

THE EXPORT PERFORMANCE OF THE TURKISH MANUFACTURING
INDUSTRIES WITH RESPECT TO SELECTED COUNTRIES

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ABSTRACT

THE EXPORT PERFORMANCE OF TURKISH MANUFACTURING INDUSTRIES WITH RESPECT TO SELECTED COUNTRIES

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The objective of this paper is to analyze the export performance of Turkish manufacturing industries in the East-Asian countries between the years 1992-2002. SITC (Rev.3), three digit data were used in calculations and three methodologies were applied in order to discover promising sectors of the Turkish exports. Constant Market Share Analysis was used to explain the causes of the change in the market shares of the exports of Turkey from one period to another. Revealed comparative advantage indices were calculated to determine sectors in which Turkey had comparative advantage. Grubel-Lloyd Index was used to determine the rate of intra-industry trade. Results signal important changes in the export structure of Turkey.

Key words: Export Performance, Constant Market Share Analysis, Revealed Comparative Advantage, Grubel-Lloyd Index

ÖZ

TÜRK İMALAT SANAYİİNİN İHRACAT PERFORMANSININ SEÇİLMİŞ ÜLKELER AÇISINDAN DEĞERLENDİRİLMESİ

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Bu çalışmanın amacı, Türk İmalat Sanayiinin 1992-2002 yılları arasında, Doğu Asya ülkelerindeki ihracat performansını değerlendirmektir. Hesaplamalarda SITC (Rev.3), üç basamaklı veriler kullanılmış ve Türkiye'nin ihracatında gelecek vadeden sektörlerin belirlenmesinde başlıca üç yöntem uygulanmıştır. Sabit Pazar Payı Analizi, Türkiye'nin ihracatındaki pazar paylarındaki iki dönem arasındaki değişimin nedenlerini açıklamak için; Açıklanmış Karşılaştırmalı Üstünlükler Analizi, Türkiye'nin karşılaştırmalı üstünlüğe sahip sektörlerinin belirlenebilmesi için; Grubel-Lloyd Endeksi, endüstri içi ticaretin seviyesini belirlemek için kullanılmıştır. Sonuçlar, Türkiye'nin ihracat yapısında önemli değişiklikler olduğunu göstermektedir.

Anahtar Kelimeler: İhracat Performansı, Sabit Pazar Payı Analizi, Açıklanmış Karşılaştırmalı Üstünlükler, Grubel-Lloyd Endeksi

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CHAPTER 1

INTRODUCTION

The objective of this thesis is to analyze the export performance of Turkey in a group of selected countries between the years 1992-2002. The basic motive behind the analysis of export performance is to reflect the export structure of Turkey in order to give some idea about the promising sectors in different markets. We think that if Turkey is able to have an export structure which is in line with the world trends in terms of commodity groups and country markets, it may be much easier for her to attain a sustainable export growth.

China, Japan, Korea, Malaysia and Singapore were selected as the country group¹ for this investigation. There were two major reasons for this choice. First and the most important reason was to analyze the export performance of Turkey with respect to a country group that had not been studied before. Although European Union (EU) countries, non-EU member OECD countries and the middle-east countries constitute the major categories in Turkish trade, these countries were analyzed fully in the studies of Erlat, Erlat and Özçelik (2003) and Erlat and Erlat (2004). Accordingly, in order to establish an original study which provides different information, East Asian countries were selected for this research.

Second reason for this choice was to evaluate the export performance of Turkey in country markets which achieved high rates of export-led economic growth and significant trade volumes. China has special importance in this study since she is considered as one of the most challenging countries of the new century with her incredible trade performance.

¹ This country group will be called as “East-Asian countries” in the remainder of this study.

This study is based on three different methods in evaluating Turkish export performance. The first method is the Constant Market Share Analysis (CMSA). CMSA is a methodology which tries to project the possible causes of the change in the market shares of the exports of a country from one period to another. The second method is Revealed Comparative Advantage (RCA). RCA gives information about the sectors in which a country has comparative advantage relative to her trading partners. The last method is the Grubel-Lloyd Index (GL) and it is used to measure the rate of intra-industry trade. With the use of Standard International Trade Classification (SITC) Revision 3 (REV.3), three digit data² and through the use of these methodologies, Turkish export performance with respect to East-Asian countries will be evaluated.

This study is organized as follows. Chapter 2 is a literature survey and it reviews some previous studies about these three methodologies. The third chapter summarizes the general structure of trade between Turkey and East-Asian countries. Chapters 4, 5 and 6 give details of CMSA, RCA and GL methodologies respectively and present the empirical results. Chapter 7 describes the rising sectors which are selected simultaneously according to the methodologies used in this thesis. Finally, Chapter 8 derives the main conclusions.

² See Appendix A for the explanation about the data used and Appendix B for the details of the SITC (Rev.3), three digit classification.

CHAPTER 2

LITERATURE SURVEY

The first methodology which was used to analyze the export performance of Turkey was the CMSA. It is a methodology which tries to project the possible causes of the change in the market shares of the exports of a country from one period to another. Major CMS models, their founders and followers are summarized in Table 1.

Table 1: Overall Summary of the Major CMS Models, Their Founders and Followers

		Tyszynski	Leamer and Stern	Fagerberg and Sollie
Model Includes		Two Effects:	Three Effects:	Five Effects:
		Competitiveness Eff.	Commodity Eff.	Market Share Eff.
		Structural Eff.	Market Distribution Eff.	Commodity Composition Eff.
			Competitiveness Eff.	Commodity Adaptation Eff.
				Market Composition Eff.
Followers				Market Adaptation Eff.
		Baldwin	Banerji	Ongun
		Spielglas	Bishwas	Lohrmann
			Bowen and Pelzman	Erlat, Erlat and Özçelik
			Merkies and Meer	Erlat and Erlat
			Radam	
		Kotan		

CMSA was first introduced to the literature by Tyszynski (1951). He analyzed changes in world trade of manufactured commodities between the years 1899 and 1950 and stated that there were two major reasons for the changes in the market shares of the countries. The first reason was related to the changes in the relative importance of commodity groups and the second one was related to

the changes in the actual country shares of individual commodity groups. He separated these causes by calculating two different market shares: the hypothetical market share and the actual market share. The hypothetical market share was defined as the market share of a country when its market shares in individual commodity groups had remained constant. With the help of both the hypothetical market share and the actual market share, Tyszynski tried to explain the changes in the world demand for exports and changes in the competitive position of the countries.

Studies until Leamer and Stern (1970) followed Tyszynski's methodology to a great extent instead of developing a new CMS technique. Among these studies, Baldwin (1958) classified the imports of seven developed countries by using a methodology which was similar to Tyszynski's categorization and evaluated commodity composition of world trade. In this sense, he divided the change in the market shares of countries into two components: structural component and competitiveness component. The structural component was related to the change in the relative importance of the commodity groups while country's share in the world trade in each of these commodities remain the same. The competitiveness component was related to the change in the shares of individual commodity groups. With the help of these components, he determined leading commodity classes, changes in the export performance of countries and new trends in world trade of the period.

Spiegelglas (1959) also analyzed changes in the patterns of world export of manufactured commodities. Similar to Baldwin (1958), he adopted Tyszynski's classification of commodities and was concerned with trade data of nine countries between the years 1937 and 1956. He emphasized the significance of both structural and competitive effects in the distribution of world exports during the period.

Leamer and Stern (1970) followed Tyszynski's method to a great extent but they developed his work by introducing three different reasons for poor export performance. The first reason was related to the commodity composition of exports. The second one was related to the market distribution of exports and the last one was related to competitiveness. The major assumption of their study in analyzing

the export performance was the idea of constant market shares of countries in the world markets. The competitiveness effect was accepted as the difference between this constant market share and the actual market share and it was associated with only price changes. In addition to this competitiveness effect, two additional effects were included. The first one was the commodity composition effect and it measured whether or not a country's exports were concentrated in commodity classes whose growth rates were more than the world average. The last effect was the market distribution effect and it measured whether or not a country's exports were concentrated in export markets whose growth rates were more than the world average. Leamer and Stern emphasized that making a distinction in these effects offers valuable information for policy makers to improve the export performance of the country.

Richardson (1971a) seriously criticized the study of Leamer and Stern.. He tried to recover their model by proposing several criticisms about application. The first criticism was about the unit of measurement. He argued that if export shares of the countries were measured in values rather than in quantities, results would be deceptive. The second criticism was about the choice of commodity classifications. He underlined the fact that using different commodity classifications would alter results. The third criticism was about the choice of a standard "world" for trade. Since CMSA was applied on a basis where there exist a focus country and her competitors, alternative choices of competitors and trade areas would affect results. The fourth criticism was about the order of calculation. Richardson showed that changing the order in which commodity and market effects were calculated significantly altered results. And the last criticism was about the choice of base year. He drew attention to the fact that CMSA was utilized in a discrete time period and the choice of the base year involved the "index number problem" (Richardson, 1971b: 301). In his conclusion, he suggested three ways to deal with problems in application. Firstly, he recommended computation of CMS effects by using different base year weights. Secondly, he advised to be careful in choosing competitors in the world trade. Lastly, he advocated utilization of quantity data rather than value data.

Banerji (1974) criticized previous studies on the basis that they had only one aspect in analyzing export performance of less developed countries: demand aspect or supply aspect. In his analysis, he tried to include both aspects. In this sense, commodity and market effects were considered on the demand side, whereas the competitiveness effect was considered on the supply side. In his paper, he summarized some shortcomings of the CMS model. One critique was about the inability of the model to forecast unexpected changes in trade performance. CMSA was used to evaluate trade performance in the past and it did not include any econometric interpretation which was essential to predict probable future variations. Another critique was about the interdependence of commodity and market effects. He emphasized that although less developed countries became aware of the markets which grew faster than the world average, those markets might not be considered as alternative market places since countries might not have any comparative advantage in those markets. Results of his study confirmed his hypothesis. After the examination of sixteen markets for less developed countries, he found that developing countries continued to focus basically on commodities³ and markets⁴ which grew slower than the world average.

Following Leamer and Stern (1970), Bishwas (1982) evaluated export performance of India by using SITC data for seven commodity groups and eleven markets between 1959 and 1968. Results of his study showed that commodity composition, market distribution and competitiveness effects were all against India's export growth. Among them, the competitiveness effect was found to be the most dominant one, mainly because of the currency overvaluation during that period.

Similarly, Bowen and Pelzman (1984) analyzed the export performance of US between the years 1962 and 1977 and tried to project the relationship between the decline in US competitiveness and the poor export performance during the period. Results of their study indicated that the market distribution effect played a

³ These commodities were basically primary commodities such as food, beverages and tobacco, oils and fats etc.

⁴ The declining markets were defined as those in which the import of a given commodity increased by less than that of the world average of that commodity. Some of these declining markets were Australia, New Zealand, Latin America and Africa

positive role in US export growth between 1962 and 1969 whereas the commodity composition effect played a positive role between 1974 and 1977. In order to prevent probable bias in estimation, Bowen and Pelzman applied some sensitivity tests to the calculated figures of CMSA with the purpose of evaluating Richardson's (1971b) criticisms about the model. Sensitivity tests indicated that although commodity classifications did not affect CMSA results, they were very sensitive to changes in the choice of base year and the definition of the world market.

After the methodology which was developed by Leamer and Stern (1970) and the criticisms which were introduced by Richardson (1971 a and b), Fagerberg and Sollie (1987) developed the CMSA considerably and made the latest contribution. They introduced two new perspectives in CMSA. The first one was the use of Laspeyres Indices⁵ in order to avoid the index number problem which was mentioned by Richardson (1971b) and the second one was the introduction of two further effects into the analysis. In addition to the two common effects derived in CMSA⁶, the well-known competitiveness effect was split up into the commodity adaptation and market adaptation effects. Fagerberg and Sollie defined the role of the commodity adaptation effect as “. . . to what degree a country has succeeded in adapting the commodity composition of its exports to the changes in the commodity composition of the market” (p.1575). Similarly, the role of the market adaptation effect was defined as: “. . . the degree of success of the country in adapting the market composition of its exports to the changes in the country composition of world imports” (p.1576). Derivation of five effects instead of Leamer and Stern's three, increased the power of the CMSA and brought an additional perspective to the analysis since these adaptation effects measure the performance of a country in adapting her export composition in the direction of commodities with relatively higher demand rates and in the direction of markets with relatively higher import rates. Fagerberg and Sollie's methodology was followed by many other researchers. Among them, Lohrmann (2000) tried to evaluate the export performance of Turkey in terms of both commodity groups and markets. She tried to find out whether

⁵ Laspeyres indexation uses initial year's weights.

⁶ These were the commodity and the market composition effects.

Turkey sold the right goods to the right markets. Results of her study indicated that Turkey could not adapt herself to the change in both the demand conditions and the market conditions.

Following Leamer and Stern's methodology, Merkies and Meer (1988) tried to present a theoretical basis with the help of a two stage homothetic demand function in order to offer a better framework for CMSA. By considering exports of the same commodities from different countries as different products, they developed a demand function in two stages. At the first stage, spending on a commodity was allocated to exporters of that commodity and at the second stage the import budget was allocated to different commodities. Using five different SITC categories between 1972 and 1976 for USA, Economic and Social Commission for Asia and the Pacific (ESCAP) countries and rest of the world, they estimated a demand model. Results of their estimation showed that, contrary to the generally accepted norms, commodity term was in fact a supply term since it emerged from supply changes. World and market terms were both considered as demand terms in line with the general view⁷.

Arshad and Radam (1997) also followed Leamer and Stern's methodology and applied CMSA for a special commodity group in order to evaluate the export performance of selected electrical and electronic products in Malaysia. Results of the CMSA showed that during the period of analysis, exports of electrical and electronic products grew mainly due to the increase in world demand. The competitiveness effect was the second important factor whereas the market composition effect was quite negligible.

Among the Master Theses which applied CMSA, Ongun (1990) followed both the methodologies of Richardson and Fagerberg and Sollie to analyze Turkish fresh fruit and vegetable exports to the European Community (EC) between 1976 and 1987 years. She emphasized that the objective of her study was to examine CMSA instead of examining Turkey's fresh fruit and vegetable exports to EC. She used both quantity data and value data in order to consider Richardson (1971a)'s

⁷ Merkies and Meer explained the export changes of a country by four different terms: the world term, the market term, the commodity term and the competitiveness term where the first three were defined as the "structural term"

advice. Results of the analysis indicated that different type of data might signal different conclusions. Still her results showed that in fresh fruit and vegetable exports, the commodity composition effect was positive whereas the market distribution effect was negative. This meant that Turkey selected commodities with high export rates but her choice of market might be wrong. Consequently, her study is quite important in the sense that her conclusions supported the idea of considering different market alternatives which was one of the basic motives behind this thesis.

Kotan (2000) mainly adopted Leamer and Stern's methodology and compared export performance of Turkey and South East Asian Countries in the European Union Market and tried to measure whether or not relative geographical proximity of Turkey to the EU market played a positive role in decreasing prices and increasing competitiveness. Relative proximity advantage was measured by the difference between CIF import and FOB export prices and with the help of CMSA, effect of competitiveness on the export performance of each country was analyzed. Results of her study showed that price was the most significant factor in competitiveness and relative export performance of Turkey was highly affected by this factor especially in textiles, garment and technology intensive commodities.

Temiz (2002) evaluated Turkish export performance in agricultural goods between 1989 and 1998 using CMSA methodology which was developed by Leamer and Stern. Although different calculation methods were used, almost all results demonstrated that both commodity composition and market distribution effects were positive. Those positive effects indicated that both the commodity and market composition of exports change in favor of Turkey. Conversely, the competitiveness effect was found to be negative indicating that Turkey had relatively less competitive power in agricultural exports.

The second methodology which was used to evaluate the export performance of Turkey in this study was RCA. It is a methodology which simply tries to compare a country's export performance of a particular good with the world's export performance of that particular good. Balassa (1965) was the person who introduced the concept of RCA. In his words:

. . . revealed comparative advantage can be indicated by the trade performance of individual countries in regard to manufacturing products, in the sense that the commodity pattern of trade reflects relative costs as well as differences in non-price factors . . . (p.103)

Balassa suggested that evaluation of RCA is possible through the use of relative shares of a country in the world exports of individual commodities and through the indication of changes in these relative shares. He also recommended the use of export-import ratios in order to reflect comparative advantages under certain assumptions like identical tastes and uniform duties. Since the assumptions of identical tastes and uniform duties are not realistic in the real world, Balassa (1977) totally gave up using the export-import ratios in the computation of RCA indices and recommended the use of export ratios alone. Alternative to Balassa's studies, Volrath (1991) computed ten different RCA indices and compared them by outlining both their shortcomings and good qualities. In this sense, he tried to analyze and compare the theoretical foundation of alternative RCA indices with the use of intensity measures.

The last methodology which was used in this thesis was the GL index. This index was developed by Grubel and Lloyd (1971) in order to measure the rate of intra-industry trade. Values of the index differ between 0 and 100. In one extreme, when the value of the exports of commodity *i* is exactly equal to the value of the imports of commodity *i*, the index takes on the value of 100 and at the other extreme, when there are exports (imports) of commodity *i* but there are no imports (exports) of it, the index takes the value of 0 indicating that there is no intra-industry trade.

There are two studies which shed light on this thesis. These are Erlat, Erlat and Özçelik (2003) and Erlat and Erlat (2004). Erlat, Erlat and Özçelik (2003) evaluated the export performance of Turkey for the 15 European Union (EU) and 18 non-EU member OECD countries for the period of 1990-2000 whereas Erlat and Erlat (2004) evaluated her performance in the Middle-East countries. They both used the SITC (REV.3), three digit data and analyzed the rising and declining sectors in the Turkish exports by applying CMS, RCA and GL methodologies at the same time. In these studies, they also divided the 261, three-digit manufacturing

sectors into “traditional” and “non-traditional” sectors and calculated all the measures taking into account these two groups separately. The expectation underlying their approach was that sectors which become competitive towards the end of the period would emerge from the “non-traditional” group and their studies have shown that this expectation was justified. Accordingly, with the use of their formulation and the guidance of their application, Turkish export performance in a totally different market, East-Asia, was tried to be evaluated in this study. As it was mentioned in Chapter 1, details of these three methodologies and their empirical results are summarized in Chapters 4, 5 and 6.

CHAPTER 3

GENERAL STRUCTURE OF TRADE BETWEEN TURKEY AND EAST-ASIAN COUNTRIES

Before summarizing the general structure of trade between Turkey and East-Asian countries, it is useful to give some information about these economies. Basic data about these countries and main economic indicators are summarized in Table 2.

Table 2: Main Indicators of the East-Asian Economies⁸

	China	Japan	Korea	Malaysia	Singapore
Land area (sq km)	9,561,000	377,864	99,585	330,113	682.3
Population	1.3billion	127.6 million	47.6 million	25.1million	3.4million
Capital City	Beijing	Tokyo	Seoul	Kuala Lumpur	Singapore
GDP (billion US\$)	1,307.3	3,981.7	454	94.9	87
GDP per capita (US\$)	974	31,373.9	9,654	3,870	20,921
Real GDP growth (%)	8	0.3	6.3	4.1	2.2
CPI (%)	-0.8	-0.9	4.1	1.8	-0.4
Exports, fob(US\$ billion)	325.7	387.6	151.3	92	126.3
Imports, fob(US\$ billion)	281.5	293.4	137.8	74	109.8

It can be easily seen from Table 2 that these countries are quite different in terms of GDP, population and land area but they all have significant trade volumes. High values of their imports place these countries at the centre of this research as they are worth considering as market alternatives for Turkish exports. Before evaluating Turkish export performance in these markets and deciding upon whether or not these countries can be alternative trade partners of Turkey especially in some

⁸ All of them are 2002 figures and they are taken from Economic Intelligence Unit , 2003 Country Reports.

commodity groups, it will be helpful to give a general picture of trade between Turkey and East-Asia.

Change in the market share of these five countries in Turkey's total exports is summarized in Figure 1.

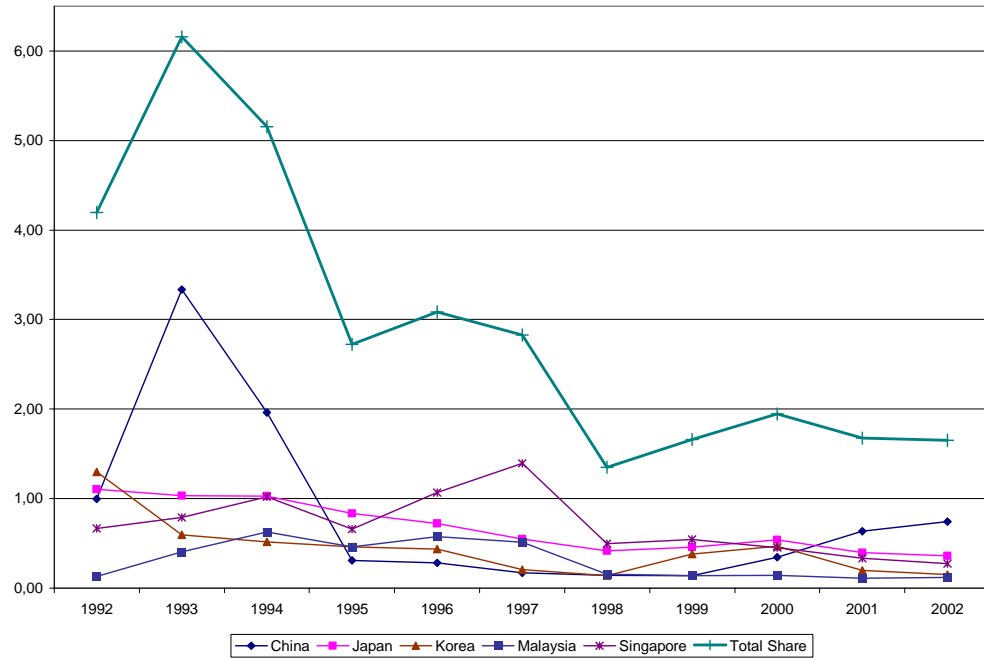


Figure 1: Market Share of East-Asian Countries in Turkey's Total Exports (%)

Between 1992 and 2002, these countries' share was on the average, 2.95 percent of total Turkish exports⁹. Among this 2.95 percent share; China, Japan, Korea, Malaysia and Singapore capture 0.82, 0.68, 0.44, 0.31, 0.70 percent respectively. 1993 is the most successful year of Turkey in this market since 6.16 percent of total Turkish goods are exported to this region. Since more than half of this 6.16 percent was exported to China, export values of Turkey to China were examined in detail and it was discovered that this enormous increase in the year 1993 was mainly due to the iron and steel exports. Especially in the sector groups 671- Pig iron, sponge iron, iron or steel granules and powders and ferroalloys, 673-

⁹ See Table D.1 in the Appendix D.

Iron or non-alloy steel flat-rolled products, not clad, plated or coated and 676- Iron and steel bars, rods, angles, shapes and sections, including sheet piling, there was a gigantic increase in the Turkey's export values to China from 1992 to 1993. This might be due to the increase in Chinese investment in the construction sector after her adoption of liberal economic policies in 1993.

As opposed to the performance in 1993, only 1.35 percent of total goods are exported to East-Asia in 1998. This fact is not surprising in the sense that a serious economic crisis emerged in the Asia during the year 1997.

After a big jump in the market share of China from 1992 to 1993, there has been a continuous decrease until 1998 and a slight recovery between 1999 and 2002. Japan has a continuous downward trend although there has been a slight recovery just after the 1997 Asian Crisis, between 1998 and 2000. Exports to Singapore fluctuate until 1998 and 1999-2002 period is a period of continuous decrease in the share of Turkey's exports to this country. Korea and Malaysia have the lowest shares among these countries and their shares fluctuate around their period averages of 0.44 percent and 0.31 percent, respectively.

In general, changes in the market shares of these East-Asian countries do not have a unique trend in Turkey's total exports. Japan and Korea are similar to some extent in the sense that their shares have a downward trend between 1992 and 1997 whereas there has been a slight recovery period between 1998 and 2000. China, Malaysia and Singapore have slightly different pictures. Their shares fluctuate continuously.

Change in the total share of Turkish exports in these countries' total imports is summarized in Figure 2.

Between 1992 and 2002, there is a declining trend of Turkish exports in East-Asian imports and Turkey on the average captures only 0.50 percent of their total imports¹⁰. 1993 has the highest share with 0.95 percent whereas 2002 has the lowest share with 0.29 percent. Although China, Malaysia and Singapore have very similar period averages, their shares are quite different throughout the period. Japan

¹⁰ See Table D.2 in the Appendix D.

has the most stable values among these five. However, Japan has the lowest share with 0.05 percent in this market and Korea follows Japan with 0.08 percent.

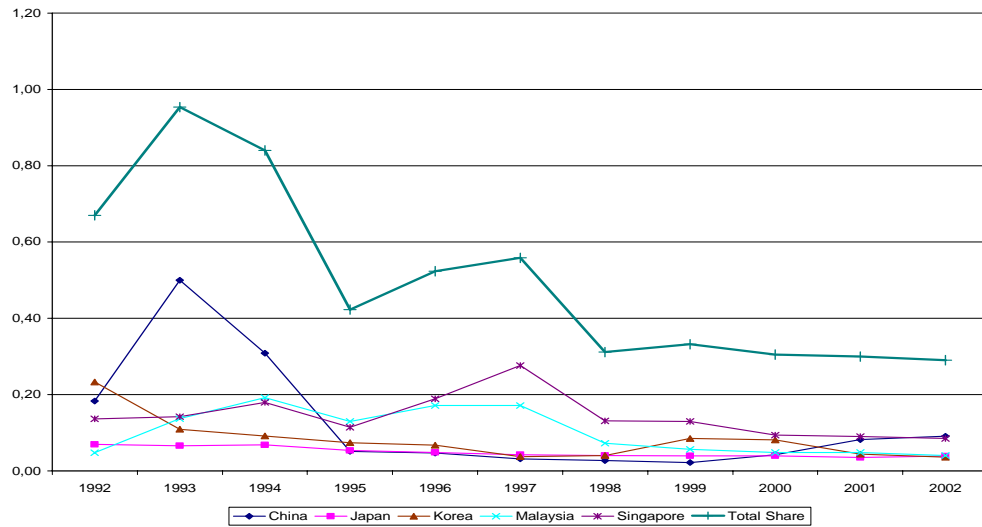


Figure 2: Total Share of Turkish Exports in East-Asian Imports (%)

Change in the market share of these five countries in Turkey's total imports is summarized in Figure 3.

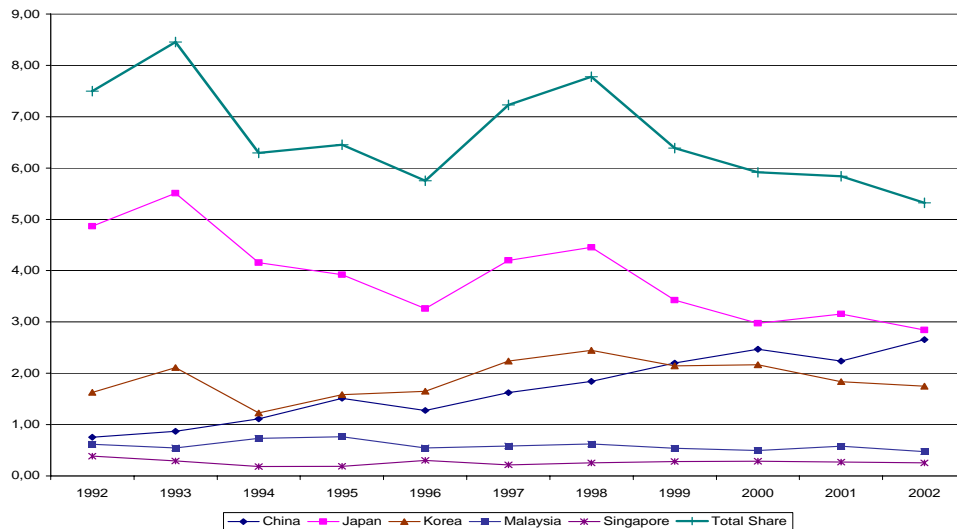


Figure 3: Market Share of East-Asian Countries in Turkey's Total Imports (%)

Between 1992 and 2002, these countries' export share, on the average is, 6.63 percent of total Turkish imports¹¹. Among this 6.63 percent share, Japan takes the largest share with 3.89 percent and Korea follows Japan with 1.89 percent. Although China is at third place as far as period averages are concerned, she has a continuous upward trend and almost reaches Japan in 2002. Malaysia and Singapore have the lowest shares and all their values are under one percent during the period.

Change in the total share of Turkish imports in these countries' total exports is summarized in Figure 4.

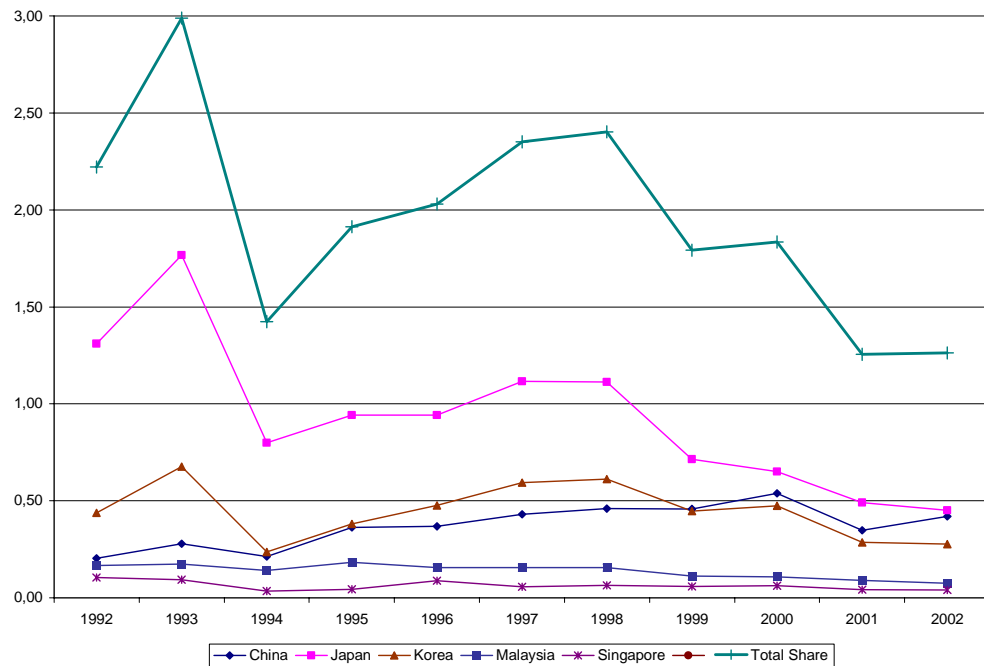


Figure 4: Total Share of Turkish Imports In East Asian Countries' Total Exports (%)

On the average, 1.95 percent of total East-Asian exports have Turkey as the destination. Japan has first place in Turkey's imports among these five countries with 0.94 percent. Korea follows Japan with 0.45 percent, China has a share of 0.37

¹¹ See Table D.3 in the Appendix D.

percent, Malaysia and Singapore have 0.14 percent and 0.06 percent shares respectively.

The trade balance between Turkey and East-Asian Countries is summarized in Table 3.

Table 3: Trade Balance of Turkey with East Asian Countries (million \$)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
China	-26	257	97	-472	-491	-743	-808	-858	-1.249	-726	-1.100	-556
Japan	-950	-1.462	-781	-1.220	-1.254	-1.896	-1.933	-1.272	-1.471	-1.183	-1.336	-1.342
Korea	-182	-530	-192	-466	-618	-1.031	-1.087	-770	-1.051	-697	-846	-679
Malaysia	-122	-98	-57	-173	-103	-149	-243	-182	-229	-204	-195	-159
Singapore	10	35	143	77	117	263	16	30	-29	-6	-33	57
Total	-1.270	-1.798	-790	-2.254	-2.349	-3.557	-4.054	-3.052	-4.029	-2.817	-3.509	-2.680

During the 1992-2002 period, trade balance is continuously against Turkey. On the average, Turkey has a 2.68 billion dollar trade deficit throughout these years. Singapore is the only country with whom Turkey has a trade surplus. Figure 1 and Figure 3 can explain this situation. Relatively high level of exports to Singapore (on the average 0.70 percent) but low levels of imports in return (on the average 0.26 percent) result in trade surplus with this country. Despite continuous trade deficits after 1999, Turkey still has an average surplus of 57 million dollars with Singapore.

Previous studies¹² which analyze Turkish export performance in the EU countries and non-EU member OECD countries demonstrated that trade balances with these countries were also against Turkey. However, a different and positive performance was observed with the Middle-East countries¹³. This might be related to the similar geographical conditions of Turkey and the Middle-East which result in the supply of commodity groups which are appropriate for the Middle-East countries' demand patterns. But trade deficits with the EU member, non EU member OECD countries and East-Asian countries indicated that Turkey should revise her export structure and improve her export performance. In this sense with the purpose of giving some idea about the structure of trade between Turkey and

¹² See Erlat, Erlat, Özçelik (2003)

¹³ See Erlat and Erlat (2004)

East-Asian countries, Table 4 and Table 5¹⁴ summarize the technological characteristics of major sectors in trade. More than half of Turkish goods which are exported to East-Asian countries are capital intensive (CIG). Raw material intensive goods (RMIG) follow capital intensive goods with 19.43 percent. Labor intensive goods (LIG) are at the third place with 14.34 percent. Difficult-to-imitate (DIRIG) and easy-to-imitate research intensive goods (EIRIG) have the lowest shares of 8.16 percent and 3.02 percent, respectively.

Table 4: Technological Characteristics of the Goods which are Exported to East-Asian Countries (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	13,06	7,31	9,48	23,79	16,36	16,02	23,31	27,93	24,41	27,61	24,47	19,43
CIG	73,74	85,39	76,10	53,38	57,45	63,04	44,93	40,73	33,31	42,46	34,97	55,05
LIG	9,70	5,34	8,23	16,63	15,51	10,98	16,31	12,38	14,34	18,42	29,88	14,34
EIRIG	1,82	0,92	1,35	1,32	2,26	2,08	5,85	4,63	4,28	5,08	3,68	3,02
DIRIG	1,67	1,05	4,85	4,88	8,42	7,89	9,60	14,32	23,66	6,43	7,01	8,16

Table 5: Technological Characteristics of the Goods which are Imported From East-Asian Countries (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	10,34	7,35	11,95	11,28	8,52	7,39	6,13	5,00	4,29	4,32	4,77	7,39
LIG	10,82	12,31	18,77	21,14	19,06	16,98	20,21	21,61	19,67	20,78	23,15	18,59
CIG	21,61	27,83	14,74	14,89	19,75	24,35	22,79	19,70	19,87	18,67	12,43	19,69
EIRIG	12,13	10,19	11,87	10,39	13,26	11,37	10,75	16,13	18,27	15,65	19,04	13,55
DIRIG	45,10	42,32	42,67	42,30	39,40	39,91	40,12	37,56	37,90	40,59	40,62	40,77

Turkey mostly imports DIRIG from these countries. CIG and LIG have very close shares which are 19.69 percent and 18.59 percent respectively. EIRIG follow them with 13.55 percent. RMIG have the lowest share with 7.39 percent.

¹⁴ See Appendix C for the details of this classification. For country details see Tables D.5-D.14 in the Appendix D.

After summarizing the technological characteristics of the exports and imports, it might be useful to examine the level of the concentration in the commodity groups. In this respect, the Hirschman-Herfindahl Index (HHI) was used in the calculations.

In general, HHI is used as a measure of industry concentration. It is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. Market shares are squared in order to give more weight to larger shares. Higher values of the index indicate that less competition exists in the market.

HHI can also be used to measure the level of commodity concentration in trade. In this sense, HHI was adapted to our purpose by using Erlat and Erlat's (2004) definitions and the following formula is used:

$$HHI_t = \sum_i^N p_{it}^2$$

where:

N= number of commodities

p_{it} = share of commodity i in exports or imports that is: $p_{it} = Q_{it} / Q_t$

Q_{it} = exports or imports of commodity i in year t

Q_t = total exports or imports in year t, i.e., $Q_t = \sum_i Q_{it}$

HHI takes values between $1/N$ and 1. Values close to $1/N$ indicate low levels of concentration whereas values close to 1 indicate high levels of concentration.

Results are summarized in Table 6 and Table 7 on the next page. Values in Table 6 and Table 7 indicate that there exists no significant level of concentration in either exports or imports as far as the whole period is concerned. However some figures in exports are worth considering. For instance, in exports to China, the 1993 and 1994 values are quite high. This fact is not surprising in the sense that capital

intensive goods constitute the major category in exports to China in 1993 and 1994 with 98.74 and 89.44 percentages respectively¹⁵.

Table 6: Hirschman-Herfindahl Index (Exports)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
China	0,385	0,741	0,660	0,244	0,183	0,173	0,148	0,067	0,210	0,213	0,093
Japan	0,087	0,119	0,082	0,080	0,064	0,067	0,074	0,090	0,076	0,063	0,071
Korea	0,431	0,368	0,215	0,300	0,157	0,153	0,427	0,198	0,405	0,084	0,055
Malaysia	0,117	0,219	0,362	0,162	0,123	0,132	0,209	0,082	0,072	0,063	0,053
Singapore	0,354	0,458	0,424	0,439	0,539	0,513	0,538	0,486	0,373	0,342	0,446

Table 7: Hirschman-Herfindahl Index (Imports)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
China	0,073	0,046	0,086	0,100	0,050	0,036	0,033	0,029	0,027	0,024	0,023
Japan	0,047	0,056	0,035	0,057	0,052	0,051	0,046	0,031	0,038	0,067	0,039
Korea	0,133	0,084	0,066	0,054	0,057	0,058	0,046	0,042	0,039	0,084	0,038
Malaysia	0,372	0,428	0,439	0,396	0,304	0,275	0,199	0,138	0,110	0,118	0,077
Singapore	0,104	0,113	0,071	0,066	0,075	0,058	0,057	0,080	0,096	0,071	0,124

Values in Table 6 and Table 7 indicate that there exists no significant level of concentration in either exports or imports as far as the whole period is concerned. However some figures in exports are worth considering. For instance, in exports to China, the 1993 and 1994 values are quite high.

Similarly, the level of concentration is relatively high in the exports to Singapore. This is again because of the high level of capital intensive goods exports which has a period average of 78.97 percent¹⁶.

¹⁵ See Table D.5 in the Appendix D.

¹⁶ See Table D.13 in the Appendix D.

As opposed to these figures, the level of concentration is very low and negligible in the imports from these countries.

CHAPTER 4

CONSTANT MARKET SHARE ANALYSIS

Constant Market Share Analysis (CMSA)¹⁷ is a methodology which tries to project the possible causes of the change in the market shares of the exports of a country from one period to another. If change in the market share of the home country is analyzed in only one target country, the market share in question, s_{ij} , is found by dividing the value of home country's exports of commodity i by the value of partner country j 's total imports. That is:

$$s_{ij} = X_{ij} / \sum_i M_{ij} \quad \text{and } i = 1, \dots, N$$

where

s_{ij} = market share of home country exports of commodity i in country j 's total imports.

X_{ij} = home country's exports of commodity i to partner country j

M_{ij} = country j 's imports of commodity i

This market share, s_{ij} , can be expressed as the multiplication of two ratios. The first ratio, a_{ij} , is the number which is found by the division of the value of home country's exports of commodity i to country j by the value of country j 's imports of commodity i . Then $a_{ij} = X_{ij} / M_{ij}$. Second ratio, b_{ij} , is the share of partner country j 's imports of commodity i in country j 's total imports. Then $b_{ij} = M_{ij} / \sum_i M_{ij}$.

If we denote the beginning and the end periods by "0" and "1" respectively, then, the change in the s_{ij} from one period to another can be expressed as:

¹⁷ This study is mainly based on and uses the definitions developed by Erlat, Erlat and Özçelik (2003)

$$\Delta s_{ij} = s_{ij}^1 - s_{ij}^0 = a_{ij}^1 b_{ij}^1 - a_{ij}^0 b_{ij}^0 \quad (1)$$

The equality above can be written as an identity and it can be separated into three different effects:

$$\Delta s_{ij} = (a_{ij}^1 - a_{ij}^0) b_{ij}^0 + a_{ij}^0 (b_{ij}^1 - b_{ij}^0) + (a_{ij}^1 - a_{ij}^0) (b_{ij}^1 - b_{ij}^0) \quad (2)$$

$(a_{ij}^1 - a_{ij}^0) b_{ij}^0$ is called as the *market share effect* since change in s_{ij} from one period to another is measured only by changes in the a_{ij} 's. In other words, this effect indicates what the change in the market share of a country may be if the change was only due to the change in the ratio of home country exports of commodity i to partner country imports of that commodity.

$a_{ij}^0 (b_{ij}^1 - b_{ij}^0)$ is called as the *commodity composition effect* since change in s_{ij} from one period to another is measured only by changes in b_{ij} 's. This effect indicates what the difference between two periods may be if the change was only due to the change in the ratio of partner country's imports of a particular commodity to partner country's total imports.

$(a_{ij}^1 - a_{ij}^0) (b_{ij}^1 - b_{ij}^0)$ is called as the *commodity adaptation effect*. This effect shows whether the home country can adapt her exports to changes in the commodity composition of her partner's imports. Accordingly, when both $(b_{ij}^1 - b_{ij}^0)$ and $(a_{ij}^1 - a_{ij}^0)$ have equal signs, the commodity adaptation effect will be positive.

If change in the market share of the home country is analyzed in a group of countries, then the market share in question is now " S_i " and it can be computed by dividing the value of home country exports of commodity i to the group countries by the value of group of countries' total imports. Then :

$$S_i = \sum_j X_{ij} / \sum_i \sum_j M_{ij}$$

S_i can be expressed as the multiplication of three ratios. The first two ratios a_{ij} and b_{ij} were explained previously. The third ratio, c_j , is the ratio which is found

by the division of the value of the total imports of j th country by the value of total imports of the country group. Then $c_j = \sum_i M_{ij} / \sum_i \sum_j M_{ij}$

The difference between the two period market shares can be expressed as follows:

$$\Delta S_i = S_i^1 - S_i^0 = a_{ij}^1 b_{ij}^1 c_j^1 - a_{ij}^0 b_{ij}^0 c_j^0 \quad (3)$$

This difference can be split into five effects with the help the of following identity:

$$\begin{aligned} \Delta S_i = & \sum_j (a_{ij}^1 - a_{ij}^0) b_{ij}^0 c_j^0 + \sum_j a_{ij}^0 (b_{ij}^1 - b_{ij}^0) c_j^0 + \sum_j (a_{ij}^1 - a_{ij}^0) (b_{ij}^1 - b_{ij}^0) c_j^0 \\ & + \sum_j s_{ij}^0 (c_j^1 - c_j^0) + \sum_j (s_{ij}^1 - s_{ij}^0) (c_j^1 - c_j^0) \end{aligned} \quad (4)$$

The first three effects are the same with the previous market share, commodity composition and commodity adaptation effects. However there are two additional effects in this case. The first one, $\sum_j s_{ij}^0 (c_j^1 - c_j^0)$, is the **market composition effect**. Here, change in the S_i from one period to another is measured only by changes in the c_j 's. This means that the variation between two periods is the result of the changes in the market shares of the countries within the group.

$\sum_j (s_{ij}^1 - s_{ij}^0) (c_j^1 - c_j^0)$ is the **market adaptation effect**. This effect shows whether or not Turkey can adapt its market shares of individual commodity groups to the changes in the market shares of the countries in the group. Then if $(s_{ij}^1 - s_{ij}^0)$ changes in the same direction with $(c_j^1 - c_j^0)$, the market adaptation effect will be positive.

Using the above methodology, first the change in the market share of Turkey is analyzed with respect to each of these East Asian countries separately and the change in Turkey's market share is split into three effects. Then the change in the market share of Turkey is analyzed with respect to these countries as a whole. Consequently, change in the market share is split into five effects. In both cases, the period we considered was divided into two sub-periods. The first sub-period is the 1992-1997 period and the second one is the 1998-2002 period. The reason why we

have these periods is due to the fact that 1997 was a turning point since these countries were affected to a great extent by the Asian Crisis of 1997. Results of each situation are summarized in the next two sections.

4.1. CMSA With Respect to Each Country

General structure of the analysis is summarized in Table 8.

Table 8: CMSA Including Three Effects (% changes)

		China	Japan	Korea	Malaysia	Singapore
1992-1997 period	Market Share Effect	-93,791	-36,049	-85,766	246,638	63,430
	Commodity Composition Effect	5,941	-24,586	-26,470	30,350	16,905
	Commodity Adaptation Effect	-5,955	11,841	24,890	25,821	17,342
	Total	-93,805	-48,793	-87,345	302,809	97,677
1998-2002 period	Market Share Effect	128,100	5,176	-30,225	-33,050	8,592
	Commodity Composition Effect	-5,897	-15,150	-27,763	0,471	-36,673
	Commodity Adaptation Effect	-4,357	3,025	18,958	-0,980	-7,670
	Total	117,846	-6,949	-39,029	-33,559	-35,751
1992-2002 period	Market Share Effect	-84,128	-36,895	-86,309	32,442	9,376
	Commodity Composition Effect	-48,122	-34,899	-26,574	-28,872	-49,192
	Commodity Adaptation Effect	45,907	19,352	21,369	-13,113	-3,325
	Total	-86,343	-52,442	-91,514	-9,543	-43,140

In the 1992-1997 period, Turkey's market shares increased only in Malaysia and Singapore. All three effects are positive in Malaysia and Singapore but the market share effect is the dominant one. In China and Korea, although commodity composition and commodity adaptation effects have different signs, they have close

shares and almost neutralize each other¹⁸. Although the commodity adaptation effect is positive in Japan, negative market share and commodity composition effects overcome its positive contribution.

As opposed to the 1992-1997 period, Turkey increased her market share in China in the 1998-2002 period. This is only because of the positive market share effect since the other two effects are negative. In other words, Turkey increased her market share in China because, keeping other factors constant, only the ratio of Turkish exports to Chinese imports increased between 1998 and 2002. This result can be easily shown with the help of Table D.2 in the Appendix D. Total share of Turkish exports in Chinese imports was 0.03 percent in 1998 whereas it increased to 0.09 percent in 2002.

The 6.95 percent decrease in the market share in Japan during the 1998-2002 period is lower than the 48.79 percent decrease of the 1992-1997 period. The major difference between two periods is the positive market share effect of the 1998-2002 period which can not compensate the negative impact of the commodity composition effect.

Similarly, due to the decline in the negative impact of the market share effect, there is a smaller decrease in the market share in Korea in the 1998-2002 period compared to the previous period. However weights of the effects and their contributions do not change much between the two periods.

Turkey's performance in Malaysia is quite interesting in this period. Positive contributions of three effects for the 1992-1997 period are almost totally reversed in the 1998-2002 period. The market share effect is still dominant as it was in the previous period, however it turns negative. The commodity composition and commodity adaptation effects have really insignificant shares.

Between the 1992-1997 and 1998-2002 periods, another radical change takes place in the case of Singapore. The commodity composition and adaptation effects both turn negative and decrease the overall market share. This decrease can

¹⁸ This generalization is not valid for the 1998-2002 period.

be derived from the fact that both Singapore's share in Turkish exports and Turkey's share in Singapore's imports decline from 1998 to 2002¹⁹.

When we consider the whole period, Turkish market shares decrease in all of these countries. This fact is not surprising because, from Table D.2, it can be seen that the total share of Turkish exports in East-Asian imports decreases from 0.18 percent to 0.09 percent in China, from 0.07 percent to 0.04 percent in Japan, from 0.23 percent to 0.04 percent in Korea, from 0.05 percent to 0.04 percent in Malaysia and from 0.14 percent to 0.08 percent in Singapore.

When we look at the number of positive entries in Table 8, we see that there are seven positive and eight negative market share effects, four positive and eleven negative commodity composition effects, nine positive and six negative commodity adaptation effects. Although the commodity adaptation effect is at first place as far as number of positive entries is considered, the reality is quite different when the magnitude of these effects is considered.

Change in the market share between two periods is characterized to a great extent by the market share effect when all three effects are taken as a whole in terms of magnitude. This means that Turkey's market share is mostly influenced by the changes in the ratio of Turkish exports of a particular good to partner country imports of that particular good. The commodity composition effect is the second important factor. Although commodity adaptation is the least dominant factor, it is interesting to note that this effect is positive in Japan and Korea in all three periods. This indicates that Turkey can adapt its export structure according to the changes in the commodity composition of Japanese and Korean imports. However negative market share and commodity composition effects prevent the overall increase in the market share of Turkey in these countries.

4.2. CMSA With Respect to Group Countries As A Whole

General structure of CMSA including five effects is summarized in Table 9 on the following page.

¹⁹ See Table D.1 and Table D.2 in the Appendix D.

Table 9: CMSA Including Five Effects (% changes)

		China	Japan	Korea	Malaysia	Singapore
1992-1997 period	Market Share Effect	-93,690	-35,980	-85,710	159,780	63,560
	Commodity Composition Effect	5,940	-24,590	-26,470	19,530	16,900
	Commodity Adaptation Effect	-5,880	11,840	24,860	16,430	17,320
	Market Composition Effect	7,590	-11,910	7,170	19,450	11,180
	Market Adaptation Effect	-7,110	5,800	-6,260	38,070	10,930
	Total	-93,150	-54,840	-86,410	253,260	119,890
1998-2002 period	Market Share Effect	128,130	5,180	-29,660	-33,050	8,590
	Commodity Composition Effect	-5,900	-15,150	-27,720	0,470	-36,670
	Commodity Adaptation Effect	-4,360	3,030	19,030	-0,980	-7,670
	Market Composition Effect	44,590	-17,360	12,030	-5,710	-21,370
	Market Adaptation Effect	52,560	1,210	-4,610	1,920	7,640
	Total	215,020	-23,090	-30,930	-37,350	-49,480
1992-2002 period	Market Share Effect	-84,100	-36,540	-86,110	34,780	9,580
	Commodity Composition Effect	-48,120	-34,900	-26,570	-28,870	-49,190
	Commodity Adaptation Effect	45,950	19,230	21,280	-13,740	-3,380
	Market Composition Effect	90,340	-25,110	-3,810	3,020	-16,600
	Market Adaptation Effect	-77,940	13,110	3,490	-0,240	7,140
	Total	-73,870	-64,210	-91,720	-5,050	-52,450

In addition to the previous information, CMSA including five effects offer two supplementary pieces of information about the causes of the change in the Turkey's market share from one period to another. These are market composition and market adaptation effects. Market composition effect is related to the changes in the country shares of the East Asian countries within the group. Market adaptation effect shows to what degree Turkey can adapt its market shares of a particular commodity according to the changes in the country shares within the group.

In the 1992-1997 period, the market composition effect is positive in all countries except Japan. This means, country shares within the group change in favor of Turkish exports. However, since this effect is relatively insignificant among the others, it can not increase Turkey's market share alone.

The market adaptation effect is positive in Japan, Malaysia and Singapore. In other words, Turkey can arrange her market shares of individual commodity groups according to the changes in the country shares of Japan, Malaysia and Singapore within the group in the 1992-1997 period.

In the 1998-2002 period, the market composition effect turns negative in Malaysia and Singapore but it is still positive in China and Korea. Although this effect has different signs in different countries, its relative importance in the total change increases considerably compared to the 1992-1997 period.

During this period, the market adaptation effect is positive except for Korea but its contribution to the total change is trivial in Japan, Malaysia and Singapore. In China, contribution of the market adaptation effect is significant and it increases the market share of Turkey together with the positive market share and market composition effects.

In the 1992-2002 period, the market composition effect is positive for China and Malaysia whereas it is negative in the other three countries. Just the opposite is true for the market adaptation effect. It is negative for China and Malaysia and positive in the other three countries.

When three periods and five countries are considered altogether, it is observed that except for Malaysia and Singapore, Turkey's market shares decrease

in the pre-crisis period. After the Asian Crisis of 1997, Turkey loses her share even in the Malaysia and Singapore markets. The market share increase in China during the 1998-2002 period is only a slight recovery after the 1997 crisis since the 0.18 percent share of Turkish exports in Chinese imports during 1992 can not be reached in the year 2002²⁰.

Detailed CMSA tables including five effects about the 3-digit sectors are provided in Table D.15 to Table D.29 in Appendix D. Tables D.15-D.19 provide information about the 1992-1997 period whereas Tables D.20-D.24 and Tables D.25-D.29 summarize the 1998-2002 and the 1992-2002 periods respectively. The last columns of all tables indicate the number of positive CMSA effects in each sector. In order to find out which sectors enhance Turkey's export performance considering these five countries, firstly sectors in which Turkey's market share increases is chosen in each country. Among them, sectors whose market shares increase in at least three of these five countries are taken and grouped under three different titles, "sectors which are chosen in all five countries", "sectors which are chosen in four countries" and "sectors which are chosen in three countries". Results are summarized in Table 10, Table 11 and Table 12. Numbers in brackets denote the number of CMSA effects which positively contribute to the market share increase in the corresponding country.

Table 10: Rising Sectors in the 1992-1997 Period

In All Five Countries	In Four Countries	In Three Countries
	058 (1,5,3,3)	062 (3,5,3)
	659 (3,3,3,3)	121 (3,5,3)
	784 (3,3,5,3)	292 (1,3,3)
		653 (1,3,3)
		656 (1,3,3)
		697 (3,3,3)
		743 (3,3,3)
		772 (5,3,5)
		778 (3,5,5)
		874 (3,3,5)
-		

²⁰ See Table D.2 in the appendix D.

In the 1992-1997 period, there exists no sectors whose market shares increase in all of these five countries. Among the sectors whose market shares increase in three or four countries, the following sectors are worth mentioning²¹:

- 058- Fruit, preserved and fruit preparations
- 062- Sugar confectionary
- 121- Tobacco, unmanufactured; tobacco refuse
- 659- Floor coverings, etc.
- 697- Household equipment of base metal, n.e.s.
- 743- Pumps, air or gas compressors and fans
- 772- Electrical apparatus
- 778- Electrical machinery and apparatus, n.e.s.
- 784- Parts and accessories for tractors, motor cars and other vehicles, trucks, public transport vehicles and road motor vehicles, n.e.s.
- 874- Measuring, checking, analyzing and controlling instruments, n.e.s.

²¹ The market share effect is the dominant factor in the market share increase of Turkey in most of these sectors. For a better evaluation of the export performance, there should be at least two additional positive CMSA effects which increase the market share in that sector. Therefore sectors including at least three positive effects in each country are selected from Table 10, Table 11 and Table 12.

Table 11: Rising Sectors in the 1998-2002 Period

In All Five Countries	In Four Countries	In Three Countries
642 (3,3,5,1,1)	273 (5,1,1,1)	062 (3,3,3)
656 (3,1,5,1,3)	621 (5,3,1,1)	075 (3,3,1)
658 (3,3,5,3,3)	651 (3,1,3,1)	098 (3,5,1)
713 (5,3,3,3,3)	653 (3,1,3,1)	277 (3,1,5)
784 (5,3,5,3,3)	661 (3,1,5,1)	278 (3,1,1)
892 (2,1,5,3,1)	663 (3,3,1,1)	523 (3,3,1)
893 (3,3,5,3,3)	665 (3,5,1,3)	581 (5,3,3)
	694 (3,3,3,1)	598 (5,3,1)
	748 (3,3,3,1)	611 (2,1,5)
	749 (3,3,1,1)	629 (5,3,5)
	778 (5,3,5,1)	652 (3,1,1)
	842 (3,3,5,3)	654 (3,1,3)
	845 (5,1,5,3)	679 (3,3,1)
		695 (5,1,3)
		697 (5,1,3)
		699 (3,5,1)
		716 (3,1,3)
		723 (1,3,1)
		724 (5,1,3)
		741 (3,3,1)
		743 (5,5,3)
		764 (5,3,3)
		775 (5,1,3)
		821 (5,3,1)
		841 (3,1,5)
		846 (3,1,1)
		891 (3,3,3)
		897 (3,1,1)

Following sectors are selected in the 1998-2002 period:

- 062- Sugar confectionary
- 581- Tubes, pipes and hoses of plastics
- 629- Articles of rubber, n.e.s.
- 642- Paper and paperboard
- 656- Tullies, lace, embroidery, ribbons
- 658- Made-up articles, wholly or chiefly of textile materials, n.e.s.
- 665- Glassware
- 694- Nails, screws, nuts, bolts, rivets, and similar articles of iron, steel, copper or aluminum
- 713- Internal combustion piston engines and parts thereof, n.e.s.

- 743- Pumps, air or gas compressors and fans
- 748- Transmission shafts and cranks
- 764- Telecommunications equipment and parts, n.e.s.
- 778- Electrical machinery and apparatus, n.e.s.
- 784- Parts and accessories for tractors, motor cars and other vehicles, trucks, public transport vehicles and road motor vehicles, n.e.s.
- 842- Women's and girls' clothing accessories, not knitted or crocheted
- 845- Articles of apparel, whether knitted or not crocheted, n.e.s.
- 891- Arms and ammunition
- 893- Articles, n.e.s. of plastics

Table 12: Rising Sectors in the 1992-2002 Period

In All Five Countries	In Four Countries	In Three Countries
784 (3,3,3,5,1)	058 (1,1,3,1)	121 (1,5,1)
		653 (1,1,3)
		656 (1,3,1)
		658 (3,3,3)
		724 (1,3,1)
		743 (3,3,1)
		778 (3,5,3)
		821 (3,1,1)
		874 (5,3,3)

And finally in the 1992-2002 period, Turkey's export performance is noteworthy in the following sectors:

- 658- Made-up articles, wholly or chiefly of textile materials, n.e.s.
- 778- Electrical machinery and apparatus, n.e.s.
- 784- Parts and accessories for tractors, motor cars and other vehicles, trucks, public transport vehicles and road motor vehicles, n.e.s.
- 874- Measuring, checking, analyzing and controlling instruments, n.e.s.

Importance of the above sectors can be better recognized when it is considered that in each of these sectors, Turkish market shares increases in at least three countries and in each country, there are at least three CMSA effects which positively contribute to these market share increases. In this sense, it is interesting to note that when all three periods are taken together, Turkish export performance is

generally better in the sectors with the codes of 700s and 800s. Especially 778, 784 and 874 have special importance since they are selected in all three periods. Detailed information about the export performance in these three sectors is provided below²².

Market shares in the sector 778- Electrical machinery and apparatus increase in three countries- Japan, Malaysia and Singapore- during the 1992-1997 period. In Japan, market share, commodity composition and commodity adaptation effects are positive whereas in Malaysia and Singapore all five effects are positive. In the 1998-2002 period, 778 increases in four countries i.e. China, Japan, Korea and Singapore. All five effects are positive in China and Korea, market share, commodity composition and commodity adaptation effects are positive in Japan and only the market share effect is positive in Singapore. In the 1992-2002 period, 778 increases in Japan, Malaysia, Singapore. Market share, commodity composition and commodity adaptation effects are positive in Japan and Singapore and all five effects are positive in Malaysia.

Market shares of Turkey in 784- parts and accessories for tractors, motor cars and other vehicles increase in four countries- Japan, Korea, Malaysia, Singapore- in the 1992-1997 period. In Japan, market share, commodity composition and commodity adaptation effects are positive whereas in Korea and Singapore, market share, market composition and market adaptation effects are positive. In Malaysia, all five effects are positive. Positive market composition and adaptation effects of this sector are quite interesting in the sense that these effects are usually negative in other commodity groups. This indicates that in Turkey's exports of 784- parts and accessories for tractors, motor cars and other vehicles, market shares of the countries within the group change in favor of Turkey and Turkey can adapt to these changes. The CMS performance of this sector is even better in the 1998-2002 and the 1992-2002 periods since market shares increase in all countries during both periods. For the period of 1998-2002, all five effects are positive in China and Korea whereas market share, commodity composition and commodity adaptation effects are positive in Japan, Malaysia and Singapore. In the

²² See Tables D.15-D.29 in the Appendix D.

1992-2002 period, all five effects are positive in Malaysia, three effects are positive in China, Japan and Korea whereas only the market share effect is positive in Singapore.

Market shares in the sector 874- Measuring, checking, analyzing and controlling instruments increase in three countries- China, Japan and Singapore- during the 1992-1997 period. In China, market share, market composition and market adaptation effects are positive. In Japan, market share, commodity composition and commodity adaptation effects are positive and in Singapore, all five effects are positive. In the 1992-2002 period, 874 increases in China, Japan and Singapore. Market share, commodity composition and commodity adaptation effects are positive in Japan and Singapore and all five effects are positive in China²³.

The above explanations once again show that the sectors 778, 784 and 874 have superior export performances in terms of both the number of countries in which Turkey's market shares increase and the number of positive CMS effects which trigger these market share increases. Technological characteristics of these sectors are quite interesting in the sense that two of these three sectors- 778, 874- belong to the difficult-to imitate research intensive goods category. Coping with the technology leaders of the world and being successful in their market might be considered as a success for Turkey even if this success is valid for two commodity groups.

²³ 874 increases in only two countries in the 1998-2002 period, and therefore this period was not included in the Table 11 and in the detailed explanation about this sector.

CHAPTER 5

REVEALED COMPARATIVE ADVANTAGE

RCA is another method which is used in this study in order to evaluate the export performance of Turkey. This method simply tries to compare a country's export performance of a particular good with the world's export performance of that particular good. The concept was first used in the literature by Balassa (1965). He suggested that evaluation of RCA is possible through the use of relative shares of a country in the world exports of individual commodities and through the indication of changes in these relative shares.

His study analyses only seventy-four commodity classes in the manufacturing sector and includes merely the European Common Market and five industrialized countries (United States, Canada, United Kingdom, Sweden, Japan). But his study can be extended to all commodity classes and can be computed for developing countries as well.

Accordingly, Erlat, Erlat and Özçelik (2003) computed RCA indices for 261 commodity groups in Turkey and the European Union (EU) countries together with non-EU member OECD countries. We again will follow and use the methodology and definitions given in their study for the computation of RCA indices.

In this sense, RCA indices are calculated through the use of the following formulation:

$$RCA_i = \frac{X_i / \sum_{i=1}^N X_i}{X_{iw} / \sum_{i=1}^N X_{iw}} \quad i=1, \dots, N$$

where

X_i = Turkey's total exports of commodity i

X_{iw} = World exports of commodity i

N = Number of commodities

Accordingly, if RCA index for commodity i is greater than 1, this commodity is said to have comparative advantage.

The definition of "world" is really important in the computation of RCA. Its definition may change according to the purpose of the research. It can be total world exports, total exports of a country group or even a single country. Here, X_{iw} is calculated by the summation of total exports of five East-Asian countries together with Turkey, i.e. China, Japan, Korea, Malaysia, Singapore and Turkey.

Firstly, RCA indices for these six countries are computed and sectors whose RCA averages are greater than one are selected and classified according to their technological characteristics.

Results are summarized in Table 13 and Table 14.

Table 13: Number of Sectors Which Have RCA Greater Than Unity

	RMIG	LIG	CIG	EIRIG	DIRIG	Total
China	47	48	14	11	5	125
Japan	8	9	17	14	44	92
Korea	17	26	12	9	13	77
Malaysia	36	11	5	7	8	67
Singapore	29	6	12	13	13	73
Turkey	45	35	19	6	6	111

**Table 14: Percentage Distribution of Sectors Which Have
RCA Greater Than Unity**

	RMIG	LIG	CIG	EIRIG	DIRIG	Total
China	37,6	38,4	11,2	8,8	4,0	100
Japan	8,7	9,8	18,5	15,2	47,8	100
Korea	22,1	33,8	15,6	11,7	16,9	100
Malaysia	53,7	16,4	7,5	10,4	11,9	100
Singapore	39,7	8,2	16,4	17,8	17,8	100
Turkey	40,5	31,5	17,1	5,4	5,4	100

Among these six countries, China is at the first place when the number of sectors with comparative advantage is concerned. China had comparative advantage in 125 sectors out of 260 sectors. About 38.4 percent of these sectors are labor intensive. Raw material intensive sectors are the second major category with 37.6 percent. Capital intensive goods, easy-to-imitate and difficult-to-imitate research intensive goods are relatively less significant since they have 11.2 percent, 8.8 percent and 4.0 percent shares respectively.

Turkey is at the second place since she has comparative advantage in 111 sectors. Distribution of sectors is quite similar to China. Raw material intensive goods take the lion's share with 40.5 percent. Labor intensive goods are the second major category with 31.5 percent while capital intensive goods account for 17.1 percent. Easy-to-imitate and difficult-to-imitate research intensive goods have only 5.4 percent share.

Japan has comparative advantage in 92 sectors but the distribution of sectors is quite different. As opposed to China and Turkey, difficult-to-imitate research intensive goods constitute the most important category in Japan's export performance with 47.8 percent share. This fact is not surprising in the sense that Japan is the world leader in technology. Capital intensive goods and easy-to-imitate research intensive goods have close shares which are 18.5 and 15.2 respectively. Japan is relatively less competitive in raw material intensive and labor intensive goods which have percentages of 8.7 and 9.8.

Korea has comparative advantage in 77 sectors. Korea is most competitive in labor intensive sectors which make up of 33.8 percent of all competitive sectors.

Raw material intensive goods, difficult-to-imitate research intensive goods, capital intensive goods and easy-to-imitate research intensive goods do not differ much and have shares of 22.1 percent, 16.9 percent, 15.6 percent and 11.7 percent in a descending order.

Singapore has comparative advantage in 73 sectors. Raw material intensive goods comprise the major category with 29 sectors. Difficult-to-imitate and easy-to-imitate research intensive goods have equal shares and both sector groups have 17.8 percent share. Capital intensive goods follow these sectors with 16.4 percent. Labor intensive goods have only 8.2 percent share and there are only 6 competitive sectors out of 73 sectors that are of labor intensive goods.

Malaysia is at the last place when the number of sectors which have comparative advantage is concerned. She has comparative advantage only in 67 sectors. Raw material intensive goods are the leading category with 36 sectors and capital intensive goods are at the final place with 5 sectors.

Turkey's RCA performance is given in Appendix Table D.30 in detail. The last two columns indicate the 1992-2002 period average and the last three year's period average respectively. Bold numbers specify the sectors whose revealed comparative indices are greater than one. These competitive sectors are selected and represented in Table 15.

Table 15: Sectors in which Turkey has Revealed Comparative Advantage

SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr. Av.
001	6,52	12,91	10,32	6,42	4,00	3,82	2,37	0,80	0,20	2,85	1,98	4,74	1,68
012	2,29	2,26	2,42	0,81	0,65	0,68	0,67	0,52	0,58	0,68	0,71	1,12	0,66
022	0,26	0,53	0,71	1,20	0,79	0,73	1,03	0,71	1,06	1,63	1,15	0,89	1,28
023	3,60	3,87	1,20	2,43	3,60	2,19	1,19	1,35	1,26	1,16	1,40	2,11	1,27
024	25,45	28,31	28,34	29,41	25,55	27,27	22,34	24,77	25,27	22,26	23,82	25,71	23,78
025	0,28	0,90	4,25	4,74	7,15	9,50	10,79	6,35	1,78	6,70	1,41	4,90	3,29
041	41,78	38,85	38,28	38,60	26,44	29,39	33,24	36,76	41,72	24,92	3,92	32,17	23,52
043	42,11	43,63	43,41	42,74	38,88	35,81	33,27	35,09	41,77	33,62	32,08	38,40	35,82
044	0,20	0,35	0,60	5,65	5,27	0,20	0,36	0,42	0,16	0,44	0,30	1,27	0,30
045	0,10	0,89	0,18	0,10	0,46	0,45	0,29	6,13	2,33	0,25	0,05	1,02	0,88
046	18,19	15,50	18,00	18,55	14,93	18,80	11,62	8,11	12,16	5,25	7,07	13,47	8,16
047	1,29	1,25	0,90	3,25	3,09	2,08	1,19	0,89	0,65	0,40	0,59	1,42	0,55

Table 15 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
048	6,59	7,16	7,91	11,40	12,34	11,38	10,16	6,52	6,98	6,39	6,92	8,52	6,76
054	10,20	10,50	8,01	8,13	9,34	9,28	7,36	5,75	6,31	6,04	4,65	7,78	5,66
056	9,90	9,30	9,49	7,62	8,64	8,62	8,03	7,69	7,27	5,99	5,12	7,97	6,13
057	23,81	24,66	24,59	24,93	22,17	22,52	22,20	23,56	24,95	21,72	19,03	23,10	21,90
058	10,98	14,83	16,45	14,20	13,12	14,64	13,51	12,69	12,61	10,04	8,71	12,89	10,45
059	24,18	19,79	20,66	21,69	20,65	12,98	12,39	11,88	7,95	5,93	4,24	14,76	6,04
061	5,63	6,73	9,55	0,90	1,02	6,04	6,29	10,10	12,15	12,94	5,23	6,96	10,11
062	5,91	8,92	15,32	15,64	14,79	13,40	12,21	9,65	9,66	8,40	7,25	11,01	8,44
072	0,01	0,02	0,04	0,29	0,23	0,44	0,25	1,34	2,58	2,80	2,10	0,92	2,49
073	8,77	11,51	12,87	17,10	15,38	15,48	13,23	11,32	12,39	10,07	9,95	12,55	10,80
074	0,66	4,54	0,70	0,47	0,61	1,43	1,13	0,47	0,60	0,35	0,41	1,03	0,45
075	5,38	6,14	4,51	3,29	3,50	3,09	3,70	3,03	3,60	3,68	4,01	4,00	3,76
091	17,04	18,54	18,60	19,42	19,72	13,82	13,70	12,68	11,00	8,82	8,53	14,72	9,45
098	1,79	2,08	2,04	2,02	2,33	2,63	2,39	2,06	2,25	1,76	1,91	2,11	1,97
111	0,84	0,87	1,73	3,92	4,16	2,57	1,83	1,24	1,26	0,80	0,82	1,82	0,96
112	1,03	1,23	1,78	2,18	2,18	1,50	1,38	1,18	1,17	1,00	0,96	1,42	1,04
121	27,24	31,37	33,40	28,04	30,03	25,85	23,93	24,53	28,73	21,45	18,13	26,61	22,77
122	0,82	1,10	0,64	2,35	1,42	1,82	1,12	2,15	3,64	1,82	2,11	1,73	2,52
211	0,54	0,80	0,43	0,83	1,10	0,50	5,22	3,49	9,05	7,77	7,82	3,41	8,21
212	1,05	1,04	1,73	1,34	1,83	1,89	0,69	1,03	0,16	0,25	0,02	1,00	0,14
223	3,41	6,96	7,17	8,25	11,35	14,71	14,68	15,66	11,28	8,57	8,06	10,01	9,30
263	7,60	16,35	8,39	12,68	28,11	20,29	15,62	10,13	7,34	14,19	8,90	13,60	10,14
264	0,00	0,01	0,09	0,75	5,09	8,99	6,18	0,65	0,32	1,42	1,89	2,31	1,21
266	1,69	1,10	2,14	2,12	1,81	1,43	1,72	1,94	2,26	2,41	2,42	1,91	2,36
269	2,17	2,02	2,80	2,95	2,59	2,68	3,99	2,82	2,81	2,32	2,59	2,70	2,57
273	2,15	2,30	2,28	2,79	3,12	3,97	4,89	7,11	7,52	9,42	9,65	5,02	8,86
277	8,59	3,71	3,57	3,99	4,17	2,88	3,39	2,64	2,79	2,11	2,73	3,69	2,55
278	9,95	9,25	8,84	7,52	7,35	6,46	6,46	7,58	7,74	5,50	5,62	7,48	6,29
281	0,64	0,39	0,00	0,10	1,87	3,71	0,61	1,01	4,03	7,13	0,62	1,83	3,93
282	1,26	1,50	4,02	1,83	1,38	1,10	0,80	0,92	1,34	0,66	0,65	1,40	0,88
283	5,33	5,91	5,68	16,45	14,69	22,15	22,88	29,98	39,79	31,79	30,18	20,44	33,92
285	3,71	4,99	2,83	4,81	3,13	3,11	2,10	2,65	2,83	3,81	1,37	3,21	2,67
287	11,63	9,26	11,10	22,39	20,09	15,22	14,55	13,03	15,38	7,25	6,36	13,29	9,66
288	0,37	0,45	2,18	1,90	2,56	2,23	2,38	2,20	2,46	2,09	2,02	1,89	2,19
289	0,00	0,07	0,77	1,60	3,48	1,92	0,00	0,06	1,39	0,10	1,92	1,03	1,13
291	3,18	3,54	2,56	2,31	2,24	2,17	2,07	2,25	1,89	1,31	1,62	2,29	1,61
292	1,26	1,36	1,26	1,74	1,06	1,09	1,29	1,37	1,05	0,97	1,21	1,24	1,08
322	0,06	1,52	16,07	1,20	12,01	1,39	3,44	1,98	2,39	0,45	1,37	3,81	1,40
344	7,17	3,38	2,26	2,38	1,76	1,46	1,58	2,61	1,69	1,78	1,53	2,51	1,67
351	0,00	0,00	0,22	0,13	2,41	0,87	1,10	0,93	1,40	1,03	0,80	0,81	1,08
411	2,98	2,35	3,47	9,49	8,16	1,21	1,08	0,81	1,61	0,39	2,66	3,11	1,55
421	22,32	12,53	7,20	12,67	8,84	7,09	8,44	15,25	8,80	14,10	7,91	11,38	10,27
431	0,53	4,22	3,08	3,19	3,04	3,28	2,47	1,42	1,25	0,64	0,56	2,15	0,82
523	5,29	4,73	4,74	3,91	0,56	3,81	4,29	5,10	4,92	3,20	3,25	3,98	3,79
532	8,54	5,32	7,00	10,77	9,84	9,65	9,89	9,95	10,52	7,03	6,37	8,63	7,98

Table 15 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
542	1,98	3,15	2,61	1,43	1,64	1,77	1,67	1,22	1,58	1,46	1,65	1,83	1,56
551	1,03	1,00	0,89	1,01	0,80	0,69	0,88	1,04	1,56	1,14	1,12	1,02	1,27
553	0,50	0,31	0,48	0,79	1,32	1,73	1,67	1,21	1,70	1,49	1,51	1,16	1,57
554	5,06	4,86	5,19	8,03	9,36	9,86	8,61	7,64	7,37	6,37	6,10	7,13	6,61
562	3,36	1,60	2,69	1,33	1,01	0,45	0,95	0,54	0,37	0,85	1,60	1,34	0,94
581	0,58	0,71	0,78	0,98	1,03	1,40	1,78	2,69	3,38	5,55	4,57	2,13	4,50
582	0,49	0,41	0,59	0,94	0,87	1,03	1,17	0,99	1,16	1,09	1,08	0,89	1,11
583	0,31	1,05	2,08	3,65	6,48	9,80	9,38	6,83	8,43	7,67	10,09	5,98	8,73
591	1,73	2,03	1,25	1,17	1,02	1,00	0,76	0,63	0,97	0,71	0,65	1,08	0,78
612	1,86	1,33	0,97	1,27	1,05	1,21	0,81	0,65	1,00	0,91	0,53	1,05	0,81
613	0,93	1,48	0,80	2,39	3,29	2,82	3,26	2,86	2,04	1,20	1,54	2,06	1,60
621	1,05	0,82	0,88	1,21	0,94	1,03	1,60	1,91	2,34	2,26	2,00	1,46	2,20
625	1,78	1,81	1,96	1,83	1,36	1,43	1,32	1,43	1,78	1,90	1,71	1,66	1,80
629	0,33	0,30	0,31	0,44	0,51	0,53	0,98	1,02	1,08	1,01	1,35	0,71	1,14
642	0,78	0,64	0,71	1,01	1,43	1,65	1,72	1,75	1,98	2,25	2,75	1,52	2,33
651	4,26	3,69	5,12	3,74	3,48	3,66	4,01	4,42	4,58	4,23	3,12	4,03	3,98
652	2,10	2,04	3,21	2,94	3,11	3,15	3,38	2,86	3,21	3,22	2,83	2,91	3,09
653	0,87	1,12	1,22	1,79	1,52	1,66	2,00	2,13	2,23	2,03	2,22	1,71	2,16
654	0,66	0,86	0,86	1,33	1,68	1,49	1,60	2,02	2,20	1,55	1,51	1,43	1,75
655	1,56	1,30	2,25	1,20	1,56	1,78	1,77	2,04	1,87	1,71	1,54	1,69	1,71
656	1,44	2,06	2,29	2,54	2,69	2,85	3,34	4,36	4,95	5,48	5,22	3,38	5,22
657	1,53	1,57	1,23	1,47	1,70	1,97	1,56	1,39	1,52	1,49	1,59	1,55	1,53
658	5,70	5,38	5,30	6,21	6,72	7,37	7,76	7,92	8,44	6,74	6,45	6,73	7,21
659	12,81	14,46	11,70	12,21	14,78	14,34	13,56	12,95	14,38	10,70	10,09	12,91	11,72
661	5,31	4,32	5,17	4,51	4,02	4,81	5,77	6,72	9,04	7,81	8,30	5,98	8,38
662	6,41	8,03	7,91	9,03	9,72	9,43	9,49	11,43	11,72	8,84	7,78	9,07	9,45
664	2,53	1,74	1,35	1,17	1,23	1,48	1,38	1,32	1,44	1,40	1,28	1,48	1,38
665	7,18	7,06	6,41	6,27	6,52	7,15	7,47	6,68	6,83	5,66	4,91	6,56	5,80
671	3,45	2,99	2,22	1,43	1,73	1,46	1,07	1,79	1,16	0,71	0,80	1,71	0,89
672	20,67	25,22	18,27	9,59	8,49	7,34	4,86	4,16	6,15	8,98	11,18	11,36	8,77
673	0,69	0,60	1,28	0,47	0,95	1,40	0,93	1,05	1,25	1,75	1,26	1,06	1,42
676	8,98	11,79	13,10	11,18	11,52	11,09	8,67	11,20	11,31	11,15	9,96	10,90	10,81
679	1,09	1,13	1,50	2,26	1,56	1,75	1,51	1,84	2,50	2,66	3,19	1,91	2,78
682	1,58	1,61	1,31	1,43	1,60	1,41	1,04	1,04	1,34	1,23	0,86	1,31	1,15
684	2,08	1,81	1,82	1,79	2,03	1,73	2,28	2,25	2,66	2,32	1,76	2,05	2,25
691	0,72	0,82	1,42	1,30	2,73	2,19	2,91	2,19	2,73	2,71	2,63	2,03	2,69
692	1,40	1,19	1,43	1,70	1,43	1,47	2,35	2,35	2,57	2,88	2,81	1,96	2,76
693	2,75	2,37	2,04	1,93	2,36	2,76	2,74	3,36	4,48	3,43	3,58	2,89	3,83
697	3,85	2,26	2,18	2,25	2,24	2,23	2,19	2,22	2,35	2,17	2,25	2,38	2,26
713	0,27	0,20	0,29	0,34	0,37	0,42	0,60	0,62	0,81	1,10	1,12	0,56	1,01
714	0,05	0,23	0,80	0,81	1,74	1,37	1,44	1,54	1,32	1,05	1,10	1,04	1,16
721	0,87	1,02	1,17	1,45	1,80	1,74	1,49	1,52	1,95	2,69	1,74	1,59	2,13
722	0,02	0,10	0,03	0,01	0,43	0,26	0,76	1,00	1,61	1,02	1,08	0,57	1,24
727	2,39	3,25	3,77	3,22	3,25	7,35	7,03	5,46	6,24	4,92	4,75	4,69	5,31
733	0,46	0,35	0,41	0,45	0,48	0,74	1,22	1,46	1,36	1,57	1,94	0,95	1,63

Table 15 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
761	1,15	0,83	0,79	0,95	0,94	1,89	3,57	3,47	3,66	3,04	3,75	2,18	3,48
773	2,89	2,65	2,79	2,99	3,26	2,60	2,62	2,28	2,48	2,61	2,70	2,71	2,60
775	0,98	1,22	1,46	1,99	1,86	1,97	2,10	2,09	2,13	1,89	2,17	1,81	2,06
782	0,02	0,05	0,06	0,18	0,15	0,13	0,12	0,20	0,53	2,00	3,02	0,59	1,85
783	1,16	2,04	2,57	3,61	5,29	3,44	3,97	6,29	6,42	6,02	5,50	4,21	5,98
786	0,42	1,56	2,03	1,55	1,55	1,47	0,93	0,56	0,52	0,51	0,61	1,06	0,55
792	0,00	0,01	0,33	0,06	0,49	1,33	1,01	4,24	6,54	4,25	1,28	1,78	4,03
811	7,31	11,99	10,38	6,95	4,99	4,55	8,99	5,74	6,57	4,35	6,76	7,14	5,89
812	18,99	19,28	18,56	17,77	16,64	15,94	16,79	17,91	19,22	15,55	15,16	17,44	16,64
841	2,69	2,97	2,70	4,12	3,63	3,47	3,65	3,73	3,73	3,19	3,74	3,42	3,55
842	4,12	4,41	4,01	5,88	5,70	5,29	5,52	5,91	6,21	5,34	5,36	5,25	5,64
843	3,72	4,08	4,66	6,67	6,28	4,49	4,15	4,08	3,76	3,12	3,20	4,38	3,36
844	14,27	14,41	11,22	13,96	11,07	7,59	7,18	7,08	7,68	6,12	5,79	9,67	6,53
845	7,27	7,57	7,52	8,57	8,12	6,85	6,77	6,46	6,35	5,05	5,25	6,89	5,55
846	3,29	3,78	4,31	5,14	5,09	4,01	3,96	4,44	4,33	3,95	3,99	4,21	4,09
848	4,95	5,00	4,55	4,20	2,91	2,99	2,53	2,52	2,58	2,13	1,98	3,30	2,23
891	1,89	1,37	1,50	2,94	6,10	6,05	1,58	5,81	7,45	7,49	12,60	4,98	9,18
896	0,01	0,02	0,09	0,10	0,25	0,05	0,99	0,21	4,64	0,65	0,30	0,66	1,86
897	0,32	0,60	0,84	0,92	1,68	1,97	1,99	2,92	4,23	4,25	5,04	2,25	4,51
961	0,00	0,00	0,22	2,41	7,12	3,82	5,10	5,90	6,23	0,31	1,14	2,93	2,56

Table 15 offers four different information about the RCA performance of Turkey. The first information we gather concerns the sectors whose RCA averages are smaller than one for the whole period but greater than one in the last three years. In other words, it represents rising sectors. There are ten sectors in this category which can be listed as follows:

- 022- Milk and cream and milk products other than butter or cheese
- 072- Cocoa
- 351- Electric current
- 582- Plates, sheets, film, foil and strip of plastics
- 629- Articles of rubber, n.e.s.
- 713- Steam turbines and other vapor turbines, and parts thereof, n.e.s.
- 722- Tractors (other than mechanical handling equipment)
- 733- Machine tools for working metal, sintered metal carbides or cermets, without removing material
- 782- Motor vehicles for the transport of goods and special purpose motor vehicles

896- Works of art, collectors' pieces and antiques

The second type of information is just the opposite of the first situation. It represents the sectors whose RCA averages are greater than one for the whole period but smaller than one in the last three years. In other words, it represents declining sectors. There are fourteen sectors in this category which can be recorded as the following:

- 012- Meat, other than of bovine animals, and edible offal, fresh, chilled or frozen
- 044- Maize (not including sweet corn) unmilled
- 045- Cereals, unmilled (other than wheat, rice, barley and maize)
- 047- Cereal meals and flours, n.e.s.
- 074- Tea and mate
- 111- Nonalcoholic beverages, n.e.s.
- 212- Furskins, raw (including furskin heads, tails and other pieces or cuttings, suitable for furriers' use)
- 282- Ferrous waste and scrap; remelting ingots of iron or steel
- 431- Animal or vegetable fats and oils processed; waxes and inedible mixtures or preparations of animal or vegetable fats or oils, n.e.s.
- 562- Fertilizers (other than those of group 272)
- 591- Insecticides, fungicides, herbicides, plant growth regulators, etc., disinfectants and similar products, put up or packed for retail sale, etc.
- 612- Manufactures of leather or composition leather, n.e.s.; saddlery and harness
- 671- Pig iron and sponge iron, iron or steel granules and powders and ferroalloys
- 786- Trailers and semi-trailers; other vehicles, not mechanically propelled; specially designed and equipped transport containers

Third type of information we obtain from Table 15 is about the sectors whose RCA averages are greater than one both in the 1992-2002 period and in the

last three years. However, these sectors have increasing RCA values in the last three years compared to the 1992-2002 period. There are forty-one sectors in this category which are:

- 061- Sugars, molasses, and honey
- 122- Tobacco, manufactured
- 211- Hides and skins (except furskins), raw
- 266- Synthetic fibers suitable for spinning
- 273- Stone, sand and gravel
- 281- Iron ore and concentrates
- 283- Copper ores and concentrates; copper mattes; cement copper
- 288- Nonferrous base metal waste and scrap, n.e.s.
- 289- Ores and concentrates of precious metals; waste, scrap and sweepings of precious metals (other than gold)
- 551- Essential oils, perfume and flavor materials
- 553- Perfumery, cosmetics, or toilet preparations, excluding soaps
- 581- Tubes, pipes and hoses of plastics
- 583- Monofilament with a cross-sectional dimension exceeding 1 mm
- 621- Materials of rubber, including pastes, plates, sheets, rods, thread, tubes, etc.
- 625- Rubber tires, interchangeable tire treads, tire flaps and inner tubes for wheels of all kinds
- 642- Paper and paperboard, cut to size or shape, and articles of paper or paperboard
- 652- Cotton fabrics, woven (not including narrow or special fabrics)
- 653- Woven fabrics of manmade textile materials (not including narrow or special fabrics)
- 654- Woven fabrics of textile materials, other than cotton or manmade fibers and narrow or special fabrics
- 655- Knitted or crocheted fabrics (including tubular knit fabrics, n.e.s., pile fabrics and open-work fabrics), n.e.s.
- 656- Tullies, lace, embroidery, ribbons, trimmings and other small wares

- 658- Made-up articles, wholly or chiefly of textile materials, n.e.s.
- 661- Lime, cement, and fabricated construction materials, except glass and clay materials
- 662- Clay construction materials and refractory construction materials
- 673- Iron or non-alloy steel flat-rolled products, not clad, plated or coated
- 679- Iron and steel tubes, pipes and hollow profiles, fittings for tubes and pipes
- 684- Aluminum
- 691- Metal structures and parts, n.e.s., of iron, steel or aluminum
- 692- Metal containers for storage or transport
- 693- Wire products (excluding insulated electrical wiring) and fencing grills
- 714- Engines and motors, non-electric
- 721- Agricultural machinery (excluding tractors) and parts thereof
- 727- Food-processing machines (excluding domestic)
- 761- TV receivers (including video monitors & projectors)
- 775- Household type electrical and non-electrical equipment, n.e.s.
- 783- Road motor vehicles, n.e.s.
- 792- Aircraft and associated equipment; spacecraft (including satellites) and spacecraft launch vehicles; and parts thereof
- 841- Men's or boys' coats, jackets, suits, trousers, shirts, underwear etc. of woven textile fabrics (except swimwear and coated or laminated apparel)
- 842- Women's or girls' coats, capes, jackets, suits, trousers, dresses, skirts, underwear, etc. of woven textiles (except swimwear and coated etc. apparel)
- 891- Arms and ammunition
- 897- Jewelry, goldsmiths' and silversmiths' wares, and other articles of precious or semiprecious materials, n.e.s.

Finally, the last category includes sectors whose RCA averages are again greater than one both in the 1992-2002 period and in the last three years but these sectors have decreasing RCA values in the last three years compared to the 1992-2002 period. There are fifty-seven sectors in this category which are:

- 001- Live animals
- 023- Butter and other fats and oils derived from milk
- 024- Cheese and curd
- 025- Birds' eggs and egg yolks, fresh, dried or otherwise
- 041- Wheat (including spelt) and meslin, unmilled
- 043- Barley, unmilled
- 046- Meal and flour of wheat and flour of meslin
- 048- Cereal preparations and preparations of flour or starch of fruits or vegetables
- 054- Vegetables, fresh, chilled, frozen or simply preserved; roots, tubers and other edible vegetable products, n.e.s., fresh or dried
- 056- Vegetables, roots and tubers, prepared or preserved, n.e.s.
- 057- Fruit and nuts (not including oil nuts), fresh or dried
- 058- Fruit preserved, and fruit preparations (excluding fruit juices)
- 059- Fruit juices (incl. grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sweetening matter
- 062- Sugar confectionery
- 073- Chocolate and other food preparations containing cocoa, n.e.s.
- 075- Spices
- 091- Margarine and shortening
- 098- Edible products and preparations, n.e.s
- 112- Alcoholic beverages
- 121- Tobacco, unmanufactured; tobacco refuse
- 223- Oil seeds and oleaginous fruits, whole or broken, of a kind used for extracting other fixed vegetable oils
- 263- Cotton textile fibers
- 264- Jute and other textile bast fibers, n.e.s., raw or processed but not spun; tow and waste of these fibres
- 269- Worn clothing and other worn textile articles; rags
- 277- Natural abrasives, n.e.s. (including industrial diamonds)

278- Crude minerals, n.e.s.
285- Aluminum ores and concentrates (including alumina)
287- Ores and concentrates of base metals, n.e.s.
291- Crude animal materials, n.e.s.
292- Crude vegetable materials, n.e.s.
322- Briquettes, lignite and peat
344- Petroleum gases and other gaseous hydrocarbons, n.e.s.
411- Animal oils and fats
421- Fixed vegetable fats and oils, soft, crude, refined or fractionated
523- Metallic salts and peroxy salts of inorganic acids
532- Dyeing and tanning extracts, and synthetic tanning materials
542- Medicaments (including veterinary medicaments)
554- Soap, cleansing and polishing preparations
613- Furskins, tanned or dressed (including pieces or cuttings), assembled or unassembled without the addition of other materials, other than apparel, etc.
651- Textile yarn
657- Special yarns, special textile fabrics and related products
659- Floor coverings, etc.
664- Glass
665- Glassware
672- Iron or steel ingots and other primary forms, and semifinished products of iron or steel
676- Iron and steel bars, rods, angles, shapes and sections, including sheet piling
682- Copper
697- Household equipment of base metal, n.e.s.
773- Equipment for distributing electricity, n.e.s.
811- Prefabricated buildings
812- Sanitary, plumbing and heating fixtures and fittings, n.e.s.

- 843- Men's or boys' coats, capes, jackets, suits, blazers, trousers, shirts, etc.
(except swimwear or coated apparel), knitted or crocheted textile fabric
- 844- Women's or girls' coats, capes, jackets, suits, trousers, dresses, underwear,
etc. (except swimwear and coated etc. apparel), knitted or crocheted
- 845- Articles of apparel, of textile fabrics, whether or not knitted or crocheted,
n.e.s.
- 846- Clothing accessories, of textile fabrics, whether or not knitted or crocheted
(other than those for babies)
- 848- Articles of apparel and clothing accessories of other than textile fabrics;
headgear of all materials
- 961- Coin (other than gold coin), not being legal tender

In sum, when 122 sectors in the Table 15 are considered altogether, it is observed that in the last three years; 10 sectors have RCA values which exceed one and 14 sectors have values which fall below one. The remaining 98 sectors have greater than unity RCAs in both periods. However, RCA values of 57 sectors among these 98 sectors are decreasing. This situation signals a continuous change in the RCA performance of Turkey in the East-Asian market. This change also takes place in the technological characteristics of the sectors. While DIRIG increases its share from 5.41 percent to 8.33 percent in the last three years, RMIG's share decreases from 40.54 percent to 35.19 percent. (Table 16)

**Table 16: Technological Characteristics of the Sectors with
RCA greater than unity (%)**

	RMIG	LIG	CIG	EIRIG	DIRIG	Total
1992-2002	40,54	31,53	17,12	5,41	5,41	100
2000-2002	35,19	33,33	17,59	5,56	8,33	100

CHAPTER 6

MEASUREMENT OF INTRA-INDUSTRY TRADE: GRUBEL-LLYOD INDEX

The last index which was used in the evaluation of Turkey's export performance is the Grubel and Lloyd (GL) index which was developed in 1971 in order to measure the rate of intra-industry trade (IIT). IIT is found by subtracting the absolute value of the difference between exports and imports $|X_i - M_i|$ from total trade $(X_i + M_i)$. Then this index can be expressed as a percentage with the help of the following formula:

$$ITT_i = \frac{(X_{it} + M_{it}) - |X_{it} - M_{it}|}{(X_{it} + M_{it})} \times 100$$

where

$i = 1, \dots, N$ and $t = 1, \dots, T$

$N =$ number of commodities

$X_{it} =$ Exports of industry i at time t .

$M_{it} =$ Imports of industry i at time t .

The aggregated IIT index can be stated as follows:

$$ITT = \frac{\sum_i^N (X_{it} + M_{it}) - \sum_i^N |X_{it} - M_{it}|}{\sum_i^N (X_{it} + M_{it})} \times 100$$

$t = 1, \dots, T$

Values of IIT differ between 0 and 100. In one extreme, when the value of the exports of commodity *i* is exactly equal to the value of the imports of commodity *i*, the index takes on the value of 100 and at the other extreme, when there are exports (imports) of commodity *i* but there are no imports (exports) of it, the index takes the value of 0 indicating that there is no intra-industry trade.

The aggregated GL index for trade between Turkey and East-Asian countries is given in Table 17.

Table 17 : The Aggregated Grubel-Lloyd Index (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Average
China	1,16	1,62	1,91	1,66	2,76	2,31	4,49	3,82	2,86	6,02	7,67	3,30
Japan	4,20	2,88	3,94	2,65	3,04	1,69	1,50	2,14	2,31	2,22	2,13	2,61
Korea	0,62	1,52	5,23	2,82	2,66	1,36	0,72	5,52	4,20	4,16	5,56	3,12
Malaysia	2,42	2,17	2,63	2,81	4,20	3,82	2,64	4,06	4,94	5,22	5,32	3,66
Singapore	1,36	2,15	2,91	3,78	3,70	3,68	5,18	5,44	5,95	6,59	6,60	4,30

For China, the GL index follows a relatively stable progress in the pre-crisis period. Between 1996 and 1999, it fluctuates continuously and has an upward trend in the last two years. This increase may be related to the increase in the share of RMIG from 4.86 percent to 7.45 percent in the imports from China between 2000 and 2002 since RMIG has also an important share in the exports to China²⁴.

The GL index of trade with Japan has a declining trend in the pre-crisis period although it fluctuates between 4.20 percent and 1.69 percent. In the post-crisis period it became stable around 2 percent.

Although the GL index of trade with Korea has a period average of 3.12 percent, it does not have any trend and fluctuates continuously.

²⁴ See Tables D.5 and D.6 in the Appendix D.

The index for Malaysia has a relatively stable trend in the pre-crisis period until 1996. Between 1996 and 1998 the index decreases continuously and after 1998 it gains an upward trend. Since RMIG has the highest share in the imports from Malaysia, this upward trend may be related with significant rise in the share of RMIG in the exports from Malaysia after 1998²⁵.

Singapore has an interestingly upward trend in the whole period. Since Turkey imported mostly EIRIG and DIRIG from Singapore, this trend in the GL index may be related to the increase in the share of DIRIG in the exports to Singapore after the Asian crisis of 1997²⁶.

In sum, Table 17 indicates that the level of intra-industry trade is very low in trade with these countries and all figures are less than 10 percent. In fact, the reason for this situation is inherent in the Tables D.5- D.14 of the Appendix D. The technological characteristics of the goods which are exported to East-Asia and imported from these countries are quite different. While raw material intensive goods, labor intensive goods and capital intensive goods constitute the major categories in the exports to East-Asia, easy-to-imitate and difficult-to imitate research intensive goods are significant in the imports from them.

²⁵ See Table D.11 and D.12 in the Appendix D.

²⁶ See Tables D.13 and D.14 in the Appendix D.

CHAPTER 7

EVALUATION OF THE RISING SECTORS IN THE EXPORT PERFORMANCE OF TURKEY WITH RESPECT TO EAST-ASIAN COUNTRIES

In this study, mainly three methodologies were used in order to evaluate the export performance of Turkey with respect to East-Asian countries. These are CMSA, RCA and the GL index whose results were summarized in Chapters 4, 5 and 6 respectively. From Chapter 6, we saw that the level of intra-industry trade was very low in trade with these countries and therefore this analysis was not represented at the sectoral level. In this sense, the results of GL analysis were not considered in this chapter and rising sectors were selected according to the results of the CMSA and RCA. These results are also compared with the results of Erlat, Erlat and Özçelik (2003) in order to judge the export performance of Turkey in the East-Asian countries against EU and non-EU member OECD countries. The comparison of the Turkish export performance in the East-Asian countries against Middle-East countries is included only in general terms at the end of this chapter since Erlat and Erlat (2004) does not present the CMSA and RCA results at the sectoral level.

Accordingly, rising sectors in the East-Asian countries were selected from the sectors in Tables 10, 11 and 12 whose RCA indices are greater than one in the 1992-2002 period, in the last three years or both. Results are presented in Table 18.

058- Fruit preserved and fruit preparations, 062- Sugar confectionery, 121- Tobacco, 659- Floor coverings, 665- Glassware, 697- Household equipment of base metal, n.e.s. and 845- Articles of apparel, of textile fabrics all have RCA averages which are greater than one both in the 1992-2002 period and in the last three years

Table 18: Rising Sectors which were Selected by the CMSA and RCA Methodologies

SITC	Explanation	CMSA			RCA	
		1992-1997	1998-2002	1992-2002	Period Av.	Last 3yr. Av.
058	Fruit preserved, and fruit preparations	(1,5,3,3)	-	(1,1,3,1)	12,89	10,45
062	Sugar confectionery	(3,5,3)	(3,3,3)	-	11,01	8,44
121	Tobacco, unmanufactured; tobacco refuse	(3,5,3)	-	(1,5,1)	26,61	22,77
581	Tubes, pipes and hoses of plastics	-	(5,3,3)	-	2,13	4,50
629	Articles of rubber, n.e.s.	-	(5,3,5)	-	0,71	1,14
642	Paper and paperboard	-	(3,3,5,1,1)	-	1,52	2,33
656	Tulles, lace, embroidery, ribbons etc.	(1,3,3)	(3,1,5,1,3)	(1,3,1)	3,38	5,22
658	Made-up articles, wholly or chiefly of textile materials	-	(3,3,5,3,3)	(3,3,3)	6,73	7,21
659	Floor coverings, etc	(3,3,3,3)	-	-	12,91	11,72
665	Glassware	-	(3,5,1,3)	-	6,56	5,80
697	Household equipment of base metal, n.e.s.	(3,3,3)	(5,1,3)	-	2,38	2,26
713	Steam turbines and other vapor turbines etc.	-	(5,3,3,3,3)	-	0,56	1,01
842	Women's or girls' of woven textiles	-	(3,3,5,3)	-	5,25	5,64
845	Articles of apparel, of textile fabrics	-	(5,1,5,3)	-	6,89	5,55
891	Arms and ammunition	-	(3,3,3)	-	4,98	9,18

but these sectors have decreasing RCA values in the last three years compared to the 1992-2002 period. 062, 121, 659, 845 have also decreasing RCA indices in the last three years in the non-EU member OECD countries²⁷. In the EU countries, the situation is quite different and except for 062 and 121 all sectors have increasing RCA values²⁸.

581- Tubes, pipes and hoses of plastics, 642- Paper and paperboard, cut to size or shape, and articles of paper or paperboard, 656- Tullies, lace, embroidery, ribbons, trimmings and other small wares and 658- Made-up articles, wholly or chiefly of textile materials, n.e.s., 842- Women's or girls' woven textiles and 891- Arms and ammunition have RCA averages which are greater than one both in the 1992-2002 period and in the last three years and these sectors have increasing RCA values in the last three years compared to the 1992-2002 period. This situation is also valid for the sectors 656, 658, 842 in the EU countries. RCA indices for 581 and 642 are smaller than one both in the whole period and in the last three years. In the non-EU member OECD countries, 581 has RCA averages which are smaller than one for the whole period but greater than one in the last three years. 656, 658 have increasing but 842 has decreasing RCA values in the last three years. RCA indices for 642 and 891 are smaller than one both in the whole period and in the last three years.

There are two sectors which need special emphasis in Table 18. These sectors are 629- Articles of rubber and 713- Steam turbines and other vapor turbines, and parts thereof. Their RCA averages are smaller than one for the whole period but greater than one in the last three years. In other words, they represent rising sectors of the last three years. Interestingly, these sectors have RCA indices which are smaller than one both in the EU and non-EU member OECD countries.

When we look at the CMS performances of these sectors in the East-Asian countries, from Table 18 we see that they are impressive in these sectors during the 1998-2002 period. In sector 629, market shares of Turkey increase in three countries and, in each country, there are at least three positive CMS effects. The

²⁷ See Erlat, Erlat and Özçelik (2003) , Tables 12 and 13 for the results of the RCA in the non-EU member OECD countries

²⁸ See Erlat , Erlat and Özçelik (2003) ,Tables 10 and 11 for the RCA results in the EU countries

performance of sector 713 is even better. Turkey's market shares increase in all five countries in question. In Japan, Korea, Malaysia and Singapore three CMS effects are positive and in China all five effects are positive²⁹. These sectors have also significant CMS performances in the EU and non-EU member OECD countries³⁰ although their RCA performances are poorer in these countries. This result is interesting in the sense that it may be a signal for Turkey's success in the alternative markets for certain commodity groups.

When CMS performances of the sectors in Table 18 are considered altogether, it is observed that almost all of them have significant performances in the 1998-2002 period. During this period, Turkey's market shares increase in at least three countries in each sector and in each country, at least three of these five effects are positive³¹. When CMS performances of these sectors are considered in the EU countries, it is observed that growing sectors are quite similar with the East-Asian countries. However, different from the East-Asian countries, 058, 121, 656 and 842 have poor performances in the EU countries whereas 058, 062, 121, 581, 659 and 665 have poor performances in the non-EU member OECD countries. Turkey's poor export performance in these sectors in the EU and non-EU member OECD countries but better export performance in the East-Asian countries raises the following question: Should Turkey stop selling these goods in the EU and OECD countries market and direct her exports to the East Asian markets? Even if this statement is true, we can not decide whether an export structure depending on these low-technological, traditional goods is desirable or not. It is another research question and beyond the scope of this study.

Considering the export performance of Turkey in the Middle-East countries, it is seen that Turkey has comparative advantages in 191 sectors in this market³². In this sense, RCA performance of Turkey is better in the Middle-East countries when it is compared to the East Asian countries since Turkey has comparative advantage

²⁹ See Tables D.20-D.24 in the Appendix D.

³⁰ See Erlat, Erlat and Özçelik (2003) , Tables 4 and 9 for the CMS results in the EU and non-EU member OECD countries

³¹ 697-Household equipment of base metal is the only exception for the 1998-2002 period.

³² See Table 10 in Erlat and Erlat (2004)

only in 111 sectors in the East-Asian market³³. Similar to the case of East-Asia, LIG and RMIG constitute the major categories in Turkish exports to the Middle-East countries. However, it is interesting to note that DIRIG has a significant share of 19.4 percent in the exports to the Middle-East countries whereas this share is only 5.4 percent in the exports to East-Asia. When the CMSA performance of Turkey is concerned, it is observed that the market share of the exports of Turkey to the Middle-East countries decreased in the 1998-2000 period and the commodity adaptation effect was the major reason behind this decrease. Only the market share and market composition effects were positive and similar to the East-Asian market, market share effect was the dominant one among the other effects which had positively contributed the change in the market share between two periods³⁴.

³³ See Table 13 of this study.

³⁴ See Table 9 in Erlat and Erlat (2004)

CHAPTER 8

CONCLUSION

Basic motive behind this research was to shed light on the export structure of Turkey and find out promising sectors that encourage her export growth. In this sense, the export performance of the Turkish manufacturing industries with respect to East-Asian countries was analyzed between the years 1992-2002. Using SITC (Rev.3), 3 digit data for 261 sectors and following CMS, RCA and GL methodologies, we tried to discover the locomotive sectors of Turkish exports.

This analysis was different from the previous studies in the sense that Turkish export performance was not studied in the East-Asian countries before. In fact these countries have really significant shares in total world trade and in this sense, they are worth considering as alternative trade markets for Turkey. In addition, this study was very detailed in terms of both the type of data used and the type of information it offers. It gives detailed information about the export performance of Turkey in each of these 261 sectors of the SITC (REV.3), three digit classification.

Three methodologies -CMSA, RCA and GL- were applied together in order to find an answer to our research question. Results of the CMSA show that Turkey's market shares decreased in each of these countries during the 1992-2002 period. When two sub-periods are concerned, we see that market shares increase in Malaysia and Singapore during the 1992-1997 period and in China during the 1998-2002 period. When the CMS effects which contribute positively or negatively to these market share increases are concerned, it is observed that the market share effect is the dominant one in terms of magnitude. Accordingly, increases or decreases in Turkey's market shares are mostly characterized by the changes in the

ratio of Turkish exports to partner country imports. The remaining commodity composition, commodity adaptation, market composition and market adaptation effects are not as dominant as the market share effect. Although the commodity adaptation effect is the least dominant factor, it is interesting to note that this effect is positive in Japan and Korea in all three periods. This indicates that Turkey can adapt its export structure according to the changes in the commodity composition of Japanese and Korean imports. This fact is quite important in the sense that these countries may be seriously considered as new trade partners for Turkey if the magnitude of the commodity composition effect increases enough to provide the overall market share increase of Turkey.

When detailed CMSA tables including five effects about the 3-digit sectors in the Appendix D are examined, it is observed that Turkey has superior export performances in three sectors: 778-Electrical machinery and apparatus, 784- Parts and accessories for tractors, motor cars and other vehicles, 874- Measuring, checking, analyzing and controlling instruments. These sectors were not included in Chapter 7 since their RCA indices are smaller than one both in the 1992-2002 period and in the last three years. However, these sectors are worth considering in this chapter although they were not selected by the RCA methodology. In each of these sectors, Turkish market shares increased in at least three countries and in each country, there are at least three CMSA effects, which positively contribute to these market share increases. Erlat, Erlat and Özçelik (2003) showed that the export performance in these sectors is also noteworthy in the EU and non-EU member OECD countries. Both in the EU countries and non-EU member OECD countries, the market share of Turkey in the commodity group 784 increases in each of the 1990-1996, 1997-2000 and 1990-2000 periods. Similarly, 874 increases in both country groups in all three periods. 778 also shows significant trade performance in the EU countries although the same success cannot be achieved in the non-EU member OECD countries.

Significant export performance of these three sectors in the East-Asia, EU and non-EU member OECD³⁵ countries is quite interesting in the sense that Turkey

³⁵ Except for the commodity group 778 in the non-EU member OECD countries

does not have comparative advantage in these sectors. As it was mentioned in Chapter 4, two of these three sectors- 778, 874- belong to the DIRIG category. Erlat and Erlat (2004) showed that DIRIG had also a significant share of 19.4 percent in the exports to the Middle-East countries. This situation underlines the fact that Turkey might be successful in different commodity groups even if she diverges from her classical, traditional export structure.

Apart from what CMSA shows, results of the RCA methodology show that out of 122 sectors in which Turkey has comparative advantage, 10 sectors have RCA values which exceed one and 14 sectors have values which fall below one in the last three years. The remaining 98 sectors have greater than unity RCAs in both periods. However, RCA values of 57 sectors among these 98 sectors are decreasing. This change in the RCA performance of Turkey in the East-Asian market also takes place in the technological characteristics of the sectors. While DIRIG increases its share, RMIG's share decreases in the last three years. Accordingly, this signals a change in the traditional export structure of Turkey together with the results of the CMSA.

Results of Chapter 6 show that the level of intra-industry trade is very low in trade with these countries. This low level of intra-industry trade indicates that the structure of Turkish exports (imports) and East-Asian exports (imports) is quite different in terms of commodity groups. Turkey may take advantage from this situation because instead of trying to sell similar products and competing with these countries in the same export markets, she may find different product groups which can help Turkey's penetration into these markets.

When both CMSA and RCA methodologies are considered together, it is observed that Turkey's export performance is noteworthy in fifteen sectors³⁶. These sectors are mostly traditional sectors which belong to the labor-intensive goods³⁷ category. Another common feature of these sectors is their better CMS performance during the 1998-2002 period. This recent increase in the export performance may signal an improvement in trade with these countries.

³⁶ See Table 18.

³⁷ In Table 18, sectors 642, 656, 658, 659, 665, 697, 842, 845 and 891 are labor-intensive. See Appendix C to find out the technological characteristics of the other sectors in this table.

In sum, it is observed that Turkey's export performance is better in the traditional, less-technology intensive goods when RCA indices are considered. However this situation is quite different when the CMSA is taken into account since CMS performances are better in the sectors which Turkey does not have comparative advantage. In this sense, this situation might be seen as a contradiction but in fact it is not. Although Turkey's RCA structure currently depends on traditional goods, results of the Chapter 5 shows that difficult-to-imitate research intensive goods have increased their shares in the last three years while shares of raw material intensive goods have decreased. This signals a change in the RCA structure of Turkey and supports the CMS results. In this sense, these changes once again underline the importance of considering different commodity groups as well as different country markets for better export performance.

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APPENDICES

APPENDIX A

DATA

In this study, SITC (Rev.3), 3 digit data was used for Turkey and five East Asian countries (China, Japan, Korea, Malaysia and Singapore) for the years 1992-2002.

Data about Turkey's foreign trade was obtained from the State Institute of Statistics. Statistics about foreign trade of East Asian countries were downloaded from the United Nations Commodity Trade Statistics Database and the International Trade Center's (ITC) web site.

In the SITC (Rev.3) three-digit data classification, there are 261 sectors. From these sectors, only those that contain data on trade between Turkey and East Asian countries for the years 1992 and 2002 are selected and used in calculations. Since calculations include ratios, sectors that contain the number zero in the denominators of these ratios are excluded as ratios become mathematically indefinite. Given that the number of indefinite sectors is not identical in each calculation, the aggregate number of sectors may be different for each country in each period.

APPENDIX B

STANDARD INTERNATIONAL TRADE CLASSIFICATION, REVISION 3 THREE-DIGIT CLASSIFICATION LEVEL³⁸

- 001 Live animals other than animals of division 03
- 011 Meat of bovine animals, fresh, chilled or frozen
- 012 Meat, other than of bovine animals, and edible offal, fresh, chilled or frozen (except meat and meat offal not suitable for human consumption)
- 016 Meat and edible meat offal, salted, in brine, dried or smoked; edible flours and meals of meat or meat offal
- 017 Meat and edible meat offal, prepared or preserved n.e.s.
- 022 Milk and cream and milk products other than butter or cheese
- 023 Butter and other fats and oils derived from milk
- 024 Cheese and curd
- 025 Birds' eggs and egg yolks, fresh, dried or otherwise preserved, sweetened or not; egg albumin
- 034 Fish, fresh (live or dead), chilled or frozen
- 035 Fish, dried, salted in brine; smoked fish (whether or not cooked before or during the smoking process); flours, meals n pellets r fish, fit f human consumption
- 036 Crustaceans molluscs,aqutc invrtbrts fresh (live/dead) ch salted etc.;
- 037 Fish, crustaceans, molluscs and other aquatic invertebrates, prepared or preserved, n.e.s.
- 041 Wheat (including spelt) and meslin, unmilled
- 042 Rice
- 043 Barley, unmilled
- 044 Maize (not including sweet corn) unmilled
- 045 Cereals, unmilled (other than wheat, rice, barley and maize)
- 046 Meal and flour of wheat and flour of meslin
- 047 Cereal meals and flours, n.e.s.
- 048 Cereal preparations and preparations of flour or starch of fruits or vegetables

³⁸ Abbreviations: *nesoi* means *not elsewhere specified or indicated*; *nspf* means *not specifically provided for*; and *nec* means *not elsewhere classified*.

- 054 Vegetables, fresh, chilled, frozen or simply preserved; roots, tubers and other edible vegetable products, n.e.s., fresh or dried
- 056 Vegetables, roots and tubers, prepared or preserved, n.e.s.
- 057 Fruit and nuts (not including oil nuts), fresh or dried
- 058 Fruit preserved, and fruit preparations (excluding fruit juices)
- 059 Fruit juices (incl. grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sweetening matter
- 061 Sugars, molasses, and honey
- 062 Sugar confectionery
- 071 Coffee and coffee substitutes
- 072 Cocoa
- 073 Chocolate and other food preparations containing cocoa, n.e.s.
- 074 Tea and mate
- 075 Spices
- 081 Feeding stuff for animals (not including unmilled cereals)
- 091 Margarine and shortening
- 098 Edible products and preparations, n.e.s.
- 111 Nonalcoholic beverages, n.e.s.
- 112 Alcoholic beverages
- 121 Tobacco, unmanufactured; tobacco refuse
- 122 Tobacco, manufactured (whether or not containing tobacco substitutes)
- 211 Hides and skins (except furskins), raw
- 212 Furskins, raw (including furskin heads, tails and other pieces or cuttings, suitable for furriers' use)
- 222 Oil seeds and oleaginous fruits used for the extraction of soft fixed vegetable oils (excluding flours and meals)
- 223 Oil seeds and oleaginous fruits, whole or broken, of a kind used for extracting other fixed vegetable oils (including their flours and meals, n.e.s.)
- 231 Natural rubber, balata, gutta-percha, guayule, chicle and similar natural gums, in primary forms (including latex) or in plates, sheets or strip
- 232 Synthetic rubber; reclaimed rubber; waste, pairings and scrap of unhardened rubber
- 244 Cork, natural, raw and waste (including natural cork in blocks or sheets)
- 245 Fuel wood (excluding wood waste) and wood charcoal
- 246 Wood in chips or particles and wood waste
- 247 Wood in the rough or roughly squared
- 248 Wood, simply worked and railway sleepers of wood
- 251 Pulp and waste paper
- 261 Silk textile fibers
- 263 Cotton textile fibers

- 264 Jute and other textile bast fibers, n.e.s., raw or processed but not spun; tow and waste of these fibres (including yarn waste and garnetted stock)
- 265 Vegetable textile fibers (other than cotton and jute), raw or processed but not spun; waste of these fibers
- 266 Synthetic fibers suitable for spinning
- 267 Manmade fibers, n.e.s. suitable for spinning and waste of manmade fibers
- 268 Wool and other animal hair (including wool tops)
- 269 Worn clothing and other worn textile articles; rags
- 272 Fertilizer, crude, except those of division 56, (imports only)
- 273 Stone, sand and gravel
- 274 Sulfur and unroasted iron pyrites
- 277 Natural abrasives, n.e.s. (including industrial diamonds)
- 278 Crude minerals, n.e.s.
- 281 Iron ore and concentrates
- 282 Ferrous waste and scrap; remelting ingots of iron or steel
- 283 Copper ores and concentrates; copper mattes; cement copper
- 284 Nickel ores and concentrates; nickel mattes, nickel oxide sinters and other intermediate products of nickel metallurgy
- 285 Aluminum ores and concentrates (including alumina)
- 286 Ores and concentrates of uranium or thorium
- 287 Ores and concentrates of base metals, n.e.s.
- 288 Nonferrous base metal waste and scrap, n.e.s.
- 289 Ores and concentrates of precious metals; waste, scrap and sweepings of precious metals (other than gold)
- 291 Crude animal materials, n.e.s.
- 292 Crude vegetable materials, n.e.s.
- 321 Coal, pulverized or not, but not agglomerated
- 322 Briquettes, lignite and peat
- 325 Coke and semicoke (including char) of coal, of lignite or of peat, agglomerated or not; retort carbon
- 333 Petroleum oils and oils from bituminous minerals, crude
- 334 Petroleum oils and oils from bituminous minerals (other than crude), and products therefrom containing 70% (by wt) or more of these oils, n.e.s.
- 335 Residual petroleum products, n.e.s. and related materials
- 342 Liquefied propane and butane
- 343 Natural gas, whether or not liquefied
- 344 Petroleum gases and other gaseous hydrocarbons, n.e.s.
- 345 Coal gas, water gas, producer gas and similar gases, other than petroleum gases and other gaseous hydrocarbons
- 351 Electric current
- 411 Animal oils and fats
- 421 Fixed vegetable fats and oils, soft, crude, refined or fractionated
- 422 Fixed vegetable fats and oils (other than soft), crude, refined or fractionated

- 431 Animal or vegetable fats and oils processed; waxes and inedible mixtures or preparations of animal or vegetable fats or oils, n.e.s.
- 511 Hydrocarbons, n.e.s. and their halogenated, sulfonated, nitrated or nitrosated derivatives
- 512 Alcohols, phenols, phenol-alcohols and their halogenated, sulfonated, nitrated or nitrosated derivatives
- 513 Carboxylic acids and anhydrides, halides, peroxides and peroxyacids; their halogenated, sulfonated, nitrated or nitrosated derivatives
- 514 Nitrogen-function compounds
- 515 Organo-inorganic compounds, heterocyclic compounds, nucleic acids and their salts
- 516 Organic chemicals, n.e.s.
- 522 Inorganic chemical elements, oxides and halogen salts
- 523 Metallic salts and peroxysalts of inorganic acids
- 524 Inorganic chemicals, n.e.s.; organic and inorganic compounds of precious metals
- 525 Radioactive and associated materials
- 531 Synthetic organic coloring matter and color lakes and preparations based thereon
- 532 Dyeing and tanning extracts, and synthetic tanning materials
- 533 Pigments, paints, varnishes and related materials
- 541 Medicinal and pharmaceutical products, other than medicaments (of group 542)
- 542 Medicaments (including veterinary medicaments)
- 551 Essential oils, perfume and flavor materials
- 553 Perfumery, cosmetics, or toilet preparations, excluding soaps
- 554 Soap, cleansing and polishing preparations
- 562 Fertilizers (exports include group 272; imports exclude group 272)
- 571 Polymers of ethylene, in primary forms
- 572 Polymers of styrene, in primary forms
- 573 Polymers of vinyl chloride or other halogenated olefins, in primary forms
- 574 Polyacetals, other polyethers and epoxide resins, in primary forms; polycarbonates, alkyd resins and other polyesters, in primary forms
- 575 Plastics, n.e.s., in primary forms
- 579 Waste, parings and scrap, of plastics
- 581 Tubes, pipes and hoses of plastics
- 582 Plates, sheets, film, foil and strip of plastics
- 583 Monofilament with a cross-sectional dimension exceeding 1 mm, rods, sticks and profile shapes of plastics, not more than surface-worked
- 591 Insecticides, fungicides, herbicides, plant growth regulators, etc., disinfectants and similar products, put up or packed for retail sale, etc.
- 592 Starches, inulin and wheat gluten; albuminoidal substances; glues

- 593 Explosives and pyrotechnic products
- 597 Prepared additives for mineral oils etc.; liquids for hydraulic transmissions; antifreezes and deicing fluids; lubricating preparations
- 598 Miscellaneous chemical products, n.e.s.
- 611 Leather
- 612 Manufactures of leather or composition leather, n.e.s.; saddlery and harness
- 613 Furskins, tanned or dressed (including pieces or cuttings), assembled or unassembled without the addition of other materials, other than apparel, etc.
- 621 Materials of rubber, including pastes, plates, sheets, rods, thread, tubes, etc.
- 625 Rubber tires, interchangeable tire treads, tire flaps and inner tubes for wheels of all kinds
- 629 Articles of rubber, n.e.s.
- 633 Cork manufactures
- 634 Veneers, plywood, particle board, and other wood, worked, n.e.s.
- 635 Wood manufactures, n.e.s.
- 641 Paper and paperboard
- 642 Paper and paperboard, cut to size or shape, and articles of paper or paperboard
- 651 Textile yarn
- 652 Cotton fabrics, woven (not including narrow or special fabrics)
- 653 Woven fabrics of manmade textile materials (not including narrow or special fabrics)
- 654 Woven fabrics of textile materials, other than cotton or manmade fibers and narrow or special fabrics
- 655 Knitted or crocheted fabrics (including tubular knit fabrics, n.e.s., pile fabrics and open-work fabrics), n.e.s.
- 656 Tullies, lace, embroidery, ribbons, trimmings and other small wares
- 657 Special yarns, special textile fabrics and related products
- 658 Made-up articles, wholly or chiefly of textile materials, n.e.s.
- 659 Floor coverings, etc.
- 661 Lime, cement, and fabricated construction materials, except glass and clay materials
- 662 Clay construction materials and refractory construction materials
- 663 Mineral manufactures, n.e.s.
- 664 Glass
- 665 Glassware
- 666 Pottery
- 667 Pearls, precious and semiprecious stones, unworked or worked
- 671 Pig iron and spiegeleisen, sponge iron, iron or steel granules and powders and ferroalloys
- 672 Iron or steel ingots and other primary forms, and semifinished products of iron or steel

- 673 Iron or nonalloy steel flat-rolled products, not clad, plated or coated
- 674 Iron and nonalloy steel flat-rolled products, clad, plated or coated
- 675 Alloy steel flat-rolled products
- 676 Iron and steel bars, rods, angles, shapes and sections, including sheet piling
- 677 Iron and steel rails and railway track construction material
- 678 Iron and steel wire
- 679 Iron and steel tubes, pipes and hollow profiles, fittings for tubes and pipes
- 681 Silver, platinum and other platinum group metals
- 682 Copper
- 683 Nickel
- 684 Aluminum
- 685 Lead
- 686 Zinc
- 687 Tin
- 689 Miscellaneous nonferrous base metals employed in metallurgy and cermets
- 691 Metal structures and parts, n.e.s., of iron, steel or aluminum
- 692 Metal containers for storage or transport
- 693 Wire products (excluding insulated electrical wiring) and fencing grills
- 694 Nails, screws, nuts, bolts, rivets and similar articles, of iron, steel, copper or aluminum
- 695 Tools for use in the hand or in machines
- 696 Cutlery
- 697 Household equipment of base metal, n.e.s.
- 699 Manufactures of base metal, n.e.s.
- 711 Steam or other vapor generating boilers, super-heated water boilers and auxiliary plant for use therewith; and parts thereof
- 712 Steam turbines and other vapor turbines, and parts thereof, n.e.s.
- 713 Internal combustion piston engines and parts thereof, n.e.s.
- 714 Engines and motors, nonelectric (other than steam turbines, internal combustion piston engines and power generating machinery); parts thereof, n.e.s.
- 716 Rotating electric plant and parts thereof, n.e.s.
- 718 Power generating machinery and parts thereof, n.e.s.
- 721 Agricultural machinery (excluding tractors) and parts thereof
- 722 Tractors (other than mechanical handling equipment)
- 723 Civil engineering and contractors' plant and equipment
- 724 Textile and leather machinery, and parts thereof, n.e.s.
- 725 Paper mill and pulp mill machinery, paper cutting machines and machinery for the manufacture of paper articles; parts thereof
- 726 Printing and bookbinding machinery, and parts thereof
- 727 Food-processing machines (excluding domestic)

- 728 Machinery and equipment specialized for particular industries, and parts thereof, n.e.s.
- 731 Machine tools working by removing metal or other material
- 733 Machine tools for working metal, sintered metal carbides or cermets, without removing material
- 735 Parts and accessories suitable for use solely or principally with metal working machine tools, whether or not removing metal; hand held tool holders
- 737 Metalworking machinery (other than machine tools) and parts thereof, n.e.s.
- 741 Heating and cooling equipment and parts thereof, n.e.s.
- 742 Pumps for liquids, whether or not fitted with a measuring device; liquid elevators; parts for such pumps and liquid elevators
- 743 Pumps (not for liquids), air or gas compressors and fans; ventilating hoods incorporating a fan; centrifuges; filtering etc. apparatus; parts thereof
- 744 Mechanical handling equipment, and parts thereof, n.e.s.
- 745 Nonelectrical machinery, tools and mechanical apparatus, and parts thereof, n.e.s.
- 746 Ball or roller bearings
- 747 Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, etc. (including pressure and temperature controlled valves)
- 748 Transmission shafts and cranks; bearing housings and plain shaft bearings; gears and gearing; ball screws; gear boxes, clutches, etc.; parts thereof
- 749 Nonelectric parts and accessories of machinery, n.e.s.
- 751 Office machines
- 752 Automatic data processing machines and units thereof; magnetic or optical readers; machines transcribing coded media and processing such data, n.e.s.
- 759 Parts and accessories suitable for use solely or principally with office machines or automatic data processing machines
- 761 Tv receivers (including video monitors & projectors) whether or not incorporating radiobroadcast receivers or sound or video recording or reproducing apparatus
- 762 Radio-broadcast receivers, whether or not incorporating sound recording or reproducing apparatus or a clock
- 763 Sound recorders or reproducers; television image and sound recorders or reproducers
- 764 Telecommunications equipment, n.e.s.; and parts, n.e.s., and accessories of apparatus falling within telecommunications, etc.
- 771 Electric power machinery (other than rotating electric plant of power generating machinery) and parts thereof
- 772 Electrical apparatus for switching or protecting electrical circuits or for making connections to or in electrical circuits (excluding telephone etc.)
- 773 Equipment for distributing electricity, n.e.s.

- 774 Electro-diagnostic apparatus for medical, surgical, dental or veterinary sciences and radiological apparatus
- 775 Household type electrical and nonelectrical equipment, n.e.s.
- 776 Thermionic, cold cathode or photocathode valves and tubes; diodes, transistors and similar semiconductor devices; integrated circuits, etc.; parts
- 778 Electrical machinery and apparatus, n.e.s.
- 781 Motor cars and other motor vehicles principally designed for the transport of persons (not public transport), including station wagons and racing cars
- 782 Motor vehicles for the transport of goods and special purpose motor vehicles
- 783 Road motor vehicles, n.e.s.
- 784 Parts and accessories for tractors, motor cars and other motor vehicles, trucks, public-transport vehicles and road motor vehicles n.e.s.
- 785 Motorcycles (including mopeds) and cycles, motorized and not motorized; invalid carriages
- 786 Trailers and semi-trailers; other vehicles, not mechanically propelled; specially designed and equipped transport containers
- 791 Railway vehicles (including hovertrains) and associated equipment
- 792 Aircraft and associated equipment; spacecraft (including satellites) and spacecraft launch vehicles; and parts thereof
- 793 Ships, boats (including hovercraft) and floating structures
- 811 Prefabricated buildings
- 812 Sanitary, plumbing and heating fixtures and fittings, n.e.s.
- 813 Lighting fixtures and fittings, n.e.s.
- 821 Furniture and parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings
- 831 Trunks, suitcases, vanity cases, binocular and camera cases, handbags, wallets, etc. of leather, etc.; travel sets for personal toilet, sewing, etc.
- 841 Men's or boys' coats, jackets, suits, trousers, shirts, underwear etc. of woven textile fabrics (except swimwear and coated or laminated apparel)
- 842 Women's or girls' coats, capes, jackets, suits, trousers, dresses, skirts, underwear, etc. of woven textiles (except swimwear and coated etc. apparel)
- 843 Men's or boys' coats, capes, jackets, suits, blazers, trousers, shirts, etc. (except swimwear or coated apparel), knitted or crocheted textile fabric
- 844 Women's or girls' coats, capes, jackets, suits, trousers, dresses, underwear, etc. (except swimwear and coated etc. apparel), knitted or crocheted
- 845 Articles of apparel, of textile fabrics, whether or not knitted or crocheted, n.e.s.

- 846 Clothing accessories, of textile fabrics, whether or not knitted or crocheted (other than those for babies)
- 848 Articles of apparel and clothing accessories of other than textile fabrics; headgear of all materials
- 851 Footwear
- 871 Optical instruments and apparatus, n.e.s.
- 872 Instruments and appliances, n.e.s., for medical, surgical, dental or veterinary purposes
- 873 Meters and counters, n.e.s.
- 874 Measuring, checking, analysing and controlling instruments and apparatus, n.e.s.
- 881 Photographic apparatus and equipment, n.e.s.
- 882 Photographic and cinematographic supplies
- 883 Cinematographic film, exposed and developed, whether or not incorporating sound track or consisting only of sound track
- 884 Optical goods, n.e.s.
- 885 Watches and clocks
- 891 Arms and ammunition
- 892 Printed matter
- 893 Articles, n.e.s. of plastics
- 894 Baby carriages, toys, games and sporting goods
- 895 Office and stationery supplies, n.e.s.
- 896 Works of art, collectors' pieces and antiques
- 897 Jewelry, goldsmiths' and silversmiths' wares, and other articles of precious or semiprecious materials, n.e.s.
- 898 Musical instruments, parts and accessories thereof; records, tapes and other sound or similar recordings (excluding photographic film, etc.)
- 899 Miscellaneous manufactured articles, n.e.s.
- 931 Special transactions and commodities not classified according to kind
- 950 Coin, including gold coin; proof and presentation sets and current coin
- 961 Coin (other than gold coin), not being legal tender
- 971 Gold, nonmonetary (excluding gold ores and concentrates)
- 984 Estimate of items valued under \$251 and of other low valued items nonexempt from formal entry
- 992 Shipments valued not over \$10,000, not identified by kind
- 994 Estimate of non-canadian low value shipments; compiled low value shipments to canada; and shipments to canada not identified by kind
- 998 Adjustment for undocumented exports

APPENDIX C

TECHNOLOGICAL CHARACTERISTICS OF THE SECTORS IN SITC

Raw material Intensive Goods (RMIG)

- 0 Food and Live Animals
- 2 Crude materials, inedible, except fuels (except 26)
- 3 Mineral fuels, lubricants and related materials (except 35)
- 4 Animal and vegetable oils, fats and waxes
- 56 Fertilizers (exports exclude group 272)

Labor Intensive Goods (LIG)

- 26 Textile fibres and their wastes
- 6 Manufactured goods classified chiefly by material (except 62, 67, 68)
- 8 Miscellaneous manufactured articles (except 87, 88)

Capital Intensive Goods (CIG)

- 1 Beverages and Tobacco
- 35 Electric current
- 53 Dyeing, tanning and coloring materials
- 55 Essential oils and resinoids and perfume materials; toilet, polishing and cleansing preparations
- 62 Rubber manufactures, n.e.s.
- 67 Iron and steel
- 68 Nonferrous materials
- 78 Road vehicles (including air-cushion vehicles)

Easy-to-imitate Research Intensive Goods (EIRIG)

- 51 Organic chemicals
- 52 Inorganic chemicals
- 54 Medicinal and pharmaceutical products
- 58 Plastics in non-primary forms
- 59 Chemical materials and products n.e.s.
- 75 Office machines and automatic data processing machines
- 76 Telecommunications and sound recording and reproducing apparatus and equipment

Difficult-to-imitate Research Intensive Goods (DIRIG)

- 56 Plastics in primary forms
- 7 Machinery and transport equipment (except 75, 76, 78)
- 87 Professional, scientific and controlling instruments and apparatus n.e.s.
- 88 Photographic apparatus, equipment and supplies and optical goods, n.e.s watches

APPENDIX D

TABLES

Table D.1: Market Share of East-Asian Countries in Turkey's Total Exports (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Average
China	1,00	3,34	1,96	0,31	0,28	0,17	0,14	0,14	0,35	0,64	0,74	0,82
Japan	1,10	1,03	1,03	0,83	0,72	0,55	0,42	0,46	0,54	0,40	0,36	0,68
Korea	1,30	0,60	0,52	0,46	0,44	0,21	0,14	0,38	0,47	0,20	0,15	0,44
Malaysia	0,13	0,41	0,63	0,46	0,58	0,51	0,16	0,14	0,14	0,11	0,12	0,31
Singapore	0,67	0,79	1,02	0,66	1,07	1,39	0,49	0,54	0,45	0,33	0,27	0,70
Total Share	4,20	6,16	5,15	2,73	3,09	2,83	1,35	1,66	1,95	1,68	1,65	2,95

Table D.2: Total Share of Turkish Exports in East-Asian Imports (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Average
China	0,18	0,50	0,31	0,05	0,05	0,03	0,03	0,02	0,04	0,08	0,09	0,13
Japan	0,07	0,07	0,07	0,05	0,05	0,04	0,04	0,04	0,04	0,04	0,04	0,05
Korea	0,23	0,11	0,09	0,07	0,07	0,04	0,04	0,08	0,08	0,04	0,04	0,08
Malaysia	0,05	0,14	0,19	0,13	0,17	0,17	0,07	0,06	0,05	0,05	0,04	0,10
Singapore	0,14	0,14	0,18	0,11	0,19	0,28	0,13	0,13	0,09	0,09	0,08	0,14
Total Share	0,67	0,95	0,84	0,42	0,52	0,56	0,31	0,33	0,31	0,30	0,29	0,50

Table D.3: Market Share of East-Asian Countries in Turkey's Total Imports (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Average
China	0,75	0,87	1,11	1,51	1,28	1,62	1,84	2,20	2,47	2,24	2,65	1,69
Japan	4,87	5,51	4,16	3,92	3,26	4,20	4,45	3,43	2,97	3,16	2,84	3,89
Korea	1,63	2,11	1,23	1,59	1,65	2,24	2,45	2,14	2,17	1,83	1,75	1,89
Malaysia	0,62	0,54	0,73	0,76	0,54	0,58	0,62	0,54	0,49	0,58	0,48	0,59
Singapore	0,39	0,29	0,18	0,19	0,30	0,21	0,25	0,28	0,28	0,27	0,26	0,26
Total Share	7,50	8,45	6,30	6,45	5,75	7,23	7,78	6,39	5,92	5,84	5,32	6,63

Table D.4: Total Share of Turkish Imports In East Asian Countries' Total Exports (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Per. Av.
China	0,20	0,28	0,21	0,36	0,37	0,43	0,46	0,46	0,54	0,35	0,42	0,37
Japan	1,31	1,77	0,80	0,94	0,94	1,12	1,11	0,71	0,65	0,49	0,45	0,94
Korea	0,44	0,68	0,24	0,38	0,48	0,59	0,61	0,45	0,47	0,29	0,28	0,45
Malaysia	0,17	0,17	0,14	0,18	0,16	0,15	0,15	0,11	0,11	0,09	0,08	0,14
Singapore	0,10	0,09	0,03	0,04	0,09	0,06	0,06	0,06	0,06	0,04	0,04	0,06
Total Share	2,22	2,99	1,42	1,91	2,03	2,35	2,40	1,79	1,83	1,26	1,26	1,95

Table D.5: Technological Characteristics Of The Goods Which Are Exported To China (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	2,35	0,51	3,09	39,58	29,01	49,28	15,27	41,53	20,90	19,55	25,31	22,40
LIG	1,58	0,29	4,87	34,54	27,21	26,19	37,05	21,65	15,32	12,27	11,62	17,51
CIG	90,79	98,74	89,44	22,22	34,91	9,62	6,50	12,80	48,11	56,84	49,98	47,27
EIRIG	0,53	0,17	0,53	0,90	1,39	6,74	32,00	15,16	7,48	5,48	4,78	6,83
DIRIG	4,75	0,28	2,07	2,76	7,48	8,17	9,18	8,86	8,19	5,85	8,31	5,99
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table D.6: Technological Characteristics Of The Goods Which Are Imported From China (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	32,24	12,95	12,93	9,12	5,35	10,65	7,83	4,81	4,86	6,58	7,45	10,43
LIG	37,55	54,36	57,48	61,14	45,45	40,18	43,81	41,94	36,78	40,57	36,15	45,04
CIG	5,71	5,66	5,60	3,75	4,41	4,37	6,67	7,19	8,29	6,07	6,26	5,82
EIRIG	9,07	14,35	13,91	15,18	24,04	24,02	20,15	22,85	23,39	18,47	24,41	19,08
DIRIG	15,42	12,68	10,09	10,81	20,76	20,78	21,55	23,20	26,68	28,32	25,73	19,64
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table D.7: Technological Characteristics Of The Goods Which Are Exported To Japan (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	32,57	32,49	30,84	45,56	43,42	52,69	56,55	57,54	53,82	47,84	59,67	46,63
LIG	15,64	16,34	15,98	18,74	24,95	20,82	19,10	18,71	23,33	30,67	29,18	21,22
CIG	45,63	46,68	48,87	32,47	27,88	21,88	18,37	17,26	16,72	15,72	7,86	27,21
EIRIG	5,84	4,47	3,54	2,14	2,32	2,65	3,50	4,49	3,87	2,44	1,45	3,34
DIRIG	0,32	0,02	0,77	1,09	1,43	1,97	2,48	2,00	2,26	3,33	1,84	1,59
Total	100	100	100	100	100	100	100	100	100	100	100	100,00

Table D.8: Technological Characteristics Of The Goods Which Are Imported From Japan (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	0,37	0,51	0,47	0,48	0,35	0,55	0,29	0,44	0,37	0,33	0,60	0,43
LIG	4,67	4,21	6,20	6,38	7,45	4,74	5,20	7,10	7,08	5,50	7,32	5,99
CIG	29,37	32,68	18,47	18,74	23,87	31,48	31,67	26,64	30,09	30,66	19,78	26,68
EIRIG	12,40	10,24	12,31	9,33	10,57	7,49	7,61	12,66	13,38	14,54	14,07	11,33
DIRIG	53,19	52,35	62,55	65,07	57,76	55,74	55,23	53,16	49,08	48,97	58,23	55,57
Total	100	100	100	100	100	100	100	100	100	100	100	100,00

Table D.9: Technological Characteristics Of The Goods Which Are Exported To Korea (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	8,56	7,51	4,64	14,79	14,49	19,42	16,65	19,64	8,39	40,85	25,29	16,38
LIG	89,29	84,38	81,29	68,82	66,38	54,98	67,81	27,43	13,10	26,09	29,44	55,37
CIG	1,58	7,09	9,88	13,87	11,52	15,51	9,05	7,76	7,99	20,24	23,20	11,61
EIRIG	0,28	0,21	1,78	0,52	3,46	4,41	2,96	2,17	2,55	7,30	10,80	3,31
DIRIG	0,30	0,80	2,41	2,00	4,15	5,67	3,54	43,01	67,97	5,51	11,27	13,33
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table D.10 : Technological Characteristics Of The Goods Which Are Imported From Korea (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	0,29	1,19	0,48	0,87	0,75	0,64	0,95	0,77	0,67	0,89	1,33	0,80
LIG	20,47	19,76	37,41	29,91	27,31	26,00	32,48	27,80	20,72	25,43	28,05	26,85
CIG	16,63	34,10	19,71	23,90	31,90	33,01	24,09	26,14	25,22	13,00	13,84	23,78
EIRIG	11,79	6,97	12,15	8,39	8,73	7,12	6,80	9,76	10,97	8,41	12,68	9,43
DIRIG	50,82	37,97	30,24	36,93	31,31	33,23	35,67	35,53	42,41	52,27	44,09	39,13
Total	100	100	100	100	100	100	100	100	100	100	100	100,00

Table D.11: Technological Characteristics Of The Goods Which Are Exported To Malaysia (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	34,25	9,76	9,20	12,92	5,59	6,08	16,06	31,75	24,76	28,10	18,58	17,91
LIG	27,30	8,12	5,46	12,19	13,62	10,54	12,35	14,61	17,51	25,42	25,43	15,68
CIG	29,76	71,61	64,26	54,81	46,79	52,33	12,80	23,77	20,42	17,72	29,92	38,56
EIRIG	1,09	0,71	1,41	1,90	3,57	2,67	5,31	10,74	8,81	13,84	9,09	5,38
DIRIG	7,61	9,79	19,67	18,19	30,43	28,38	53,47	19,13	28,51	14,93	16,97	22,46
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table D.12: Technological Characteristics Of The Goods Which Are Imported From Malaysia (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	89,78	91,32	92,52	89,95	77,08	69,62	56,65	46,96	38,94	28,43	27,57	64,44
LIG	3,43	2,10	2,46	3,03	8,18	9,08	14,38	14,17	14,13	15,82	33,86	10,97
CIG	1,72	0,70	0,77	0,64	1,57	1,86	9,67	9,08	2,58	27,37	2,56	5,32
EIRIG	3,47	3,49	1,86	3,31	9,08	9,79	10,30	16,29	30,86	15,07	21,28	11,34
DIRIG	1,59	2,39	2,39	3,08	4,09	9,64	9,01	13,50	13,49	13,31	14,72	7,93
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table D.13: Technological Characteristics Of The Goods Which Are Exported To Singapore (%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	1,46	1,67	2,83	2,79	1,32	0,72	1,68	4,35	8,54	10,91	3,72	3,63
LIG	24,39	9,52	7,70	10,59	8,72	4,75	11,26	7,38	8,46	12,15	13,66	10,78
CIG	73,06	87,43	82,62	82,58	85,43	90,84	82,10	81,31	66,74	64,85	71,75	78,97
EIRIG	0,25	0,04	0,44	0,64	1,26	0,72	1,28	2,26	2,70	3,19	0,73	1,23
DIRIG	0,85	1,35	6,41	3,39	3,27	2,98	3,68	4,70	13,55	8,90	10,14	5,38
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table D.14: Technological Characteristics Of The Goods Which Are Imported From Singapore(%)												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.
RMIG	8,66	8,20	21,28	22,75	29,50	17,81	22,69	13,99	7,76	3,86	4,49	14,64
LIG	7,11	5,24	10,25	7,15	7,43	8,67	8,24	6,50	4,44	14,62	10,63	8,21
CIG	7,78	7,14	7,63	5,70	6,36	6,68	3,54	4,32	2,49	2,52	3,34	5,23
EIRIG	30,05	32,60	28,08	40,12	29,12	40,63	36,75	53,83	59,01	56,07	57,69	42,18
DIRIG	46,40	46,81	32,76	24,27	27,58	26,21	28,79	21,36	26,30	22,94	23,85	29,75
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table D.15: CMSA for China (% changes, 1992-1997)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
048	13,98	-20,48	-2,86	7,59	-0,71	-2,49	2
057	-96,26	227,00	-218,51	7,59	-6,66	-86,84	2
062	3.174,13	-41,59	-1.320,17	7,59	137,57	1.957,53	3
211	-92,03	91,82	-84,50	7,59	-6,43	-83,54	2
266	116,31	0,15	0,18	7,59	8,85	133,08	5
287	-46,52	11,93	-5,55	7,59	-3,05	-35,60	2
524	-100,00	88,96	-88,96	7,59	-7,59	-100,00	2
532	220,80	54,99	121,41	7,59	30,15	434,93	5
571	-100,00	-3,51	3,51	7,59	-7,59	-100,00	2
573	-100,00	83,22	-83,22	7,59	-7,59	-100,00	2
613	845,07	-39,89	-337,08	7,59	35,53	511,22	3
625	-100,00	-45,50	45,50	7,59	-7,59	-100,00	2
658	5.685,49	-44,13	-2.509,28	7,59	237,74	3.377,41	3
659	7.819,94	-34,08	-2.664,80	7,59	388,72	5.517,37	3
673	-99,98	41,13	-41,13	7,59	-7,59	-99,97	2
676	-99,37	4,05	-4,02	7,59	-7,54	-99,30	2
682	-99,54	-24,60	24,49	7,59	-7,56	-99,63	2
684	-100,00	10,91	-10,91	7,59	-7,59	-100,00	2
692	-100,00	-14,02	14,02	7,59	-7,59	-100,00	2
697	602,75	-48,79	-294,09	7,59	19,73	287,18	3
728	-99,79	-7,80	7,78	7,59	-7,58	-99,79	2
735	-100,00	33,21	-33,21	7,59	-7,59	-100,00	2
772	58.051,04	71,63	41.583,41	7,59	7.568,23	107.281,91	5
784	-25,67	-40,91	10,50	7,59	-4,26	-52,74	2
848	-75,56	-20,45	15,45	7,59	-6,11	-79,08	2
874	5.035,68	-9,21	-463,58	7,59	346,35	4.916,83	3
883	-100,00	-53,22	53,22	7,59	-7,59	-100,00	2

Table D.16 CMSA for Japan (% changes, 1992-1997)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
001	-100,00	-19,24	19,24	-11,91	11,91	-100,00	2
012	-100,00	-26,88	26,88	-11,91	11,91	-100,00	2
034	24,61	-19,25	-4,74	-11,91	-0,08	-11,35	1
036	71,09	-22,43	-15,95	-11,91	-3,89	16,90	1
037	-44,59	19,58	-8,73	-11,91	4,02	-41,63	2
048	-99,16	-10,77	10,68	-11,91	11,82	-99,34	2
056	-28,34	-0,01	0,00	-11,91	3,38	-36,88	2
057	41,00	-29,66	-12,16	-11,91	0,10	-12,63	2
058	719,41	-25,97	-186,85	-11,91	-60,33	434,36	1
059	-81,37	-14,05	11,43	-11,91	10,00	-85,89	2
074	655,29	-8,27	-54,16	-11,91	-70,60	510,36	1
075	-21,67	22,15	-4,80	-11,91	0,51	-15,71	2
081	49,50	-5,59	-2,77	-11,91	-4,90	24,34	1
098	-99,75	69,73	-69,55	-11,91	11,86	-99,62	2
111	-99,69	5,14	-5,12	-11,91	11,87	-99,71	2
121	-29,06	-39,18	11,38	-11,91	6,77	-61,99	2
211	-100,00	-53,32	53,32	-11,91	11,91	-100,00	2
222	-16,81	-4,39	0,74	-11,91	2,44	-29,93	2
223	92,53	-12,51	-11,58	-11,91	-8,15	48,38	1
248	10.970,02	13,43	1.472,85	-11,91	-1.483,34	10.961,05	3
261	-100,00	-40,17	40,17	-11,91	11,91	-100,00	2
263	5,16	-55,71	-2,88	-11,91	6,36	-58,97	2
274	-100,00	-86,29	86,29	-11,91	11,91	-100,00	2
277	988,58	-48,25	-476,94	-11,91	-55,18	396,30	1
278	-27,60	-15,92	4,39	-11,91	4,66	-46,37	2
287	337,52	-27,66	-93,36	-11,91	-25,78	178,81	1
291	-16,59	-21,23	3,52	-11,91	4,08	-42,12	2
292	192,90	-19,01	-36,67	-11,91	-16,34	108,97	1
514	-32,11	4,40	-1,41	-11,91	3,47	-37,57	2
515	-100,00	1,87	-1,87	-11,91	11,91	-100,00	2
522	-93,47	16,87	-15,77	-11,91	11,00	-93,28	2
523	-63,31	6,59	-4,17	-11,91	7,25	-65,55	2
524	-100,00	-5,71	5,71	-11,91	11,91	-100,00	2
532	1.256,90	-26,55	-333,66	-11,91	-106,78	778,00	1
551	1.256,90	-26,55	-333,66	-11,91	-106,78	778,00	1
611	-83,38	-23,18	19,32	-11,91	10,39	-88,75	2
612	2.821,07	78,98	2.228,18	-11,91	-610,69	4.505,64	3
613	-100,00	-48,27	48,27	-11,91	11,91	-100,00	2
625	-82,19	-29,57	24,30	-11,91	10,41	-88,95	2
635	-17,09	51,93	-8,88	-11,91	-3,09	10,97	1
642	2.286,84	52,89	1.209,41	-11,91	-422,64	3.114,58	3
651	2.963,02	1,96	58,14	-11,91	-360,00	2.651,21	3
652	0,09	-11,28	-0,01	-11,91	1,33	-21,77	2

Table D.16 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
653	8.131,71	-32,32	-2.628,30	-11,91	-651,52	4.807,67	1
654	38.753,26	-45,69	-17.705,87	-11,91	-2.500,95	18.488,84	1
655	427,74	100,13	428,32	-11,91	-113,87	830,42	3
656	1.648,47	-33,43	-551,08	-11,91	-126,70	925,35	1
658	-53,45	53,82	-28,77	-11,91	3,38	-36,93	2
659	36,11	-24,10	-8,70	-11,91	-0,39	-8,99	1
661	400,29	-17,73	-70,99	-11,91	-37,10	262,56	1
662	213,89	71,24	152,38	-11,91	-52,10	373,51	3
663	-88,76	17,19	-15,26	-11,91	10,34	-88,40	2
664	-73,95	44,19	-32,68	-11,91	7,44	-66,91	2
665	-77,62	11,65	-9,04	-11,91	8,93	-77,99	2
666	58,77	24,00	14,10	-11,91	-11,54	73,43	3
671	-100,00	1,28	-1,28	-11,91	11,91	-100,00	2
672	-92,04	-66,29	61,01	-11,91	11,59	-97,64	2
673	-67,63	-26,57	17,97	-11,91	9,08	-79,07	2
676	-99,89	-64,54	64,47	-11,91	11,90	-99,97	2
679	-100,00	2,70	-2,70	-11,91	11,91	-100,00	2
684	477,29	0,98	4,68	-11,91	-57,51	413,53	3
694	-98,59	33,73	-33,25	-11,91	11,68	-98,34	2
697	185,41	17,86	33,11	-11,91	-28,15	196,32	3
699	7,22	21,00	1,52	-11,91	-3,54	14,29	3
721	-100,00	-25,61	25,61	-11,91	11,91	-100,00	2
724	-77,32	-27,78	21,48	-11,91	9,96	-85,57	2
727	-100,00	-25,99	25,99	-11,91	11,91	-100,00	2
741	-73,24	-1,41	1,03	-11,91	8,77	-76,76	2
742	-100,00	25,32	-25,32	-11,91	11,91	-100,00	2
743	378,88	26,31	99,70	-11,91	-60,12	432,87	3
745	-87,47	4,20	-3,68	-11,91	10,35	-88,50	2
747	-100,00	13,91	-13,91	-11,91	11,91	-100,00	2
751	-99,98	123,11	-123,08	-11,91	11,90	-99,96	2
752	164,23	155,57	255,49	-11,91	-68,51	494,87	3
761	-99,99	128,23	-128,22	-11,91	11,90	-99,97	2
762	-4,33	31,34	-1,36	-11,91	-3,05	10,68	1
764	-27,93	98,89	-27,62	-11,91	-5,16	26,27	1
772	-30,88	48,61	-15,01	-11,91	-0,32	-9,51	1
775	20.378,88	61,14	12.460,45	-11,91	-3.917,90	28.970,67	3
776	-51,12	121,96	-62,35	-11,91	-1,01	-4,43	1
778	488,97	61,93	302,81	-11,91	-101,66	740,14	3
784	515,19	16,52	85,09	-11,91	-73,45	531,43	3
786	-100,00	81,84	-81,84	-11,91	11,91	-100,00	2
812	-100,00	30,40	-30,40	-11,91	11,91	-100,00	2
813	-59,14	40,68	-24,06	-11,91	5,06	-49,37	2
821	6,35	32,77	2,08	-11,91	-4,91	24,39	3
831	-66,98	12,96	-8,68	-11,91	7,47	-67,15	2

Table D.16 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
841	636,68	8,37	53,26	-11,91	-83,16	603,24	3
842	171,65	6,23	10,70	-11,91	-22,46	154,22	3
843	12.647,99	-8,40	-1.062,88	-11,91	-1.378,59	10.186,21	1
844	-54,21	44,75	-24,26	-11,91	4,02	-41,61	2
895	58,64	11,49	6,74	-11,91	-9,15	55,81	3
846	-71,55	3,95	-2,83	-11,91	8,39	-73,94	2
848	-95,13	-57,80	54,98	-11,91	11,66	-98,19	2
851	476,43	19,50	92,88	-11,91	-70,12	506,79	3
871	-100,00	236,12	-236,12	-11,91	11,91	-100,00	2
874	4.529,79	28,43	1.287,77	-11,91	-696,16	5.137,92	3
891	-94,37	-27,60	26,05	-11,91	11,42	-96,41	2
892	277,23	2,87	7,96	-11,91	-34,30	241,84	3
893	1.325,12	62,68	830,53	-11,91	-264,17	1.942,25	3
894	5.599,83	16,50	923,88	-11,91	-778,83	5.749,46	3
897	136,21	-31,14	-42,42	-11,91	-7,46	43,28	1
898	80,54	57,37	46,21	-11,91	-21,93	150,28	3
899	573,42	-3,38	-19,39	-11,91	-65,57	473,17	1

Table D.17: CMSA for Korea (% changes, 1992-1997)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
036	-67,87	28,06	-19,04	7,17	-4,22	-55,91	2
041	-100,00	-38,25	38,25	7,17	-7,17	-100,00	2
056	-65,81	19,65	-12,93	7,17	-4,23	-56,16	2
057	83,24	-22,44	-18,68	7,17	3,02	52,31	3
058	239,77	1,47	3,52	7,17	17,54	269,46	5
075	425,19	-13,27	-56,41	7,17	25,48	388,15	3
121	97,46	-20,82	-20,29	7,17	4,04	67,55	3
261	-100,00	-60,15	60,15	7,17	-7,17	-100,00	2
277	6.198,48	-42,17	-2.613,91	7,17	253,85	3.803,42	3
278	6.555,95	-29,65	-1.944,10	7,17	328,36	4.917,72	3
291	-100,00	-58,12	58,12	7,17	-7,17	-100,00	2
292	161,20	-1,21	-1,96	7,17	11,32	176,52	3
514	-64,69	-29,27	18,93	7,17	-5,38	-73,23	2
524	-99,69	-10,26	10,23	7,17	-7,15	-99,70	2
532	-44,78	-45,09	20,19	7,17	-4,99	-67,50	2
598	424,49	16,99	72,12	7,17	36,80	557,57	5
611	10.305,47	-44,66	-4.602,74	7,17	405,46	6.070,70	3
613	-39,20	23,12	-9,06	7,17	-1,80	-19,79	2
625	-100,00	-1,72	1,72	7,17	-7,17	-100,00	2
651	39,89	-7,16	-2,86	7,17	2,14	39,18	3
652	172,74	-42,21	-72,91	7,17	4,13	68,91	3
653	5.920,41	-16,28	-964,09	7,17	354,00	5.301,21	3
654	2.024,80	-45,05	-912,11	7,17	76,51	1.151,32	3
659	187,92	-10,12	-19,02	7,17	11,38	177,32	3
661	557,68	-55,72	-310,74	7,17	13,70	212,09	3
662	-36,86	-30,87	11,38	7,17	-4,04	-53,22	2
672	-82,64	7,74	-6,40	7,17	-5,83	-79,96	2
676	-100,00	-41,20	41,19	7,17	-7,17	-100,00	2
716	-88,52	-22,84	20,22	7,17	-6,53	-90,51	2
724	-83,87	-67,69	56,77	7,17	-6,79	-94,41	2
728	-100,00	18,04	-18,04	7,17	-7,17	-100,00	2
761	-94,67	256,95	-243,26	7,17	-5,80	-79,61	2
764	-99,99	16,80	-16,80	7,17	-7,17	-99,99	2
775	1.058,35	38,88	411,45	7,17	108,11	1.623,96	5
784	79,66	-13,29	-10,58	7,17	4,00	66,96	3
813	-100,00	57,48	-57,48	7,17	-7,17	-100,00	2
821	25,18	115,64	29,12	7,17	12,18	189,28	5
848	-37,86	136,52	-51,68	7,17	3,37	57,51	3
872	213,56	8,73	18,64	7,17	17,27	265,36	5
899	-95,11	-12,25	11,65	7,17	-6,86	-95,41	2

Table D.18: CMSA for Malaysia (% changes, 1992-1997)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
054	-42,83	-3,88	1,66	19,45	-8,76	-34,35	2
056	11,21	-24,12	-2,70	19,45	-3,04	0,80	2
057	28,88	-24,05	-6,95	19,45	-0,41	16,93	2
058	32.343,59	-27,31	-8.832,40	19,45	4.568,21	28.071,54	3
059	213,01	-10,30	-21,95	19,45	35,16	235,38	3
062	71,18	39,80	28,33	19,45	27,10	185,85	5
075	-95,10	-22,34	21,24	19,45	-18,71	-95,46	2
111	-100,00	21,61	-21,61	19,45	-19,45	-100,00	2
121	660,54	62,98	416,03	19,45	221,67	1.380,68	5
222	-100,00	-36,17	36,17	19,45	-19,45	-100,00	2
223	19,28	-48,13	-9,28	19,45	-7,42	-26,10	2
277	-72,58	74,27	-53,91	19,45	-10,16	-42,91	2
523	9.139,92	-2,05	-187,38	19,45	1.741,10	10.711,04	3
524	-100,00	31,89	-31,89	19,45	-19,45	-100,00	2
532	-100,00	-26,98	26,98	19,45	-19,45	-100,00	2
629	303,13	-24,11	-73,09	19,45	40,06	265,44	3
651	-100,00	-54,66	54,66	19,45	-19,45	-100,00	2
653	391,75	-57,43	-224,98	19,45	21,27	150,06	3
656	941,07	-36,12	-339,90	19,45	109,92	694,42	3
657	-54,47	-29,31	15,97	19,45	-13,19	-61,55	2
658	8.701,59	-43,98	-3.826,65	19,45	939,74	5.790,16	3
659	6.880,65	-27,76	-1.910,07	19,45	961,50	5.923,78	3
661	-99,46	118,08	-117,44	19,45	-19,22	-98,58	2
665	-71,72	-37,77	27,09	19,45	-16,03	-78,98	2
672	115,97	56,45	65,47	19,45	46,28	303,62	5
676	1.244,65	22,38	278,54	19,45	300,65	1.865,68	5
682	616,17	1,80	11,11	19,45	122,37	770,90	5
693	-100,00	-43,22	43,22	19,45	-19,45	-100,00	2
695	295,02	-38,32	-113,05	19,45	27,94	191,05	3
713	785,84	-31,29	-245,90	19,45	98,95	627,05	3
724	-54,90	-33,07	18,15	19,45	-13,58	-63,94	2
728	1.170,23	-15,01	-175,64	19,45	190,55	1.189,59	3
742	81,07	-40,93	-33,18	19,45	1,35	27,76	3
743	20.926,69	-30,27	-6.334,30	19,45	2.832,70	17.414,28	3
744	1.610,26	6,45	103,83	19,45	334,69	2.074,69	5
746	4.773,23	-8,86	-422,78	19,45	844,55	5.205,59	3
748	3.779,27	-14,62	-552,55	19,45	624,84	3.856,39	3
749	5.180,15	-25,24	-1.307,53	19,45	748,41	4.615,24	3
771	1.099,78	15,47	170,12	19,45	250,04	1.554,86	5
772	495,53	-11,84	-58,67	19,45	82,68	527,16	3
778	88.639,46	11,76	10.427,77	19,45	19.273,37	118.371,81	5
784	214,12	50,72	108,60	19,45	72,64	465,53	5
813	51,55	-30,99	-15,97	19,45	0,89	24,93	3
821	-76,01	11,83	-8,99	19,45	-14,23	-67,95	2

Table D.18 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
841	344,56	-22,19	-76,47	19,45	47,83	313,18	3
844	-95,28	54,15	-51,60	19,45	-18,04	-91,31	2
845	-80,23	-51,75	41,52	19,45	-17,60	-88,60	2
873	1.672,74	-23,61	-395,00	19,45	243,96	1.517,54	3

Table D.19: CMSA for Singapore (% changes, 1992-1997)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
048	-67,31	-7,88	5,30	11,18	-7,81	-66,52	2
054	38,90	-36,57	-14,22	11,18	-1,33	-2,05	2
056	-54,53	-52,95	28,87	11,18	-8,79	-76,21	2
057	93,85	-43,82	-41,12	11,18	1,00	21,08	3
058	8.912,76	-54,78	-4.882,56	11,18	444,37	4.430,97	3
062	77,31	-14,25	-11,01	11,18	5,82	69,04	3
073	99,89	-17,60	-17,58	11,18	7,23	83,13	3
075	38,48	-5,38	-2,07	11,18	3,47	45,68	3
081	-100,00	-75,85	75,85	11,18	-11,18	-100,00	2
111	51,85	-0,73	-0,38	11,18	5,67	67,59	3
121	449,22	-23,02	-103,42	11,18	36,08	370,03	3
273	-2,79	65,54	-1,83	11,18	6,81	78,91	3
277	-100,00	-72,75	72,75	11,18	-11,18	-100,00	2
292	5.625,55	-36,90	-2.075,78	11,18	392,67	3.916,71	3
334	-100,00	-12,95	12,95	11,18	-11,18	-100,00	2
523	43,63	-5,91	-2,58	11,18	3,93	50,25	3
524	-100,00	40,46	-40,46	11,18	-11,18	-100,00	2
531	-100,00	-40,73	40,73	11,18	-11,18	-100,00	2
532	-100,00	-77,12	77,12	11,18	-11,18	-100,00	2
575	-71,47	-7,79	5,57	11,18	-8,24	-70,76	2
581	5.988,96	-8,71	-521,39	11,18	610,19	6.080,23	3
598	-87,08	-62,35	54,30	11,18	-10,63	-94,59	2
625	249,64	-15,23	-38,02	11,18	21,95	229,52	3
635	-7,81	25,89	-2,02	11,18	1,80	29,03	3
651	-96,93	-40,54	39,29	11,18	-10,97	-97,97	2
652	102,00	-69,40	-70,79	11,18	-4,27	-31,28	2
653	138,08	-63,38	-87,52	11,18	-1,43	-3,07	2
656	529,72	-24,95	-132,15	11,18	41,65	425,45	3
658	-36,60	-29,00	10,62	11,18	-6,15	-49,96	2
659	175,22	-47,91	-83,95	11,18	4,85	59,39	3
661	-71,37	4,22	-3,01	11,18	-7,84	-66,83	2
662	18,82	-17,47	-3,29	11,18	-0,22	9,03	2
663	11.815,31	-21,41	-2.529,61	11,18	1.035,57	10.311,04	3

Table D.19 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
665	96,24	-41,22	-39,67	11,18	1,72	28,24	3
666	712,82	-43,81	-312,29	11,18	39,87	407,77	3
672	34,07	82,13	27,98	11,18	16,12	171,47	5
676	116,92	16,66	19,48	11,18	17,11	181,36	5
679	-96,51	-27,03	26,09	11,18	-10,89	-97,17	2
682	221,65	-13,82	-30,64	11,18	19,81	208,18	3
684	801,35	-9,63	-77,14	11,18	79,88	805,64	3
694	14,22	-15,68	-2,23	11,18	-0,41	7,08	2
697	1.334,09	-3,49	-46,50	11,18	143,54	1.438,82	3
699	916,10	-6,23	-57,03	11,18	95,33	959,35	3
713	1.403,15	-33,82	-474,59	11,18	100,01	1.005,92	3
723	662,70	55,58	368,32	11,18	121,46	1.219,24	5
724	-95,74	-30,54	29,24	11,18	-10,85	-96,71	2
728	-88,74	41,80	-37,10	11,18	-9,39	-82,25	2
741	-60,48	-17,71	10,71	11,18	-7,54	-63,84	2
742	52,17	-10,90	-5,69	11,18	3,98	50,73	3
743	2.417,30	-20,95	-506,51	11,18	211,25	2.112,26	3
747	263,36	-36,03	-94,88	11,18	14,81	158,44	3
748	428,14	-30,26	-129,56	11,18	29,99	309,49	3
749	28.621,37	-14,87	-4.255,35	11,18	2.721,98	27.084,31	3
752	83,72	79,10	66,23	11,18	25,60	265,83	5
759	323,63	54,43	176,16	11,18	61,95	627,35	5
771	1.530,72	19,31	295,60	11,18	206,30	2.063,11	5
772	21.829,96	8,17	1.783,02	11,18	2.640,38	26.272,70	5
773	24.130,60	-24,69	-5.958,51	11,18	2.028,52	20.187,10	3
776	2.387,75	83,29	1.988,86	11,18	498,53	4.969,60	5
778	355,08	24,77	87,94	11,18	52,29	531,26	5
784	170,37	-18,40	-31,34	11,18	13,48	145,30	3
812	1.446,53	1,89	27,32	11,18	164,96	1.651,88	5
813	-95,84	6,28	-6,02	11,18	-10,68	-95,08	2
821	-55,44	17,16	-9,51	11,18	-5,34	-41,96	2
843	4,62	27,55	1,27	11,18	3,74	48,36	5
844	-99,25	-42,62	42,30	11,18	-11,13	-99,52	2
845	170,80	-4,93	-8,42	11,18	17,60	186,23	3
846	2.256,72	-34,27	-773,35	11,18	161,98	1.622,26	3
874	219,61	23,38	51,34	11,18	32,90	338,41	5
885	3.951,62	-7,91	-312,72	11,18	405,87	4.048,04	3
893	1.654,76	-8,99	-148,79	11,18	167,33	1.675,50	3
896	186,61	36,77	68,61	11,18	32,64	335,80	5
897	-67,34	372,68	-250,98	11,18	6,08	71,61	3

Table D.20: CMSA for China (% changes, 1998-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
012	-58,54	111,92	-65,51	44,59	-5,41	27,05	2
036	186,43	46,19	86,10	44,59	142,12	505,42	5
054	268,48	27,26	73,20	44,59	164,51	578,04	5
058	189,43	10,31	19,52	44,59	97,77	361,61	5
073	81,65	39,24	32,04	44,59	68,19	265,72	5
121	-67,22	191,78	-128,91	44,59	-1,94	38,30	2
211	92,54	-3,48	-3,22	44,59	38,28	168,72	3
247	-48,30	69,57	-33,61	44,59	-5,50	26,75	2
248	5,92	53,77	3,18	44,59	28,04	135,50	5
261	580,97	-71,78	-417,00	44,59	41,11	177,89	3
263	1.005,32	-75,14	-755,43	44,59	77,92	297,25	3
266	-47,80	-50,50	24,14	44,59	-33,07	-62,63	2
268	461,42	-18,17	-83,86	44,59	160,25	564,23	3
273	5.587,58	106,56	5.953,86	44,59	5.193,86	16.886,44	5
277	2.744,40	-18,40	-504,85	44,59	990,41	3.256,15	3
278	8.888,19	-7,11	-632,09	44,59	3.678,24	11.971,81	3
283	709,06	-15,91	-112,82	44,59	258,77	883,69	3
287	54,48	-3,82	-2,08	44,59	21,66	114,82	3
288	2.858,97	41,15	1.176,54	44,59	1.817,79	5.939,03	5
292	933,35	-31,66	-295,53	44,59	270,29	921,04	3
334	653,11	-25,04	-163,55	44,59	207,13	716,24	3
512	-49,78	68,76	-34,23	44,59	-6,80	22,54	2
513	180,45	98,88	178,42	44,59	204,11	706,45	5
523	20.947,63	-16,44	-3.444,44	44,59	7.797,36	25.328,70	3
524	-100,00	-2,27	2,27	44,59	-44,59	-100,00	2
531	-88,95	-19,67	17,49	44,59	-40,63	-87,17	2
532	945,71	25,50	241,19	44,59	540,61	1.797,61	5
533	-39,02	-8,23	3,21	44,59	-19,63	-19,08	2
553	-89,84	-5,04	4,52	44,59	-40,29	-86,04	2
554	-65,21	-20,06	13,08	44,59	-32,19	-59,78	2
572	4.563,69	-33,74	-1.539,86	44,59	1.333,28	4.367,96	3
581	550,52	12,81	70,52	44,59	282,63	961,07	5
582	474,55	-31,74	-150,61	44,59	130,29	467,08	3
583	-100,00	21,03	-21,03	44,59	-44,59	-100,00	2
592	-97,07	-18,84	18,29	44,59	-43,53	-96,56	2
597	2.217,32	30,04	666,16	44,59	1.299,14	4.257,26	5
598	2.031,40	19,77	401,64	44,59	1.093,71	3.591,11	5
611	49,22	-36,37	-17,90	44,59	-2,25	37,29	2
613	33.881,69	-45,23	-15.325,84	44,59	8.253,91	26.809,12	3
621	42.522,99	36,78	15.639,02	44,59	25.950,91	84.194,29	5
625	2.908.680,63	-15,08	-438.604,95	44,59	1.101.403,26	3.571.508,46	3
629	6.272,24	12,65	793,23	44,59	3.156,14	10.278,86	5

Table D. 20 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
634	-61,66	-58,93	36,34	44,59	-37,57	-77,23	2
641	53.541,46	-44,37	-23.757,68	44,59	13.260,84	43.044,84	3
642	8.257,41	-49,60	-4.095,87	44,59	1.833,52	5.990,05	3
651	379,52	-35,68	-135,42	44,59	92,93	345,94	3
652	41.667,59	-41,33	-17.219,28	44,59	10.883,11	35.334,69	3
653	2.175,23	-55,55	-1.208,26	44,59	406,41	1.362,43	3
654	506,67	-39,82	-201,78	44,59	118,19	427,85	3
655	5.038,47	-41,44	-2.088,15	44,59	1.297,07	4.250,54	3
656	2.180,82	-36,74	-801,28	44,59	598,76	1.986,14	3
658	2.501,31	-39,80	-995,53	44,59	653,68	2.164,24	3
659	-80,28	-23,89	19,18	44,59	-37,90	-78,30	2
661	739,11	-71,29	-526,92	44,59	62,83	248,33	3
662	224.326,55	-50,29	-112.812,95	44,59	49.701,63	161.209,53	3
663	10.780,28	-1,40	-151,00	44,59	4.738,98	15.411,44	3
664	1.009,31	-2,18	-22,01	44,59	439,27	1.468,98	3
665	-99,79	25,43	-25,38	44,59	-44,48	-99,63	2
673	606.604,76	-8,00	-48.499,85	44,59	248.856,14	806.997,65	3
676	-73,95	-69,13	51,12	44,59	-41,00	-88,37	2
679	13.524,14	-32,53	-4.399,76	44,59	4.054,07	13.190,50	3
682	-90,33	14,03	-12,67	44,59	-39,67	-84,06	2
692	-100,00	-34,82	34,82	44,59	-44,59	-100,00	2
693	-16,42	9,79	-1,61	44,59	-3,67	32,68	2
695	776,81	3,82	29,69	44,59	361,32	1.216,23	5
696	-74,59	-3,40	2,53	44,59	-33,64	-64,50	2
697	-96,73	-47,87	46,31	44,59	-43,83	-97,54	2
699	818,90	-25,61	-209,69	44,59	260,23	888,42	3
713	82,89	31,24	25,89	44,59	62,43	247,03	5
716	517.024,01	-20,21	-104.511,48	44,59	183.930,86	596.467,77	3
724	707,78	32,86	232,55	44,59	433,95	1.451,73	5
737	113,65	-3,93	-4,46	44,59	46,94	196,79	3
741	828,47	-3,16	-26,19	44,59	356,33	1.200,03	3
743	7,34	25,29	1,86	44,59	15,38	94,45	5
744	48,11	-42,38	-20,39	44,59	-6,54	23,39	2
745	-75,01	-9,16	6,87	44,59	-34,47	-67,18	2
747	-54,26	18,67	-10,13	44,59	-20,39	-21,53	2
749	973,04	-14,72	-143,19	44,59	363,47	1.223,19	3
764	-99,62	-13,43	13,38	44,59	-44,44	-99,53	2
771	-93,09	2,02	-1,88	44,59	-41,45	-89,81	2
772	-58,44	23,13	-13,51	44,59	-21,77	-26,02	2
773	-88,25	-14,00	12,36	44,59	-40,08	-85,39	2
775	-55,53	-27,46	15,25	44,59	-30,20	-53,35	2
776	-71,24	100,54	-71,62	44,59	-18,87	-16,60	2
778	2.533,15	22,88	579,63	44,59	1.398,20	4.578,45	5

Table D.20 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
784	27.511,96	50,72	13.953,72	44,59	18.512,22	60.073,22	5
791	-100,00	-17,09	17,09	44,59	-44,59	-100,00	2
793	425,74	53,18	226,42	44,59	314,51	1.064,44	5
812	2.915,94	-14,64	-426,97	44,59	1.103,31	3.622,22	3
841	3.192,38	-35,64	-1.137,71	44,59	900,29	2.963,90	3
842	542,09	-9,61	-52,10	44,59	214,20	739,17	3
845	123,05	26,93	33,14	44,59	81,65	309,36	5
846	42,58	-70,63	-30,08	44,59	-25,92	-39,46	2
848	-53,61	-22,45	12,04	44,59	-28,55	-47,99	2
851	122,44	-50,26	-61,54	44,59	4,75	59,99	3
872	-82,40	49,84	-41,07	44,59	-32,83	-61,86	2
873	-99,54	6,54	-6,51	44,59	-44,37	-99,29	2
874	731,07	16,10	117,70	44,59	385,64	1.295,10	5
892	71,53	-50,80	-36,34	44,59	-6,96	22,02	2
893	100,65	-20,96	-21,09	44,59	26,13	129,32	3
894	-97,32	-38,58	37,55	44,59	-43,86	-97,62	2

Table D.21: CMSA for Japan (% changes, 1998-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
034	567,29	-5,24	-29,70	-17,36	-92,40	422,59	1
036	-54,33	-25,05	13,61	-17,36	11,42	-71,71	2
037	-88,90	-0,30	0,27	-17,36	15,44	-90,85	2
041	-100,00	-14,73	14,73	-17,36	17,36	-100,00	2
046	-100,00	-43,06	43,06	-17,36	17,36	-100,00	2
048	219.882,24	-11,88	-26.117,14	-17,36	-33.631,22	160.104,65	1
054	6,21	-29,59	-1,84	-17,36	4,38	-38,20	2
056	-9,56	-13,39	1,28	-17,36	3,76	-35,27	2
057	-7,67	-8,95	0,69	-17,36	2,77	-30,53	2
058	20,18	-9,73	-1,96	-17,36	-1,47	-10,34	1
059	-48,09	-8,93	4,29	-17,36	9,15	-60,93	2
062	2,81	29,62	0,83	-17,36	-5,77	10,13	3
071	-42,32	-52,79	22,34	-17,36	12,63	-77,50	2
073	-65,63	-13,35	8,76	-17,36	12,19	-75,39	2
074	-33,15	-17,13	5,68	-17,36	7,74	-54,22	2
075	0,87	-26,68	-0,23	-17,36	4,52	-38,88	2
098	1.794,07	1,21	21,68	-17,36	-315,38	1.484,21	3
111	-77,91	38,78	-30,21	-17,36	12,04	-74,67	2
112	11,40	-39,98	-4,56	-17,36	5,75	-44,74	2
121	-32,21	-23,95	7,72	-17,36	8,41	-57,40	2
122	-87,20	-9,09	7,92	-17,36	15,34	-90,38	2
222	67,36	-30,05	-20,24	-17,36	-2,96	-3,24	1
223	40,83	-67,66	-27,63	-17,36	9,45	-62,36	2
248	72,17	-13,26	-9,57	-17,36	-8,57	23,42	1
263	-94,15	-60,05	56,54	-17,36	16,95	-98,07	2
273	1.950,13	-39,54	-771,12	-17,36	-197,79	924,33	1
277	701,48	-23,48	-164,68	-17,36	-89,10	406,86	1
278	-52,65	-27,79	14,63	-17,36	11,42	-71,74	2
283	80,28	-8,58	-6,89	-17,36	-11,25	36,21	1
287	-34,04	-27,97	9,52	-17,36	9,11	-60,74	2
288	1.465,91	7,01	102,69	-17,36	-273,49	1.284,76	3
291	44,87	-38,31	-17,19	-17,36	1,84	-26,14	2
292	-0,67	-15,46	0,10	-17,36	2,78	-30,60	2
421	1.515,79	-33,20	-503,29	-17,36	-169,98	791,96	1
514	-100,00	-11,90	11,90	-17,36	17,36	-100,00	2
522	-89,60	-23,56	21,11	-17,36	15,98	-93,43	2
523	-70,08	3,77	-2,64	-17,36	11,97	-74,34	2
531	-100,00	-26,94	26,94	-17,36	17,36	-100,00	2
532	-80,29	-6,32	5,07	-17,36	14,15	-84,74	2
533	-100,00	-12,63	12,63	-17,36	17,36	-100,00	2
551	-46,28	2,42	-1,12	-17,36	7,81	-54,53	2
553	175,68	12,94	22,73	-17,36	-36,68	157,30	3

Table D.21 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
554	-65,72	-2,55	1,67	-17,36	11,56	-72,39	2
581	25,16	0,87	0,22	-17,36	-4,56	4,34	3
591	-100,00	-18,65	18,65	-17,36	17,36	-100,00	2
598	4.992,16	10,31	514,53	-17,36	-957,63	4.542,01	3
611	5.323,30	-22,89	-1.218,58	-17,36	-708,51	3.355,96	1
612	-100,00	12,30	-12,30	-17,36	17,36	-100,00	2
621	29.004,80	1,64	475,04	-17,36	-5.117,32	24.346,79	3
625	-21,91	-27,18	5,96	-17,36	7,49	-53,01	2
629	2.192.587,30	4,33	94.996,10	-17,36	-397.073,99	1.890.496,39	3
634	26,88	9,37	2,52	-17,36	-6,73	14,68	3
635	-59,10	11,33	-6,69	-17,36	9,45	-62,37	2
642	344,49	10,76	37,06	-17,36	-68,10	306,85	3
651	202,45	-23,77	-48,12	-17,36	-22,66	90,54	1
652	922,46	-35,25	-325,20	-17,36	-97,55	447,09	1
653	597,02	-38,73	-231,24	-17,36	-56,77	252,92	1
654	405,61	-28,03	-113,71	-17,36	-45,80	200,71	1
655	-52,93	-64,91	34,36	-17,36	14,49	-86,35	2
656	44,24	-2,97	-1,31	-17,36	-6,93	15,66	1
657	214,88	-1,59	-3,41	-17,36	-36,43	156,09	1
658	280,48	16,19	45,41	-17,36	-59,38	265,35	3
659	-24,47	-8,61	2,11	-17,36	5,38	-42,96	2
661	129,88	-0,13	-0,16	-17,36	-22,49	89,74	1
662	-15,56	20,76	-3,23	-17,36	-0,34	-15,74	1
663	204,35	4,32	8,83	-17,36	-37,75	162,39	3
664	-99,26	-7,66	7,61	-17,36	17,24	-99,43	2
665	77,97	9,87	7,70	-17,36	-16,58	61,60	3
666	-22,62	-10,39	2,35	-17,36	5,32	-42,69	2
667	-100,00	-22,47	22,47	-17,36	17,36	-100,00	2
671	-96,05	-24,26	23,31	-17,36	16,84	-97,52	2
672	-100,00	-46,99	46,99	-17,36	17,36	-100,00	2
676	-100,00	-39,98	39,98	-17,36	17,36	-100,00	2
678	11.011,51	-13,45	-1.480,62	-17,36	-1.652,01	7.848,07	1
679	-67,91	-12,95	8,80	-17,36	12,51	-76,92	2
682	-94,03	-48,29	45,41	-17,36	16,82	-97,45	2
684	-74,76	-22,49	16,82	-17,36	13,96	-83,83	2
691	138,31	32,17	44,49	-17,36	-37,31	160,30	3
692	-100,00	6,01	-6,01	-17,36	17,36	-100,00	2
693	-100,00	5,41	-5,41	-17,36	17,36	-100,00	2
694	223,15	4,89	10,92	-17,36	-41,48	180,13	3
695	1.068,59	-7,00	-74,79	-17,36	-171,29	798,16	1
696	-40,34	17,70	-7,14	-17,36	5,17	-41,97	2
697	-68,08	6,39	-4,35	-17,36	11,46	-71,94	2
699	-95,26	5,00	-4,76	-17,36	16,49	-95,88	2

Table D.21 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
711	-100,00	-58,31	58,31	-17,36	17,36	-100,00	2
713	150,52	31,30	47,11	-17,36	-39,74	171,83	3
716	2.752,80	-10,45	-287,56	-17,36	-426,10	2.011,33	1
723	248,97	-18,93	-47,13	-17,36	-31,75	133,80	1
724	-39,74	-26,34	10,47	-17,36	9,65	-63,32	2
725	1.769,63	-41,50	-734,33	-17,36	-172,50	803,94	1
728	48,85	-22,02	-10,76	-17,36	-2,79	-4,07	1
731	-94,62	-32,89	31,12	-17,36	16,73	-97,02	2
735	-87,72	-44,75	39,26	-17,36	16,18	-94,39	2
737	-100,00	-37,95	37,95	-17,36	17,36	-100,00	2
741	-62,40	30,03	-18,74	-17,36	8,87	-59,59	2
742	-91,13	-1,53	1,39	-17,36	15,84	-92,78	2
743	-75,21	-3,54	2,66	-17,36	13,21	-80,24	2
744	238,40	-29,01	-69,16	-17,36	-24,34	98,53	1
745	-97,44	-7,40	7,21	-17,36	16,95	-98,04	2
747	-52,56	9,60	-5,04	-17,36	8,33	-57,03	2
748	82.592,78	3,94	3.253,45	-17,36	-14.901,67	70.931,15	3
749	-22,93	-17,17	3,94	-17,36	6,28	-47,24	2
752	-97,85	21,25	-20,80	-17,36	16,90	-97,84	2
759	-100,00	-6,59	6,59	-17,36	17,36	-100,00	2
761	-92,85	14,17	-13,15	-17,36	15,94	-93,26	2
762	-100,00	12,71	-12,71	-17,36	17,36	-100,00	2
763	-100,00	71,25	-71,25	-17,36	17,36	-100,00	2
764	-41,01	2,21	-0,90	-17,36	6,89	-50,17	2
771	-53,90	1,18	-0,63	-17,36	9,26	-61,45	2
772	129,52	13,40	17,36	-17,36	-27,82	115,10	3
773	261,11	20,26	52,91	-17,36	-58,02	258,90	3
774	-96,43	8,53	-8,22	-17,36	16,68	-96,79	2
775	-51,91	70,88	-36,79	-17,36	3,10	-32,09	2
778	34,26	2,36	0,81	-17,36	-6,50	13,58	3
783	-100,00	7,15	-7,15	-17,36	17,36	-100,00	2
784	1.527,92	33,50	511,88	-17,36	-359,88	1.696,06	3
785	-81,17	38,23	-31,04	-17,36	12,84	-78,49	2
813	22,06	26,89	5,93	-17,36	-9,53	28,00	3
821	-28,00	19,41	-5,43	-17,36	2,44	-28,95	2
831	-73,15	1,80	-1,32	-17,36	12,61	-77,41	2
841	48,76	-8,74	-4,26	-17,36	-6,21	12,19	1
842	31,44	16,84	5,29	-17,36	-9,30	26,91	3
843	205,70	-28,74	-59,11	-17,36	-20,46	80,04	1
844	130,73	-22,54	-29,47	-17,36	-13,66	47,70	1
845	399,59	-2,07	-8,26	-17,36	-67,57	304,33	1
846	394,33	6,77	26,69	-17,36	-74,25	336,18	3
848	187,21	38,11	71,34	-17,36	-51,49	227,81	3

Table D.21 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
851	37,17	-0,23	-0,09	-17,36	-6,40	13,10	1
872	-72,53	7,11	-5,15	-17,36	12,25	-75,68	2
874	-83,45	-7,23	6,03	-17,36	14,69	-87,31	2
884	-100,00	41,12	-41,12	-17,36	17,36	-100,00	2
885	-55,82	-13,45	7,51	-17,36	10,72	-68,40	2
891	39,98	1,53	0,61	-17,36	-7,31	17,46	3
892	122,18	-23,66	-28,91	-17,36	-12,08	40,17	1
893	123,34	22,73	28,04	-17,36	-30,22	126,53	3
894	-85,59	-12,76	10,92	-17,36	15,18	-89,61	2
895	775,49	-12,37	-95,90	-17,36	-115,82	534,05	1
897	38,73	21,22	8,22	-17,36	-11,83	38,97	3
898	-83,61	-11,16	9,33	-17,36	14,83	-87,97	2
899	-95,90	4,50	-4,31	-17,36	16,61	-96,46	2

Table D.22: CMSA for Korea (% changes, 1998-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
056	-4,49	-4,11	0,18	12,03	-1,01	2,60	2
057	-69,58	46,15	-32,11	12,03	-6,68	-50,19	2
058	-31,65	32,29	-10,22	12,03	-1,15	1,30	2
061	-100,00	-49,98	49,98	12,03	-12,03	-100,00	2
075	216,50	-39,26	-85,00	12,03	11,10	115,37	3
098	70,41	78,84	55,51	12,03	24,63	241,43	5
121	-56,84	-41,57	23,63	12,03	-9,00	-71,75	2
232	-100,00	-19,42	19,42	12,03	-12,03	-100,00	2
263	28.051,04	-56,08	-15.730,65	12,03	1.475,39	13.751,74	3
267	143,73	-15,67	-22,53	12,03	12,70	130,26	3
277	215,62	3,07	6,63	12,03	27,11	264,46	5
278	-24,04	-17,54	4,21	12,03	-4,49	-29,82	2
283	-100,00	-18,29	18,29	12,03	-12,03	-100,00	2
292	307,04	-7,82	-24,01	12,03	33,11	320,34	3
421	350,76	-15,64	-54,85	12,03	33,72	326,01	3
523	172,06	-10,08	-17,35	12,03	17,40	174,07	3
532	-9,05	-24,12	2,18	12,03	-3,73	-22,68	2
533	213.175,43	4,11	8.764,89	12,03	26.699,77	248.656,23	5
542	58,95	61,00	35,96	12,03	18,76	186,69	5
554	-93,57	4,95	-4,64	12,03	-11,22	-92,44	2
571	-100,00	-8,43	8,43	12,03	-12,03	-100,00	2
579	219,75	-24,84	-54,58	12,03	16,88	169,24	3
582	-39,75	41,62	-16,54	12,03	-1,76	-4,40	2
598	-100,00	-11,79	11,79	12,03	-12,03	-100,00	2
611	170,19	19,30	32,85	12,03	26,75	261,11	5
613	-71,85	-33,76	24,25	12,03	-9,79	-79,11	2
629	3.296,68	1,94	63,92	12,03	404,51	3.779,09	5
642	10.236,96	23,86	2.442,57	12,03	1.528,21	14.243,62	5
651	511,41	-8,48	-43,38	12,03	55,28	526,85	3
653	1.245,16	-47,59	-592,59	12,03	72,78	689,79	3
654	-1,17	-18,57	0,22	12,03	-2,35	-9,85	2
655	-39,33	6,56	-2,58	12,03	-4,25	-27,57	2
656	363,18	6,66	24,20	12,03	47,40	453,48	5
658	291,84	113,26	330,53	12,03	88,49	836,15	5
659	-94,74	103,72	-98,26	12,03	-10,74	-88,00	2
661	599,93	291,42	1.748,31	12,03	317,55	2.969,23	5
662	-47,15	139,32	-65,69	12,03	3,19	41,70	3
663	-88,40	24,04	-21,25	12,03	-10,30	-83,88	2
664	-99,20	57,79	-57,33	12,03	-11,88	-98,59	2
665	304,77	43,84	133,62	12,03	58,01	552,28	5
694	2.507,27	-8,52	-213,72	12,03	274,89	2.571,94	3
697	11.153,70	111,01	12.381,39	12,03	2.844,61	26.502,73	5

Table D.22 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
699	2.597,17	3,41	88,62	12,03	323,51	3.024,74	5
713	2.610,38	-2,25	-58,66	12,03	306,70	2.868,20	3
716	44.019,94	-13,69	-6.025,24	12,03	4.569,09	42.562,13	3
723	113,61	-33,98	-38,60	12,03	4,94	58,00	3
741	819,84	-36,25	-297,19	12,03	58,51	556,95	3
742	-34,32	10,27	-3,52	12,03	-3,32	-18,87	2
743	63,28	25,70	16,27	12,03	12,66	129,94	5
744	-59,59	-21,85	13,02	12,03	-8,23	-64,62	2
745	2.209,87	-3,53	-77,93	12,03	256,05	2.396,49	3
747	378,47	-14,73	-55,76	12,03	37,05	357,06	3
748	3.288,55	-5,30	-174,18	12,03	374,02	3.495,12	3
749	780.761,63	-35,76	-279.237,42	12,03	60.328,73	561.829,21	3
752	865,01	92,59	800,88	12,03	211,54	1.982,05	5
761	55,80	328,08	183,06	12,03	68,20	647,18	5
762	-100,00	139,28	-139,28	12,03	-12,03	-100,00	2
764	23.325,46	33,50	7.813,03	12,03	3.749,97	34.933,99	5
774	2.273,47	41,82	950,79	12,03	392,91	3.671,02	5
775	9,53	93,11	8,87	12,03	13,42	136,96	5
776	1.033,71	-14,30	-147,79	12,03	104,86	988,51	3
778	10,84	50,83	5,51	12,03	8,08	87,30	5
781	-100,00	2.164,88	-2.164,88	12,03	-12,03	-100,00	2
784	2.695,22	45,51	1.226,63	12,03	477,27	4.456,66	5
821	2.001,94	137,44	2.751,51	12,03	588,37	5.491,29	5
841	739,62	143,78	1.063,41	12,03	234,20	2.193,03	5
842	79.829,78	275,57	219.988,89	12,03	36.101,14	336.207,42	5
843	-70,55	182,13	-128,49	12,03	-2,03	-6,91	2
844	-2,51	135,93	-3,41	12,03	15,64	157,69	3
845	159,67	180,95	288,92	12,03	75,73	717,30	5
848	189,72	150,40	285,33	12,03	75,24	712,72	5
872	307,44	46,77	143,79	12,03	59,91	569,95	5
873	-100,00	-9,50	9,50	12,03	-12,03	-100,00	2
874	-99,40	-4,79	4,76	12,03	-11,96	-99,36	2
884	-86,23	134,89	-116,31	12,03	-8,14	-63,76	2
885	-88,54	-22,93	20,30	12,03	-10,97	-90,11	2
891	3.318,56	-69,11	-2.293,52	12,03	115,00	1.082,95	3
892	5.650,64	34,99	1.977,33	12,03	921,85	8.596,85	5
893	8.699,43	35,95	3.127,35	12,03	1.427,08	13.301,84	5
894	12.289,11	94,46	11.608,55	12,03	2.886,24	26.890,39	5
895	-100,00	10,22	-10,22	12,03	-12,03	-100,00	2
898	2.544,89	20,08	510,95	12,03	370,03	3.457,98	5
899	81,62	25,85	21,10	12,03	15,47	156,07	5

Table D.23: CMSA for Malaysia (% changes, 1998-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
046	-52,55	225,14	-118,31	-5,71	-3,10	45,47	1
048	18,36	-4,45	-0,82	-5,71	-0,75	6,63	1
054	-46,46	-9,10	4,23	-5,71	2,93	-54,11	2
056	-39,03	-7,51	2,93	-5,71	2,49	-46,82	2
057	-6,18	-1,05	0,06	-5,71	0,41	-12,46	2
058	34,92	41,68	14,55	-5,71	-5,20	80,24	3
061	-100,00	-28,30	28,30	-5,71	5,71	-100,00	2
062	126,95	51,41	65,27	-5,71	-13,91	224,01	3
073	19,37	82,94	16,07	-5,71	-6,76	105,91	3
075	1.095,14	19,80	216,84	-5,71	-76,01	1.250,06	3
098	68,02	-7,81	-5,31	-5,71	-3,13	46,05	1
121	-70,33	97,08	-68,27	-5,71	2,37	-44,86	2
223	438,57	-59,91	-262,75	-5,71	-6,62	103,59	1
232	-100,00	0,82	-0,82	-5,71	5,71	-100,00	2
247	-100,00	86,46	-86,46	-5,71	5,71	-100,00	2
263	-100,00	-70,52	70,52	-5,71	5,71	-100,00	2
273	6.289,76	-34,16	-2.148,81	-5,71	-234,40	3.866,68	1
277	-100,00	206,72	-206,72	-5,71	5,71	-100,00	2
278	183,05	-8,57	-15,70	-5,71	-9,06	144,01	1
288	-100,00	-8,65	8,65	-5,71	5,71	-100,00	2
292	-69,14	-28,62	19,79	-5,71	4,45	-79,23	2
334	348,32	11,37	39,60	-5,71	-22,79	370,80	3
515	-100,00	-34,22	34,22	-5,71	5,71	-100,00	2
522	-79,97	-20,56	16,44	-5,71	4,80	-84,99	2
523	90,06	-18,48	-16,64	-5,71	-3,14	46,10	1
533	327,19	-2,25	-7,36	-5,71	-18,13	293,75	1
541	-100,00	15,45	-15,45	-5,71	5,71	-100,00	2
551	-100,00	3,28	-3,28	-5,71	5,71	-100,00	2
553	-93,94	3,34	-3,14	-5,71	5,35	-94,09	2
573	-100,00	-27,24	27,24	-5,71	5,71	-100,00	2
575	9.142,23	26,51	2.423,99	-5,71	-661,66	10.925,36	3
581	56.871,92	87,01	49.484,38	-5,71	-6.075,34	100.362,26	3
582	1.761,78	2,50	44,05	-5,71	-103,21	1.699,41	3
592	-100,00	-20,65	20,65	-5,71	5,71	-100,00	2
621	662,74	-13,96	-92,52	-5,71	-31,75	518,81	1
625	171,33	198,34	339,83	-5,71	-40,50	663,30	3
629	-51,08	5,03	-2,57	-5,71	2,78	-51,55	2
635	-100,00	34,06	-34,06	-5,71	5,71	-100,00	2
642	155.590,60	-14,89	-23.159,72	-5,71	-7.557,75	124.852,54	1
651	3.189,04	-14,11	-450,11	-5,71	-155,52	2.563,59	1
652	270,17	-48,38	-130,71	-5,71	-5,20	80,18	1
653	186,31	-29,09	-54,19	-5,71	-5,88	91,44	1
654	-92,07	-29,17	26,85	-5,71	5,39	-94,70	2
656	231,91	-33,54	-77,77	-5,71	-6,88	108,01	1

Table D.23 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
657	18,51	-2,04	-0,38	-5,71	-0,92	9,47	1
658	357,71	39,65	141,82	-5,71	-30,77	502,70	3
659	70,23	11,59	8,14	-5,71	-5,13	79,11	3
661	-100,00	-24,38	24,38	-5,71	5,71	-100,00	2
662	17,21	-18,79	-3,23	-5,71	0,27	-10,25	2
663	93,86	-12,32	-11,56	-5,71	-3,99	60,28	1
664	-52,45	71,72	-37,62	-5,71	1,05	-23,01	2
665	1.068,03	-29,22	-312,11	-5,71	-41,48	679,51	1
666	11,87	185,36	22,01	-5,71	-12,51	201,02	3
674	-100,00	-9,95	9,95	-5,71	5,71	-100,00	2
679	700,02	38,13	266,93	-5,71	-57,37	942,00	3
682	-96,54	-14,64	14,14	-5,71	5,54	-97,22	2
691	91,18	-24,42	-22,27	-5,71	-2,54	36,24	1
694	224,64	14,92	33,52	-5,71	-15,59	251,79	3
695	-79,72	3,59	-2,86	-5,71	4,51	-80,19	2
697	159,16	-5,07	-8,06	-5,71	-8,33	131,99	1
699	8,54	-18,73	-1,60	-5,71	0,67	-16,82	2
713	41,56	20,21	8,40	-5,71	-4,01	60,46	3
716	-96,65	-22,15	21,41	-5,71	5,56	-97,54	2
721	3.038,43	20,02	608,35	-5,71	-209,29	3.451,81	3
723	-96,38	167,47	-161,41	-5,71	5,15	-90,86	2
724	1.383,60	-32,00	-442,69	-5,71	-51,88	851,34	1
727	2.143,91	-51,99	-1.114,63	-5,71	-55,78	915,80	1
728	-96,48	-33,14	31,97	-5,71	5,57	-97,78	2
733	506,10	-13,41	-67,86	-5,71	-24,25	394,88	1
737	-72,90	-70,92	51,70	-5,71	5,26	-92,57	2
741	-52,30	-53,59	28,03	-5,71	4,44	-79,12	2
742	50,77	13,76	6,99	-5,71	-4,08	61,72	3
743	1.134,74	20,40	231,50	-5,71	-79,14	1.301,79	3
744	-87,49	-15,98	13,98	-5,71	5,11	-90,09	2
745	205,51	-10,95	-22,49	-5,71	-9,82	156,54	1
746	208,77	-6,70	-14,00	-5,71	-10,73	171,63	1
747	357,42	29,10	104,00	-5,71	-28,00	456,81	3
748	244,23	57,04	139,31	-5,71	-25,15	409,73	3
749	75,13	-13,80	-10,37	-5,71	-2,91	42,35	1
764	52,37	25,50	13,36	-5,71	-5,21	80,31	3
771	-77,98	-9,98	7,79	-5,71	4,58	-81,31	2
772	66,03	-9,64	-6,37	-5,71	-2,86	41,46	1
773	-19,04	-20,87	3,97	-5,71	2,05	-39,59	2
775	-2,87	135,46	-3,88	-5,71	-7,35	115,65	1
778	-75,93	14,06	-10,67	-5,71	4,14	-74,12	2
784	71,81	118,00	84,74	-5,71	-15,67	253,17	3
786	469,70	48,69	228,69	-5,71	-42,64	698,73	3
812	557,25	24,42	136,07	-5,71	-40,97	671,06	3
813	-94,10	-15,75	14,82	-5,71	5,42	-95,31	2
821	648,97	102,56	665,55	-5,71	-80,88	1.330,49	3

Table D.23 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
831	5.885,08	40,58	2.388,28	-5,71	-474,53	7.833,71	3
842	-100,00	52,55	-52,55	-5,71	5,71	-100,00	2
844	-19,87	-13,24	2,63	-5,71	1,74	-34,45	2
845	35,13	49,37	17,35	-5,71	-5,81	90,33	3
846	138,96	-14,55	-20,23	-5,71	-5,95	92,53	1
872	-48,68	32,52	-15,83	-5,71	1,83	-35,87	2
873	145,50	-18,75	-27,29	-5,71	-5,68	88,08	1
874	24,50	-7,18	-1,76	-5,71	-0,89	8,97	1
884	-100,00	21,98	-21,98	-5,71	5,71	-100,00	2
891	115.760,12	191,56	221.752,33	-5,71	-19.274,73	318.423,57	3
892	386,97	20,26	78,42	-5,71	-27,72	452,22	3
893	1.212,18	40,68	493,14	-5,71	-99,65	1.640,63	3
895	57,32	-24,75	-14,19	-5,71	-1,05	11,63	1
897	867,87	-34,44	-298,86	-5,71	-30,51	498,35	1
898	629,40	-13,33	-83,91	-5,71	-30,37	496,08	1
899	1.143,90	-9,66	-110,52	-5,71	-58,43	959,58	1

Table D.24: CMSA for Singapore (% changes, 1998-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
017	470,92	2,91	13,73	-21,37	-104,21	361,98	3
046	125,02	-25,79	-32,24	-21,37	-14,32	31,30	1
048	-75,00	5,83	-4,37	-21,37	15,72	-79,20	2
054	-61,77	-7,98	4,93	-21,37	13,85	-72,34	2
056	-83,17	-11,80	9,81	-21,37	18,20	-88,32	2
057	20,07	-19,27	-3,87	-21,37	0,66	-23,79	2
058	-74,72	-14,43	10,78	-21,37	16,75	-82,99	2
062	66,43	1,26	0,84	-21,37	-14,65	32,52	3
073	178,96	43,83	78,44	-21,37	-64,38	215,48	3
075	839,33	-24,03	-201,72	-21,37	-131,14	461,07	1
098	-72,67	13,65	-9,92	-21,37	14,73	-75,58	2
111	-52,44	32,20	-16,89	-21,37	7,94	-50,57	2
121	141,14	-35,82	-50,56	-21,37	-11,70	21,68	1
223	-100,00	-30,02	30,02	-21,37	21,37	-100,00	2
248	-100,00	-43,50	43,50	-21,37	21,37	-100,00	2
273	1.790,23	-33,26	-595,44	-21,37	-248,26	891,90	1
278	63.856,96	-25,34	-16.179,26	-21,37	-10.184,94	37.446,05	1
292	-90,13	-15,23	13,73	-21,37	19,58	-93,42	2
335	-69,08	10,12	-6,99	-21,37	14,10	-73,22	2
421	25,61	-46,53	-11,92	-21,37	7,02	-47,19	2
513	-100,00	-29,35	29,35	-21,37	21,37	-100,00	2
522	-100,00	19,63	-19,63	-21,37	21,37	-100,00	2
523	-60,71	-26,84	16,30	-21,37	15,23	-77,40	2
533	-95,41	9,99	-9,53	-21,37	20,30	-96,03	2
553	-100,00	16,36	-16,36	-21,37	21,37	-100,00	2
574	-29,50	-8,19	2,42	-21,37	7,54	-49,11	2
575	-55,21	10,65	-5,88	-21,37	10,78	-61,04	2
581	-46,01	-9,52	4,38	-21,37	10,93	-61,59	2
582	-94,70	-4,03	3,82	-21,37	20,29	-96,00	2
591	-100,00	45,47	-45,47	-21,37	21,37	-100,00	2
598	601,05	-22,27	-133,85	-21,37	-95,10	328,46	1
611	-100,00	52,17	-52,17	-21,37	21,37	-100,00	2
621	97,66	-2,55	-2,49	-21,37	-19,79	51,44	1
625	-50,24	1,63	-0,82	-21,37	10,56	-60,24	2
634	280,19	-25,71	-72,03	-21,37	-39,00	122,09	1
635	1.296,15	-17,42	-225,80	-21,37	-225,05	806,51	1
642	800,94	-18,88	-151,24	-21,37	-134,83	474,61	1
651	-58,41	-36,72	21,44	-21,37	15,75	-79,30	2
652	-99,22	-23,67	23,48	-21,37	21,25	-99,53	2
653	-66,95	-16,67	11,16	-21,37	15,49	-78,35	2
654	203,43	36,26	73,77	-21,37	-67,00	225,09	3
656	78,25	33,68	26,35	-21,37	-29,56	87,35	3
658	98,29	3,77	3,71	-21,37	-22,61	61,79	3

Table D.24 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
659	137,42	-28,43	-39,07	-21,37	-14,94	33,60	1
661	293,28	-54,75	-160,56	-21,37	-16,67	39,93	1
662	14,74	-56,77	-8,37	-21,37	10,77	-61,00	2
663	84,70	-19,88	-16,84	-21,37	-10,26	16,35	1
664	1.390,92	-33,74	-469,25	-21,37	-189,78	676,78	1
665	31,79	36,48	11,60	-21,37	-17,07	41,42	3
672	-100,00	-17,50	17,50	-21,37	21,37	-100,00	2
676	6,64	-44,74	-2,97	-21,37	8,78	-53,66	2
678	63,74	-20,03	-12,77	-21,37	-6,61	2,96	1
679	1.155.017,78	-32,32	-373.335,83	-21,37	-167.065,26	614.563,00	1
682	-35,76	-54,62	19,53	-21,37	15,14	-77,08	2
684	157,81	49,14	77,54	-21,37	-60,80	202,31	3
691	111,52	-49,70	-55,43	-21,37	-1,37	-16,35	1
692	-76,68	-30,07	23,06	-21,37	17,89	-87,18	2
694	20.241,62	-4,47	-904,60	-21,37	-4.132,03	15.179,15	1
695	836,17	15,77	131,83	-21,37	-210,27	752,14	3
696	374,29	-70,54	-264,03	-21,37	-8,49	9,85	1
697	168,94	1,81	3,06	-21,37	-37,15	115,29	3
699	371,63	-20,28	-75,37	-21,37	-58,99	195,62	1
713	338,61	25,45	86,18	-21,37	-96,23	332,63	3
716	59,01	-26,50	-15,64	-21,37	-3,61	-8,10	1
723	471,87	-4,56	-21,53	-21,37	-95,28	329,12	1
724	153,19	10,56	16,17	-21,37	-38,46	120,09	3
728	312,18	15,86	49,52	-21,37	-80,70	275,49	3
731	18,95	-6,11	-1,16	-21,37	-2,50	-12,19	1
733	291,38	-36,49	-106,34	-21,37	-31,75	95,43	1
735	64,53	-0,43	-0,28	-21,37	-13,64	28,81	1
737	17,97	-35,58	-6,39	-21,37	5,13	-40,24	2
741	5.744,86	-31,63	-1.817,16	-21,37	-832,72	3.041,97	1
742	-61,69	-6,81	4,20	-21,37	13,74	-71,93	2
743	18,88	-5,66	-1,07	-21,37	-2,60	-11,82	1
744	10,06	-46,55	-4,68	-21,37	8,80	-53,75	2
745	-87,37	14,44	-12,61	-21,37	18,28	-88,63	2
746	31,77	24,32	7,73	-21,37	-13,64	28,80	3
747	-77,87	-22,55	17,56	-21,37	17,71	-86,52	2
748	1.678,83	-23,56	-395,57	-21,37	-269,24	969,09	1
749	391,25	-15,89	-62,15	-21,37	-66,94	224,89	1
752	-88,97	-28,54	25,39	-21,37	19,69	-93,81	2
759	-55,44	3,54	-1,96	-21,37	11,51	-63,72	2
761	110,55	42,11	46,55	-21,37	-42,58	135,26	3
763	-100,00	20,28	-20,28	-21,37	21,37	-100,00	2
764	401,97	3,03	12,18	-21,37	-89,17	306,64	3
771	356,04	-32,66	-116,28	-21,37	-44,26	141,46	1
772	-71,76	-19,87	14,26	-21,37	16,54	-82,20	2

Table D.24 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
773	55,28	-43,60	-24,10	-21,37	2,66	-31,14	2
775	261,14	1,41	3,67	-21,37	-56,90	187,95	3
776	301,53	14,48	43,66	-21,37	-76,87	261,42	3
778	374,83	-14,35	-53,78	-21,37	-65,55	219,78	1
781	-100,00	65,25	-65,25	-21,37	21,37	-100,00	2
784	220,97	48,62	107,44	-21,37	-80,58	275,07	3
793	39.582,68	-87,70	-34.713,18	-21,37	-1.022,03	3.738,39	1
812	25,01	-36,83	-9,21	-21,37	4,50	-37,91	2
813	355,98	-14,19	-50,50	-21,37	-62,26	207,66	1
821	277,60	-16,85	-46,78	-21,37	-45,73	146,86	1
841	-53,79	-16,88	9,08	-21,37	13,16	-69,80	2
842	130,84	6,97	9,12	-21,37	-31,40	94,15	3
843	-77,28	-22,48	17,37	-21,37	17,61	-86,15	2
844	-54,82	15,21	-8,34	-21,37	10,25	-59,07	2
845	-54,92	48,66	-26,72	-21,37	7,05	-47,30	2
846	393,57	-4,15	-16,34	-21,37	-79,74	271,96	1
848	-94,53	-25,98	24,56	-21,37	20,51	-96,82	2
851	-100,00	6,76	-6,76	-21,37	21,37	-100,00	2
872	158,57	-0,32	-0,50	-21,37	-33,72	102,66	1
885	9.686,88	-25,16	-2.437,34	-21,37	-1.544,10	5.658,91	1
892	302,57	-2,95	-8,92	-21,37	-62,13	207,20	1
893	45,58	8,09	3,69	-21,37	-12,26	23,72	3
894	-86,18	31,56	-27,20	-21,37	17,49	-85,70	2
896	-100,00	-15,89	15,89	-21,37	21,37	-100,00	2
897	95,88	-13,51	-12,96	-21,37	-14,83	33,20	1
898	-92,38	-54,40	50,25	-21,37	20,63	-97,27	2
899	-100,00	20,79	-20,79	-21,37	21,37	-100,00	2

Table D.25: CMSA for China (% changes, 1992-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
048	9,82	-18,51	-1,82	90,33	-9,49	70,33	2
057	108,85	149,77	163,02	90,33	380,87	892,84	5
062	762,04	-58,68	-447,19	90,33	231,39	577,88	3
211	-64,55	82,82	-53,46	90,33	-31,79	23,35	2
266	75,18	-63,63	-47,84	90,33	-32,78	21,27	2
287	-40,63	-10,10	4,10	90,33	-42,12	1,59	2
524	-100,00	131,33	-131,33	90,33	-90,33	-100,00	2
532	1.443,41	110,14	1.589,79	90,33	2.839,46	6.073,14	5
571	-100,00	-27,65	27,65	90,33	-90,33	-100,00	2
573	-100,00	42,39	-42,39	90,33	-90,33	-99,99	2
613	1.588,62	-69,36	-1.101,84	90,33	377,07	884,83	3
625	857,00	-61,51	-527,13	90,33	242,41	601,11	3
658	8.697,32	-66,64	-5.795,74	90,33	2.560,87	5.486,14	3
659	2.999,94	-64,33	-1.929,79	90,33	908,59	2.004,75	3
673	-59,19	15,77	-9,33	90,33	-47,65	-10,07	2
676	-99,95	-69,97	69,93	90,33	-90,32	-99,97	2
682	-99,53	-5,52	5,50	90,33	-89,93	-99,16	2
684	-98,93	-4,82	4,77	90,33	-89,41	-98,06	2
692	-100,00	-68,37	68,37	90,33	-90,33	-100,00	2
697	109,49	-73,01	-79,94	90,33	-39,25	7,63	2
728	195,91	-32,27	-63,22	90,33	90,72	281,47	3
735	29,39	-25,40	-7,46	90,33	-3,14	83,73	2
772	15.432,84	142,22	21.948,53	90,33	33.896,04	71.509,97	5
784	13.768,91	-10,20	-1.404,19	90,33	11.160,16	23.605,02	3
848	-27,73	-50,34	13,96	90,33	-57,91	-31,69	2
874	3.456,05	16,32	564,11	90,33	3.646,26	7.773,08	5
883	-100,00	-78,38	78,38	90,33	-90,33	-100,00	2

Table D.26: CMSA for Japan (% changes, 1992-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
001	-100,00	-10,59	10,59	-25,11	25,11	-100,00	2
012	235,93	-12,28	-28,96	-25,11	-48,89	120,69	1
034	804,38	-24,23	-194,86	-25,11	-146,96	413,21	1
036	-26,84	-40,07	10,75	-25,11	14,10	-67,16	2
037	-93,01	15,06	-14,01	-25,11	23,09	-93,98	2
048	1.578,39	-11,53	-182,02	-25,11	-347,73	1.012,00	1
056	-25,28	1,17	-0,30	-25,11	6,13	-43,39	2
057	64,31	-27,57	-17,73	-25,11	-4,77	-10,88	1
058	917,29	-23,73	-217,66	-25,11	-169,72	481,07	1
059	-60,28	-11,34	6,84	-25,11	16,27	-73,63	2
074	317,65	-16,46	-52,30	-25,11	-62,50	161,28	1
075	-1,08	-15,14	0,16	-25,11	4,03	-37,14	2
081	-100,00	-13,97	13,97	-25,11	25,11	-100,00	2
098	-84,00	88,07	-73,98	-25,11	17,55	-77,47	2
111	-99,82	54,02	-53,92	-25,11	25,04	-99,79	2
121	-71,91	-42,59	30,63	-25,11	21,06	-87,92	2
211	-100,00	-78,29	78,29	-25,11	25,11	-100,00	2
222	92,80	-30,32	-28,13	-25,11	-8,62	0,61	1
223	334,04	-70,89	-236,79	-25,11	-6,62	-5,37	1
248	60.011,77	-37,83	-22.704,78	-25,11	-9.358,24	27.885,80	1
261	-100,00	-71,30	71,30	-25,11	25,11	-100,00	2
263	-95,97	-79,34	76,15	-25,11	24,90	-99,38	2
274	-100,00	-94,46	94,46	-25,11	25,11	-100,00	2
277	698,30	-64,13	-447,85	-25,11	-46,78	114,42	1
278	-72,86	-32,94	24,00	-25,11	20,54	-86,37	2
287	105,11	-48,45	-50,93	-25,11	-1,44	-20,82	1
291	-33,28	-48,26	16,06	-25,11	16,44	-74,15	2
292	221,26	-28,12	-62,23	-25,11	-32,87	72,93	1
514	-100,00	-7,59	7,59	-25,11	25,11	-100,00	2
515	-100,00	46,66	-46,66	-25,11	25,11	-100,00	2
522	-99,50	3,96	-3,94	-25,11	24,98	-99,61	2
523	-87,68	16,80	-14,73	-25,11	21,50	-89,22	2
524	-100,00	-17,72	17,72	-25,11	25,11	-100,00	2
532	145,13	-26,22	-38,06	-25,11	-20,30	35,44	1
551	-74,61	-9,46	7,06	-25,11	19,34	-82,78	2
611	764,00	-49,76	-380,19	-25,11	-83,88	225,05	1
612	-100,00	67,92	-67,92	-25,11	25,11	-100,00	2
613	726,98	-54,35	-395,15	-25,11	-69,67	182,69	1
625	-94,77	-48,23	45,70	-25,11	24,43	-97,97	2
635	-19,51	50,30	-9,82	-25,11	-5,27	-9,40	1
642	8.443,90	98,05	8.278,96	-25,11	-4.223,71	12.572,09	3
651	32.818,73	-39,04	-12.811,50	-25,11	-5.013,99	14.929,09	1
652	2.137,90	-50,14	-1.071,98	-25,11	-255,06	735,61	1

Table D.26 Continued (% changes, 1992-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
653	90,271,99	-66,62	-60,140,05	-25,11	-7,549,37	22,490,84	1
654	385,878,89	-66,20	-255,466,00	-25,11	-32,729,91	97,591,67	1
655	119,77	-31,20	-37,37	-25,11	-12,86	13,24	1
656	1,849,46	-40,54	-749,79	-25,11	-265,94	768,07	1
658	57,66	83,36	48,07	-25,11	-47,48	116,50	3
659	-14,96	-34,75	5,20	-25,11	11,18	-58,45	2
661	1,365,52	-20,02	-273,36	-25,11	-269,21	777,82	1
662	52,54	122,22	64,21	-25,11	-60,01	153,86	3
663	-57,04	33,35	-19,02	-25,11	10,73	-57,10	2
664	-99,91	19,44	-19,42	-25,11	25,08	-99,92	2
665	-40,66	25,38	-10,32	-25,11	6,43	-44,28	2
666	127,49	-0,19	-0,24	-25,11	-31,91	70,05	1
671	-83,36	-33,43	27,87	-25,11	22,33	-91,71	2
672	-100,00	-94,89	94,89	-25,11	25,11	-100,00	2
673	-96,67	-75,05	72,55	-25,11	24,90	-99,38	2
676	-100,00	-82,82	82,82	-25,11	25,11	-100,00	2
679	-99,27	-11,55	11,47	-25,11	24,95	-99,52	2
684	100,12	-25,88	-25,92	-25,11	-12,13	11,08	1
694	-95,57	49,23	-47,05	-25,11	23,45	-95,05	2
697	-64,26	25,86	-16,62	-25,11	13,81	-66,31	2
699	-92,66	44,73	-41,44	-25,11	22,44	-92,05	2
721	-100,00	-11,41	11,41	-25,11	25,11	-100,00	2
724	-76,28	-46,83	35,72	-25,11	21,94	-90,55	2
727	-100,00	-52,59	52,59	-25,11	25,11	-100,00	2
741	-30,16	29,75	-8,97	-25,11	2,35	-32,13	2
742	-94,01	37,00	-34,78	-25,11	23,05	-93,85	2
743	3,037,08	31,50	956,65	-25,11	-1,010,73	2,989,38	3
745	-64,24	-1,25	0,80	-25,11	16,24	-73,55	2
747	-78,60	33,19	-26,09	-25,11	17,95	-78,65	2
751	-99,10	42,99	-42,61	-25,11	24,79	-99,04	2
752	114,68	206,67	237,00	-25,11	-140,20	393,04	3
761	-99,51	172,44	-171,59	-25,11	24,77	-98,99	2
762	-100,00	75,63	-75,63	-25,11	25,11	-100,00	2
764	23,99	125,91	30,20	-25,11	-45,22	109,77	3
772	-65,47	85,51	-55,99	-25,11	9,03	-52,03	2
775	12,849,24	188,40	24,208,39	-25,11	-9,352,44	27,868,49	3
776	-71,64	164,22	-117,64	-25,11	6,29	-43,87	2
778	81,36	79,04	64,31	-25,11	-56,42	143,17	3
784	3,060,72	67,36	2,061,77	-25,11	-1,303,17	3,861,57	3
786	-99,98	40,74	-40,74	-25,11	25,10	-99,98	2
812	-100,00	75,63	-75,63	-25,11	25,11	-100,00	2
813	1,731,76	62,56	1,083,45	-25,11	-722,60	2,130,05	3
821	30,03	57,00	17,11	-25,11	-26,15	52,88	3
831	-91,77	18,65	-17,11	-25,11	22,66	-92,69	2

Table D.26 Continued (% changes, 1992-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
841	1.448,17	0,42	6,07	-25,11	-365,26	1.064,29	3
842	354,15	25,00	88,54	-25,11	-117,44	325,14	3
843	62.915,87	-30,04	-18.899,76	-25,11	-11.044,85	32.916,10	1
844	-21,92	28,44	-6,23	-25,11	-0,07	-24,90	1
845	494,01	21,63	106,87	-25,11	-156,31	441,09	3
846	-39,80	19,28	-7,67	-25,11	7,08	-46,22	2
848	-77,81	-40,79	31,74	-25,11	21,81	-90,16	2
851	1.039,21	10,94	113,73	-25,11	-292,25	846,52	3
871	-100,00	386,83	-386,83	-25,11	25,11	-100,00	2
874	1.005,09	34,50	346,76	-25,11	-348,11	1.013,12	3
891	59,32	-21,72	-12,88	-25,11	-6,21	-6,60	1
892	912,10	-18,89	-172,28	-25,11	-181,02	514,79	1
893	1.010,86	114,67	1.159,17	-25,11	-573,69	1.685,91	3
894	-5,20	5,50	-0,29	-25,11	0,00	-25,10	1
897	75,62	-8,45	-6,39	-25,11	-15,26	20,41	1
898	-0,19	37,84	-0,07	-25,11	-9,43	3,03	1
899	-82,34	16,25	-13,38	-25,11	19,96	-84,63	2

Table D.27: CMSA for Korea (% changes, 1992-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
036	-6,38	119,77	-7,64	-3,81	-4,03	97,91	1
041	-100,00	-46,37	46,37	-3,81	3,81	-100,00	2
056	-66,80	4,40	-2,94	-3,81	2,49	-66,66	2
057	-11,24	3,52	-0,40	-3,81	0,31	-11,62	2
058	148,20	-1,31	-1,94	-3,81	-5,53	135,61	1
075	953,88	-22,56	-215,21	-3,81	-27,31	684,98	1
121	94,75	-35,71	-33,84	-3,81	-0,96	20,43	1
261	-100,00	-82,18	82,18	-3,81	3,81	-100,00	2
277	8.409,63	-62,86	-5.286,23	-3,81	-116,72	2.940,01	1
278	4.093,09	-31,18	-1.276,08	-3,81	-106,24	2.675,78	1
291	-100,00	-64,67	64,67	-3,81	3,81	-100,00	2
292	800,62	-18,47	-147,89	-3,81	-24,19	606,26	1
514	230,81	-32,94	-76,02	-3,81	-4,65	113,40	1
524	-100,00	3,02	-3,02	-3,81	3,81	-100,00	2
532	-34,79	-52,00	18,09	-3,81	2,62	-69,89	2
598	-100,00	22,77	-22,77	-3,81	3,81	-100,00	2
611	50.296,44	-38,28	-19.251,26	-3,81	-1.182,50	29.820,59	1
613	-49,20	-76,93	37,85	-3,81	3,37	-88,72	2
625	17.308,06	92,83	16.066,29	-3,81	-1.276,33	32.187,04	3
651	836,48	-11,44	-95,67	-3,81	-27,82	697,74	1
652	450,33	-33,96	-152,93	-3,81	-10,05	249,58	1
653	31.346,77	-59,24	-18.570,35	-3,81	-484,99	12.228,37	1
654	6.180,50	-58,97	-3.644,59	-3,81	-94,46	2.378,67	1
659	-94,14	-13,76	12,95	-3,81	3,62	-95,14	2
661	3.694,94	-48,75	-1.801,42	-3,81	-70,35	1.770,61	1
662	-94,96	37,76	-35,85	-3,81	3,55	-93,32	2
672	-100,00	-17,88	17,88	-3,81	3,81	-100,00	2
676	-100,00	-27,85	27,85	-3,81	3,81	-100,00	2
716	364,63	-26,88	-98,01	-3,81	-9,14	226,78	1
724	607,14	-78,55	-476,88	-3,81	-1,97	45,92	1
728	-43,99	-19,11	8,40	-3,81	2,09	-56,42	2
761	347,32	810,87	2.816,29	-3,81	-151,57	3.819,09	3
764	-91,68	51,99	-47,67	-3,81	3,33	-87,83	2
775	1.369,02	68,79	941,74	-3,81	-90,75	2.284,99	3
784	648,61	22,42	145,45	-3,81	-31,14	781,54	3
813	178,08	106,42	189,51	-3,81	-18,08	452,12	3
821	-13,06	185,29	-24,20	-3,81	-5,65	138,58	1
848	-46,40	164,72	-76,43	-3,81	-1,60	36,47	1
872	1.927,49	31,18	600,94	-3,81	-97,62	2.458,18	3
899	274,11	1,21	3,33	-3,81	-10,63	264,21	3

Table D.28: CMSA for Malaysia (% changes, 1992-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
054	-66,19	-0,94	0,62	3,02	-2,01	-65,50	2
056	-31,79	-21,65	6,88	3,02	-1,40	-44,95	2
057	12,42	-35,45	-4,40	3,02	-0,83	-25,25	2
058	175.811,27	-33,94	-59.674,80	3,02	3.501,08	119.606,63	3
059	-100,00	-5,61	5,61	3,02	-3,02	-100,00	2
062	-63,46	67,29	-42,70	3,02	-1,17	-37,02	2
075	-71,81	-1,64	1,18	3,02	-2,18	-71,44	2
111	-100,00	33,32	-33,32	3,02	-3,02	-100,00	2
121	133,62	176,51	235,86	3,02	16,46	565,48	5
222	-100,00	-34,94	34,94	3,02	-3,02	-100,00	2
223	207,94	-31,27	-65,01	3,02	3,37	118,04	3
277	-100,00	397,22	-397,22	3,02	-3,02	-100,00	2
523	13.979,51	-13,03	-1.821,09	3,02	366,25	12.514,65	3
524	-100,00	16,07	-16,07	3,02	-3,02	-100,00	2
532	-100,00	-48,81	48,81	3,02	-3,02	-100,00	2
629	316,17	-24,16	-76,39	3,02	6,50	225,14	3
651	2,56	-61,45	-1,58	3,02	-1,82	-59,27	2
653	633,08	-71,35	-451,69	3,02	3,32	116,37	3
656	1.414,96	-54,83	-775,83	3,02	17,62	604,93	3
657	-34,16	-36,03	12,31	3,02	-1,75	-56,61	2
658	30.485,10	-40,21	-12.257,63	3,02	548,44	18.738,71	3
659	7.595,35	-41,49	-3.151,06	3,02	132,77	4.538,58	3
661	-100,00	-67,07	67,07	3,02	-3,02	-100,00	2
665	-67,38	-8,54	5,75	3,02	-2,12	-69,26	2
672	34,24	-47,67	-16,32	3,02	-0,90	-27,64	2
676	-100,00	-35,96	35,96	3,02	-3,02	-100,00	2
682	-73,59	-18,49	13,61	3,02	-2,37	-77,82	2
693	-100,00	-49,26	49,26	3,02	-3,02	-100,00	2
695	-64,49	-30,34	19,57	3,02	-2,27	-74,52	2
713	1.984,21	-41,86	-830,57	3,02	33,53	1.148,33	3
724	429,25	-75,09	-322,30	3,02	0,96	35,84	3
728	-16,92	-53,96	9,13	3,02	-1,86	-60,60	2
742	18,23	-48,31	-8,81	3,02	-1,17	-37,05	2
743	34.757,32	-28,37	-9.861,75	3,02	749,87	25.620,09	3
744	3.592,05	-63,98	-2.298,13	3,02	37,09	1.270,04	3
746	5.610,87	-31,11	-1.745,79	3,02	115,61	3.952,60	3
748	8.011,64	-8,68	-695,70	3,02	220,35	7.530,62	3
749	13.794,52	-35,11	-4.842,73	3,02	268,88	9.188,59	3
771	120,50	16,96	20,43	3,02	4,76	165,66	5
772	-37,13	-1,14	0,42	3,02	-1,14	-35,97	2
778	41.078,42	31,87	13.089,87	3,02	1.634,41	55.837,59	5
784	642,82	28,75	184,78	3,02	25,82	885,18	5
813	1,14	-44,63	-0,51	3,02	-1,33	-42,31	2
821	-50,24	66,32	-33,32	3,02	-0,52	-14,75	2

Table D.28 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
841	-100,00	25,40	-25,40	3,02	-3,02	-100,00	2
844	-77,50	-13,02	10,09	3,02	-2,43	-79,84	2
845	-31,71	-50,71	16,08	3,02	-2,00	-65,33	2
873	7.065,43	-37,58	-2.655,10	3,02	131,86	4.507,62	3

Table D.29: CMSA for Singapore (% changes, 1992-2002)							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
048	-66,19	-0,94	0,62	3,02	-2,01	-65,50	2
054	-31,79	-21,65	6,88	3,02	-1,40	-44,95	2
056	12,42	-35,45	-4,40	3,02	-0,83	-25,25	2
057	175.811,27	-33,94	-59.674,80	3,02	3.501,08	119.606,63	3
058	-100,00	-5,61	5,61	3,02	-3,02	-100,00	2
061	-63,46	67,29	-42,70	3,02	-1,17	-37,02	2
074	-71,81	-1,64	1,18	3,02	-2,18	-71,44	2
098	-100,00	33,32	-33,32	3,02	-3,02	-100,00	2
112	133,62	176,51	235,86	3,02	16,46	565,48	5
211	-100,00	-34,94	34,94	3,02	-3,02	-100,00	2
222	207,94	-31,27	-65,01	3,02	3,37	118,04	3
277	-100,00	397,22	-397,22	3,02	-3,02	-100,00	2
523	13.979,51	-13,03	-1.821,09	3,02	366,25	12.514,65	3
524	-100,00	16,07	-16,07	3,02	-3,02	-100,00	2
532	-100,00	-48,81	48,81	3,02	-3,02	-100,00	2
629	316,17	-24,16	-76,39	3,02	6,50	225,14	3
651	2,56	-61,45	-1,58	3,02	-1,82	-59,27	2
653	633,08	-71,35	-451,69	3,02	3,32	116,37	3
656	1.414,96	-54,83	-775,83	3,02	17,62	604,93	3
657	-34,16	-36,03	12,31	3,02	-1,75	-56,61	2
658	30.485,10	-40,21	-12.257,63	3,02	548,44	18.738,71	3
659	7.595,35	-41,49	-3.151,06	3,02	132,77	4.538,58	3
661	-100,00	-67,07	67,07	3,02	-3,02	-100,00	2
665	-67,38	-8,54	5,75	3,02	-2,12	-69,26	2
672	34,24	-47,67	-16,32	3,02	-0,90	-27,64	2
676	-100,00	-35,96	35,96	3,02	-3,02	-100,00	2
682	-73,59	-18,49	13,61	3,02	-2,37	-77,82	2
693	-100,00	-49,26	49,26	3,02	-3,02	-100,00	2
695	-64,49	-30,34	19,57	3,02	-2,27	-74,52	2
713	1.984,21	-41,86	-830,57	3,02	33,53	1.148,33	3
724	429,25	-75,09	-322,30	3,02	0,96	35,84	3
728	-16,92	-53,96	9,13	3,02	-1,86	-60,60	2
742	18,23	-48,31	-8,81	3,02	-1,17	-37,05	2

Table D.29 Continued							
SITC	Market Share Effect	Commodity Composition Effect	Commodity Adaptation Effect	Market Composition Effect	Market Adaptation Effect	Total	+
743	34.757,32	-28,37	-9.861,75	3,02	749,87	25.620,09	3
744	3.592,05	-63,98	-2.298,13	3,02	37,09	1.270,04	3
746	5.610,87	-31,11	-1.745,79	3,02	115,61	3.952,60	3
748	8.011,64	-8,68	-695,70	3,02	220,35	7.530,62	3
749	13.794,52	-35,11	-4.842,73	3,02	268,88	9.188,59	3
771	120,50	16,96	20,43	3,02	4,76	165,66	5
772	-37,13	-1,14	0,42	3,02	-1,14	-35,97	2
778	41.078,42	31,87	13.089,87	3,02	1.634,41	55.837,59	5
784	642,82	28,75	184,78	3,02	25,82	885,18	5
813	1,14	-44,63	-0,51	3,02	-1,33	-42,31	2
821	-50,24	66,32	-33,32	3,02	-0,52	-14,75	2
841	-100,00	25,40	-25,40	3,02	-3,02	-100,00	2
844	-77,50	-13,02	10,09	3,02	-2,43	-79,84	2
845	-31,71	-50,71	16,08	3,02	-2,00	-65,33	2
873	7.065,43	-37,58	-2.655,10	3,02	131,86	4.507,62	3

Table D.30: Turkey's RCA Indices for Individual Sectors													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
001	6,52	12,91	10,32	6,42	4,00	3,82	2,37	0,80	0,20	2,85	1,98	4,74	1,68
011	1,06	2,87	0,11	0,16	0,23	0,05	0,01	0,15	0,37	0,19	0,16	0,49	0,24
012	2,29	2,26	2,42	0,81	0,65	0,68	0,67	0,52	0,58	0,68	0,71	1,12	0,66
016	0,00	0,04	0,00	0,00	0,15	0,12	0,03	0,01	0,03	0,03	0,23	0,06	0,10
017	0,04	0,03	0,08	0,14	0,56	0,41	0,19	0,19	0,13	0,04	0,04	0,17	0,07
022	0,26	0,53	0,71	1,20	0,79	0,73	1,03	0,71	1,06	1,63	1,15	0,89	1,28
023	3,60	3,87	1,20	2,43	3,60	2,19	1,19	1,35	1,26	1,16	1,40	2,11	1,27
024	25,45	28,31	28,34	29,41	25,55	27,27	22,34	24,77	25,27	22,26	23,82	25,71	23,78
025	0,28	0,90	4,25	4,74	7,15	9,50	10,79	6,35	1,78	6,70	1,41	4,90	3,29
034	0,50	0,45	0,45	0,39	0,45	0,56	0,32	0,64	0,48	0,45	0,82	0,50	0,58
035	0,27	0,15	0,17	0,15	0,43	0,40	0,24	0,53	0,29	0,27	0,25	0,29	0,27
036	0,52	0,44	0,47	0,50	0,54	0,61	0,38	0,38	0,33	0,28	0,44	0,44	0,35
037	0,81	0,83	0,92	1,08	1,03	1,14	1,20	0,81	0,86	0,33	0,29	0,85	0,49
041	41,78	38,85	38,28	38,60	26,44	29,39	33,24	36,76	41,72	24,92	3,92	32,17	23,52
042	0,19	0,24	0,05	1,40	0,40	0,07	0,02	0,04	0,13	0,03	0,06	0,24	0,08
043	42,11	43,63	43,41	42,74	38,88	35,81	33,27	35,09	41,77	33,62	32,08	38,40	35,82
044	0,20	0,35	0,60	5,65	5,27	0,20	0,36	0,42	0,16	0,44	0,30	1,27	0,30
045	0,10	0,89	0,18	0,10	0,46	0,45	0,29	6,13	2,33	0,25	0,05	1,02	0,88
046	18,19	15,50	18,00	18,55	14,93	18,80	11,62	8,11	12,16	5,25	7,07	13,47	8,16
047	1,29	1,25	0,90	3,25	3,09	2,08	1,19	0,89	0,65	0,40	0,59	1,42	0,55
048	6,59	7,16	7,91	11,40	12,34	11,38	10,16	6,52	6,98	6,39	6,92	8,52	6,76
054	10,20	10,50	8,01	8,13	9,34	9,28	7,36	5,75	6,31	6,04	4,65	7,78	5,66
056	9,90	9,30	9,49	7,62	8,64	8,62	8,03	7,69	7,27	5,99	5,12	7,97	6,13
057	23,81	24,66	24,59	24,93	22,17	22,52	22,20	23,56	24,95	21,72	19,03	23,10	21,90

Table D.30 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
058	10,98	14,83	16,45	14,20	13,12	14,64	13,51	12,69	12,61	10,04	8,71	12,89	10,45
059	24,18	19,79	20,66	21,69	20,65	12,98	12,39	11,88	7,95	5,93	4,24	14,76	6,04
061	5,63	6,73	9,55	0,90	1,02	6,04	6,29	10,10	12,15	12,94	5,23	6,96	10,11
062	5,91	8,92	15,32	15,64	14,79	13,40	12,21	9,65	9,66	8,40	7,25	11,01	8,44
071	0,07	0,04	0,05	0,06	0,68	0,28	0,26	0,19	0,21	0,16	0,14	0,20	0,17
072	0,01	0,02	0,04	0,29	0,23	0,44	0,25	1,34	2,58	2,80	2,10	0,92	2,49
073	8,77	11,51	12,87	17,10	15,38	15,48	13,23	11,32	12,39	10,07	9,95	12,55	10,80
074	0,66	4,54	0,70	0,47	0,61	1,43	1,13	0,47	0,60	0,35	0,41	1,03	0,45
075	5,38	6,14	4,51	3,29	3,50	3,09	3,70	3,03	3,60	3,68	4,01	4,00	3,76
081	0,14	0,18	0,47	0,62	0,78	0,47	0,33	0,43	0,77	1,36	0,54	0,55	0,89
091	17,04	18,54	18,60	19,42	19,72	13,82	13,70	12,68	11,00	8,82	8,53	14,72	9,45
098	1,79	2,08	2,04	2,02	2,33	2,63	2,39	2,06	2,25	1,76	1,91	2,11	1,97
111	0,84	0,87	1,73	3,92	4,16	2,57	1,83	1,24	1,26	0,80	0,82	1,82	0,96
112	1,03	1,23	1,78	2,18	2,18	1,50	1,38	1,18	1,17	1,00	0,96	1,42	1,04
121	27,24	31,37	33,40	28,04	30,03	25,85	23,93	24,53	28,73	21,45	18,13	26,61	22,77
122	0,82	1,10	0,64	2,35	1,42	1,82	1,12	2,15	3,64	1,82	2,11	1,73	2,52
211	0,54	0,80	0,43	0,83	1,10	0,50	5,22	3,49	9,05	7,77	7,82	3,41	8,21
212	1,05	1,04	1,73	1,34	1,83	1,89	0,69	1,03	0,16	0,25	0,02	1,00	0,14
222	0,74	0,73	0,62	0,63	0,79	1,46	1,38	1,22	1,05	0,81	0,76	0,93	0,87
223	3,41	6,96	7,17	8,25	11,35	14,71	14,68	15,66	11,28	8,57	8,06	10,01	9,30
231	0,00	0,01	0,01	0,01	0,01	0,00	0,00	0,02	0,01	0,00	0,01	0,01	0,01
232	0,15	0,25	0,69	0,58	0,49	0,28	0,25	0,25	0,30	0,14	0,28	0,33	0,24
244	0,00	1,04	0,15	0,02	0,33	0,16	0,47	0,60	0,22	0,19	0,35	0,32	0,25
245	0,01	0,01	0,01	0,01	0,04	0,00	0,07	0,00	0,00	0,00	0,00	0,01	0,00
246	0,00	0,01	0,05	0,00	0,03	0,08	0,01	0,00	0,00	0,00	0,00	0,02	0,00
247	0,15	0,19	0,28	0,15	0,21	0,28	0,51	0,26	0,27	0,28	0,27	0,26	0,28
248	0,23	0,15	0,47	0,44	0,24	0,51	0,66	0,53	0,34	1,01	0,82	0,49	0,72
251	0,11	0,15	0,89	0,33	0,17	0,17	0,09	0,03	0,12	0,01	0,09	0,20	0,08
261	0,14	0,00	0,04	0,01	0,04	0,01	0,00	0,02	0,03	0,00	0,00	0,03	0,01
263	7,60	16,35	8,39	12,68	28,11	20,29	15,62	10,13	7,34	14,19	8,90	13,60	10,14
264	0,00	0,01	0,09	0,75	5,09	8,99	6,18	0,65	0,32	1,42	1,89	2,31	1,21
265	0,02	0,02	0,09	0,04	0,88	0,74	0,44	0,57	0,30	0,27	0,75	0,38	0,44
266	1,69	1,10	2,14	2,12	1,81	1,43	1,72	1,94	2,26	2,41	2,42	1,91	2,36
267	0,13	0,12	0,12	0,26	0,16	0,15	0,24	0,16	0,62	0,51	0,44	0,27	0,52
268	0,31	0,22	0,65	0,65	0,88	1,49	1,57	0,98	0,90	1,15	1,49	0,94	1,18
269	2,17	2,02	2,80	2,95	2,59	2,68	3,99	2,82	2,81	2,32	2,59	2,70	2,57
272	0,00	0,01	0,02	0,04	0,11	0,57	0,01	0,04	0,01	0,11	0,01	0,08	0,04
273	2,15	2,30	2,28	2,79	3,12	3,97	4,89	7,11	7,52	9,42	9,65	5,02	8,86
274	0,24	0,01	1,45	0,02	0,00	0,02	0,01	0,02	0,15	0,24	0,18	0,21	0,19
277	8,59	3,71	3,57	3,99	4,17	2,88	3,39	2,64	2,79	2,11	2,73	3,69	2,55
278	9,95	9,25	8,84	7,52	7,35	6,46	6,46	7,58	7,74	5,50	5,62	7,48	6,29
281	0,64	0,39	0,00	0,10	1,87	3,71	0,61	1,01	4,03	7,13	0,62	1,83	3,93
282	1,26	1,50	4,02	1,83	1,38	1,10	0,80	0,92	1,34	0,66	0,65	1,40	0,88
283	5,33	5,91	5,68	16,45	14,69	22,15	22,88	29,98	39,79	31,79	30,18	20,44	33,92
284	0,00	0,00	0,00	0,00	0,00	0,02	0,00	0,00	0,00	0,00	0,00	0,00	0,00
285	3,71	4,99	2,83	4,81	3,13	3,11	2,10	2,65	2,83	3,81	1,37	3,21	2,67

Table D.30 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
286	0,00	0,00	0,00	0,01	0,00	0,00	0,38	0,00	0,00	0,00	0,00	0,00	0,00
287	11,63	9,26	11,10	22,39	20,09	15,22	14,55	13,03	15,38	7,25	6,36	13,29	9,66
288	0,37	0,45	2,18	1,90	2,56	2,23	2,38	2,20	2,46	2,09	2,02	1,89	2,19
289	0,00	0,07	0,77	1,60	3,48	1,92	0,00	0,06	1,39	0,10	1,92	1,03	1,13
291	3,18	3,54	2,56	2,31	2,24	2,17	2,07	2,25	1,89	1,31	1,62	2,29	1,61
292	1,26	1,36	1,26	1,74	1,06	1,09	1,29	1,37	1,05	0,97	1,21	1,24	1,08
321	0,00	0,00	0,00	0,00	0,00	0,01	0,01	0,03	0,04	0,05	0,02	0,01	0,04
322	0,06	1,52	16,07	1,20	12,01	1,39	3,44	1,98	2,39	0,45	1,37	3,81	1,40
325	0,02	0,01	0,12	0,01	0,01	0,04	0,05	0,02	0,02	0,00	0,00	0,03	0,01
333	0,01	0,01	0,00	0,01	0,00	0,00	0,02	0,06	0,03	0,02	0,02	0,02	0,03
334	0,74	0,52	0,71	0,81	0,58	0,35	0,52	0,63	0,42	0,59	0,97	0,62	0,66
335	0,19	0,44	0,52	0,79	0,26	0,20	0,19	0,32	0,46	0,38	0,24	0,36	0,36
342	0,00	0,00	0,00	0,00	0,00	0,12	0,01	0,01	0,00	0,01	0,14	0,03	0,05
343	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
344	7,17	3,38	2,26	2,38	1,76	1,46	1,58	2,61	1,69	1,78	1,53	2,51	1,67
345	0,00	0,00	0,00	0,00	39,45	36,85	0,00	0,00	0,49	0,00	0,04	0,00	0,18
351	0,00	0,00	0,22	0,13	2,41	0,87	1,10	0,93	1,40	1,03	0,80	0,81	1,08
411	2,98	2,35	3,47	9,49	8,16	1,21	1,08	0,81	1,61	0,39	2,66	3,11	1,55
421	22,32	12,53	7,20	12,67	8,84	7,09	8,44	15,25	8,80	14,10	7,91	11,38	10,27
422	0,31	0,16	0,20	0,08	0,02	0,04	0,07	0,07	0,14	0,07	0,05	0,11	0,09
431	0,53	4,22	3,08	3,19	3,04	3,28	2,47	1,42	1,25	0,64	0,56	2,15	0,82
511	0,90	0,74	0,75	0,34	0,40	0,33	0,32	0,31	0,33	0,27	0,32	0,46	0,31
512	0,36	0,07	0,19	0,63	0,51	0,24	0,31	0,26	0,31	0,29	0,28	0,31	0,29
513	0,46	0,42	0,19	0,18	0,09	0,08	0,03	0,06	0,17	0,25	0,20	0,19	0,21
514	0,47	0,28	0,55	0,38	0,24	0,20	0,17	0,26	0,36	0,29	0,22	0,31	0,29
515	0,07	0,07	0,17	0,13	0,12	0,10	0,04	0,07	0,07	0,03	0,02	0,08	0,04
516	0,06	0,04	0,10	0,11	0,08	0,05	0,06	0,08	0,11	0,13	0,14	0,09	0,13
522	0,43	0,61	0,90	0,60	1,84	0,52	0,36	0,22	0,21	0,51	0,29	0,59	0,33
523	5,29	4,73	4,74	3,91	0,56	3,81	4,29	5,10	4,92	3,20	3,25	3,98	3,79
524	2,35	1,68	1,07	0,78	0,07	0,14	0,12	0,16	0,14	0,15	0,24	0,63	0,18
525	0,00	0,00	0,00	0,00	0,01	0,00	0,01	0,01	0,01	0,00	0,01	0,00	0,01
531	0,11	0,04	0,06	0,09	0,10	0,13	0,22	0,20	0,22	0,15	0,23	0,14	0,20
532	8,54	5,32	7,00	10,77	9,84	9,65	9,89	9,95	10,52	7,03	6,37	8,63	7,98
533	0,48	0,67	0,61	0,73	1,02	1,05	1,04	0,78	0,78	0,75	0,79	0,79	0,77
541	0,17	0,13	0,20	0,25	0,48	0,46	0,47	0,59	0,64	0,31	0,22	0,36	0,39
542	1,98	3,15	2,61	1,43	1,64	1,77	1,67	1,22	1,58	1,46	1,65	1,83	1,56
551	1,03	1,00	0,89	1,01	0,80	0,69	0,88	1,04	1,56	1,14	1,12	1,02	1,27
553	0,50	0,31	0,48	0,79	1,32	1,73	1,67	1,21	1,70	1,49	1,51	1,16	1,57
554	5,06	4,86	5,19	8,03	9,36	9,86	8,61	7,64	7,37	6,37	6,10	7,13	6,61
562	3,36	1,60	2,69	1,33	1,01	0,45	0,95	0,54	0,37	0,85	1,60	1,34	0,94
571	1,17	1,78	1,14	0,32	0,18	0,07	0,04	0,06	0,15	0,30	0,10	0,48	0,18
572	0,00	0,01	0,01	0,00	0,01	0,01	0,01	0,02	0,02	0,02	0,01	0,01	0,02
573	1,56	1,70	1,37	0,70	0,23	0,05	0,15	0,08	0,17	0,33	0,09	0,58	0,20
574	1,11	0,67	0,41	0,44	0,53	0,61	0,48	0,54	0,44	0,48	0,39	0,55	0,44
575	0,78	0,68	0,61	0,53	0,46	0,33	0,34	0,33	0,34	0,37	0,35	0,46	0,35
579	0,22	0,23	0,15	0,18	0,17	0,11	0,11	0,37	0,62	0,44	0,36	0,27	0,47

Table D.30 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
581	0,58	0,71	0,78	0,98	1,03	1,40	1,78	2,69	3,38	5,55	4,57	2,13	4,50
582	0,49	0,41	0,59	0,94	0,87	1,03	1,17	0,99	1,16	1,09	1,08	0,89	1,11
583	0,31	1,05	2,08	3,65	6,48	9,80	9,38	6,83	8,43	7,67	10,09	5,98	8,73
591	1,73	2,03	1,25	1,17	1,02	1,00	0,76	0,63	0,97	0,71	0,65	1,08	0,78
592	0,29	0,34	0,42	0,41	0,65	0,75	0,81	0,50	0,66	0,51	0,51	0,53	0,56
593	0,01	0,01	0,05	0,02	0,07	0,04	0,19	0,06	0,08	0,11	0,17	0,07	0,12
597	0,20	0,12	0,17	0,21	0,27	0,21	0,23	0,27	0,22	0,19	0,22	0,21	0,21
598	0,30	0,28	0,20	0,20	0,16	0,15	0,16	0,18	0,19	0,18	0,19	0,20	0,19
611	0,33	0,37	0,55	0,53	0,52	0,76	0,85	0,79	0,70	0,53	0,45	0,58	0,56
612	1,86	1,33	0,97	1,27	1,05	1,21	0,81	0,65	1,00	0,91	0,53	1,05	0,81
613	0,93	1,48	0,80	2,39	3,29	2,82	3,26	2,86	2,04	1,20	1,54	2,06	1,60
621	1,05	0,82	0,88	1,21	0,94	1,03	1,60	1,91	2,34	2,26	2,00	1,46	2,20
625	1,78	1,81	1,96	1,83	1,36	1,43	1,32	1,43	1,78	1,90	1,71	1,66	1,80
629	0,33	0,30	0,31	0,44	0,51	0,53	0,98	1,02	1,08	1,01	1,35	0,71	1,14
633	0,47	0,64	0,15	0,48	0,49	0,29	1,79	0,41	0,62	0,55	0,34	0,57	0,51
634	0,23	0,11	0,24	0,37	0,28	0,30	0,44	0,41	0,50	0,81	0,85	0,41	0,72
635	0,50	0,58	0,76	0,84	1,04	0,64	0,52	0,55	0,56	0,45	0,38	0,62	0,46
641	0,62	0,56	1,30	1,00	0,76	0,69	0,53	0,49	0,49	0,83	0,79	0,73	0,70
642	0,78	0,64	0,71	1,01	1,43	1,65	1,72	1,75	1,98	2,25	2,75	1,52	2,33
651	4,26	3,69	5,12	3,74	3,48	3,66	4,01	4,42	4,58	4,23	3,12	4,03	3,98
652	2,10	2,04	3,21	2,94	3,11	3,15	3,38	2,86	3,21	3,22	2,83	2,91	3,09
653	0,87	1,12	1,22	1,79	1,52	1,66	2,00	2,13	2,23	2,03	2,22	1,71	2,16
654	0,66	0,86	0,86	1,33	1,68	1,49	1,60	2,02	2,20	1,55	1,51	1,43	1,75
655	1,56	1,30	2,25	1,20	1,56	1,78	1,77	2,04	1,87	1,71	1,54	1,69	1,71
656	1,44	2,06	2,29	2,54	2,69	2,85	3,34	4,36	4,95	5,48	5,22	3,38	5,22
657	1,53	1,57	1,23	1,47	1,70	1,97	1,56	1,39	1,52	1,49	1,59	1,55	1,53
658	5,70	5,38	5,30	6,21	6,72	7,37	7,76	7,92	8,44	6,74	6,45	6,73	7,21
659	12,81	14,46	11,70	12,21	14,78	14,34	13,56	12,95	14,38	10,70	10,09	12,91	11,72
661	5,31	4,32	5,17	4,51	4,02	4,81	5,77	6,72	9,04	7,81	8,30	5,98	8,38
662	6,41	8,03	7,91	9,03	9,72	9,43	9,49	11,43	11,72	8,84	7,78	9,07	9,45
663	0,23	0,27	0,29	0,38	0,45	0,42	0,45	0,46	0,68	0,42	0,52	0,42	0,54
664	2,53	1,74	1,35	1,17	1,23	1,48	1,38	1,32	1,44	1,40	1,28	1,48	1,38
665	7,18	7,06	6,41	6,27	6,52	7,15	7,47	6,68	6,83	5,66	4,91	6,56	5,80
666	0,22	0,19	0,20	0,36	0,44	0,51	0,46	0,50	0,45	0,66	0,53	0,41	0,55
667	0,01	0,01	0,03	0,02	0,01	0,02	0,01	0,02	0,05	0,01	0,01	0,02	0,02
671	3,45	2,99	2,22	1,43	1,73	1,46	1,07	1,79	1,16	0,71	0,80	1,71	0,89
672	20,67	25,22	18,27	9,59	8,49	7,34	4,86	4,16	6,15	8,98	11,18	11,36	8,77
673	0,69	0,60	1,28	0,47	0,95	1,40	0,93	1,05	1,25	1,75	1,26	1,06	1,42
674	0,22	0,14	0,21	0,20	0,21	0,25	0,30	0,27	0,47	0,57	0,72	0,32	0,59
675	0,00	0,00	0,01	0,01	0,01	0,02	0,01	0,01	0,02	0,04	0,15	0,03	0,07
676	8,98	11,79	13,10	11,18	11,52	11,09	8,67	11,20	11,31	11,15	9,96	10,90	10,81
677	0,03	0,01	0,05	0,01	0,07	0,11	0,05	0,11	0,02	0,08	0,07	0,05	0,06
678	0,97	0,60	0,50	0,82	0,94	0,87	0,91	1,00	1,02	0,88	0,75	0,84	0,88
679	1,09	1,13	1,50	2,26	1,56	1,75	1,51	1,84	2,50	2,66	3,19	1,91	2,78
681	0,00	0,03	0,02	0,16	0,01	0,02	0,06	0,01	0,03	0,01	0,00	0,03	0,01
682	1,58	1,61	1,31	1,43	1,60	1,41	1,04	1,04	1,34	1,23	0,86	1,31	1,15

Table D.30 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
683	0,08	0,08	0,01	0,10	0,02	0,06	0,17	0,02	0,02	0,02	0,04	0,06	0,03
684	2,08	1,81	1,82	1,79	2,03	1,73	2,28	2,25	2,66	2,32	1,76	2,05	2,25
685	0,03	0,02	0,03	0,01	0,04	0,03	0,10	0,21	0,16	0,22	0,21	0,10	0,19
686	0,01	0,01	0,04	0,01	0,45	0,75	0,72	0,20	0,01	0,12	0,13	0,22	0,08
687	0,00	0,00	0,00	0,02	0,00	0,01	0,01	0,01	0,01	0,01	0,02	0,01	0,01
689	0,05	0,07	0,15	0,08	0,04	0,02	0,07	0,07	0,02	0,03	0,01	0,05	0,02
691	0,72	0,82	1,42	1,30	2,73	2,19	2,91	2,19	2,73	2,71	2,63	2,03	2,69
692	1,40	1,19	1,43	1,70	1,43	1,47	2,35	2,35	2,57	2,88	2,81	1,96	2,76
693	2,75	2,37	2,04	1,93	2,36	2,76	2,74	3,36	4,48	3,43	3,58	2,89	3,83
694	0,42	0,41	0,27	0,45	0,47	0,49	0,55	0,54	0,59	0,54	0,47	0,47	0,53
695	0,16	0,18	0,16	0,20	0,19	0,20	0,63	0,40	0,32	0,16	0,16	0,25	0,22
696	0,15	0,20	0,19	0,27	0,36	0,16	0,15	0,20	0,14	0,14	0,12	0,19	0,13
697	3,85	2,26	2,18	2,25	2,24	2,23	2,19	2,22	2,35	2,17	2,25	2,38	2,26
699	0,39	0,44	0,49	0,73	0,83	0,77	0,81	1,11	0,96	0,90	0,93	0,76	0,93
711	0,08	0,19	0,20	0,16	0,17	0,51	0,73	0,70	0,34	0,31	0,38	0,34	0,34
712	0,00	0,01	0,00	0,01	0,04	0,11	0,03	0,06	0,01	0,00	0,01	0,03	0,01
713	0,27	0,20	0,29	0,34	0,37	0,42	0,60	0,62	0,81	1,10	1,12	0,56	1,01
714	0,05	0,23	0,80	0,81	1,74	1,37	1,44	1,54	1,32	1,05	1,10	1,04	1,16
716	0,11	0,11	0,14	0,18	0,27	0,31	0,32	0,32	0,38	0,43	0,37	0,27	0,39
718	0,05	0,02	0,02	0,09	0,14	0,11	0,19	0,12	0,16	0,15	0,20	0,11	0,17
721	0,87	1,02	1,17	1,45	1,80	1,74	1,49	1,52	1,95	2,69	1,74	1,59	2,13
722	0,02	0,10	0,03	0,01	0,43	0,26	0,76	1,00	1,61	1,02	1,08	0,57	1,24
723	0,14	0,13	0,22	0,23	0,33	0,34	0,37	0,62	0,56	0,51	0,39	0,35	0,48
724	0,13	0,17	0,22	0,23	0,21	0,35	0,32	0,33	0,39	0,46	0,43	0,30	0,43
725	0,17	0,11	0,16	0,09	0,24	0,25	0,51	0,66	0,53	0,61	0,50	0,35	0,55
726	0,02	0,04	0,09	0,06	0,13	0,13	0,10	0,15	0,13	0,23	0,15	0,11	0,17
727	2,39	3,25	3,77	3,22	3,25	7,35	7,03	5,46	6,24	4,92	4,75	4,69	5,31
728	0,17	0,17	0,14	0,11	0,12	0,12	0,18	0,16	0,13	0,19	0,24	0,16	0,19
731	0,05	0,04	0,05	0,03	0,03	0,03	0,07	0,10	0,10	0,11	0,12	0,07	0,11
733	0,46	0,35	0,41	0,45	0,48	0,74	1,22	1,46	1,36	1,57	1,94	0,95	1,63
735	0,11	0,11	0,06	0,16	0,14	0,12	0,14	0,20	0,17	0,15	0,13	0,13	0,15
737	0,07	0,12	0,12	0,13	0,14	0,15	0,35	0,54	0,42	0,60	0,53	0,29	0,52
741	0,18	0,17	0,36	0,40	0,37	0,43	0,44	0,58	0,71	0,70	0,83	0,47	0,75
742	0,38	0,37	0,42	0,36	0,42	0,51	0,68	0,65	0,76	0,74	0,76	0,55	0,75
743	0,18	0,18	0,19	0,22	0,22	0,22	0,22	0,26	0,28	0,30	0,29	0,23	0,29
744	0,10	0,11	0,12	0,16	0,21	0,19	0,27	0,35	0,42	0,51	0,37	0,26	0,43
745	0,14	0,18	0,31	0,21	0,27	0,39	0,50	0,42	0,48	0,37	0,38	0,33	0,41
746	0,03	0,08	0,12	0,14	0,14	0,14	0,10	0,11	0,15	0,17	0,18	0,12	0,17
747	0,34	0,27	0,40	0,40	0,56	0,56	0,65	0,70	0,72	0,58	0,65	0,53	0,65
748	0,10	0,09	0,10	0,13	0,18	0,19	0,27	0,29	0,33	0,29	0,39	0,21	0,34
749	0,13	0,14	0,20	0,13	0,14	0,18	0,19	0,20	0,21	0,19	0,25	0,18	0,21
751	0,02	0,04	0,02	0,02	0,04	0,02	0,02	0,02	0,02	0,04	0,04	0,03	0,03
752	0,02	0,00	0,01	0,00	0,01	0,01	0,02	0,03	0,03	0,02	0,01	0,02	0,02
759	0,00	0,01	0,01	0,00	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
761	1,15	0,83	0,79	0,95	0,94	1,89	3,57	3,47	3,66	3,04	3,75	2,18	3,48
762	0,02	0,02	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,01	0,01	0,01	0,01

Table D.30 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
763	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
764	0,04	0,07	0,05	0,05	0,10	0,07	0,12	0,07	0,08	0,08	0,05	0,07	0,07
771	0,57	0,55	0,60	0,56	0,79	0,73	0,56	0,45	0,58	0,63	0,66	0,61	0,62
772	0,15	0,11	0,13	0,14	0,20	0,16	0,21	0,20	0,19	0,23	0,24	0,18	0,22
773	2,89	2,65	2,79	2,99	3,26	2,60	2,62	2,28	2,48	2,61	2,70	2,71	2,60
774	0,02	0,02	0,05	0,02	0,05	0,06	0,04	0,06	0,05	0,03	0,08	0,04	0,06
775	0,98	1,22	1,46	1,99	1,86	1,97	2,10	2,09	2,13	1,89	2,17	1,81	2,06
776	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
778	0,06	0,09	0,08	0,10	0,14	0,16	0,15	0,13	0,13	0,15	0,14	0,12	0,14
781	0,06	0,04	0,06	0,22	0,21	0,08	0,08	0,39	0,38	0,50	0,54	0,23	0,47
782	0,02	0,05	0,06	0,18	0,15	0,13	0,12	0,20	0,53	2,00	3,02	0,59	1,85
783	1,16	2,04	2,57	3,61	5,29	3,44	3,97	6,29	6,42	6,02	5,50	4,21	5,98
784	0,27	0,24	0,26	0,37	0,43	0,56	0,79	0,81	0,90	0,91	1,01	0,60	0,94
785	0,02	0,04	0,05	0,10	0,09	0,16	0,10	0,09	0,08	0,09	0,08	0,08	0,08
786	0,42	1,56	2,03	1,55	1,55	1,47	0,93	0,56	0,52	0,51	0,61	1,06	0,55
791	0,00	0,14	0,48	0,33	0,05	0,09	0,11	0,26	0,20	0,24	0,56	0,22	0,33
792	0,00	0,01	0,33	0,06	0,49	1,33	1,01	4,24	6,54	4,25	1,28	1,78	4,03
793	0,42	0,21	0,13	0,16	0,13	0,25	0,24	0,31	0,24	0,50	0,41	0,27	0,38
811	7,31	11,99	10,38	6,95	4,99	4,55	8,99	5,74	6,57	4,35	6,76	7,14	5,89
812	18,99	19,28	18,56	17,77	16,64	15,94	16,79	17,91	19,22	15,55	15,16	17,44	16,64
813	1,10	0,93	0,81	0,90	1,01	0,82	0,72	0,67	0,67	0,50	0,52	0,79	0,56
821	0,64	0,79	0,73	0,89	0,89	0,75	0,81	0,92	1,04	0,91	1,01	0,85	0,98
831	0,55	0,50	0,39	0,40	0,44	0,37	0,33	0,29	0,33	0,31	0,29	0,38	0,31
841	2,69	2,97	2,70	4,12	3,63	3,47	3,65	3,73	3,73	3,19	3,74	3,42	3,55
842	4,12	4,41	4,01	5,88	5,70	5,29	5,52	5,91	6,21	5,34	5,36	5,25	5,64
843	3,72	4,08	4,66	6,67	6,28	4,49	4,15	4,08	3,76	3,12	3,20	4,38	3,36
844	14,27	14,41	11,22	13,96	11,07	7,59	7,18	7,08	7,68	6,12	5,79	9,67	6,53
845	7,27	7,57	7,52	8,57	8,12	6,85	6,77	6,46	6,35	5,05	5,25	6,89	5,55
846	3,29	3,78	4,31	5,14	5,09	4,01	3,96	4,44	4,33	3,95	3,99	4,21	4,09
848	4,95	5,00	4,55	4,20	2,91	2,99	2,53	2,52	2,58	2,13	1,98	3,30	2,23
851	0,45	0,52	0,83	0,57	0,67	0,77	0,66	0,41	0,43	0,38	0,35	0,55	0,39
871	0,00	0,00	0,00	0,01	0,07	0,02	0,03	0,01	0,00	0,02	0,03	0,02	0,02
872	0,16	0,19	0,10	0,12	0,19	0,19	0,24	0,17	0,20	0,19	0,22	0,18	0,21
873	0,05	0,09	0,15	0,11	0,19	0,47	0,43	0,38	0,31	0,32	0,27	0,25	0,30
874	0,10	0,06	0,07	0,06	0,09	0,08	0,12	0,12	0,11	0,11	0,09	0,09	0,10
881	0,00	0,00	0,01	0,00	0,01	0,01	0,01	0,01	0,00	0,01	0,01	0,00	0,01
882	0,01	0,01	0,00	0,01	0,02	0,03	0,03	0,04	0,04	0,04	0,15	0,03	0,08
883	0,11	0,02	0,02	0,02	0,03	0,01	0,07	0,02	0,05	1,26	0,05	0,15	0,46
884	0,02	0,02	0,02	0,03	0,04	0,03	0,04	0,03	0,04	0,02	0,02	0,03	0,03
885	0,01	0,01	0,02	0,01	0,02	0,03	0,02	0,03	0,04	0,05	0,06	0,03	0,05
891	1,89	1,37	1,50	2,94	6,10	6,05	1,58	5,81	7,45	7,49	12,60	4,98	9,18
892	0,36	0,67	0,40	0,41	0,56	0,67	0,50	0,46	0,55	0,49	0,49	0,50	0,51
893	0,44	0,46	0,67	0,91	1,06	1,11	1,00	0,87	0,96	0,90	0,91	0,84	0,92
894	0,02	0,02	0,03	0,03	0,05	0,03	0,04	0,04	0,04	0,04	0,03	0,03	0,04
895	0,18	0,15	0,13	0,14	0,17	0,12	0,16	0,13	0,14	0,17	0,17	0,15	0,16
896	0,01	0,02	0,09	0,10	0,25	0,05	0,99	0,21	4,64	0,65	0,30	0,66	1,86

Table D.30 Continued													
SITC3	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Period Av.	Last 3yr.Av.
897	0,32	0,60	0,84	0,92	1,68	1,97	1,99	2,92	4,23	4,25	5,04	2,25	4,51
898	0,41	0,49	0,46	0,51	0,62	0,44	0,35	0,19	0,10	0,08	0,08	0,34	0,08
899	0,22	0,21	0,20	0,24	0,32	0,28	0,26	0,26	0,33	0,28	0,30	0,27	0,31
931	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
961	0,00	0,00	0,22	2,41	7,12	3,82	5,10	5,90	6,23	0,31	1,14	2,93	2,56
971	0,00	0,01	0,03	0,03	0,00	0,00	0,00	0,00	0,00	0,38	0,72	0,11	0,37