

**INTERNATIONAL COMPETITIVENESS OF JORDAN'S  
MANUFACTURING INDUSTRY**

***By***

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*Dedicated to*

*My Parents, Husband*

*and*

*All Memembers of Our Family*

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## **Abstract**

*The International competitiveness of Jordan's manufacturing sector has recently been of considerable concern to officials in Jordan. This study examines Jordan's capacity to compete successfully in foreign markets and with imports in Jordan's market, and the impact of the recent policies on the price and short-run aspects of competitiveness for a period from the mid-1970s to the early 1990s. Unlike previous studies, assessment and analysis of Jordan's relative competitive position are built on indicators constructed exclusively for the manufacturing sector covering import, export, and overall dimensions of competitiveness. The OECD model has been employed using export, import and producer prices, and trade double weights for manufactures.*

*The results show that Jordan's competitiveness deteriorated until the mid-1980s. Subsequently, competitiveness improved with the most pronounced gains being achieved at the end of the 1980s and in the early 1990s, particularly in import and overall competitiveness.*

*The maintenance of a strong Jordanian dinar associated with other unfavourable internal and external developments in Jordan's and competitors' prices before the mid-1980s, and the favourable developments in these prices including the devaluation of the Jordanian dinar at the end of the 1980s, may explain the initial deterioration in*

*competitiveness and the subsequent improvement. Between the mid-1970s and the late-1980s the gains achieved in import competitiveness process were reflected in most years in declines in the import penetration ratio; and in the case of the export competitiveness process were translated into higher market shares.*

*The Constant-Market-Share approach shows that one-third of the expansion in Jordan's manufactured exports was attributable to improved competitiveness. The Commodity effect, particularly for chemicals, was favourable to this expansion, while the concentration of exports on the sluggish import demand of the Middle Eastern countries resulted in a slight unfavourable market effect.*

## **Table Of Contents**

	<b>Page</b>
<b>Chapter ① Introduction</b>	<b>1</b>
<b>Chapter ② Jordan's Economy: General Background</b>	<b>6</b>
②.1 Location and Importance	6
②.2 Historical Background	7
②.3 The Economic Background	11
②.4 Analysis Of The Economic Setting (1976-1993)	17
②.4.1 Overview	17
②.4.2 Economic Planning	22
②.4.3 Trends Of Output And Prices	23
②.4.4 Output At The Sectoral Level	27
②.4.5 Availability And Use Of Resources	30
②.4.6 External Sector	31
②.4.7 Public Finance	37
②.4.8 Money And Banking	38
②.4.9 Employment	40
<b>Chapter ③ Manufacturing Industry in Jordan</b>	<b>42</b>
③.1 Introduction	42
③.2 The Structure Of Manufacturing	42
③.2.1 Manufacturing And The Economy	42
③.2.2 Size, Ownership And Location	46
③.2.3 Investment	50
③.2.4 Employment	52
③.3 Performance Of Manufacturing	53
③.3.1 Growth In Output	53
③.3.2 Changes In The Structure Of The Economy	60
<b>Chapter ④ International Competitiveness: Concepts and Measurements</b>	<b>63</b>
④.1 Introduction	63
④.2 Concepts	63
④.2.1 Significance	63
④.2.2 Scope	66
④.2.3 Definition	68
④.2.4 Nature	72

④.3	A Framework For Analysing IC	75
④.4	Measurement of IC	77
④.4.1	Basic Considerations	77
④.4.2	Measures Of The Process Of IC	78
④.4.2.1	Price (Cost) Competitiveness	78
④.4.2.2	Non-Price Competitiveness	85
④.4.3	Measures Of The Result Of IC	88
④.4.3.1	The Trade Balance	89
④.4.3.2	Market Shares	90
④.4.3.3	Conclusions And Implications	102
④.4.4	The Multidimensional Approach	104
④.4.5	A Mathematical Model For The Measurement Of International Price-Competitiveness	106
④.4.5.1	General Considerations in Constructing Competitiveness Indicators	106
④.4.5.2	Main Elements In Constructing Competitiveness Indicators	109
④.4.5.3	The OECD Mathematical Model For The Measurement Of Import, Export and Overall Competitiveness	122
<b>Chapter ⑤</b>	<b>Analysis Of Jordan's External Manufacturing Trade</b>	<b>130</b>
⑤.1	Introduction	130
⑤.2	Overall Trade Performance	130
⑤.2.1	The World And The Middle East	130
⑤.2.2	Jordan's External Merchandise Trade	137
⑤.2.3	Export/Import Ratio	141
⑤.2.4	Terms Of Trade	143
⑤.3	Commodity Structure Of Trade	144
⑤.3.1	Commodity Structure Of Trade By Economic Functions	144
⑤.3.2	Commodity Structure Of Trade By SITC Categories	148
⑤.4	Direction Of Trade	152
⑤.5	Structure Of Manufactured Trade By Region And By Commodity Class	159
⑤.5.1	Domestic Manufactured Exports	159
⑤.5.1.1	Exports Of Total Manufacturing	159
⑤.5.1.2	Exports Of Major SITC Sections Of Manufacturing	161
⑤.5.2	Manufactured Imports	166
⑤.5.2.1	Imports of Total Manufacturing	166
⑤.5.2.2	Manufactured Imports By Major SITC Sections	168
⑤.6	Diversification Of Export Markets And Commodities	172
⑤.6.1	Role Of New Export Products In Diversification	172
⑤.6.2	Recent Developments	174
⑤.7	Summary And Concluding Remarks	176



<b>Chapter ⑥</b>	<b>Factors Influencing The International Competitiveness Of Manufacturing Industry In Jordan</b>	180
⑥.1	Introduction	180
⑥.2	Resources	181
⑥.2.1	Human Resources	181
⑥.2.1.1	Labour: Productivity And Wages	181
⑥.2.1.2	Management	187
⑥.2.2	Financial Resources	189
⑥.2.3	Infrastructural Utilities	191
⑥.2.4	Natural Resources	193
⑥.3	Government Policies And Institutions	194
⑥.3.1	Macroeconomic Policies And The Exchange Rate	195
⑥.3.2	Commercial Policy	196
⑥.3.3	Industrial Policies	202
⑥.3.3.1	Investment Licensing	202
⑥.3.3.2	Encouragement Of Investment Law (EIL)	203
⑥.3.3.3	Price Control	205
⑥.3.3.4	Standards and Specifications	206
⑥.3.4	Export Promotion	207
⑥.4	Summary	214
<b>Chapter ⑦</b>	<b>Export Performance Of Jordanian Manufacturing Industry</b>	216
⑦.1	Introduction	216
⑦.2	Method	216
⑦.3	Export Expansion	221
⑦.4	Analysis Of Export Performance	222
⑦.4.1	Analysis Of Export Performance By Period	224
⑦.4.1.1	The First Period, 1975-1980	224
⑦.4.1.2	The Second Period, 1980-1985	231
⑦.4.1.3	The Third Period, 1985-1988	234
⑦.4.1.4	The Entire Period, 1975-1988	236
⑦.4.2	Analysis Of Export Performance By Factor	242
⑦.4.3	Analysis By Commodity Group	248
⑦.5	Summary And Concluding Remarks	249
<b>Chapter ⑧</b>	<b>Analysis Of Jordan's International Competitiveness</b>	252
⑧.1	Introduction	252
⑧.2	Method	252
⑧.3	Analysis Of International Competitiveness For Total Manufacturing	256
⑧.3.1	Import Competitiveness	256

⑧.3.1.1	Measurements Of Import Competitiveness	257
⑧.3.1.2	Proportion Of Domestic Production In Net Domestic Supply For Manufactures	265
⑧.3.2	Export Competitiveness	266
⑧.3.2.1	Measurements Of Export Competitiveness	267
⑧.3.2.2	Manufactured Exports	271
⑧.3.3	Overall International Competitiveness	271
⑧.3.3.1	Measurements Of Overall Competitiveness	272
⑧.3.3.2	Comparison With Other Studies	276
⑧.3.3.3	Overall Competitiveness and Export/Import Ratio	279
⑧.3.3.4	Export/Import Ratio And The Balance Of Trade	280
⑧.4	Analysis Of Jordan's International Competitiveness By Subsector	284
<b>Chapter ⑨</b>	<b>Conclusion</b>	<b>294</b>
	<i>References</i>	306
<i>Appendix I</i>	<b>Sources And Data</b>	318
<i>Appendix II</i>	<b>Choice Of The Samples Of Jordan's Export markets And Competitors</b>	326
<i>Appendix III</i>	<b>Statistical Appendix</b>	
<i>Statistical Appendix A</i>	Jordan's External Merchandise Trade (Total and Manufactures)	328
<i>Statistical Appendix B</i>	Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports	344
<i>Statistical Appendix C</i>	Construction of Jordan's Competitors' Weighted Average Prices for Import and Export Competitiveness	352
<i>Statistical Appendix D</i>	Jordan's Manufacturing: Production and External Trade by Subsector	388

### ***Introduction***

It is almost self evidently the case that the prospects for future growth in Jordan's manufacturing depend on an efficient import-substituting industry which is able to compete with imports, and on competitive exports that can face the challenges in the rapidly changing external environment and can succeed in penetrating new export markets and in increasing market shares.

For years the International Competitiveness (IC) of Jordan's manufacturing industry has been a major concern of officials. This concern has been expressed regularly in Jordan's Economic Development Plans which have emphasised the importance of manufacturing to the Jordanian economy as the largest commodity producing sector and the need to achieve full potential from manufacturing by producing goods which are "competitive" in both domestic and foreign markets. This issue was also raised at the beginning of the 1980s in the comprehensive study by Dar-Al-Handasah of Jordan's industry, and in the late 1980s in several conferences such as that held in Amman on the Industrialisation of Jordan (1988), and in a study conducted by the Arab Consultant Centre in 1987. Other reports in the same year were carried out by the World Bank on Jordan's small- and medium-scale industry and on Jordan's overall economy. These studies pointed to the weakness of the IC of Jordan's manufacturing and the need for improvement. Such a belief has been built on the measurement of the IC for the overall economy. Shrinking export markets provided other evidence. In fact, drawing conclusions on the competitiveness of Jordan's manufactur-

ing from such measurement may be inaccurate and unreliable, because it is not obvious whether the loss of competitiveness of the overall economy is attributable to the deterioration in a specific sector or to all sectors in the economy. Also, the drop in exports may reflect the unfavourable effects of factors other than competitiveness, such as the sluggish demand in regional economies. Thus, the view that the competitiveness of Jordan's manufacturing industry has been eroding needs verification and an accurate investigation which should be based on measurement confined to manufacturing. The macro-economic policies introduced in 1988 to counter the economic crisis facing Jordan at that time and the measures undertaken within the framework of the Adjustment Economic Programme adopted in 1989 to alleviate the structural imbalances in the economy associated with some incentives and measures in the industrial sector may have an impact on Jordan's competitiveness. Of particular importance were the measures to devalue the Jordanian dinar (JD) and the policies aimed at restructuring the external trade regime.

In light of this, the primary aim of the present study is to:

- \* assess the relative position of the price and short-run aspects of the international competitiveness of Jordan's manufacturing and to investigate the changes in this position. (The non-price and the long-term aspects of competitiveness are outside the scope of this study).
- \* examine the impact of the policies introduced in the end of the 1980s on the improvement of price competitiveness.

Since the international competitiveness of Jordan's manufacturing has become a major concern of officials and since previous studies suffer from certain shortcomings, the importance of this study lies in the attempt to measure and analyse Jordan's relative competitiveness in a systematic fashion. None of the previous work on Jordan's competitiveness built its analysis of total manufacturing on the basis of the measurement of the competitive process or its outcome. Hence, none of them has

constructed separate indicators for import, export and overall competitiveness. Two groups of studies are available. The first, has analysed the competitiveness of total manufacturing on the basis of general information and the indicators used in the analysis of the competitiveness of manufacturing groups and subgroups were not sufficiently detailed, particularly with respect to exports. The second group's interest was in Jordan's economy in general and the measurement of competitiveness was for the whole economy and not specially for manufacturing industry. Even the World Bank's Report on small and medium scale industry used measures for the whole economy. Hence, the variables used were related to total goods and sometimes to total goods and services, and the weights applied were in most cases simple trade bilateral weights based on trade in total goods and not confined to manufacturing.

In order to have a useful measure of the price aspect of IC as a basis for more reliable results, this study has involved seeking out an appropriate model, and the model developed by the Organisation for Economic Co-operation and Development (OECD) was chosen. Hence, the indicators that will be used in this study have the merit of comprehensiveness, as the import, export and overall aspects of competitiveness are covered, and also of being founded on the reality of Jordan's trade in manufactures, since third country effects will be considered in a relatively detailed way. Producer, import and export prices for manufactures will be used. Two separate samples will be chosen to build the trade weights needed: 19 export markets which absorbed 98.0% of Jordan's total manufactured exports in the base year 1985, and 30 competitors which supplied 89.0% of Jordan's total manufactured imports.

Measurement of the competitiveness process is supported by the measurement of competitiveness outcome or result. The Constant-Market-Shares (CMS) approach is applied to measure the outcome of the competitiveness process in Jordan's export markets. This method is preferred because it allows for the separation of the competitiveness effect from market and commodity effects. The so-called Economic and Social

Commission for Western Asia (ESCWA) region, comprising the Arab countries of Western Asia in addition to Egypt, are used to represent Jordan's "world" in the computations built on CMS approach. This is because Jordan's total manufactured exports directed at the whole world were very small in international terms, and ESCWA countries absorbed most of Jordan's manufactured exports. The outcome of the competitiveness process in Jordan's home market is measured using the import penetration ratio; and the trade balance for manufactures, in addition to the export/import ratio, is used in measuring the outcome of the overall competitiveness process. These ratios are computed for total manufacturing and for major groups and subgroups.

The lack of readily available data on Jordan's manufactured exports and imports by geographic distribution requires that considerable effort be devoted to compiling the relevant information from different sources. These data will be useful for other researchers undertaking future studies which require such data. The CMS analysis is employed for the first time in respect of Jordan, and in this case also data were not readily available and have had to be compiled. The attempt to apply measures originally designed for the developed countries, may indicate the possible application of these measures to other developing countries, provided appropriate data and other requirements are available. Furthermore, since information on the various aspects and dimensions of IC and on measuring IC are scattered in numerous works, it is hoped that this study may contribute to the literature by gathering, presenting and discussing such material in a systematic way.

The measurement and analysis of Jordan's IC requires general information on Jordan and its economy and detailed information on its manufacturing industry. *Chapters ②* and *③* are devoted to providing such information. It also requires a discussion of the theoretical background on IC and *Chapter ④* presents, therefore, the central base of concepts and approach to measurement. That *Chapter* starts by

discussing the significance, scope, definition and nature of IC. Measures of competitiveness process and its outcome then follow. Non-price competitiveness and the multi-dimensional methods are also discussed. Special attention is given to the possibility of using these measures in Jordan's case. General considerations in constructing competitiveness indicators are then discussed before presenting the mathematical model of the OECD. Analysis of Jordan's export performance and relative competitiveness position constitute the latter part of the study, comprising *Chapters 5, 6, 7 and 8*. *Chapter 5* deals with issues on the geographic distribution of total manufactures and major SITC groups, examining the role of new export commodities. *Chapter 6* explores two main groups of factors influencing Jordan's competitiveness: human, financial and natural resources; and government policies and institutions including macro-economic policies (mainly the exchange rate), and sectoral policies (essentially the industrial and commercial policies) in addition to special measures for export promotion. *Chapter 7* computes and analysis the effects of competitiveness, commodity composition and market structure on the expansion of Jordan's exports. *Chapter 8* examines price competitiveness in its import, export and overall aspects. It analyses the changes in IC through discussing the various factors influencing it. Although total manufacturing is the focus, groups and subgroups are also examined. This is followed by *Chapter 9*, the conclusion. *Chapter 9* is devoted to presenting a discussion of the findings, and where possible, makes recommendations and suggestions for Government and other groups of interest. Three appendices follow. They provide material on the sources and data (*Appendix I*), and on the choice of samples for building competitiveness indicators (*Appendix II*). *Appendix III* is statistical in nature and supports the *Chapters* on international trade, manufacturing industry, export performance and the analysis of competitiveness.

***Jordan's Economy: General Background***

**2.1 LOCATION AND IMPORTANCE**

Jordan is an Asian country. Its area (the East Bank only) is 91860 km<sup>2</sup>, with 80% of this being desert. With a population of 4.152 million individuals in 1993, Jordan lies in a strategic position in relation to its neighbours in the Middle East; a region that mediates the continents of Asia, Africa and Europe, and is known for its importance in various historical epochs. Great civilisations have been established in the region since the beginning of written history, the three great monotheistic religions were first revealed in this region, and powerful empires have invaded it. These factors have a continuing impact on the region's culture and civilisation. A central role was played by the region in initiating and transferring civilisation and trade to the whole world. It had been, and still is, a source of strategic natural resources and an important arena of world events.

Jordan, one of the smaller countries of the region, has been known particularly as a trade and pilgrimage route and as a scarred battleground. It was, successively, a part of the Persian, Greek, Roman, Arab and Turkish Empires. These Empires and Kingdoms established civilisations of which many sites and antiquities are still being found. Jordan is now important as a zone of transit and land transport, in addition to its importance as a pilgrimage route from Syria to the Islamic holy cities of Saudi-Arabia.



Jordan is a part of Natural Syria, known as "Bilad-Al-Sham", the other parts being Syria, Palestine and Lebanon. These territories were ruled by Islam for 13 centuries, beginning from the Arab Muslim conquests in the seventh century AD., and later with the conquests of the Ottoman Turks Muslims in the sixteenth century<sup>(1)</sup>. The area had no political boundaries until after World War I<sup>(2)</sup>, and restrictions on free movements of persons or goods did not exist. In effect, the area enjoyed a political, spiritual and cultural unity. Jordan now has geographical boundaries with two of the above countries, namely, Palestine and Syria in addition to Iraq and Saudi-Arabia.

## 2.2 HISTORICAL BACKGROUND<sup>(3)</sup>

### *Late Ottoman Rule*

For a variety of reasons, the Ottoman Empire began to decline in the late seventeenth century, and by the turn of this century its weakness extended to all parts of the Empire. The Arab condition, in general, was not much different from that of the majority of the Turks themselves<sup>(4)</sup>. However, the Arabs, being mostly Muslim, remained loyal to the Caliphate, the only Muslim power of the time.

Efforts at reform in the Arab World<sup>(5)</sup> were initiated at the end of the 19th century. Two trends emerged; the Islamic one, represented by Jamal Al-Din Al-Afgani

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- (1) In the eleventh and twelfth centuries, the European Crusaders wrested the eastern shores of the Mediterranean from the Muslims, in their attempts to seize the Holy Land. They ruled these shores and some other parts including Jerusalem in Palestine and Karak in Transjordan.
  - (2) Even the administrative divisions were interlaced.
  - (3) Much of the material in this section on historical background draws on: (a) James Morris, *The Hashemite Kings* (New York, 1959), (b) Zeine N. Zeine, *Arab Turkish Relations and the Emergence of Arab Nationalists* (Beirut, 1958), (c) George E. Kirk, *A Short History of the Middle East* (London, 1961), (d) The Hashemite Kingdom of Jordan, Ministry of Information, *Jordan* (London, 1978).
  - (4) In fact, the Arabs attained high positions in the civil service and the army; and became ministers, generals and governors. Their countries were represented both in the Senate and the House of Representatives. See Zeine N. Zeine, p. 119 and Ministry of Information, p. 37.
  - (5) The Ottoman rulers had initiated reforms since the last quarter of the eighteenth century, but most of these reforms did not bring real fundamental change in the Ottoman institutions and society.

and Mohammad Abdu; and the political trend influenced by the forces of nationalism imported from Europe. However, this nationalist sentiment became stronger after the emergence of the Committee of Union and Progress in Turkey. It took over the Ottoman Government in 1908 and deposed Caliph Abdul Hamid II in 1909. This Turkish nationalist movement expected all groups to become Turkified within a homogenous Ottoman State.

New national societies, born secret and public, opposed to the "Turkification" program sprang up among a group of western-orientated intellectual Arabs. These groups desired, at first, reforms and greater Arab autonomy within the Ottoman Empire. Months before the outbreak of the First World War, Sharif Hussain of Mecca had been in correspondence with the British Government about the possibility of British support if the Sharif raised a revolt against the Turks. When war broke out in 1914, The Ottoman Empire became involved on the side of Germany against France and Great Britain. During the war, contacts were established between the Sharif and the Arab nationalist in Syria, and the Sharif became the leader of the Arab nationalists. The earlier correspondence between the British and the Sharif was renewed and the Sharif agreed to cooperate with the Allies in exchange for their support for post-war independence of all the Arabs in Asia (excluding Aden). So, in 1916 the Sharif declared the Arab Revolt, and his sons (Abdullah and Faisal) led armies to seize Hijaz and Syria from the Ottomans.

In the same year, however, Great Britain and France concluded the secret Sykes-Picot Agreement, in which they agreed to divide the former Ottoman dominions between themselves and to draw artificial political borders among these territories. Then in 1917 Great Britain issued the Balfour Declaration pledging the British Government to establishing a national home for the Jews in Palestine. At the end of the war and with the defeat of the Turks, the General Syrian Congress, meeting in

Damascus in 1920, announced full independence for Syria (including Palestine) and proclaimed Amir Faisal as king. But this announcement was not recognised by Great Britain and France, and in the same year the Allied Supreme Court concluded the San-Remo Conference, by which the mandates of France over (Syria and Lebanon) and Great Britain over (Iraq and Palestine) were assigned.

### *Emirate of Transjordan*

Jordan (called at that time Transjordan) was assigned as part of the Palestine Mandate, but it was not incorporated into the Palestine Administration. In 1921 Great Britain recognised, under her mandate, a local central authority in Amman, and Emir Abdullah became the Head of the Emirate of Transjordan. In 1923 Britain recognised the Emirate as a national state being prepared for independence. Under the Treaty of Alliance of 1928, which regulated the relations between the two countries until after World War II, the Government of the Emirate was to handle internal affairs and the British took control of foreign affairs, finance, fiscal policy and all matters affecting foreigners. The British administrator became, in effect, the highest authority in the country with strong powers of control and supervision. The mandate continued until 1946, when the Emirate obtained its independence, and Jordan was proclaimed a Kingdom under King Abdullah.

### *Palestine and the British Mandate*

Both Palestine and Transjordan came under British control at the end of the First World War. Although Transjordan was handed over to Emir Abdullah, both countries were governed by a British High Commissioner under the Colonial Office. In 1922 the League of Nations assigned the Palestine mandate and the British commitments relating to establishment of a Jewish national home in Palestine, excluding Transjordan. Palestine was then governed by direct British administration to facilitate the establishment of a national home for the Jewish people. The Administration

encouraged mass immigration of the Jews to Palestine, facilitated land acquisition by the Jews and the building of military force, and provided the economic facilities needed for the growth of their economy.

The Palestinian Arabs rejected the Balfour Declaration, and protested against the measures of the British Mandate Government. Attacks began in 1920 against the Jews and after 1929 against both the Jews and the British Mandate. The large-scale attacks, that began in 1936, continued, and various solutions were attempted but failed. In 1948, when Great Britain formally ended her mandate on Palestine, war broke out between the Arabs and the Jews whose military strength had developed during the thirty years of the Mandate. The results of that war were the establishment of the State of Israel, the loss of most of Palestine which was seized by the Israelis (Central Palestine was retained by the Jordanian Arab Legion and South Palestine by the Egyptians), and the influx of hundreds of Palestinian Arab refugees to the neighbouring Arab countries. Thus started what was known later as the "Palestinian Refugee Problem".

### *The Establishment of the Hashemite Kingdom of Jordan*

In 1950 West Jordan and East Jordan were annexed. West Jordan is the area west of the Jordan River and the Dead Sea. It comprised at that time the hill regions of Central Palestine (including the eastern section of Jerusalem) that were not occupied by the Israelis in the fighting of 1948. East Jordan is the land lying on the eastern side of the Jordan River, the Dead Sea and the series of wadies from the Dead Sea to the Gulf of Aqaba; roughly, the former Emirate of Transjordan (which came to be called the Hashemite Kingdom of Jordan, a term found in the 1946 Constitution but not until then in common use). The new state was renamed the Hashemite Kingdom of Jordan under the rule of King Abdullah. The Palestine part of the Kingdom was the West Bank, and the old Transjordan was then known as the East Bank. This situation

continued until 1967 when the West Bank (and Gaza Strip) fell under Israeli occupation after the June War.

### 2.3 THE ECONOMIC BACKGROUND<sup>(6)</sup>

#### *Transjordan Before 1950*

Transjordan, partly agricultural and mostly desert, was affected during most of its history by the level and extent of security (against Bedouin raids), by the level of trade activity of the neighbouring countries, and by the trade between Europe and the Orient. Around and during the first centuries AD., under the rule of the Arab Nabateans, the Romans and the Omayyad Arab Muslims cities were built, the cultivated area expanded, and agricultural production increased and was exported.

During the period of Ottoman rule, Transjordan like the rest of this region, was affected by all the prevailing administrative, economic and social Ottoman forms, and Jordan retained its importance as a trade and pilgrimage route. In the eighteenth century, the weakness of the Ottoman Empire and the tribal movements out of Arabia had great effects on the country. Settlements disappeared and most of the area reverted to pasture for the flocks of the nomads. Even its role as a caravan route was diminished by the discovery of the sea route around Africa. At the end of the nineteenth and the beginning of the twentieth centuries and at the time of the establishment of the Emirate of Transjordan in 1921, the country was poor, backward and insecure.

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(6) This section on the economic background of Jordan before the period 1976-1993 relies mainly on (a) The Hashemite Kingdom of Jordan (Jordan), National Planning Council, *Three Year Plan (1973-1975)*, (b) Jordan, National Planning Council, *Five Year Plan (1976-1980)*, (c) Jordan, National Planning Council, *Five Year plan for Economic and Social Development (1981-1985)*, (d) Jordan, Ministry of Planning, *Five Year Plan for Economic and Social Development (1986-1990)*, (e) Central Bank of Jordan (CBJ), *Monthly Statistical Bulletin*, Different Volumes, (g) Michael p. Mazur, *Economic Growth and Development in Jordan* (Colorado, 1979), (h) Richard F. Nyrop, *Jordan- A Country Study* (Washington, D.C. 1980).

After nearly three decades of the British Mandate and the rule of Emir Abdullah, the population had grown to approximately 375, 000 individuals<sup>(7)</sup>. Only very modest expansion had taken place in education and health facilities, and modest progress was made in road building, with the best communications being between Transjordan and Palestine. The country was still economically dependent on Great Britain which supported two-thirds of the government revenues. Almost all of the Transjordan government budget was intended for the upkeep of public administration and the British commanded the Arab Legion. This Legion achieved the establishment of security against Bedouin raids. Improved security resulted in eastward expansion of the settled, and thus cultivated, area. Industry hardly existed apart from handicrafts and a few processing facilities largely lacking mechanical power. No extensive development programs or projects were implemented. Imports were three to four times as large as exports.

### *The Hashemite Kingdom of Jordan (1950-1966)*

The economic position of the Kingdom was greatly influenced by the events of 1948. The influx of Palestinian expellees and the annexation of the two Banks in 1950 had important economic and social impacts on the country. First, the stock of human and physical resources increased. The increase in the former was much greater than the increase in the latter and it is also the case that the variety of the additional resources was greater than that of the indigenous resources. The Palestinians who were relatively urbanised, educated and skilled (in agriculture, industry and services), provided the country with the high level of sophisticated leadership needed in government and in the private sector. This human capital was reinforced by the substantial amounts of funds brought in by some of the Palestinians. The amount of arable land also increased by about one-third, and this land was productive in fruits and vegetables.

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(7) See The International Bank for Reconstruction and Development (IBRD), *The Economy of Jordan* (Baltimore, 1957), The Summary Report, p.4.

Furthermore, the establishments in industry, banks and trading were more numerous and of better quality in the West Bank than in East Bank<sup>(8)</sup>.

Secondly, the almost three-fold increase in population<sup>(9)</sup> and the expenditure of the funds transferred by the newcomers greatly expanded demands for food, housing and basic services. This created an import boom and enriched the commercial community, especially in Amman. It also set in motion residential construction which resulted in the building of a new modern country. Furthermore, this increase in population and income led to an increase in the size of the previously very limited market and had a later favourable effect on the creation and expansion of modern establishments in various activities which required large markets to achieve economies of scale.

Thirdly, considerable foreign aid (relative to GNP) entered the Kingdom. The military situation and the massive increase in population within a short period of time required urgent foreign assistance to meet the emergency relief, the weakness and deficiencies in the basic socio-economic services, the provision of employment opportunities and the need to maintain a relatively modern military force.

The considerable assistance from external sources, the emergence of more efficient government and the inflow of educated manpower largely explain the marked progress that was attained during the decades of the 1950s and the 1960s. Indeed, Jordan succeeded in achieving high rates of growth in spite of the limitation of its natural resource endowment and an increasing defence burden. It also succeeded in restructuring the weak economy that had existed in the late 1940s and in developing an infrastructural base, as large investments were directed in the beginning to developing

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(8) See Mazur, pp. 8-9.

(9) This increase was approximately 460 000 individuals from the West Bank and 350 000 individuals from the portion of Palestine that was occupied by Israel, while Transjordanians were about 375000.

and operating the road and port networks<sup>(10)</sup> and basic public services. Later, however, there was greater concentration on the development and expansion of the productive sectors, and a number of industries were established and irrigation and agricultural projects were implemented. Education and health services also developed and the industrial and administrative framework for development was upgraded. These achievements were accomplished by both the government and private sectors.

During this period Gross Domestic Product (GDP) increased at an average annual rate of 9.1%. As the economy enjoyed relative price stability, GDP registered an average real growth rate of about 7%. This growth was greater than in any of the neighbouring Arab countries except Saudi-Arabia. Per capita national income in 1953 was probably not much more than \$100, broadly comparable to the level attained at the same time by countries such as Syria, Egypt and India. However, by 1966 per capita income in Jordan was higher than in those countries.

At the sectoral level, agricultural growth rates were affected by climatic conditions in the rain-fed areas, and by the expanded irrigated areas after the completion of the East Ghor Canal Project in the Jordan Valley. The annual real growth rates averaged about 4% over this period, 1950-1966. The industrial sector witnessed remarkable growth rates of more than 13% per annum on average. With domestic industry in its infancy, the drive to achieve rapid industrialisation via import substitution involved a number of new modern industries being established in the fields of petroleum refinery, cement, vegetable oil and other small industries such as food processing, building materials, home furniture, textiles, clothing and footwear.

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(10) Before the events of 1948, Jordan's trade and lines of communications had been directed westward to the Palestinian modern ports, airports, highways and tele-communications facilities. However, after the war, Jordan had no excess to those facilities and was faced with the necessity of developing a new transport system along North-South lines instead of the previous East-West directed to the Mediterranean.



In view of the weakness of the productive base, the Kingdom had to rely heavily on imports. A deficit in the trade balance is a phenomenon which has characterised the Jordanian economy since the foundation of the state. However, although the trade deficit continued to increase, its ratio to GDP declined. This was due to a slight reduction in the rate of growth of imports, and more importantly to steady expansion in domestic exports both of which reflected an expansion in the productive capacity of the Jordanian economy. Changes occurred in the composition of imports and exports. There was a relative decline in imported consumer goods and a sizeable increase in imports of raw materials and intermediate goods. As for exports the ratio of non-agricultural products rose to about one-half of total domestic exports in the 1960s.

The trade deficit was financed by the surplus in the invisible services balance and net factor income from abroad, as well as out of current and capital transfers to the government. The expanded tourist industry built around Jerusalem and Bethlehem was a major source of foreign currency. Another source of invisible income was remittances sent to families living in the Kingdom by about 100,000 Jordanians employed in various parts of the Arabia peninsula.

While domestic budget revenues continued to increase rapidly, they remained heavily dependent on indirect taxes coupled with a significant increase in the importance of government revenues from interest, dividends and property. This period saw significant monetary developments, such as the establishment of the Central Bank in 1964, an increase in the number of commercial banks from three to nine and the establishment of credit institutions. Money supply grew at a rate of 9% annually, with an increase in bank credit at a rate of 29% per annum.

With regard to social development, the number of pupils enrolled in school, for example, increased from over 100,000 to more than 300,000 between 1950 and 1965. This led to a corresponding decline in illiteracy from 69% to 15% among children

between six and fourteen years of age. This period was also characterised by internal migration from rural to urban areas and the rapid growth of the cities of Amman and Zarqa. Population growth increased to 3% per annum. The unemployment rate, however, was reduced from nearly one-third of the employable male population at the beginning of the 1950s to about a sixth by the end of the 1960s.

### *The impact of the June 1967 war (1967-1972)*

The result of the 1967 War with Israel was the loss of the West Bank and the influx of hundreds of thousands of Palestinian refugees to the East Bank. Although the West Bank's area comprised only about 6% of the total area of the Kingdom, it contained nearly half the population. According to a UN study<sup>(11)</sup>, the magnitude of the loss of Jordan's economic potential because of the Israeli occupation was around 38% of the Kingdom's total GDP, with particularly high percentages for services (55%), transportation (47%) and wholesale and retail trade (43%). Income from tourism and remittances from Jordanians working abroad-two major sources of foreign exchange earnings- declined by about 85% and 50% respectively. The contribution of the West Bank to the Kingdom's output of some agricultural products was high (over 60% to 65% of fruits and vegetables and 80% for olives). Although the share of the West Bank in total industrial output amounted only to about 20%, the number of industrial establishments there represented about 48% of the total for the Kingdom, employing 37% of the Jordanian labour force engaged in industry.

The period that followed the June War (1967-1972) was characterised by economic recession resulting from regional military, political, and security considerations. The 1967 War and the loss of the West Bank resources and markets, the diversion of resources to military expenditure, and the civil disturbances of 1970

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(11) UN, Ecosoc, *Studies on Selected Development Problems in Various Countries in the Middle East*, (E/45, Summary, 15 May 1968), pp. 14-15.

adversely affected the level of activity in most economic sectors, especially the commodity producing sectors which hardly achieved any real growth.

### *East Bank (1973-75)*

By 1973 the effects of the 1967 War and subsequent events had been largely overcome. The country began to prosper, benefiting from the Gulf States' increases in oil prices and in income which resulted in high levels of Arab aid and remittances sent home by the increasing number of Jordanians working in the Gulf.

A real growth rate in GDP of about 6% annually was attained. This growth, for the first time in Jordan, was accompanied by an increase in the general price level which averaged 10% per annum. The growth achieved was accounted for mainly by the large increase in the industrial sector which averaged a rate of growth of 23% annually. Other major characteristics were the increase in the ratio of gross capital formation to GDP to 31% and the rise in the proportion of the trade deficit to GDP to 47%, the highest since the establishment of the state, although there was a great increase in commodity exports.

## **2.4 ANALYSIS OF THE ECONOMIC SETTING (1976-1993)**

### **2.4.1 OVERVIEW**

The Hashemite Kingdom of Jordan (The East Bank only now) is a small country with relatively limited natural resources, but a relatively educated and hard-working people. Its main natural resources are phosphates and potash, and virtually all of its oil has to be imported. The arable land is limited (about 5% of the agricultural land) and water is an increasingly scarce resource.

Economic trends are affected by Jordan's proximity to the oil-rich Gulf States and by its narrow productive base. Jordan has relied heavily on the neighbouring

countries for workers' remittances, export markets and external assistance<sup>(12)</sup>. The services sector is relatively large while the productive non-services base is narrow. This structure of national income has led to reliance on external sources to face the military and political situation in the region and to accelerate the process of socio-economic development.

From the beginning, and in light of the above circumstances, Jordan has followed relatively market-orientated domestic policies and pursued an economic strategy which has been relatively liberal in respect of trade, labour migration and foreign exchange transfers<sup>(13)</sup>. This strategy has been based also on promoting free enterprise and private initiative by creating a political climate and economic conditions suitable to stimulating private investment. The government supports the private sector with financial contributions, the preparation and provision of infrastructure and assistance in project identification.

During the late 1970s and the beginning of the 1980s the economy witnessed a sharp revival in activity caused mainly by the changes which occurred elsewhere in the region. The increase in oil prices after 1973 and the oil shock in 1979 led to large increases in the Gulf States' incomes. Jordan benefited from these changes through exports, remittances and Arab aid. There was also a boom in the Iraqi market for transit facilities and for Jordan's manufactures after the outbreak of the war between Iran and Iraq in 1980 and the closure of the Iraqi ports.

The above factors affected Jordan favourably. The economy grew by over 11% per year during 1976-1982 and operated at close to full employment. Public finances

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(12) Arab assistance stopped in the beginning of the 1990s, except for the oil grant from Iraq which represented three quarters of the total assistance in 1993. See Jordan, CBJ, *Thirtieth Annual Report, 1993*, p.65.

(13) Some restrictions used to be imposed, with various levels, in these fields during the different periods.

and the balance of payments remained strong and, despite underlying instability resulting from the widening trade deficits, external indebtedness was contained and inflation remained low. The result of this was significant improvement in the standard of living of the Jordanian people.

Beginning in 1983, Jordan's economy started to be adversely affected by the slowdown in the regional economies caused mainly by the rapid decline in oil prices. This decreased outmigration from Jordan and, hence, reduced remittances which, along with the emerging macro-economic instability, created unemployment within Jordan. Also, exports of goods other than those produced by the natural-resource-based industries declined. Furthermore, Arab inflows of grant aid dropped putting severe strain on the Government's budgetary operations and the balance of payments. The recessionary trends continued through the middle of the 1980s. The Government, however, increased its expenditures to stimulate domestic demand and the nominal exchange rate was maintained through external borrowing and drawing down reserves.

By 1988 the overall fiscal situation had deteriorated, the balance of payments position had worsened, large overall deficits led to a depletion of official resources, and foreign indebtedness was increased. This crisis resulted in the stagnation of real GDP for most of the second half of the 1980s, a sharp rise in unemployment and a weakening of monetary stability including a falling dinar exchange rate and rising inflation rates.

Moreover, the Jordanian economy was greatly affected by the Gulf crisis that emerged in 1990. This resulted in further reduction of remittances and domestic exports and in the influx of about one-third of a million individuals. Although the immediate impact of the influx of these returnees was to add new burdens on the infrastructures, social services and on the creation of new job opportunities, a favourable effect emerged later as a result of the huge increase in foreign resources

brought in by these returnees.

To deal with the problem of foreign debt and the structural imbalances in the economy, Jordan adopted a program of economic adjustment in 1989 in cooperation with the IMF and World Bank. This resulted in the introduction of a set of measures in the context of tax and trade reforms in addition to putting the dinar on a managed floating system. This program, however, was disrupted in 1990 by the Gulf crisis, and Jordan later adopted a new program for economic adjustment for 1992-1998 aimed essentially at dealing with domestic and external financial imbalances. This was accompanied by a five-year economic and social development plan for 1993-1997.

The Jordanian economy has registered noticeable improvement since the second half of 1991. It adjusted to the economic crisis of 1988 and 1989 and the Gulf crisis of 1990: growth was revived, financial and monetary stability was restored, the dinar exchange rate was stabilised, the country's foreign reserves were built up, the budget deficit was reduced and the balance of payments improved. The economy also achieved real growth in its GDP and in per capita real income. A number of factors contributed to this growth. The most important include the implementation of the economic adjustment and the recovery program, enhanced confidence in the national economy and an improved investment climate. The boom in domestic demand for both consumption and investment coincided with the inflow of foreign resources to Jordan from Jordanian returnees from the Gulf.

### *Human Development*

According to the 1993 UNDP Report, the Human Development Index (HDI) for Jordan in 1990 was 0.582 which ranked Jordan ninety-ninth among all countries and classified it as a medium human development country<sup>(14)</sup>. This index is based on three key components: longevity, education and income. Jordan's measure of educational

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(14) See United Nations, United Nations Development Programme (UNDP), *Human Development Report, 1993*, (New York: Oxford University Press, 1993), Various Tables.

attainment surpassed the measures for all the Arab countries and other neighbours such as Turkey. Also life expectancy at birth was higher for Jordan than for all these countries except Kuwait and the United Arab Emirates (UAE). But because Jordan's real GDP per capita was the lowest in the region other than Egypt, the HDI in Jordan was lower than that in countries such as Kuwait, UAE, Saudi-Arabia, Syria and Turkey. It was, however, higher than in Lebanon and Egypt.

Comparison of Jordan with other countries in the medium human index development category shows that Jordan's situation is better than the average for most other indicators. These indicators include the percentage of people with access to health services, 90% in Jordan; to safe water, 99% in Jordan against 73% for the average; to sanitation, 100% in Jordan against 84% for the average. Also population per doctor (860) and per nurse (980) were better than the average for this category of 2210 for doctors and 1270 for nurses. But real GDP per capita at purchasing power parity (ppp) \$2345 was less than the average of ppp\$2710. It should be noted that during 1992 and 1993 noticeable improvement in this regard has been registered<sup>(15)</sup>. With respect to GNP per capita, Jordan's figure of \$1340 is higher than the average of \$940. Other indicators show that Jordan's rural population in 1991 constituted about one-third of total population against 58% for the average, and basic services are comparable in rural areas of Jordan with those in the urban areas. With regard to the status of women, the female literacy rate of 77% is comparable to the average for developing countries and higher than in the neighbouring countries. Female participation in the labour force at 10% during 1980-1989 is less than the average of 39% for the developing countries but comparable to that in the Arab countries, with 14% of the female labour force in administration and managerial staff against 11% for the average for the average for developing countries.

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(15) See Jordan, CBJ, *Thirtieth Annual Report, 1993*, p.15.

Comparison of the situation in Jordan in 1990 with that of 1970 shows that the size of the difference between the 1970 HDI values and those of 1990 was amongst the highest values in the world which suggests that considerable improvements have taken place.

#### **②.4.2 ECONOMIC PLANNING**

Economic planning began in the Kingdom in 1952, with a ten year program established with the help of the World Bank. However, the experience of development planning after 1962 was one of financial difficulties, security problems and political instability, all of which hindered the process of development planning until 1972, when a three year plan (1973-1975) was launched aimed at reactivating the economy. This was followed by three successive five-year development plans. In 1992, the government adopted two interdependent approaches: the economic adjustment program for the period 1992-1998 and a five-year economic and social development plan for 1993-1997. This plan was introduced to bolster the economic restructuring program.

The main objectives that usually recur in Jordan's development plans are: attaining high rates of growth, increasing employment opportunities, increasing the share of the commodity producing sectors of the economy, and achieving greater self-sufficiency by reducing the adverse foreign trade balance and the reliance of the general budget on external revenues. In the process per capita incomes were expected to rise, and social measures, including a better balance in regional growth, would, it was anticipated, help to reduce the disparities in income distribution. The priority assigned to these objectives in the various plans has changed according to varying circumstances. An important and central aim in the 1986-1990 plan was that of combatting the growing rate of unemployment and reversing the trend to rural-urban migration. In the latest plan 1993-1997 emphasis has been put on facing the structural



imbalances in various economic sectors through concentrating on the formulation and implementation of an integrated set of government policies, in addition to emphasising the principle of self-reliance and the role of the private sector.

With respect to investment outlays and investing entities, the planned figures in the third five-year plan, 1986-1990, indicate that out of JD 3115.5 million of the total volume of investment, JD1623.4 million (representing 52.4% of the total) was directed to the public sector, and JD 1428 million (representing 47.6%) to the private sector. While 39.3% of total outlays was allocated to the social and services sector, and 38.3% to the infrastructural sector, only 22.1% was directed to the other productive sectors<sup>(16)</sup>.

### **2.4.3 TRENDS OF OUTPUT AND PRICES**

#### *Growth in Output*

The revival in activity during 1976-1982 was reflected in an average real rate of growth of above 11% per year (see *Table 2-1*). By 1983, the regional recession affected both the external demand for Jordanian goods through the weakness in the regional markets and domestic demand through a loss of income resulting from a reduction in the flow of external resources. Consequently, the rate of growth declined after 1983 to 4.5% and 3.5% during 1982-1985 and 1985-1988 respectively. The economy declined sharply in late 1988 due to the economic crisis that faced Jordan at that time and the growth rate registered in 1989 was -10.5%. Although the economy started to improve during the first half of 1990, it was seriously set back by the Gulf crisis and the situation deteriorated further. The economy, however, started to recover and to restore its financial and monetary stability after 1991. In 1992 unprecedented real growth of 11.2% was achieved. This growth, however, became 5.8% in 1993. These achievements were attributed to the growing confidence in the national economy and to the

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(16) *Ibid.*, p. 97.

improvement in investment climate. The increased inflow of foreign resources to Jordan that accompanied the returnees and the increase in domestic demand for both consumption and investment contributed to this growth. These improvements have been reflected in per capita income in real terms which rose in 1992 and 1993 after several years of deterioration.

**Table 2-1.** Growth and Structure of Jordan's Output

Sectors	Average Growth Rate in Constant Prices				Share in GDP in Constant Prices			
	1976 ↓ 1982	1982 ↓ 1985	1985 ↓ 1988	1988 ↓ 1993	1976	1982	1988	1993
	<b>Agriculture</b>	10.6	6.5	14.5	3.7	9.9	7.0	6.0
<b>Industry</b>	15.0	4.8	1.5	4.7	26.0	32.3	23.6	26.2
Mining & Quarrying	17.1	17.5	1.5	3.7	4.7	3.9	4.3	3.3
Manufacturing	11.1	4.8	0.2	9.9	13.2	15.8	10.4	14.7
Electricity and Water	17.2	12.3	15.4	0.3	1.0	2.2	2.7	2.4
Construction	18.6	-5.8	-0.8	4.0	7.0	10.4	6.2	5.8
<b>Total Commodity Producing Sectors</b>	14.0	4.8	3.9	4.5	35.8	39.3	29.6	34.2
<b>Total Services</b>	9.5	4.3	1.6	-0.7	64.2	60.7	70.4	65.8
Trade	9.3	5.1	-5.2	-21.0	21.2	18.0	13.5	9.3
Transportation	11.0	6.3	0.4	0.3	8.6	10.6	15.5	15.3
Financing and Business	13.9	3.6	4.0	4.0	9.7	11.0	18.3	19.0
Producers of Govt. Services	7.3	2.9	5.9	3.1	21.6	18.7	21.8	20.9
Other Services	1.3	2.6	-1.1	-2.1	3.1	2.4	1.3	1.2
<b>Total GDP at Factor Cost</b>	11.4	4.5	2.3	1.0	100.0	100.0	100.0	100.0
<b>Memorandum Item:</b>								
Change in Cost of Living Index (1986 = 100)	10.5	4.9	2.3	10.9				

**Source:** Computed from data given in: Jordan, Central Bank of Jordan (CBJ), *Monthly Statistical Bulletin*, Vol. 22 (March 1986), Table 42; Vol. 25 (December 1989), Table 45; and Vol. 30, March 1994, Table 46.

**Note:** Figures for the years 1989, 1990 and 1991 are preliminary; and figures for the years 1992 and 1993 are preliminary estimate.

### *The Structure of the Economy*

Jordan's economy is characterised by a relatively high share of the services sector in GDP. This share exceeds 60% in most years, see *Table 2-1*. Agriculture's share, is small less than 10%, while that of industry (in its broadest sense) ranges between one-fourth and one-third of the total. Since the share of the services sector in GDP has not been declining, this indicates that the objective of increasing the contribution of the commodity sectors in GDP has been largely unsuccessful.

Jordan tends to have a higher share of services in GDP than other economies at a similar stage of development. According to the World Bank Development Reports, Jordan belongs to the group of "lower-middle-income" economies. The average contribution of the services sector in GDP in this group was 47% in 1985 against 64% in Jordan<sup>(17)</sup>. This phenomenon in Jordan can be explained by the exceptionally large import surplus relative to the size of the economy, the large public administration and defence sectors, and the substantial part of wholesale and retail trade in GDP. It also reflects the other face of the coin, i.e. the narrow base of commodity producing sectors<sup>(18)</sup>.

### *The General Price Level*

The high real growth achieved in GDP during 1976-1982 was accompanied by relatively high rates of inflation with an average rise of 10.5% per annum as measured by the change in the cost of living index. This was attributed to a large extent to the successive increase in oil prices during this period which constitute a burden on Jordanian economy since Jordan is not an oil producing country. Subsequently, however, inflation rates declined to 4.9% and further to 2.3% during 1982-1985 and

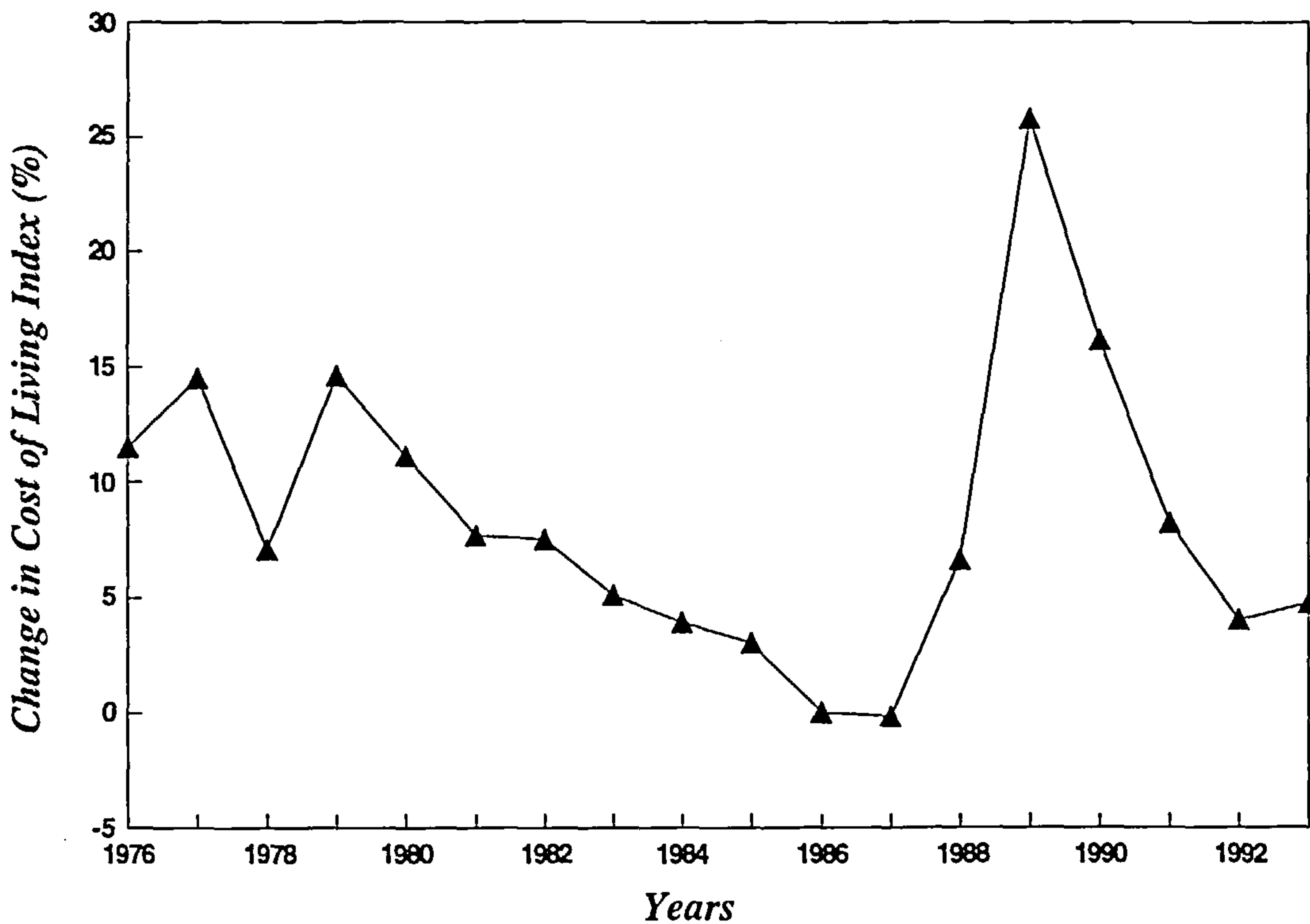
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(17) See The World Bank, *World Development Report*, 1987, pp. 206-207.

(18) A comprehensive analysis of this feature in Jordan, based on the idea of cross-section studies of Chenery and kuznets and others, can be found in: Mazur, pp. 63-76.

1985-1988 respectively as can be seen in *Table 2-1* and *Figure 2-1*. These declines reflected the recessionary conditions that prevailed in Jordan during these periods. The highest levels of inflation were registered in 1989 with 25.8% and 1990 with 16.1% owing to the depreciation of the Jordanian dinar. Inflation rates declined later reaching 8.2%, 4.0% and 4.7% during 1991, 1992 and 1993 respectively<sup>(19)</sup>.

**Figure 2-1.** Change in Prices Measured by Cost of Living Index (1986=100)



Source: Based on Jordan, CBJ, *Monthly Statistical Bulletin*, Special Issue (October 1989), Table 49 and Vol. 30, (January 1994), Table 57.

(19) Inflation measured by the GDP deflator, which considers all the prices of goods and services included in the GDP, indicates a similar trend to the change in the cost of living index. The inflation rates registered according to this deflator were: 4.5%, 4.6% and 5.1% in the years 1991, 1992, and 1993. This indicates that relative stability in the general price levels has been attained. An examination of the changes in the GDP deflator on the sectoral level in 1993 reveals that the main source for the increase in this deflator was the rise in services prices. See Jordan, CBJ, *Thirtieth Annual Report, 1993*, pp. 31-32.

#### 2.4.4 OUTPUT AT THE SECTORAL LEVEL

##### *Agriculture*

Agricultural participation in Jordanian economic activity is small. Its share in GDP during 1976-1993 ranged between 5.4% and 10.6%. During 1986-1992 its average participation in total employment was 7.4%. The highest growth rates were recorded during 1976-1982 and 1985-1988. Over the 1988-1993 period this sector witnessed large fluctuations which were reflected in the growth rates achieved. However, high growth rates were attained in 1992 and 1993 reaching 18.0% and 10.0% respectively. The import bill for food and live animals is still high and reached JD 416 million in 1992, about 19% of the total import bill. This weak role of agriculture is because the cultivated area is less than 5% of the whole land area of Jordan, and because of the difficulties facing the traditional rainfall and modern irrigated agriculture. The irrigated agricultural area, which is only about 8% of the total cultivated area, faces marketing difficulties for its fruits and vegetables although huge investments have taken place in advanced irrigation technology. Jordanian agriculture suffers from high costs and inadequate responsiveness to changing domestic and export markets as a result of weak marketing infrastructure<sup>(20)</sup>.

##### *Industry*

The share of industry<sup>(21)</sup> (mining and manufacturing) in GDP is also small, accounting for less than one-fifth of GDP (see *Table 2-1*). Its participation in employment is small, averaging 10.4% during 1986-1992.

The manufacturing sector's share in GDP was at its lowest in 1988, 10.4%, and at its highest, 15.9%, in 1981. However, these shares are higher than in agriculture and

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(20) See the World Bank, *Jordan: Responding to Changing Environment*, December 1987, p.41.

(21) In its broadest sense (mining, manufacturing electricity and construction) its contribution rises to more than one fourth of GDP.

mining, but less than that of some subsectors in services. The production and income generated from manufacturing are affected by the structure of incentives and institutions designed to foster growth<sup>(22)</sup>, and are affected also by the changing conditions of the oil producing countries in the region, which represent the traditional export markets for Jordanian manufacturers. The Iraqi market in particular was important from 1980 until the outbreak of the Gulf crisis in 1990. The value added in this sector had grown rapidly during 1976-1982 on the basis of import substitution in the small domestic market, but exports have participated in this growth. Production expanded in 1980, 1981 and 1984, but subsequently has been affected by the regional recession. After its sharp decline in 1988, it recovered later registering a real growth rate of 14.3% in 1992 and 6% in 1993.

With respect to mining, the country has few natural resources, the two most valuable being phosphates and potash. Although the mining sector's share in GDP is less than 5%, as shown in *Table 2-1*, it provides Jordan with foreign currency. Jordan is the World's third largest exporter of phosphates. These exports are directed basically to Far East Markets. Both the phosphate industry and the potash company are primarily financed through state funding and have the backing of public sector organisations. Phosphates are being used increasingly in counter-trade arrangements in foreign contracts. Virtually all Jordan's oil needs are imported. The country's only refinery produced 2.8 million tons in 1993. Electricity generation totalled 4435.2 KWh in 1993.

### *Construction*

Jordan has a sizeable construction sector. It accounted for 10.4% of GDP in 1982 and declined to 5.8% in 1993. During 1985-1990 it averaged about 70% of gross domestic

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(22) Especially for small and medium industries, being largely in the private sector.

capital formation<sup>(23)</sup>. Its contribution to employment averaged 10.1% during 1986-1992, and it is also important because of its strong linkages to the rest of the economy. This sector relies heavily on external resources, particularly the remittances of Jordanians working abroad.

### *Services*

Jordan has a large service sector accounting for more than 60% of GDP. Of this more than 30% consists of public administration. The remainder is divided among finance and business, transportation and trade (ordered according to their relative importance during 1988-1993). This sector absorbs a high and increasing proportion of the labour force. The participation of Jordanian labour force in this sector was 68% of the total in 1981. It increased to 69% in 1985 and further to 71% in 1989 and in 1992.

### *Transport*

Transport's contribution to GDP increased from 8.6% in 1976 to 15.3% in 1993. Transport, storage and communications employ about 9% of the Jordanian labour force. Transport is also a major foreign exchange earner. The transport system is mainly road-based and extensively developed. Queen Alia International Airport was opened in 1983. Aqaba, the only seaport in Jordan is located on the Red Sea and grew quickly during the years of prosperity. The railway system, except for isolated tourist trips, is used exclusively for the transportation of raw phosphates from the mining areas to Aqaba . In 1987 gross earnings from transit traffic to Iraq, Syria and Eastern Saudi Arabia were about JD 40 million.

### *Tourism*

Jordan enjoys special attractions, principally its archaeological sites and desert ruins such as the Arab Nabatean city of Petra, the Roman city of Jerash and the Muslim

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(23) See Hashemite Kingdom of Jordan, Department of Statistics, *National Accounts*, Various Issues.

Omayad Palaces scattered in the Jordanian nomad area. The Dead Sea and Aqaba port attract tourists as well. Amman is important as a transit port to the occupied West Bank, two way traffic being permitted from the Jordanian side.

Net receipts from this sector have outstripped the country's most valuable visible export, phosphates, in many years.

#### **2.4.5 AVAILABILITY AND USE OF RESOURCES**

Jordan's gross national product and disposable income are largely affected by external sources. Increases in remittances of Jordanians working abroad and official transfers led during 1976-1982 to a high increase in the rates of growth of gross domestic investment. The net results of these inflows were an enhancement of gross savings, a partial contribution to the financing of consumption and expansion of import capacity. Gross national savings reached more than JD 500 million in 1982 constituting 38% of GDP (see *Table 2-2*). Jordanians spent on consumption and investment about 64% more than they produced within their geographical boundaries (GDP) in 1982. This ratio, however, became about 33% in 1993 as a result of the changes in the regional economic situation and the adoption of certain measures to increase reliance on internal capabilities<sup>(24)</sup>.

Net factor income from abroad has fallen since 1985. Jordan adjusted to the lower availability of resources by cutting back investment (which declined by an average of 3% per annum during 1982-1988) rather than consumption (which grew by 7.1%). The growth in private consumption was less than that in public consumption and also very much less than the growth of private consumption attained during 1976-1982.

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(24) See Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 30, (June 1994), Table 49.



**Table 2-2.** The Availability and Use of Jordan's Resources

	Average Growth Rates (%)			Share in GDP (%)			
	1976 ↓ 1982	1982 ↓ 1988	1988 ↓ 1991	1976	1982	1988	1991
Gross domestic product <sup>(1)</sup>	21.0	9.1	7.9	100.0	100.0	100.0	100.0
External balance <sup>(2)*</sup>	22.7	-8.3	5.2	-58.6	-63.9	-22.4	-20.8
Total Expenditure	21.6	4.6	11.0	158.6	163.9	127.2	138.6
Consumption	20.0	7.1	12.3	123.0	117.0	104.1	117.4
Private	22.4	5.9	14.3	86.0	92.3	77.3	92.0
Public	13.1	10.7	5.9	37.0	24.7	26.8	25.4
Gross investment	26.6	-3.0	5.0	35.6	46.9	23.0	21.2
Gross national product <sup>(3)</sup>	19.9	4.2	6.4	133.4	126.7	96.0	92.2
Memorandum items:							
Gross domestic savings*	15.0	-13.7	74.1	-23.0	-17.0	-4.1	-17.4
Gross national savings	43.1	-8.3	4.3	13.8	37.9	13.3	12.0

**Source:** calculated from data given in Jordan, CBJ, *Monthly Statistical Bulletin*, (October 1989), Special Issue Table 21, Vol. 28, and (September 1992); Tables 34 and 35.

**Notes:** (1) At market prices.  
(2) External or resource balance = goods and non-factor services.  
(3) GNP is here defined as GDP plus net factor income from abroad including all workers remittances.  
\* Values of external balance and gross domestic savings are negative in each year of the period 1976-1991.

## 2.4.6 EXTERNAL SECTOR

### Overview

The external sector in Jordan occupies a special position. The size of this sector (domestic exports and imports of goods) has accounted for 104.0%, 100.4%, 60.1% and 87.4% of GDP (at market prices) in 1976, 1982, 1988 and 1993 respectively (see *Table 2-3*). The ratio of imports and exports of goods and services to GDP was 207.0% in 1982 and became 172.3% in 1993<sup>(25)</sup>. Imports of goods in particular, constitute a high proportion of GDP, reaching 86.4% in 1982. This ratio declined to 63.1% in 1993. The current account deficit to GDP is very large and Jordan's balance of payments continued to suffer from structural weaknesses such as a narrow export base and a heavy dependence on grants and remittances.

(25) Jordan, CBJ, *Thirtieth Annual Report*, 1993, Table 3.

Table 2-3. Balance of Payments / Selected Years

Million JD

	1976	1980	1982	1985	1986	1987	1988	1989	1990	1991
<b>Trade Balance</b>	-269.9	-543.4	-876.5	-763.6	-594.2	-599.8	-638.5	-585.3	-1008.6	-934.6
Exports of goods	68.8	171.4	264.6	310.9	256.0	315.7	381.5	637.6	706.1	770.8
Domestic Exports of goods	49.6	120.1	185.6	255.3	225.6	248.8	324.8	534.1	612.3	598.6
Imports of goods	338.7	714.8	1141.1	1074.4	850.0	915.5	1020.0	1222.9	1714.7	1705.3
<b>Net non-factor services</b>	22.8	51.4	32.6	73.8	61.6	89.5	137.7	234.1	308.6	351.0
<b>Net factor services</b>	21.3	-8.1	8.6	-87.7	-94.5	-93.2	-139.0	-127.3	-148.9	-189.7
Factor receipts (of which) <sup>(1)</sup>	26.0	61.4	110.3	79.9	76.4	63.6	48.8	58.9	85.3	157.5
Labour income	13.0	23.7	38.2	110.3	41.5	31.8	33.6	35.8	40.6	79.6
Factor payments	4.7	69.5	101.7	167.6	170.9	156.8	187.8	186.2	234.2	347.2
<b>Net transfers (of which)<sup>(1)</sup></b>	120.4	220.9	353.2	386.5	389.9	282.3	324.8	339.9	384.6	730.7
Workers remittances	116.6	213.0	343.7	362.6	373.1	285.9	302.1	322.4	365.7	716.1
<b>Current account</b>	-105.4	-279.2	-482.1	-391.0	-237.2	-321.2	-315.1	-139.4	-464.2	-42.5
<b>Foreign grants</b>	122.8	390.9	363.7	291.2	221.3	202.9	209.6	353.6	390.5	322.5
<b>Current account plus grants</b>	17.4	111.7	-118.4	-100.5	-15.9	-118.3	-105.5	214.2	-73.7	280.0
<b>Capital account</b>										
Government (net)	-11.3	22.8	29.6	128.0	43.6	62.8	23.3	124.7	233.6	201.6
Private / short and long term (net)	-3.4	9.3	20.8	9.7	7.1	13.1	9.5	-11.3	45.8	-17.4
<b>Overall balance</b>	2.7	143.8	-5.0	37.7	34.8	-42.4	-72.7	327.6	205.7	464.2
<b>Change in reserves</b>	10.9	-111.2	62.4	-18.5	-18.3	36.6	120.3	-322.7	-255.1	-753.2
<b>Net errors &amp; omissions</b>	-13.6	-33.7	-57.5	-19.2	-16.7	5.8	-47.6	-4.9	49.4	289.0
<b>Memorandum items:</b>										
Current account / GDP	-25.0	-28.4	-36.5	-24.3	-14.5	-19.0	-14.1	-5.8	-17.7	-1.5
Foreign grants / GDP	29.1	39.7	27.5	18.1	13.5	12.0	9.4	14.7	14.9	11.5
Current account after grants / GDP	4.1	11.3	-9.0	-6.2	-1.0	-7.0	-4.7	8.9	-2.8	10.0
Current account / GNP	-23.8	-29.0	-36.3	-25.8	-15.3	-20.3	-15.1	-6.1	-19.8	-1.6
GDP (market Price)	421.6	984.3	1321.2	1605.9	1639.9	1686.3	2235.0	2403.2	2618.4	2805.5

Source: Based on data given in Jordan, CBJ, *Monthly Statistical Bulletin*, Various Issues.

Notes: (1) Ten percent of declared workers' remittances is labour income; the balance is transfers.

See the *World Bank*, Jordan: Responding to Changing Environment, December 1987, p.11.

### *Current Account*

Jordan's balance of payments shows a large current account deficit (before grants) accounting for 37% of GDP in 1982 and 19.6% in 1993<sup>(26)</sup>. This resulted from a very high dependence on imports, on the one hand, and a paucity of natural resources, small manufacturing base and a net food importing requirement, on the other. However, more than three-quarters of this deficit was financed in 1982 and 1985 by grants, but this ratio declined to about one-third in 1992.

### *Trade Balance*<sup>(27)</sup>

Jordan suffers from a chronic trade deficit which grew at a fast rate until 1983. Since then the growth in this deficit has declined and in some years the deficit itself dropped. The trade balance, however, increased later reaching its highest value of JD 1585 million in 1993.

Jordanian external trade is characterised by a narrow export base. Domestic exports finance only a small, albeit increasing, proportion of imports reaching 28.6% in 1992. Exports grew by high rates during 1976-1982 with an average rate of 24.6% per year. This growth declined later reaching 9.8% a year during 1982-1988. The value of exports dropped in 1990 but has increased since then. Export growth for manufactured and agricultural products depend mainly on demand in the regional Arab countries, while exports of phosphates, potash and fertilisers rely basically on the Eastern European countries as well as India and the Far East countries. Recently, however, Jordan's exports has witnessed more diversification in goods exported and in export markets.

The Jordanian economy is highly import-intensive. During 1976-1982 imports of goods increased steadily reaching their peak in the early 1980s, constituting 90% of

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(26) Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 30, (June 1994), Table 33.

(27) A more detailed treatment of merchandise trade will be discussed in *Chapter ⑤* "Analysis of Jordan's External Manufacturing Trade".

GDP in 1981 and growing by an average rate of 22.4% per year. Over the 1982-1988 period, the value of imports decreased by an average of 4.8% annually. Between 1989 and 1993 the value of imports doubled, reaching JD2450 million or 68% of GDP. With respect to geographical distribution of imports, the European Community states are the most important, but their share in total imports is declining.

### *Non – Factor Services*

Non-factor services grew at an average annual rate of 34% during 1976-1982 but this rate has declined to 27.5% over 1983-1988. Improvements in exports, especially during 1976-1982, are due to the development of tourism and transportation which was made possible by improvements in infrastructure in addition to the expanded tourist trade through the port of Aqaba. Imports, although increasing steadily during the first period, declined subsequently. This decline reflects the economic recession after 1983 which resulted in slackening growth of demand abroad. Moreover, reduced commodity imports contributed to a corresponding reduction in transport services. This item has increased in the last years and stood at JD 351 million in 1991.

### *Workers' Remittances*

Another component of the current account is workers' remittances. These remittances, in addition to official grants and export earnings have helped in the financing of capital formation in Jordan. In 1985, for example, around two-thirds of the recorded workers' remittances were used in the private sector, and especially in housing, equity shareholding and projects in manufacturing and agriculture<sup>(28)</sup>. Remittances from Jordanians working abroad, mainly in the Gulf States, are the major component of invisible receipts. They reached JD475 million in 1984 constituting 50% of the

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(28) See United Nations (UN), Economic and Social Commission for Western Asia (ESCWA), *Growth of Development Finance Institutions and Financial Resources Needs of Selected ESCWA Countries* (E/ESCWA/DPD/86/6), 1988, p.25.

receipts for services. These remittances declined in 1990 and 1991 owing to the return of large numbers of Jordanians living in the Gulf region. However, improvement in this regard has been registered in 1992 as these remittances reached JD 514.6 million. Although remittances from Jordanians have been important to the Jordanian economy for a long time<sup>(29)</sup>, remittances abroad by Arabs and foreign workers working in Jordan are a relatively new development which appeared after 1977. These remittances reached JD 62.4 million in 1987, but declined in 1990 and 1991 before they rose again in 1992.

### *Aid*

Unrequited transfers are an important item in Jordan's balance of payments despite the decline in their magnitude in the last years. They were mostly important in 1979 and 1980 when their proportion to the deficit on balance of goods and services reached 99% and 139% respectively. Arab aid transferred to the government constitutes the major part of these grants. It was promised to the kingdom as one of the Frontline States at an Arab summit in Baghdad in 1978. This involved JD 376.4 million per annum. By 1984, however, that figure was down to JD 232.2 million financing only 73% of the deficit on the balance of goods and services. This proportion witnessed a general downward trend despite the increase in these transfers in some years such as 1990 and became 56%, 35% and 45% in 1991, 1992 and 1993 respectively.

### *External Indebtedness*

Until 1988 the size of Jordan's debt remained manageable. The increase in the Current Account Deficit (CAD) (after grants) during 1982-1984 sharply increased Jordan's

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(29) The inflow of remittances has begun since the 1950s, as relatively large numbers of Palestinians who settled temporary in the Kingdom and were given Jordanian citizenship worked in the Gulf states (especially Kuwait and Saudi-Arabia). Outmigration has risen and thus remittances have increased in the 1960s as a result of the 1967 war and the recession that has followed in the country. The number of Jordanians working abroad continued to increase during the 1970s and 1980s. However, their number decreased later due to the compulsory return of a large number of these workers following the Gulf War in 1990. Later, these remittances continued their increases with some fluctuations.

external indebtedness. After 1984, as a result of a reduction in the CAD after grants, the rate at which new debt is being contracted has slowed down.

From 1985 to 1987 the proportion of public and publicly-guaranteed foreign debt to GNP rose from 71.8% to 75.4%. Total external debt as a percentage of exports of goods and services increased from 89.3% to 109.1% during the same period. In the 1989 budget 20% of total estimated expenditure had to be set aside for servicing the Kingdom's civilian debt. This constituted a structural imbalance and a major factor in the economic crisis of the late 1980s. In the Spring of 1989 the IMF was called in to assist with the rescheduling of these payments. Efforts in the last years to reschedule these debts were reflected on the outstanding debt figures which dropped during the last two years from JD 5409.4 million in 1989 to JD 5203.1 million and JD 4803.9 million in 1992 and 1993 respectively. Despite this improvement, this problem is still considered a major imbalance in the economy<sup>(30)</sup>.

### *Reserves*

In the past Jordan's foreign exchanges reserves were healthy, and have been one of the sources of confidence in the economy. Before 1980, these reserves were nearly equivalent to more than 5 months of imports as shown in *Table 2-4* below. Since 1981 the reserves of the Central Bank of Jordan have fallen, especially in 1984, and 1985. In 1988, 1989 and 1990 the Central Bank of Jordan reserves were almost less than 2 months of imports of goods and services. This, accompanied with other imbalances required urgent action to face the economic crisis. Luxury imports were banned and the exchange rate of the dinar was depreciated. Later the ratio rose, reaching 6.5 months in 1993.

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(30) See Jordan, CBJ, *Monthly Statistical Bulletin*, Different Issues.

Table 2-4. Foreign Exchange Reserves

	1976	1979	1981	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993*
Total Reserves Including Gold	201.7	450.9	671.7	740.9	781.4	821.9	870.5	927.6	1209.1	1429.2	2961.8	3330.2	3249.9
Reserves of Central Bank	182.3	370.8	433.6	387.5	379.0	401.4	391.1	218.5	330.1	370.8	949.1	1001.1	1689.6
Commercial Banks	19.2	80.1	233.3	330.5	384.9	403.3	452.0	672.0	858.2	1045.7	2007.0	2324.8	1560.3
Financial Institutions	----	----	4.8	22.9	17.5	17.2	27.4	37.2	20.8	12.6	5.7	4.3	0.0
Imports of Goods and Services	441.6	863.2	1482.4	1640.8	1636.5	1334.6	1408.6	1519.7	1804.4	2474.3	2362.6	2974.7	3138.8
Central Bank Reserves as Months of Imports	5.0	5.2	3.5	2.8	2.8	3.6	3.3	1.7	2.2	1.8	4.8	4.0	6.5

Source: Jordan, CBJ, *Monthly Statistical Bulletin*, Several Issues.

Notes: \* Effective December 1993, data were reclassified according to new definitions of monetary sectors.

#### 2.4.7 PUBLIC FINANCE

Jordan's budgetary operations have shown a very large overall deficit. The proportion of the deficit (before financing) to GDP at current market prices was 13.2% in 1976 (see Table 2-5). However, an improvement in this ratio, which may be used as an indicator of financial performance, was registered until 1984. This can be explained by increases in domestic revenues and by the decline in capital expenditures. Since 1984 the budget deficit has increased steadily because the government has made an effort to accelerate project implementation, relying on borrowing from abroad to substitute for falling grants. Consequently, by 1988 capital expenditures were pushed up to about 12% of GDP. This increased the budget deficit (before financing) to 9.2% of GDP, and, accompanied with imbalances in the balance of payments and the dwindling of foreign resources, called for adoption of a comprehensive adjustment program to face this crisis. The measures adopted and the change in the economic circumstances reduced the fiscal deficit in 1989 and 1990 and turned it into surplus (when assistance is not considered) in 1992 and (with assistance) in 1993.

**Table 2-5. Main Public Finance Indicators in Jordan  
(Percentage of GDP)**

	1976	1980	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Public Revenue*	41.2	44.2	34.7	28.1	33.3	32.2	31.7	32.5	36.7	35.9	40.0	42.0	38.1
Public Expenditures	62.3	52.6	37.2	34.2	39.1	39.6	41.0	41.7	42.6	39.5	39.6	36.4	37.3
Pre-financing Deficit / Surplus	-13.2	-8.3	-2.5	-6.2	-5.8	-7.4	-9.3	-9.2	-5.9	-3.6	0.4	5.6	0.7
Deficit / Surplus (Post Financing)	-10.1	-1.6	1.5	-0.9	2.0	-3.6	-4.5	-4.5	-0.8	1.9	7.8	10.5	0.0
Outstanding Internal Public Debt	21.2	20.1	18.2	18.1	19.1	19.9	29.9	41.6	42.7	39.7	38.2	32.2	30.5
Outstanding External Public Debt	---	---	---	---	---	---	---	173.0	232.2	231.7	198.5	160.9	133.6

Source: Calculated from: Jordan, CBJ, *Monthly Statistical Bulletin*, Different Issues.

Notes: \* Public Revenues = Domestic revenues + External aid + Loans repaid.

These results were the outcome of a fall in net lending and of the increase in public revenues. Domestic revenues' role in attaining the goal of self-reliance is increasing. The ratio of domestic revenues to total revenues rose from 20% in 1976 to 55% in 1982 and to 86% in 1993. Components of domestic revenues indicate that indirect taxes, particularly import duties, constitute a large proportion, albeit declining, of the total. Income and profits tax in addition to consumption tax have increased substantially in the last few years constituting 15.3% of the total in 1990 for the former and 12.1% for the latter against 15.6% for import duties.

#### **2.4.8 MONEY AND BANKING**

By the end of 1993 the number of licensed banks operating in Jordan totalled 21, nine of which were commercial national banks, including the Housing Bank, five branches of foreign banks, one Islamic bank and six investment banks, which together had 385 branches. The Central Bank tries to promote innovation and variety. Despite the slow change in this regard, banks have proved amenable to some innovation, particularly, in



areas of portfolio management and equity financing. Returns on commercial banks capital has been more than 20% in most years and became 32% and 35% in 1992 and 1993 respectively.

Commercial banks' deposits increased considerably at the end of the 1970s and the beginning of the 1980s, reaching JD808 million in 1980, with an average rate of growth exceeding 25% per year (see *Table 2-6*). After 1983 this growth slowed down to an average of 10% a year before it stagnated in 1990. The growth in 1991 of 52% was remarkable and in 1993 these deposits were around double the figure in 1990.

*Table 2-6. Some Monetary Indicators (JD million)*

	1980	1985	1988	1989	1990	1991	1992	1993
Currency in circulation	351.6	531.8	811.2	871.1	1006.2	992.4	1003.9	1047.9
Demand deposits	243.1	316.4	370.2	455.4	426.6	608.0	712.2	789.6
Money supply (M1)	594.8	848.2	1181.4	1326.5	1432.8	1600.4	1716.1	1837.5
Money supply (M2)	984.8	1874.8	2646.8	2971.1	3122.6	3717.5	4193.0	4516.1
Money Supply (M2) as % of GDP	85.5	96.6	119.3	127.5	119.5	133.8	129.6	125.6
<b>Commercial Banks</b>								
Deposits	808.5	1747.2	2346.1	2625.4	2642.6	4022.1	4749.0	4953.5
Loans and advances	459.7	493.7	521.5	628.6	722.0	850.9	929.3	1118.8
Foreign assets	205.2	412.4	702.6	858.2	1045.7	2007.0	2324.8	1560.3
Rediscount rate (%)	6.0	6.3	7.0	8.5	8.5	8.5	8.5	8.5

*Source: Jordan, CBJ, Monthly Statistical Bulletin, Vol. 30 (June 1994), Table 1.*

Money supply (M2) has grown over the period 1982-1987 by an annual average of 11.1%, but inflation has averaged only 2.3%. This has been made possible by credit controls on the commercial banks, the high level of investment which has transformed money supply into assets, and the high level of indirect taxation which has taken the edge off an explosion in demand for consumer goods. In 1990 the growth rate registered in money supply was 5%, lower than in any year during the 1980s decade. In 1991 the rate of growth in money supply (domestic liquidity) jumped by over 19%.

Net foreign assets was the most important factor behind this increase. The flow of savings from Gulf returnees, foreign aid receipts and the rescheduling of a considerable portion of external debt were most responsible for this increase<sup>(31)</sup>.

#### **2.4.9 EMPLOYMENT**

A position of near full employment was reached in Jordan in the 1970s and the beginning of the 1980s, owing to the implementation of extensive projects in Jordan and to the out-migration of Jordanians to the Gulf States which were also witnessing a period of economic boom. Unemployment started to rise subsequently and particularly after the mid-1980s due to the slowdown in both the regional and Jordanian economies. Also, the labour supply exhibited characteristics of a structural mismatch between the skill mix of the labour force produced by Jordan's education and training systems and the pattern of labour needed in the economy. The unemployment rate was estimated at 8% in 1986<sup>(32)</sup>, but due to the economic crisis that faced Jordan in late 1988 unemployment rose to 15%. The compulsory return of approximate 300,000 Jordanians from Kuwait and other Gulf States at the time of the Gulf crisis exacerbated this problem and unemployment totalled more than 18% in 1991. Government measures to confront this problem<sup>(33)</sup> coincided with the 1992 and 1993 economic growth momenta and resulted in a drop in the unemployment rate to 15% and 13% respectively.

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(31) Jordan, CBJ, *Twenty Eighth Annual Report*, 1991, p.17.

(32) Jordan, Ministry of Labour, *Annual Report*, 1991.

(33) Government measures to face the problem of unemployment include giving the priority in the government capital expenditure to the labour intensive projects, providing soft loans to small enterprises to enable them to start their own business through a small loans guarantee programme (the Development and Employment Fund) and expanding training programs offered to the labour force. In addition, the government signed in 1992 agreements with Libya and Yemen to export specialised Jordanian labour. Furthermore, the rules for the employment of non-Jordanians were stiffened. See Jordan, CBJ, *Twenty Ninth Annual Report*, 1992, p.27 and CBJ *Thirtieth Annual Report*, 1993, pp. 32-34.

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The largest part (48.7%) of the Jordanian labour force in 1992 was engaged in government and social services, followed by trade, restaurant and hotels (10.5%) and mining & manufacturing (10.3%), and then by construction (10%), transport & communication (8.7%) and agriculture (7.4%).

With respect to the skilled labour force in Jordan, it was believed at the beginning of the 1980s that Jordan was facing skill scarcities in some areas. At present, given that vocational training programs in Jordan have been expanded fairly rapidly and that a large number of returnees from the Gulf States at the beginning of the 1990s are fairly skilled, we can assume that the scarcity in skilled labour has been reduced to a large extent.

# ***Manufacturing Industry in Jordan***

### **③.1 INTRODUCTION**

The aim of this *Chapter* is to provide a general overview of manufacturing industry in Jordan before turning at a later stage to analysing its international competitiveness. Two major sections make up this *Chapter*. The first concerns the structure of Jordanian manufacturing and the sector's importance in the Jordanian economy. Included in this section is an examination of size, ownership and location, and investment in manufacturing is also discussed. The second section deals with the performance of manufacturing with regard to the growth in output and employment. The impact of this growth on the structure of the economy is then discussed. The sector's performance with respect to exports and the contribution of both domestic output and imports to domestic supply will be examined in the later *Chapter* on international competitiveness. Other factors, including government policies, that influence the manufacturing sector and its competitiveness will be discussed in *Chapter ⑤*.

### **③.2 THE STRUCTURE OF MANUFACTURING**

#### **③.2.1 MANUFACTURING AND THE ECONOMY**

Jordan is a small country with relatively limited resources and a narrow productive base. Its gross domestic product in 1992 was only \$4.8 billion<sup>(1)</sup>. The industrial sector (manufacturing and mining) constitutes a small proportion of the economy. In

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(1) This is at producers' prices, which is equivalent to JD 3257 million. At factor cost, GDP equals \$4.1 billion (or JD 2782 million). See Jordan, Central Bank of Jordan (CBJ), *Monthly Statistical Bulletin, Vol.29* (October 1993), P. 76.

1992, its value added contribution to GDP was around \$800 million (i.e. 19.5% at factor cost current prices)<sup>(2)</sup>. Around 38% of this originated from a small number of natural-resource-based, relatively large industries (phosphates, potash and fertilisers in addition to petroleum refining and cement)<sup>(3)</sup>.

Over the last four decades, Jordan has undertaken major efforts to build up the industrial sector as a source of national income, and the role of this sector in the economy has been increasing. The production index for the industrial sector has doubled five times during the last twenty years, and industry's share in GDP has increased by 1.9 fold<sup>(4)</sup>. But the sector's contribution to total employment has risen only slowly reaching 61,800 workers in 1992 (10.3% of total Jordanian employment), as may be seen from *Table 3-1*. However, its participation in exports has been more pronounced. As presented in *Table 3-1*, the proportion of industrial exports to total exports rose from 70% in 1975 to more than 83% in 1992 (i.e. \$795 million in 1992)<sup>(5)</sup>.

With respect to manufacturing alone, it may be seen from *Table 3-1* that manufacturing accounts for around three-quarters of the industrial sector's value added<sup>(6)</sup>, accounts for more employment than mining and has been generating an increasing proportion of total export earnings. The value added in manufacturing was \$626 million (JD 426 million) in 1992, or 78% of the industrial value added. Manufacturing's share in total value added ranged between 62% and 82% during the 1975-1992 period. As for employment, 87% of the total number of employees in the industrial sector in 1984 were employed in manufacturing. This ratio rose to 90.2% in

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(2) This is equivalent to \$617 million at factor cost constant 1985 prices (or 16.4% of GDP). See: *Ibid.*, p. 76.

(3) See Jordan, Department of Statistics, *Industrial Survey*, 1992.

(4) Computed from: Jordan, CBJ, *Monthly Statistical Bulletin*, Vol.29 (October 1993), pp. 76, 84 and 85.

(5) This proportion reached 90% in 1988.

(6) Manufacturing share in "industry" defined widely as: (mining & quarrying + manufacturing + electricity & water + construction) was 44% to 56% during 1975-1992 (at current prices). These shares decreased to 38%-48% at constant prices.

1992, with 64361 workers. The share of manufacturing exports in total exports rose from 20% to 49.7% during 1975-1992, while that of mining dropped from 50.5% to 34% during the same period<sup>(7)</sup>.

**Table 3-1.** Structure of Jordan's Industry (Shares in Total)

	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
										(%)
<b>Manufacturing Industry</b>										
Value added <sup>(1)</sup> (current prices)	13.1	14.2	11.6	10.9	11.7	10.4	12.3 <sup>(2)</sup>	15.2 <sup>(2)</sup>	14.2 <sup>(2)</sup>	15.3 <sup>(3)</sup>
Value added <sup>(1)</sup> (constant prices)	13.0	13.3	11.6	11.1	11.0	8.9	12.3	13.5	12.9	13.5
Gross Fixed Capital Formation	.....	.....	4.3	2.2	8.9	3.5	3.6	1.9	.....	.....
Exports <sup>(4)</sup>	20.0	33.8	43.3	36.4	47.8	44.8	47.9	50.8	45.4	49.7
Imports	62.9	61.4	50.2	54.4	57.1	56.1	54.7	51.6	54.0	61.7
Employment	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Total Industry<sup>(5)</sup></b>										
Value added <sup>(1)</sup> (current prices)	18.5	18.7	15.4	14.8	15.3	14.7	19.8 <sup>(2)</sup>	22.2 <sup>(2)</sup>	19.4 <sup>(2)</sup>	19.5 <sup>(2)</sup>
Value added (constant prices)	18.4	21.1	15.4	15.2	15.1	12.6	16.9	17.6	16.1	16.4
Gross Fixed Capital Formation	.....	.....	4.5	2.6	10.1	5.8	7.9	3.3	.....	.....
Exports <sup>(4)</sup>	70.5	74.5	81.7	79.6	84.5	89.7	88.8	88.5	83.0	83.7
Imports	74.2	79.8	73.0	70.5	76.2	73.9	74.7	70.9	70.6	76.7
Employment <sup>(6)</sup>	9.1	8.9	10.6	10.7	10.5	10.3	10.4	10.2	10.3	10.3
Manufacturing value added as a (%) of total industry (current prices)	70.9	76.1	75.2	74.0	76.1	70.5	62.2	68.5	73.3	78.6

**Source:** For value added and gross fixed capital formation: Jordan, Central Bank of Jordan (CBJ), *Monthly Statistical Bulletin*, Various Issues. For exports and imports: UN, *Commodity Trade Statistics, Series D*, Various Issues and UN, *International Trade Statistics*, Vol. 1, 1991.

For employment: Jordan, Ministry of Labour, *Annual Reports*, Different Issues.

- Notes:**
- (1)- Share in G.D.P. at factor cost.
  - (2)- Preliminary.
  - (3)- Estimated figures.
  - (4)- Exports refer to "domestic exports".
  - (5)- Total industry defined as "Mining & Quarrying and Manufacturing".
  - (6)- Actually employed.
  - (7)- ..... = not available.

(7) The increase in the manufacturing share was not only at the expense of the mining sector, but also at the expense of agriculture which dropped from about 30% to only 16% during the same period. The deterioration in the mining share was attributed to the relatively low increase in the value of its products in comparison with that of manufacturing. It is also due (at least in 1990, 1991) to the absolute decline in their volumes. This in turn was mainly attributed to the lower prices of these materials on the world markets resulting from contraction of world demand due to the underwent recession.

The performance of manufacturing in Jordan is affected by several general factors such as: overall economic conditions in the Jordanian economy, linkages with agriculture and construction, and regional economic conditions. Government policies to promote the growth of manufacturing are important. The Government offers protection to manufacturing enterprises, creates and maintains infrastructure in the support of manufacturing and encourages manufactured exports.

The manufacturing industry has backward and forward linkages with the agricultural sector. It processes the agricultural output, making tomato paste and fruit juice, and provides agriculture with fertilisers, greenhouses, drip irrigation systems and rubber pipes. The dependence of the manufacturing industry on construction activity is large, not only in the home market but also in export markets. It supplies the construction sector with various inputs such as paints, aluminium profile, doors, windows and tiles.

The close links between Jordan and the neighbouring oil exporting countries affect the economy through various channels: financial assistance, employment opportunities, remittances and trade. Changes in economic conditions in the region affect external demand for Jordanian products and also affect the size of the transfer payments and foreign aid, which, in turn, affect capital formation and domestic demand in Jordan. The flow of these funds affects the domestic demand for manufactures from both the consumer and business sectors. Given the linkages with other productive sectors in the economy, the dependence of manufacturing on these flows becomes more important. This is obvious, in particular, in the construction sector which depends heavily on remittances from Jordanians working abroad.

On the other side, demand in the Gulf states, which depends largely on oil resources, is important for manufacturing in Jordan not only because these countries constitute Jordan's main export markets for manufactures, but also because they are



the major markets for the main exports for Jordan's agricultural sector (fruits and vegetables). Demand for these agricultural products affects the manufacturing sector through the forward linkages between the two sectors.

### ③.2.2 SIZE, OWNERSHIP AND LOCATION

#### SIZE

Despite the small number of large enterprises in Jordan's manufacturing industry, their contribution to output and employment is very much greater than that of the small enterprises. The number of enterprises employing 20 persons or more is limited; the largest enterprise, a petroleum refinery, had 3544 employees in 1992<sup>(8)</sup>. According to the 1984 Industrial Census, only 25.6% of the total number of establishments were classified as large. However, they accounted for 78.1% of the total number of employees, paid 92.1% of total wages and contributed 93.6% of total value added. Value added and wages per employee were considerably higher in the large enterprises. The average wage in 1984 was JD 1726 in the large establishments in contrast with JD 531 in the small ones; while value added per employee was JD 6245 for the former and JD 1539 for the latter.

#### OWNERSHIP

Most of the small- and medium-sized enterprises in the manufacturing sector are privately owned and operated. Some medium and large establishments have public shareholding with different levels of government participation. A relatively recent report prepared for the World Bank on 100 medium-sized enterprises<sup>(9)</sup> showed that 8 enterprises were 100%-owned by the government, 34 had no government equity participation and 58 had equity participation by one or more of the four public financial

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(8) See: Jordan, *Industrial Survey*, 1992.

(9) See The World Bank, *Policies and Prospects for Small and Medium Scale Manufacturing Industries* (June 1987), P.6.

institutions<sup>(10)</sup>. The study concluded that there were few “purely private” medium-sized firms.

According to the 1992 Industrial Survey, 12 out of 56 industries (at the 4 digit level) had government participation constituting 17.1% of the total paid capital<sup>(11)</sup>, foreign participation was 6.5%, and the rest (76.4%) was non-governmental national capital. Most of the total capital accounted for by the government in manufacturing in 1992 was in the engineering and construction materials sector (57.7%) and in the food industry (28.6%). Government participation constituted one-fourth of the capital paid in the engineering sector while that in the food industry was over one-third.

With respect to legal type, more than three-quarters of the registered industrial companies<sup>(12)</sup> in recent years, 1988-1992, were general partnerships, followed by the private shareholdings with limited liability (8.9% to 13.4% of the total) and then limited partnerships which constituted 6.4% to 11.4% of the total. Registered public companies were very few in number. Only 7 out of 813 companies which registered in 1992 were public shareholdings and these formed less than 1% of the total number of companies, but their share was 33% of the total capital<sup>(13)</sup>.

The non-Jordanian share in the manufacturing sector constituted 13.5%<sup>(14)</sup> of the authorised capital<sup>(15)</sup> in 1984. This participation declined in the late 1980, owing to the recessionary conditions, the economic crises that faced Jordan in 1988 and 1989, and

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(10) These are: the Industrial Bank, Pension Fund, Housing Bank, Social and Postal Banks.

(11) The government participation in the total industry defined according to the industrial surveys as (mining & quarrying + manufacturing + electricity + industrial services) was 33.9%. This share is higher than that in manufacturing alone because of the high participation of government in electricity (89% of the total capital in electricity) and in mining (55.7% of the total).

(12) In both mining and manufacturing.

(13) See Jordan, CBJ, *Twenty Ninth Annual Report*, 1992, p.119.

(14) This contribution rises to 35% in the mining sector. One of the reasons for this relatively high ratio is the high participation of the Arabs in the Arab Potash Company, which was established to be a common Arab company.

(15) The percentage ratio of the paid capital to the authorised capital in 1984 was 99.4%. See the Industrial Census of 1984.

the adverse effects of the Gulf War in 1990 on the Jordanian economy. During the three years, 1990, 1991 and 1992, the capital registered in new industrial companies by non-Jordanians was about 10% of the overall capital<sup>(16)</sup>. Two-thirds of it was registered in 1992, owing to renewed confidence in the prospects for the Jordanian economy among foreign investors. This might also reflect the effectiveness of the latest amendments introduced in 1991 to the incentives offered to foreign capital.

Distribution of the total registered capital by foreigners during 1990, 1991 and 1992 by nationality showed that most of the foreign investors were Iraqis (62.1%) followed by Syrians (12.9%) and then by Egyptians (5.9%) and Lebanese (2.1%). Non-Arab investors' participation was limited. The Russian share reached 2.6% while that of the British was 2%, that of Americans was 1.8%, and the rest (10.6%) was divided among 14 other nationalities<sup>(17)</sup>. The large contribution of the Iraqis reflects their capacity to benefit from Jordan's "Encouragement of Investment Laws", especially in the light of the weak investment opportunities available in their home country as a result of the sanctions imposed and the other consequences of the Gulf War.

With respect to the distribution of foreign capital by major industry groups, the Industrial Survey of 1992 showed that the chemical industry was ranked first (47.4%, with 41% of this in petroleum refinery), followed by the engineering and construction materials sector (26.6%, with 33% of this in cement), the non-food intermediate and consumer industries (18.8% with 33% of this in spinning & textiles) and last the food industry (7.1%). These figures show that foreign capital concentrates on larger industries where companies are publicly-owned with relatively larger government participation to guarantee security.

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(16) See Jordan, *Ministry of Industry and Trade*, Companies Department.

(17) *Ibid.*

Comparison with previous years indicates that nearly the same pattern has prevailed over time. But some important changes have occurred recently, especially in 1992<sup>(18)</sup>. First, there seems to be more flexibility in the movement of capital among industries. For example, there was a 50% decrease in participation in the food industry, and an increase of 217% in the spinning & textiles industry, which raised the participation of the non-food sector from 10.4% in 1991 to 18.8% in 1992. Secondly, significant changes occurred in the engineering & construction materials sector. A drop of 46% in the cement industry was more than compensated for by large involvement in new opportunities in metallic products and professional equipment.

### **LOCATION**

Examination of the geographic distribution of enterprises in the manufacturing industry reveals that they are heavily concentrated in Amman Governorate. More than 70% of the total number of enterprises according to the 1979 Censuses were located in this Governorate, and they accounted for 82.6% of the total value added, 82.2% of employment and 81.9% of wages. By 1984, although nearly the same percentage of enterprises was found in this Governorate, their shares in employment, wages and salaries, and value added had decreased to 70%, 64% and 63% respectively. This reflects the increases in the shares of other Governorates owing to the establishment of large enterprises such as the glass factory in Ma'an Governorate and the second cement company in Rashadiya.

The recent figures for the years 1991 and 1992 showed that there is still heavy concentration of industrial companies in Amman Governorate. More than three quarters of the number of companies registered were there, followed by Zarqa and by Balqa (about 8% for each), then by Irbid (4.7%) while the shares of Ma'an, Kerak and Tafilah were even lower.

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(18) Compare, for example, the Industrial Censuses of 1984, 1989 and 1992.

The Government provides a package of incentives to encourage regional dispersal<sup>(19)</sup>. This includes:

- ✱ providing tax incentives under the “Encouragement of Investment Law”.
- ✱ creating industrial estates and/or free trade zones and
- ✱ providing electricity power and credit at preferential rates. But, in spite of this and although there has been some slight improvement in other regions, the capital, Amman, seems to remain an attractive and preferred location.

### ③.2.3 INVESTMENT

Considerable resources were attracted by industry during the five years of the 1976-80 plan. They reached JD 527 million (or 22.7% of the total gross fixed capital formation) in comparison with JD 253.4 million (or 29.8% of the total) during the five years of the 1981-85 plan. The total gross fixed capital formation in the industrial sector during the five years of the 1986-90 period was only JD 154.3 million (that is 5.9% of the total). Manufacturing accounted for JD 101.3 million or 65.7% of that of the industrial sector and about 4% of the total<sup>(20)</sup>.

As a result of the widespread economic recession during the second half of the 1980s, not only manufacturing suffered, but also agriculture and construction. These sectors rely heavily on the private sector for investment and the regional economies for markets. The share of the mining sector, which has relatively large government participation, also declined. Most probably this was due to the decline in public investment since most of the profitable investment opportunities had already been exploited.

For the beginning of the 1990s, the total amount of investment in the economy started to rise, with a substantial increase (61.2%) in 1992 reaching JD 980 million.

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(19) This can easily be seen in the various Encouragement of Investment Laws.

(20) See Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 30 (March 1994), p. 83.

This may be attributed not only to the restoration of confidence in the Jordanian economy, but also to the relatively large amounts of money brought back by returnees after the Gulf War. The distribution of the capital of new companies registered by economic activity shows that industry has become the most attractive activity for investors, since its share in the total capital reached 62.1% in 1992 against 17.1% in 1991<sup>(21)</sup>.

*Table 3-2* shows the sectoral distribution of fixed capital formation in manufacturing. The chemicals industry has attracted the largest amount of investment. This resulted from the relatively large and technologically advanced machinery used by the companies in this sector. Also, as an increasingly successful industry, it attracts more and more investment.

**Table 3-2.** Fixed Capital Formation of Jordan's Manufacturing Industry by Subsector.

ISIC Code	Subsectors	Average value (Thousand JD)		
		1976 ⇒1984	1984 ⇒1988	1988 ⇒1992
311 - 314	Food processing and related industries	3595	3344	2266
321 - 342	Non-Food consumer and intermediate goods	3620	2760	3352
351 - 356	Chemicals	5065	4959	11668
361 - 385	Engineering and construction materials	3998	9164	5704
	Total manufacturing	16964	17236	20879

Source: Computed from: Jordan, Department of Statistics, *Industrial Survey, Issues of 1975-1992*.

Although during the first period both the food and non-food industries have nearly the same average amount of investment (*Table 3-2*), the non-food group attracted only about half the amount of investment in the food industry in the last period. This can be explained in the case of the food industry in that its potential is

(21) See: CBJ, *Twenty Ninth Annual Report*, 1992, P.119.

relatively limited owing to the weak opportunities available, as most profitable industries based on agricultural domestic raw materials have already been exploited. Secondly, the non-food intermediate and consumer goods group consists of a large number of industries such as textiles and spinning, leather, footwear, wood & wood products, paper & paper products, printing and publishing. These industries with more income-elastic products have, in general, more potential to grow as incomes rise.

### 3.2.4 EMPLOYMENT

The number of workers employed in manufacturing has increased over time. The average number of employees doubled between the first period 1976-1984 and the third period 1988-1992, (see *Table 3-3* below). According to the 1992 Industrial Survey the number of total employees in manufacturing stood at 93092 employees. The engineering and construction materials sector absorbed the largest proportion of workers in each period (about 28%). This is followed by the non-food consumer and intermediate goods sector (around 24%). Food manufacturing and chemicals each have nearly the same share in total manufacturing of around 16%.

**Table 3-3.** Employment in Jordan's Manufacturing Industry

Subgroup	Average (number)			Share in total (%)			Average annual growth rate (%)			
	1976 ↓ 1984	1984 ↓ 1988	1988 ↓ 1992	1976 ↓ 1984	1984 ↓ 1988	1988 ↓ 1992	1976 ↓ 1984	1984 ↓ 1988	1988 ↓ 1992	1976 ↓ 1992
A. Food processing and related industries	6080	8535	11755	17.6	16.0	16.2	2.1	8.1	9.8	5.5
B. Non-food consumer and intermediate goods	8561	12505	17201	24.8	23.5	23.8	5.6	3.2	14.6	7.2
C. Chemicals	5178	8528	11153	15.0	16.0	15.4	12.3	5.6	10.4	10.1
D. Engineering and construction materials	9880	14940	18876	28.6	28.1	26.1	8.0	4.1	9.7	8.1
E. Handicraft and miscellaneous	250	34	215	0.7	0.1	0.3	.....	.....	.....	.....
F. Repairs and maintenance	4572	8659	13164	13.3	16.3	18.2	.....	.....	.....	.....
Total manufacturing	34522	53192	72356	100.0	100.0	100.0	8.6	5.5	12.1	8.7

Source: Jordan, Department of Statistics, *Industrial Surveys*, Issues of 1975-1992.

Notes: ..... = not available.

The average annual growth rate of employment in manufacturing was highest during 1988-1992, when it reached 12.1% against 8.7% for the whole period 1976-1992. The high growth rate may be ascribed to the increase in industrial activity and to the relatively low wages prevailing during this period owing to the high unemployment rates. The growth rates in employment were the lowest during 1984-1988 due to the general slowdown in the economy.

### **3.3 PERFORMANCE OF MANUFACTURING**

#### **3.3.1 GROWTH IN OUTPUT**

In this section we will trace the trends in gross value added and in the industrial production index (see *Tables 3-4* and *3-5* below). The period studied is divided into three subperiods depending on salient changes (positive or negative) in the growth of value added. These subperiods are; 1976-1984, 1984-1988 and 1988-1992. Analysis of growth is at both the overall and the sectoral level (major groups).

#### *1976-1984*

Due to the economic boom that prevailed in the Middle East in the 1970s and the beginning of the 1980s, following the sharp increases in oil prices in 1973 and 1979, Jordan's economy achieved high growth rates. Growth in manufacturing was also considerable, especially until 1981. It was a continuation of the previous remarkable growth that had begun in the first third of the 1970s. High rates of growth were attained between 1976 and 1981. In 1982 and 1983 the growth rates contracted slightly. Although in 1984 the growth attained was high, the average for the second part of the period (1981-1984) was only moderate. Thus, the average annual growth for the whole period 1976-1984 was 22.1% (see *Table 3-4* below). In real terms this growth was 10.4%<sup>(22)</sup>.

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(22) See Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 29 (1993), pp. 82-83 and 94-95.



Table 3-4. Value Added in Jordan's Manufacturing Industry by Subsector

ISIC code	Subsector	Average (thousand JD)			Share in total (%)			Average annual growth rate (%)			
		1976 ↓ 1984	1984 ↓ 1988	1988 ↓ 1992	1976 ↓ 1984	1984 ↓ 1988	1988 ↓ 1992	1976 ↓ 1984	1984 ↓ 1988	1988 ↓ 1992	1976 ↓ 1992
311 - 314	Food processing and related industries <sup>(1)</sup>	30943	68497	103289	23.9	25.0	24.5	25.5	7.8	12.2	17.5
321 - 342	Non-food consumer and intermediate goods <sup>(2)</sup>	19210	31063	56483	14.9	11.3	13.4	10.7	9.2	17.5	12.0
361 - 385	Engineering and construction materials <sup>(3)</sup>	40004	77123	119676	31.1	28.1	28.5	20.0	9.0	17.2	16.5
351 - 356	Chemicals <sup>(4)</sup>	30890	87102	121201	24.0	31.7	28.8	20.8	24.1	-2.0	20.1
3511	Industrial chemical	9933	23760	64931	7.7	8.6	15.4	35.1	15.7	20.0	26.2
3512	Basic chemicals	2194	3208	5828	1.7	1.2	1.4	35.2	-7.5	22.2	19.9
3513	Fertilisers	-32	4163	22689	—	1.5	5.4	.....	.....	0.5	.....
3521	Synthetics	.....	659	2150	.....	—	0.5	.....	.....	.....	.....
3522	Paints	1617	2510	2550	1.3	0.9	0.6	35.2	-15.6	26.2	18.1
3523	Pharmaceuticals	2326	7570	19930	2.6	2.8	4.7	35.2	10.7	29.5	27.2
3529	Soap	2828	5118	9990	2.2	1.9	2.4	35.2	-5.1	38.3	24.4
3530	Others	.....	1766	1796	.....	0.4	0.4	.....	.....	9.5	.....
355	Petroleum refineries	17453	56980	44453	13.5	20.7	10.6	30.1	31.8	-25.4	13.6
356	Rubber products	144	181	572	0.1	0.1	0.1	-14.0	121.5	3.4	14.1
	Plastic products	3393	6180	11246	2.6	2.3	2.7	24.2	6.1	20.8	18.6
951	Industrial services	6506	6745	19351	5.1	2.5	4.6	.....	8.3	18.2	.....
	Total manufacturing <sup>(5)</sup>	128825	274521	420630	100.0	100.0	100.0	22.1	13.3	9.9	16.7

Source: Computed from data given in *Industrial Surveys* of 1976-1992.

Notes: According to the "International Standard Industrial Classification", ISIC;

- (1) food processing and related industries include: Food manufacturing, beverage industries (alcoholic and soft), and tobacco manufactures.
- (2) Non-food consumer and intermediate industries include: textiles, wearing apparel, leather & leather products, footwear, wood & furniture, paper & paper products, printing and publishing.
- (3) Engineering and construction materials include: non-metallic mineral products, basic metal industries, fabricated metal products, non-electrical machinery, electrical machinery, transport equipment and professional & scientific goods.
- (4) chemicals include: industrial chemicals (basic chemicals, fertilisers, synthetics, paints, pharmaceuticals, soap, others), petroleum refiners, rubber products, and plastic products (n.e.c.).
- (5) Total manufacturing includes; "handicrafts and other manufacturing industries". The magnitude of this item is generally not significant. It's average share in total manufacturing was only 1%, 1.4% and 0.2% during the previous periods, respectively.

..... = not available.

— = nil or negligible.

With respect to sectoral growth, the performance of most groups was striking, especially during 1976-1981. In the second part of the period, the food industry contracted, the non-food group remained nearly the same, the chemicals group grew moderately and engineering and construction materials expanded considerably. During the whole period 1976-1984, *Table 3-4* shows that engineering and construction materials, which had a relative importance of 31.1% in total manufacturing, grew by an average of 20% per annum, chemicals, with a 24% share in the total manufacturing, grew at an even higher rate of 30.8%. All components of this group achieved good performance except rubber products which contracted. Food processing and related industries group was as important as chemicals (around 24% of the total), but the growth attained of 25.5% was less than that in chemicals, although greater than that in the non-food consumer and intermediate goods group. This last group was the least important and attained the lowest growth rates.

*Table 3-5* presents the value based industrial production index (1979=100). It showed marked increases, rising from 66.5 in 1976 to 139.2 in 1981 and to 173.1 in 1984. The growth in the value of output was due to increases in both quantity and prices as is clear from examining the quantities produced and the wholesale price index<sup>(23)</sup>.

The performance of the food industries was healthy as the production index doubled for most of its components. In the non-food industries, the performance of textiles & spinning and paper & cardboard was also very good (the index for the latter grew by 233%). In contrast, the leather industry's growth was weak. As for chemicals, the index increased by 2.5 fold. All the components of the overall index increased, with the increase in quantity being greater than that in prices. For example, prices of soap & detergents increased by 28% as against a 416% increase in the

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(23) Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 25 (December 1989), p.71.

Table 3-5. Industrial Production Index (1979=100)

Weight	Industrial production	Year										
		1976	1981	1984	1985	1986	1987	1988	1989	1990	1991	1992
	General revised Index	66.5	139.2	181.2	185.2	187.8	205.2	188.5	197.9	205.8	199.9	212.3
100.0	General Index	66.5	139.2	173.0	173.6	179.0	200.2	181.2	191.5	199.8	192.5	209.1
2.9	Food items	68.5	111.1	136.0	142.2	97.9	102.8	117.5	112.8	119.0	99.8	162.5
3.0	Soft drinks	46.6	118.6	86.9	78.1	69.0	77.3	87.5	89.4	89.6	108.2	128.2
1.1	Alcoholic drinks	88.1	143.2	135.6	89.6	73.2	67.9	65.0	67.4	83.7	86.0	88.2
3.1	Fodder	98.6	108.0	118.9	90.3	87.8	85.7	95.8	99.9	91.9	93.4	105.3
12.2	Cigarettes and matches	65.8	140.4	131.8	107.0	100.1	125.9	115.3	86.3	97.3	113.6	91.6
2.6	Clothes and textiles	64.6	94.3	126.4	167.3	148.2	167.3	175.9	149.8	159.6	138.3	118.9
1.6	Footwear and leather	98.5	102.6	107.6	108.7	118.7	113.6	121.0	98.7	107.8	113.6	131.6
1.7	Plastic and sponge	49.6	102.9	92.6	89.1	114.1	107.8	122.2	92.7	102.9	113.2	132.3
	Chemicals											
6.7	General	56.0	141.5	193.2	184.5	217.3	226.8	193.1	266.7	271.7	245.0	219.2
(2.3)	Pharmaceuticals	76.4	172.0	291.3	341.1	339.2	377.1	345.1	498.4	449.7	327.1	295.2
(1.2)	Paints	45.1	103.6	120.9	113.7	95.6	105.9	99.2	89.8	109.7	101.2	117.0
(3.2)	Detergents and soap	45.4	133.7	149.0	98.5	175.3	164.1	119.2	166.4	204.5	239.9	203.0
	Construction materials											
18.9	General	82.0	164.1	177.8	191.3	182.2	201.6	176.2	174.7	207.7	212.7	239.9
(12.6)	Iron	77.1	169.0	139.1	165.5	173.7	183.3	162.9	147.5	146.6	163.8	195.3
(3.5)	Cement	93.5	154.7	325.1	324.6	287.9	380.5	285.2	309.7	494.1	487.9	487.0
(1.5)	Wood products	(n.a.)	142.1	134.6	128.4	65.0	36.9	85.1	101.3	74.2	37.3	55.6
(1.3)	Other	(n.a.)	164.6	205.8	155.6	115.0	86.9	117.5	159.4	185.1	147.7	219.2
13.0	Petroleum products	72.4	126.9	144.9	141.1	134.2	140.0	137.7	140.7	154.9	140.1	169.0
17.8	Phosphate	62.5	150.1	219.7	214.6	221.0	242.1	199.0	234.7	203.3	157.8	152.0
1.6	Paper and cardboard	73.4	162.1	160.8	200.0	170.5	245.3	208.0	263.0	274.8	255.5	249.3
1.0	Batteries	118.1	90.1	66.4	65.8	72.3	73.3	84.5	91.9	78.2	112.8	113.6
12.8	Electricity	62.2	135.0	240.6	263.5	323.7	381.8	353.0	375.3	401.7	415.3	496.9

Source: Jordan, CBJ, *Monthly Statistical Bulletin*, Various Issues.

quantity produced. The fuel price index (1979=100) grew considerably from 68 in 1976 to around 300 in 1984, while the quantity of petroleum products increased by 119%. The engineering and construction materials group also achieved good growth rates. The production index for construction materials, for example, increased between 1976 and 1984 by 116.8%, while the price index grew by 58.9% only. In particular, the cement production index increased to 3.5 fold as a result of increases in quantity (247.9%) and in prices (130.2%). Indeed, owing to the huge increase in construction activity, Jordan was obliged first to increase its imports of cement from JD 4.4 million

in 1978 to JD 22.8 million in 1981, and then to open a second cement company in order to increase domestic production to satisfy the increasing demand. Consequently, imports in 1984 decreased to only JD 3.6 million although the surface area of construction increased by 19%<sup>(24)</sup>.

### 1984 - 1988

The recessionary conditions that began in the region in 1982 as a consequence of the drop in oil prices affected the performance of manufacturing industry in Jordan. The growth in value added nearly stagnated in 1982 and 1983, although it grew considerably in 1984. After that, as these conditions still prevailed, this sector did not recover to previous growth rates although a moderate real growth rate of 3.3% was achieved in 1987. In 1988 Jordan faced an acute economic crisis which resulted in stagnation in GDP. The manufacturing sector was seriously affected and registered a drop of 19.1% in the real value added. For the whole period 1984-1988 *Table 3-4* shows that the average annual growth in manufacturing value added was 13.3%, while it registered negative growth of 4.3% in real terms<sup>(25)</sup>. While the drop in the value of manufacturing output was exclusively due to the decline in quantities, the wholesale price index moved up for all the items in the index (except manufacture of food). The general wholesale price index increased by 9.3% in 1988 and 33.8% in 1989 as a result of the depreciation of the dinar<sup>(26)</sup>.

*Table 3-4* shows that during this period the relative importance of chemicals value added in total manufacturing value added increased to 31.7% as against 24% in the previous period. This is due to the increase in the value of most subgroups of chemicals (except soap & detergents, paints and basic chemicals). Synthetics emerged

(24) Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 29 (October 1993), pp. 86- 87.

(25) Real growth rates in 1987, 1988 and the period 1984-1988 were computed from data given in Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 28 (September 1992), p.77 and Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 29 (October 1993), pp. 80-81.

(26) See Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 29 (October 1993), pp.94-95.

as a new subgroup, and fertilisers value added changed from negative to relatively high positive figures, owing to the increase in exports which grew by 62% between 1987 and 1988<sup>(27)</sup> as a result of favourable world conditions. The performance of the food industries was the worst among the four groups, and the production index decreased considerably. The non-food group was able to maintain its position since it is composed of different industries and decreases in some groups were compensated for by increases in others such as clothing & spinning and paper. The most obvious feature of the engineering and construction materials sector was the high increase in the prices of some items. The cement production index decreased due to a reduction in the quantities produced, while prices were fixed, owing to the contraction in the surface area of construction by 30% during this period.

### **1988-1993**

During 1989 and up to the outbreak of the Gulf crisis in August 1990 Jordan was able to restore stability and to achieve noticeable improvement. However, the Jordanian economy was severely affected by the Gulf crisis. Manufacturing was affected by the loss of its traditional export markets and by the decline in domestic demand owing to the fall in workers' remittances from Jordanians working abroad and in grant aid. Consequently, manufactures registered a real negative growth rate of 2.5% in 1991 against a positive growth of 9.6% in 1990. In 1992, however, a high growth of 14.3% was attained for the first time in several years, followed by a 6.0% growth rate in 1993. This improvement was due, among other factors, to the growing confidence in the economy among consumers and investors and to the re-opening of traditional markets, in addition to the opening of new export markets. Thus the real annual growth rate averaged 9.9% during the whole period 1988-1993<sup>(28)</sup>.

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(27) Figures are computed from data given in Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 29 (October 1993), p.60.

(28) Growth rates are calculated from data given in Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 30 (March 1994), p.79.

Examination of *Table 3-4* above shows that all manufacturing groups achieved relatively high growth rates except chemicals which registered a small decline. Within the chemicals group, all of its components recorded high growth rates except petroleum refining. Exclusion of this item from chemicals results in a 20.0% annual growth rate, the best among the other groups.

In summary, the trends in manufacturing indicates that value added has exhibited an increasing trend despite declines in some years. This growth, however, has mostly been achieved through import substitution and later on through export expansion also. The best growth performance in manufacturing was achieved during the 1970s and the beginning of the 1980s. The high growth rates attained were not maintained later on and high negative rates were registered in 1988. The good performance has been restored since the beginning of the 1990s<sup>(29)</sup>.

The performance of Jordan in the manufacturing industry compares favourably with the international standards presented in the World Bank's Development Reports. The average growth per annum of 13.8% achieved during 1976-1981 is substantial when compared to the rate of 7.3% achieved overall by the group of countries to which Jordan belongs, "the lower middle-income" economies. Even during the period of lower growth rates of 1980-1985, Jordan's performance of 5.6% was better than the 3.2% achieved on average by that group in the same period<sup>(30)</sup>. Despite this Jordan's

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(29) It is worth mentioning that the ratio of the gross value added to gross output of Jordan's manufacturing is low. According to the industrial surveys this ratio was only 27% in 1992 (against 31% in 1991). The low ratio of the chemicals' subsector, particularly petroleum refinery and fertilisers, has a substantial impact on this result. This ratio was only 8.4% in petroleum refineries and 6.9% in fertilisers. Exclusion of these two items from the total raises such ratio for total manufactures to 35%. This ratio is highest in the group of food manufactures (40.7%), followed by engineering and construction materials (38.4%), then comes non-food consumer and intermediate goods (33.2%) and chemicals (14.7%). Exclusion of fertilisers and petroleum refiners from chemicals raise this ratio for chemicals to 31.0% which is close to that of the construction and engineering group.

(30) See World Bank, *World Development Report, 1987*, pp. 204-205.

manufacturing has suffered from some structural weaknesses such as the excessive dependence in its growth in both import substitution and exports on the construction activity, and its reliance on limited export neighbouring markets. Recent developments in these regards indicates considerable improvements.

### **③.3.2 CHANGES IN THE STRUCTURE OF THE ECONOMY**

One of the important roles of manufacturing in developing countries is that of changing the structure of the economy. Various indicators have been developed to assess such change. A frequently used indicator is the share of manufacturing in GDP.

In analysing this share, it is preferable to extend our period of study a little bit more, to 20 years, i.e. since 1972. Considerable change occurred within the short period of 1972-1975. The share of manufacturing in GDP jumped from around 8% in 1972 to more than 13% in 1975<sup>(31)</sup>. This was mainly due to the considerable expansion in total manufacturing output in both absolute terms and relative to the changes in other sectors in the economy. This expansion, in turn, was an outcome of exploiting unutilised capacity and of the large new investments directed at this sector. The wide variations witnessed during 1972-1975 did not continue during the 1976-1984 period. Although the changes registered in these shares were favourable, but they were small, and the shares ranged between 13.3% and 15.3%.

During 1985-1988, successive decreases were registered in the ratio, reaching the lowest proportion of 8.9% in 1988, while during 1989-1992, the high growth rates achieved were reflected in the share of manufacturing which increased from 1989 (except in 1991) to reach 13.5% in 1992.

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(31) At factor constant cost.

Analysis of the above information suggests that:

- ① The low share of manufacturing in GDP in the beginning of the 1970s was mainly due to the very limited industrial base of Jordan. It is also attributed to the slowdown in the economy owing to the economic and political conditions at that time.
- ② No obvious structural change could be observed during the last twenty years, or precisely during the last 17 years; as we started with a share equals to 13.1% in 1975 and ended with 13.5% in 1992. The change which occurred in the first half of the 1970s was remarkable, and that registered during the second half of the 1970s and the beginning of the 1980s has been limited. The reason for this slow change might be that Jordan, before its formation in 1950, was a relatively backward country in almost all fields. Modern industry and agriculture hardly existed. The development efforts, which had accelerated since the mid-1970s resulted, in general, in an expansion in all the sectors of the economy and not only in manufacturing. However, it seems that the expansion in the manufacturing sector, although remarkable and generally above the average in similar countries, was not enough to cause a tangible structural change<sup>(32)</sup>.
- ③ The share of Jordan's manufacturing in GDP was low and is still low in comparison with other countries. According to the World Bank's Developments Reports Jordan's share was below the average attained in the group of "lower-middle-income" economies as it reached in 1985, for example, 12% against 17% in that group.

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(32) Comparison with the structural changes that has been taking place in the successful economies of East and South Asia indicates that the experience of South Korea, for example, had resulted in a steady rise in the share of manufacturing in GDP. This share have nearly doubled between 1954 and 1971 (as it rose from 10% to 18%); it continued its rising and doubled again in 1987 (after another 16 to 17 years) reaching 35%. See Chungsoo Kim, "The Industrialisation of Korea: Export Promotion Versus Import Substitution", in Matthes Buhbe and Sami Zreigat, eds., *The Industrialization of Jordan: Proceedings of a Conference held in Amman, Jordan, on July 2-3, 1988* (Amman: Friedrich Ebert, 1989), pp. 26 and 27.



- ④ The low share of Jordan's manufacturing in GDP is not only due to the limited productive base, but it is also a reflection of the domination of the services sector which contributes more than 60% of GDP in most years<sup>(33)</sup>. The average contribution of this sector to GDP in the "lower-middle-income" economies in 1985 was only 47% against 64% in Jordan<sup>(34)</sup>.

In conclusion, manufacturing in Jordan has not played the anticipated role in restructuring the economy. In spite of this, manufacturing is an important sector in Jordan especially because its share in GDP and role in the economy is the largest among the commodity producing sectors<sup>(35)</sup>.

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(33) See in this study *Chapter ②*, the section on the Structure of the Economy.

(34) See The World Bank, *World Development Report, 1987*, pp 206-207.

(35) The contribution of other commodity producing sectors in GDP during 1976-1992 ranged between (4.7% - 10.6%) for agriculture, (2.6%-7.5%) for mining, (1.0% - 2.7%) for electricity & water and (5.0%-12.2%) for construction.

### ***International Competitiveness: Concepts and Measurements***

#### **4.1 INTRODUCTION**

This *Chapter* is organised into two main sections. The first is on the concepts of International Competitiveness (IC). It explores the significance, scope, definition and nature of IC. The second focuses on the measurement of IC. Three types of measurement are presented with emphasis on the first two, namely, measures of the process and of the result of IC. Price (cost) and non-price measures used to assess the IC process are discussed first. Export-market shares and import-penetration ratios used to assess the result of IC come next. A third type of measure, multidimensional in nature, follows. In the last subsection, also on measurement, general considerations in constructing the indicators of price-competitiveness are discussed. These are followed by the OECD mathematical model for the measurement of import, export and overall competitiveness. This model is presented in some detail since it will be used in a later chapter to measure Jordan's IC.

#### **4.2 CONCEPTS**

##### **4.2.1 SIGNIFICANCE**

International Competitiveness refers to the ability of a country to compete successfully in world markets and with imports in its own domestic market. It is considered nowadays an important international economic issue; and for some national economies, it is a more enduring problem than many other economic problems. It has become a major concern and a much discussed topic since the late 1970s and early 1980s. Back

in the 1950s and 1960s neither economists nor policy makers expressed as much concern over IC as has been the case recently. With the dramatic increase in worldwide competition resulting from unprecedented changes in the international economy, economists and social scientists began to pay more professional attention to IC during the 1980s.

Official concern over the long-term competitiveness of national economies has arisen in some advanced Western countries from a general feeling that these countries are in danger of “losing the race”<sup>(1)</sup>. This concern was expressed in 1985 in the USA Report of the President's Committee on Industrial Competitiveness<sup>(2)</sup>, in the UK Report of the House of Lords Select Committee on Overseas Trade<sup>(3)</sup>, and also in “Competitiveness of Community Industry”, a Report prepared in 1982 at the request of the European Parliament's Committee on Economic and Monetary Affairs<sup>(4)</sup>.

Evidence of practical concern could be seen in the growing support for protectionism in Europe and the USA<sup>(5)</sup>. Indeed, huge trade deficits in the USA and other countries have increased the recent attention to IC. However, these worries are likely to continue as long as Japan and some other East Asian and other New Industrialised Countries (NICs) continue to increase their shares in Western markets.

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- (1) International Competitiveness (IC) of the United States of America has deteriorated in the mid-1980s, but the general trend since then showed improvement. This situation is, however, different in the United Kingdom where IC deteriorated in the beginning of the 1980s, improved in 1986 and 1987 but deteriorated again at the late of the 1980s and the beginning of the 1990s. The situation in other industrial countries differs from country to country.  
See International Monetary Fund (IMF), *International Financial Statistics YearBook*, 1993 (Washington, D.C.: IMF, 1993).
- (2) U.S. Government Printing Office (GPO), *The Report of the President's Commission on Industrial Competitiveness: Vol. 11, Global Competition, the New Reality* (Washington, D.C.: U.S. GPO, 1985).
- (3) Her Majesty's Stationary Office (HMSO), *Report from the Select Committee of the House of Lords on Overseas Trade*, “The Aldington Report” (London: HMSO, 1985).
- (4) Commission of the European Communities, *The Competitiveness of the Community and Industry* (Luxembourg: Office for Official Publications of the European Communities, 1982).
- (5) Protectionist pressures established in industrial countries over the past two decades remain strong. There has been little progress in dismantling the managed trade agreements and other non-tariff barriers. See The IMF, *World Economic Outlook, October 1993* (Washington, D.C.: IMF, 1993) p.1.

Not only the Western developed countries are interested in this issue. There is also growing concern in other parts of the world. The interest of the former Socialist Countries stems from their internal economic problems, in addition to the erosion of their competitive standing over the past two decades. Developing countries, which are facing different internal and external problems, express their concern in part by trying to imitate the successful experiment of the NICs who enjoy shares in important segments in the markets of both the developing and the Western countries.

It should be noted that this concern with IC is due to its important influence on a nation's domestic economy. This role is well expressed in the following quotation from the USA Report of the President's Commission: "An internationally competitive US economy is a prerequisite for the national goals to which we aspire... a rising standard of living for all Americans, our position as leader of the free world, and our national security"<sup>(6)</sup>. These goals could be attained through improved competitiveness as it enables the national economy to raise the nation's standard of living, to expand employment opportunities, and to meet its international obligations<sup>(7)</sup>.

Academic interest in conceptualising IC and in presenting empirical evidence intensified during the 1980s and the beginning of the 1990s<sup>(8)</sup>. However, some, albeit more limited, debate on this topic could also be found in earlier studies. Fleming's study, published by the IMF in 1956, is an example of the early studies<sup>(9)</sup>. In the early 1960s official, but indirect, interest in IC was found in Balassa's work where the initial concern was with the US balance of payments, and US international competitiveness

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(6) US GPO, p.6.

(7) *Ibid.*, p.5.

(8) Studies that were carried on during the 1980s and the beginning of the 1990s which emphasised the main conceptual issues of IC will be examined in the relevant position in this Chapter. However, the most important earlier work will also be discussed.

(9) J.M. Fleming and S.C. Tsiang, "Changes in Competitive Strength and Export Shares of Major Industrial Countries", International Monetary Fund, *Staff Papers*, Vol. V (1956), pp. 218-248.

was just one of the factors affecting that balance<sup>(10)</sup>. Relevant debate on British IC could be found in the mid-1960s in Ray<sup>(11)</sup> and NEDC<sup>(12)</sup> among others. Also during the 1960s other studies that had some relation to IC were conducted. These studies were on issues such as export shares, export performance and comparative international prices, and also on export trends and prospects of specific industries<sup>(13)</sup>. During the 1970s, the concern over conceptualising and conducting empirical investigation of IC continued. Examples are Stout's<sup>(14)</sup> study which set out some of the major definitional issues of IC, particularly the price (cost) measures, before examining the IC of the OECD countries<sup>(15)</sup>. Junz and Rhomberg focused on price competitiveness<sup>(16)</sup>, whereas Armington was concerned with the non-price aspect of IC<sup>(17)</sup>.

#### 4.2.2 SCOPE

Basically, IC at the national level should cover all traded goods and services, with as detailed a breakdown as possible. This will give a comprehensive picture of the competitiveness of a country.

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- (10) Balassa's study was one of the studies prepared for the "Subcommittee on International Exchange and Payments of Joint Economic Committee Congress of the United States". See Bela Balassa, "Recent Developments in the Competitiveness of American Industry and Prospects for the Future", in US Congress, Joint Economic Committee, *Factors Affecting the United States Balance of Payments* (Washington: US Government Printing Office, 1962), pp. 27-54.
- (11) G.F. Ray, *The Competitiveness of British Industrial Products: A Round Up*. London: Woolwich Polytechnic, 1966.
- (12) The National Economic Development Council (NEDC), *Imported Manufactures, An Inquiring into Competitiveness* (London: H.M.S.O., 1965).
- (13) For a detailed presentation and discussion of studies on IC before the 1970s see Joy.M. McGeeham, "Competitiveness: A survey of Recent Literature", *The Economic Journal*, Vol LXXVIII (June 1968).
- (14) David Stout, *International Price Competitiveness, Non-Price Factors and Export Performance* (London: National Economic Development Council, 1977).
- (15) Organisation for Economic Co-operation and Development (OECD), "The International Competitiveness of Selected OECD Countries", *Occasional Studies* (July 1978), pp. 35-50.
- (16) Helen B. Junz and Rudolf R. Rhomberg, "Price Competitiveness in Export Trade Among Industrial Countries", *International Trade*, Vol. 63 (May 1973), pp. 412-418.
- (17) Paul S. Armington, "The Role of 'Non-Price Competitiveness' in Exporting", *The Banker*, Vol. 127 (August 1977), pp. 39-43.

In practice, most of regularly published measures, both cost-and price- based relate to manufacturing industry only. Services are excluded and not all goods are included, the reasons being data availability and the influences of pricing policies:

- \* Services: although many services are traded, they are excluded on the grounds that service prices are not available for a sufficient number of countries, and even if they are available they are not always reliable.
- \* Agricultural products: prices of agricultural goods are to a large extent distorted through support and subsidy programs.
- \* Raw materials and energy products: these goods are priced on world markets where price differentials are arbitrated away so that price-based measures of IC might not give useful information (the same argument also applies to some agricultural products).
- \* Manufacturing output: data for manufactured goods are generally available for a large number of countries, particularly the developed. Also these data (as compared to those for other sectors) are to some extent homogenous, comparable and reliable. Moreover, price differentials are often more indicative of the importance of price competitiveness than is the case for other sectors of the economy<sup>(18)</sup>.

Trade in manufactures may be considered the primary arena of competition because manufacturing seems to show greater signs of external benefits and of economies of scale, especially in technology-intensive areas, than the rest of the economy. Thus, it is possible that nations can grow faster than others by aggressively promoting manufactures<sup>(19)</sup>. Moreover, it is believed that “a healthy manufacturing sector is a key both to international competitiveness and to a rising standard of

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(18) For a more discussion of the reason behind the choice of manufacturing see Martine Durand and Cloude Giorno, “Indicators of International Competitiveness: Conceptual Aspects and Evaluation”, *OECD Economic Studies*, No. 7 (Autumn 1987), pp. 148-151.

(19) For a detailed discussion of this point see Peter H. Lindert, *International Economies* (Homewood: Irwin, Ninth Edition, 1991), p.201.

*“We can say that a country has become more or less competitive if, as a result of a cost-and-price developments or other factors, her ability to sell on foreign and domestic markets has improved or deteriorated”<sup>(25)</sup>.*

This definition has been criticised for being not operational<sup>(26)</sup>, because it does not specify the criteria to be used in the measurement of a country’s IC, and does not enable one to say whether any one country has become more or less competitive.

The definition provided by the European Management Forum (EMF) (1984) has some similarities with Balassa’s with respect to covering both price and non-price factors and both foreign and domestic markets. According to the EMF, industrial competitiveness is:

*“The immediate and future ability of, and opportunities for, entrepreneurs to design, produce and market goods within their respective environment whose price and non-price qualities form a more attractive package than those of competitors abroad or in domestic markets”<sup>(27)</sup>.*

Refinements of the concept and definition of IC resulted in subsequent Reports adopting a definition of IC in general terms (and not only industrial competitiveness) that covers goods and services<sup>(28)</sup>.

Much of the current conceptualising of IC, especially by American writers, depends on the definition provided in the USA Report of the President’s Commission on Industrial Competitiveness. This definition begins by defining competitiveness at the firm level:

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(25) Bela Balassa, “Recent Development in the Competitiveness of American Industry and Prospects for the future”, pp. 27-54.

(26) Fröhlich, p.22.

(27) European Management Forum (EMF), *Report on International Industrial Competitiveness*, (Geneva: EMF Foundation, January 1984), p.6.

(28) See, for example, IMD and World Economic Forum, *The World Competitiveness Report, 1990* (Geneva: IMD, June 1990), p.8.

*“A firm is competitive if it can produce products or services of superior quality or lower costs than its domestic and international competitors. Competitiveness is then synonymous with a firm’s long-run profit performance and its ability to compensate its employees and provide superior returns to its owners”<sup>(29)</sup>.*

“The definition of competitiveness for a nation”, the Report goes on to recognise “must similarly be tied to its ability to generate the resources needed to meet its goals”. So,

*“Competitiveness for a nation is the degree to which it can, under free and fair world conditions, produce goods and services that meet the test of international markets while simultaneously maintaining and expanding the real incomes of its citizens”<sup>(30)</sup>.*

The Report argues that IC for a nation is much more complex than that for a firm, although there are parallels between them, since success in one industry can reduce competitiveness in others as wages and factor costs are bid up; thus, not all sectors of a nation’s economy will be equally competitive in world markets.

Two aspects of IC with regard to time horizon may be derived from the above USA Report definitions. The short-term aspect which concerns the ability of the nation to meet the test of international markets and the long-term aspect which refers to real income per capita<sup>(31)</sup>. The time horizon was explicitly expressed in the EMF Report definition mentioned above and it was considered in formulating the main factors affecting IC. Also real incomes were considered among the criteria used to assess IC.

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(29) US GPO, p.6.

(30) Ibid.

(31) In the case of the short-term aspect of IC, a country will be uncompetitive on world markets if its unit production cost becomes higher than those of other nations. This is due to increases in wages and other costs of production which are not compensated for by productivity growth. With respect to the long-term, a country is considered to be competitive if it can maintain or extend the standard of living of its citizens.



However, emphasis in that Report was put on the short-term aspect as it was stated: "The final judge of industrial competitiveness is the market place"<sup>(32)</sup>. No direct reference is made in the definition in this Report or the 1990 Report to the real returns to the firm or to the standard of living of the citizens of the nation.

The definition of the Report of the President has been considered unsatisfactory by Francis for two reasons. First, it does not pay enough attention to the concept of national comparative advantage, which should be discussed adequately in relation to international trade<sup>(33)</sup> before moving on to discussion of national competitiveness. Secondly, there must be a clear distinction between the concepts of economic growth, efficiency and competitiveness, as they are not necessarily related.

Recently, Lenz has also criticised the above Report's definition for being incomplete<sup>(34)</sup>. He argues that it is not only absolute gains that should be considered, but also relative performance. So, he adjusted the Report's definition as follows:

*"Competitiveness is the ability of a nation to maintain a rough cumulative balance in its external accounts over the long term while making gains in its standards of living that compare favourably with other nations at comparable stages of development"*<sup>(35)</sup>.

This definition requires that for a nation to be competitive it must not only achieve increases in its living standards, but also continue to match or exceed the increase in its peers'. Definitions by American writers reflect their concern with the economic leadership of America.

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(32) European Management Forum Report, p.6.

(33) That is, how advantages are shifting, and whether they are reflected in the operation of the market, including exchange rate adjustments. See Francis, p.17.

(34) Lenz, p.4.

(35) Ibid., p.6.

In the World Competitiveness Report of 1990 it is argued that the final word on competitiveness remains elusive and that, despite the attention national competitive analysis has received, the perfect synthesis of the many issues involved has not been made<sup>(36)</sup>. This deficiency in conceptualising IC is, according to Fröhlich, because of the lack of specific theory about IC in the standard economic texts, because economists are not well equipped to handle this issue, and because matters of IC are related to many fields of knowledge including management and engineering<sup>(37)</sup>. Frances, however, suggests that the very nature of the concept is the cause of this deficiency. The “Nature of IC” will be discussed below.

#### 4.2.4 NATURE

IC is not a simple, uni-dimensional notion: it has more than one aspect (price, non-price), has influences upon many sectors in the economy (industry, foreign trade, etc.), and is affected by different factors (cultural, economic, social and political). IC is also a complex concept with a global nature, especially, when compared with competitiveness at the firm level. For IC is not merely affected by domestic factors but also by factors such as technology transfers, the international division of labour, and the management of natural resources on a world scale<sup>(38)</sup>.

In fact, the competitive position of one country, indicated basically by its share in world markets, is affected negatively by growing protectionism in other countries and by the procedures undertaken to maintain or increase the rates of their exports growth. Does this mean that IC is a zero-sum game, in which one country can gain only at the expense of others? Many<sup>(39)</sup> suggest that the struggle among nations for international markets and the competition to increase economic power need not necessarily be so. All nations could benefit from and depend on the economic growth of other nations.

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(36) IMD and World Economic Forum, p.10.

(37) Fröhlich, p.21.

(38) European Management Forum Report, p.6.

(39) See, for example, US GPO, p.6; Lenz, p.5 and Fröhlich, p.27 among others.

In explaining this point, Tyson<sup>(40)</sup> argues that the adoption of policies to enhance competitiveness in one country, through accelerating productivity growth and quickening the pace of technological innovation and diffusion, need not affect its trading partners negatively, because this strategy will lead to, for example, improvement in quality standards, development of new products and production processes, and adoption of modern technology. Partners may benefit from these developments, and at the aggregate level world welfare may increase. Tyson suggests that the way in which industrial nations share in the benefits over time depends on cooperative rather than competitive efforts among nations to shape rules for the international economic system<sup>(41)</sup>.

Fröhlich<sup>(42)</sup>, on the other hand, though sharing Tyson's opinion about the importance of innovation strategy in benefiting all nations, analyses this point in a different way. He argues that the increasing growth in productivity leads to growth in income, which, in turn, stimulates import demand and, thus, trading partners benefit through larger export markets. The end result of this process is more production and higher real incomes in all countries.

From these arguments one can make two observations regarding the nature of IC. First, competitiveness is not an end in itself. "It is a way to earn rising standards of living and to generate the wealth to pay for domestic and international community"<sup>(43)</sup>. This same point is also obvious in the Report of the President<sup>(44)</sup>. The second is that in

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(40) Laura D'Andrea Tyson, "Making Policy for National Competitiveness in a Changing World", in Antonio Furino (ed.), *Cooperation and Competition in the Global Economy: Issues and Strategies* (Cambridge, Mass.: Ballinger, 1988), p.22.

(41) The share in benefits depends on what professor Klaus Schwab called "Cooperative Competition" in the Preface of the "EMF's Report on International Industrial Competitiveness.

(42) Fröhlich, p.28.

(43) Bruce R.Scott and George C. Lodge "Introduction" in Bruce R. Scott and George C. Lodge (eds.), *U.S. Competitiveness In the World Economy* (Boston: Harvard Business School Press, 1985), p.4.

(44) The Report considers an internationally competitive US economy a prerequisite to attaining national goals.

assessing IC in one country we are not confined to the domestic conditions of this country. Consideration of the factors that determine the IC position and the change of this position over time in other competitors' countries is necessary. So competitiveness is not an absolute but a relative concept. "There is no race from 'A to B'. The question is a matter of relative position in terms of resources and products and the change in relative positions over time"<sup>(45)</sup>. In fact, by definition, one can state that IC is relative. Most definitions of IC reveal this point explicitly, when they compare the performance of one country with that of other competitors abroad or in domestic markets<sup>(46)</sup>. Also, one can, by commonsense, judge that changes in IC of one country are not only a consequence of the changes in the position of this country's IC but also changes in the position of other countries<sup>(47)</sup>. Industrialisation of the NICs, for instance, has led to relative decline in the developed countries in terms of percentage shares in world markets. Actually, this characteristic of IC is quite obvious in the Report of the European Management Forum<sup>(48)</sup> and the World Competitiveness Report which did not or could not give levels relating to the competitive positions of the countries surveyed, but ranked countries according to ten Principal Indicators.

Dealing with relative concepts requires comparative analysis; which is not confined in this context to comparisons with other countries, but also comparisons with the past. Thus, competitiveness is related to another characteristic, namely, dynamism. As a dynamic concept the relative position of countries in the future is affected by the factors determining present levels and trends and by changes in the factors themselves<sup>(49)</sup>. Since the different factors and elements of IC need numerous years or

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(45) Commission of the European Communities, *The Competitiveness of the Community Industry*, p.16.

(46) See, for example, the definition of European Management Forum of 1984, p.6.

(47) In fact, the absolute position of this country may not change at all, but the change in other countries' positions will lead to relative change in this country's position.

(48) See the introduction of the "European Management Forum Report of 1984" and "IMD and World Economic Forum", p.9.

(49) Commission of the European Communities, *Competitiveness of the Community Industry*, p.16.

even decades to play their roles adequately, we can conclude that IC is essentially a long-term concept<sup>(50)</sup>.

In sum, IC is a composite, multi-dimensional, complex, global, relative, dynamic and long-term concept. Accordingly, the process of measuring IC is not easy because there is no single measure that can cover all these characteristics. Moreover, different measures give different results as we can see in the following section about measurement and evaluation of IC.

### **4.3 A FRAMEWORK FOR ANALYSING IC**

Analysis of IC for any one country requires establishing a comprehensive analytical framework. Since theory provides the substance of the framework, evaluation needs an excursion into economic theory to specify what and how we assess in addition to why we assess. Therefore, we need first to address a clear definition of IC and to specify the aspect of IC on which we are concentrating. Measurement of IC position comes next. This is followed by analysis of the role of the various determinants of IC that can maintain or improve it. Finally, action to be taken to ensure future IC should be suggested.

While a theoretical framework does not exist in a systematic form, one can find some isolated treatment of these issues. However, we can start with the definition of IC which may be at the nation's level, or at the firm's or sector's level. Also, two aspects may be considered. The short-term and the long-term. The goals aspired at the nation's level refer in the short-term to maintaining or increasing the ability of this nation to compete in international markets. While in the long-term the goals are related to maintaining or expanding the real incomes of the country's citizens. Success in achieving the goals in the short run leads, in general, to attaining long-run goals.

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(50) Scott, p.15.

Measurement of IC enables one to make objective judgements about the country's current and future prospects, which in turn helps in formulating and undertaking appropriate policy action. Indeed, systematic verification is necessary in the light of the increasing concern about this issue on a world-scale, particularly in some countries where this concern has not been built on specific economic indicators, but rather on a general fear or impression that their IC is in danger. Measurement begins by determining what to measure and by what method or measures. Both IC as "process" and the result of this process should be measured using appropriate measures, as discussed in the next section. Measuring the process involves assessing price and non-price competitiveness, while measuring the result is to some extent complicated because it depends on what we mean by results. In other words, it depends on the short-term or long-term aspects or objectives which are specified in relation to this process. In any case, the measures applied should be consistent with the adopted goals. So, in the first case variables such as export unit values and unit labour costs used to assess price competitiveness are employed. Whereas in the second case we use measures such as market shares (to assess the short-term) and changes in productivity and in real wages & return to capital (to assess the long-term).

This theoretical framework should also help in establishing the bases of evaluation and measurement and the standards used in determining adequacy. These bases or dimensions stem basically from the nature of IC as a relative dynamic concept. Therefore, the dimensions of measurement for any one country are:

- ✿ Comparison with the past performance of that country.
- ✿ Comparisons today with the performance of competitors<sup>(51)</sup>.

A third dimension has been suggested by some analysts and has been considered implicitly by others. This dimension involves comparisons with the country's

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(51) New York Stock Exchange, *U.S. International Competitiveness: Perception and Reality* (New York: New York Stock Exchange, August 1984), p.9.

potential<sup>(52)</sup> and with what the position “ought to be”<sup>(53)</sup>.

The results should be interpreted through careful analysis of the various factors that determine competitiveness, and cause its strength or weakness. These determinants include: first, competitive resources such as human resources, technological capacity, capital, infrastructure and natural resources; secondly, efficient allocation of these resources as reflected in productivity and in foreign trade performance; thirdly innovation, flexibility of adjustment to changing internal and external conditions; and fourthly, the international economic environment<sup>(54)</sup>. Finally, the result of measuring the competitiveness position and assessing the future prospects determine the extent and the kind of government action needed to build on competitive strength and to mitigate shortcomings.

#### **4.4 MEASUREMENT OF IC**

##### **4.4.1 BASIC CONSIDERATIONS**

The suggested measures of IC should be derived from and be consistent with the IC definition, nature and dimensions. The following points regarding these measures should be noted:

- ① There is no single measure of competitiveness and there is no unique way of measuring competitiveness. This stems from the composite multi-dimensional nature of IC. As a relative concept, the significant measures are also relative not absolute.
- ② Specific measures are designed to assess specific aspects of IC, but none of them is ideal. Each one has some theoretical or practical shortcomings.

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(52) Lenz, p.5.

(53) Commission of European Communities, *The Competiveness of the Community Industry*, p.6.

(54) For a discussion of the various determinants of IC see US GPO, pp. 55-133; Lenz, Ch.2; Wojciech Bienkowski; “The Applicability of Western Measurement Methods to Assess East European Competitiveness”, *Comparative Economic Studies*, Vol. XXX (Fall 1988), pp. 33-50.

- ③ Not all measures could be used in assessing IC in all countries. The applicability of IC measures depends on many factors to be discussed later.
- ④ More than one measure is required for useful competitiveness assessment.
- ⑤ The shortcomings of every measure should be considered when used.

#### 4.4.2 MEASURES OF THE PROCESS OF IC

Measuring IC, as has been stated before, requires measuring the process of IC and also its effects. We shall begin by measuring the IC process. Such process has two components or aspects: price and non-price, each of them will be discussed below in some detail.

##### 4.4.2.1 Price (Cost) Competitiveness

Price (Cost) Competitiveness is defined as “the behaviour of costs, prices or profits of a given country relative to those of its competitors”<sup>(55)</sup>. It indicates the position of a particular country relative to its competitions on the basis of price<sup>(56)</sup>.

The influence of price on competitiveness has been explained in Fröhlich<sup>(57)</sup>, who stated that a country's sales performance, like the case of an individual producer, depends largely on its ability to meet demand at low prices. However, many researchers<sup>(58)</sup> have conducted various empirical studies dealing with variable such as: prices of imports and exports, changes in these prices, the volume of imports and exports, and export performance. They have found (in addition to other results) that there is generally an association between the changes in export prices and the volume of exports. More precise evidence about competitiveness has been presented in an

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(55) OECD, “*The international Competitiveness of Selected OECD Countries*”, p.35.

(56) Nigel Piercy, *Export Strategy: Markets and Competition* (London: George Allen & Unwin, 1982), p.112.

(57) Fröhlich, p.23.

(58) See, for example, J.R. Parkinson “The Progress of United Kingdom Exports”, *Scottish Journal of Political Economy*, Vols.13 (1966), p.11; Paul S. Armington, p.43 and G.J. Hooly & J.R. Newcomb “Ailing British Exports: Symptoms, Causes and Cases”, *The Quarterly Review of Marketing*, Vol. 8 (1983), p.16.



earlier study carried out by Junz and Rhomberg<sup>(59)</sup>. It indicates that 43% of the variation in export share can be attributed to relative export prices. Accordingly, price is an important element in competitiveness. However, its relative power depends basically on the type of competition which predominates.

Before discussing relative output prices and relative unit labour costs, it seems appropriate to identify the main characteristics of the 'ideal' measure with respect to competitiveness.

The 'ideal' measure of the competitive position should<sup>(60)</sup>:

- ⊗ Take into account developments in all sectors of actual or potential competitors among countries without, however, including in its coverage sections of the economy which do not compete with those of other economies, i.e. it should cover all traded or tradable goods and services but nothing beyond that.
- ⊗ Be based on data which are comparable in various countries.

However, in practice, the researcher is faced with technical difficulties in compiling these measures because not all the relevant data are available, even in the advanced countries. Therefore, relative and not absolute prices and costs are used expressed as indexes. Also, sometimes proxies and not the suggested measures are used to reflect competitiveness<sup>(61)</sup>. Moreover, even these proxies are plagued by a variety of statistical problems.

### *Relative Output Prices*

Output price changes over time can reflect price competitiveness. Since comparisons with other countries are essential in evaluating IC, the appropriate measure involves comparing relative output prices in a common currency, which requires, in turn, taking

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(59) Helen B Junz and Rudolf R. Rhomberg, pp. 243-262.

(60) OECD, "International Developments: Foreign Trade and Current Balances", *Economic Outlook*, No. 23 (July 1978), pp 33-43.

(61) Commission of the European Communities, *The Competitiveness of the Community Industry*, pp. 42 and 43.

exchange rate changes into consideration. Thus, relative national output price movements adjusted for exchange rate variations is considered a measure of price competitiveness<sup>(62)</sup>. This is defined as the ratio of a country's output prices of manufactures to a weighted average of competitors' output prices of manufactures, both expressed in a common currency. Consequently, if these adjusted relative prices are increasing in a country, then it is becoming less competitive.

However, we can reverse this procedure<sup>(63)</sup> by looking at exchange rates corrected for the differences in national price-level changes. In other words, we can multiply relative prices by effective exchange rates to obtain "real" exchange rates<sup>(64)</sup>. This measure is also used to evaluate changes in a country's IC. If the real exchange rate increases, the competitiveness of a country's industry will decrease, but if it decreases, competitiveness will improve, and if there is no change (effective nominal exchange rates may change but their change might be compensated for inflation) competitiveness will remain the same<sup>(65)</sup>. It should be noted, however, that different variables of output prices are used for constructing price competitiveness indicators such as producer or wholesale prices, consumer prices, GDP deflators and export prices. Each of these has strengths and weaknesses<sup>(66)</sup>.

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(62) Bank of England, "Measures of Competitiveness", *Quarterly Bulletin*, Vol.22, (September 1982), pp. 369 and 370 and Fröhlich, 1991, p.23.

(63) Fröhlich, p.23.

(64) Commission of the European Communities, *The Competitiveness of the Community Industry*, p.43.

(65) Fröhlich, p.24.

(66) For an extensive analysis of the advantages and disadvantages of these variables which are used in constructing IC see H.M. Treasury, "Measures of Competitiveness in British Manufacturing Industry", *Economic Progress Report*, No. 146 (June 1982), pp. 6-8; Edourd B. Maciejewski, "Real Effective Exchange Rate Indices: A Re-Examination of the Major Conceptual and Methodological Issues", IMF, *Staff Papers*, Vol. 30 (1983), pp. 491-541; OECD, "The International Competitiveness of Selected OECD Countries", pp. 35-50; H.M.S.O., "International Competitiveness", *Economic Progress Report*, No. 158 (July 1983), pp. 1-5; Richard A Johns, *International Trade Theories and the Evolving International Economy* (New York: St. Martin's Press, 1985); and the Durand and Giorno, "International Competitiveness: Conceptual Aspects and Evaluation".

Relative wholesale price indices refer to the prices of goods that are tradable on both home and foreign markets. Published indices are to some extent unreliable because coverage varies considerably in different countries, as does the method of construction and weighting. Also, they tend to be heavily affected by changes in the prices of intermediate inputs. Another indicator of IC relates to consumer prices (and GDP deflator). These are often used because they (in particular, consumer price statistics) are readily available for a large number of countries. These measures also face statistical problems regarding their components, construction and weighting which vary from country to country. However, their main disadvantage is that their coverage is too wide as they include price developments of non-tradable goods and services.

An indicator that can be considered relatively comparable is the average export unit value index<sup>(67)</sup>. The most important advantage of this measure is that it relates exclusively to goods which enter into international competition. They, however, exclude potentially exportable goods and thus do not take into account the effects of changes in the profitability in exporting countries<sup>(68)</sup>. Also, the use of these average indices assumes implicitly that identical pricing policy on all markets are experienced by every exporter which is not the actual case. But for want of comprehensive bilateral price data these proxies are usually used.

### *Limitations of relative output prices*

This measure (expressed as output prices or real exchange rates) has these limits:

- ① It measures changes and not levels<sup>(69)</sup>. It can show that the magnitude and direction of changes but not the level. One can conclude by using this measure

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(67) Although the definitions of these indices differ from country to country, in particular, with respect to the degree of disaggregation in the underlying data.

(68) Durand and Giorno have pointed out: "Excluding potentially exportable goods can be a problem since account may not be taken of possible losses of competitiveness in respect of goods, which, while potentially exportable, have not been exported so far because they are too highly priced". See Martin Durand and Glaude Giorno, p.151.

(69) See, for example, Francis, p.8 and Commission of the European Communities, p.43.

that a country has become less or more competitive as a result of changing prices.

- ② It is not a comprehensive measure since it does not take into account other non-price elements<sup>(70)</sup>.
- ③ It may give wrong signals about the country's competitiveness. Consider the case when costs of production increase. Prices and, hence, the real exchange rate may increase and reflect a decrease in IC. But if prices do not increase (because of severe competition or government's price control) the real exchange rate will not change and will not be able to reflect the increase in IC<sup>(71)</sup>.

### *Relative Unit Labour Costs*

Because of the theory that pricing of a good is primarily influenced by its production cost, it is not necessary to confine the measures of price competitiveness to prices. Costs of production might also be used<sup>(72)</sup>. Cost-based measures are considered by some economists the most widely used measure of IC<sup>(73)</sup> and the most appropriate single indicator<sup>(74)</sup>, since they give weight to both the price and profitability aspects of competitiveness<sup>(75)</sup>.

Indeed, cost of production would be an ideal measure if it has been expressed as an index measuring the changes in relative production costs internationally. But such an index does not exist for lack of detailed data about costs. There is difficulty in measuring capital costs. The costs of many raw materials do not vary by much between countries given the homogeneity and tradability of these inputs. In comparison, labour

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(70) Francis, p.8.

(71) Fröhlich, p.24.

(72) Commission of the European Communities, *The Competitiveness of the Community Industry*, p.35.

(73) H.M.S.O. "International Competitiveness", p.1.

(74) H.M.S.O. "Measures of Competitiveness in British Manufacturing Industry", p.6.

(75) A relative profitability of exports's index is sometimes computed as a guide to the extent to which changes in a country's export prices, and hence in export price competitiveness reflect changes in the profit margins on exports in comparison with sales in the home market. See H.M.S.O. "Measures of Competitiveness in British Manufacturing Industry", p.6.

costs, which are the single major component of production costs and which are usually available in a suitable form, provide a good guide to movements in total domestic costs. Therefore, in practice, measures of cost competitiveness are restricted to labour costs<sup>(76)</sup>.

As labour costs are determined by money wages and productivity, both elements should be considered; it is obvious that increases in wages and hence in production costs will not decrease competitiveness if the growth of physical production is greater than the increase in costs. Unit wage cost has been developed to combine these variables. It is defined as<sup>(77)</sup>:

*"The ratio of hourly wage paid to hourly productivity in volume terms"*

For the sake of international comparison, movements of the unit wage cost should be expressed in a standard currency. Some economists have pointed to this combination of criteria as an index of "real efficiency wages"<sup>(78)</sup>. Changes in money wages adjusted for movements in labour productivity and the exchange rate can affect the movements of a country's competitive position against others. Competitiveness is then measured by "relative unit labour costs"<sup>(79)</sup> defined as: "the index of a country labour costs per unit of output relative to weighted average of competitors' unit labour costs, both expressed in a common currency"<sup>(80)</sup>. According to this criterion, the IC of

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(76) Unit labour costs as a measure of IC are not affected by whether changes in costs are reflected in prices or in profit margins, also they are likely to relate better to the coverage of quotation accepted and rejected than a price series. Moreover, they cover all manufacturing industries (those that are exporting, potential exporters, and facing competition from imports). For more details on the advantages of this measure see Johns, p.239.

(77) Commission of the European Communities, *The Competitiveness of the Community Industry*, p.35.

(78) Francis, p.6.

(79) "Relative Normal Unit Labour Costs" is another indicator which is sometimes used to assess cost competitiveness because productivity, and so unit labour costs tend to vary cyclically with the level of capacity utilization. Therefore, not only actual unit labour costs is computed but also the normalised one (adjusted for cyclical variations). See for discussion of this issue H.M.S.O., "International Competitiveness", p.1. and the OECD, "The International Competitiveness of Selected OECD Countries", p.37.

(80) Richard A. Johns, p. 239.

a country's industry will be greater the lower its nominal wages, the faster the increase in labour productivity, and the lower the exchange rate.

Productivity, in particular, has been given great attention in the analysis of IC. Since relative unit labour cost is considered a measure of IC and since productivity, by definition, constitutes part of unit labour costs, then productivity is taken into account in computing this measure. It should be noted, that some economists, especially the Americans, have regarded labour productivity a measure of IC. In the USA Report of the President's Commission on International Competitiveness<sup>(81)</sup>, four key measures of IC were suggested: labour productivity, real wage growth, real returns on capital employed in industry, and position in world trade.

However, the first three measures (including productivity) were criticised by Francis<sup>(82)</sup> for being measures of either efficiency or the rate of growth rather than of competitiveness.

Such confusion and ambiguity have their roots in the concentration of the American analysts on the long-term aspect of IC which concerns real income per capita. So it is logical to focus on the criteria that measure this long-term aspect. Scott, for example, has stressed this idea by saying: "The ultimate measure of success is an increase in standards of living"<sup>(83)</sup>. Productivity is a major determinant of the real wages and real returns on capital, which in turn are basic factors that influence living standards. Accordingly, IC could be measured by measuring living standards<sup>(84)</sup>; and indicators such as growth in labour productivity and growth in real returns to labour

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(81) US GPO, p.8.

(82) Francis, p.17.

(83) Scott, p.14.

(84) In fact, although the Americans focus on the previous measures and on their relation to raising living standards and attaining other external obligations; they are aware that maintaining or improving the ability to compete in international markets (as a short-term goal of IC) is a prerequisite for the national goals. This short term aspect is measured -according to these economists- by the position in world trade. Nothing, however, has been said about measuring the process of IC in the short run using price and cost measures and also non-price elements.

and capital could be used for this purpose<sup>(85)</sup>.

### *Limits*

The relative unit labour cost index suffers from these shortcomings:

- ① It is a measure of change and not of level.
- ② It does not take account of the non-price factors.
- ③ It is based on labour costs alone rather than total production costs.
- ④ The labour costs of manufactured goods are considered only, whilst the ideal measure should cover all tradable goods and services.
- ⑤ There may be no immediate link between production costs and prices<sup>(86)</sup>.
- ⑥ It faces problems of comparability among available indices of unit labour costs.

#### ④.4.2.2 **Non-Price Competitiveness**

Non-price competitiveness is the other aspect of IC. Consideration of costs and prices and productivity alone is not sufficient in determining the success of a country's competitiveness process. Generally speaking, "non-price competitiveness" describes aspects of competitiveness which are not readily quantified<sup>(87)</sup>, and are all the factors

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(85) Francis and Fröhlich who were interested in conceptualising IC and its measures in their recent studies did not mention any one of these indicators as a measure of IC. Some empirical studies adopted the same view. Examples could be found in: Commission of the European Communities, *The Competitiveness of the Community Industry*, Commission of the European Communities, *Improving Competitiveness and Industrial Structures of the Community* (Luxembourg: Office for Official Publications of European Communities, 1987) and New York Stock Exchange, *U.S. International Competitiveness*.

(86) This problem has been raised by the Commission of the European Communities: "perhaps there is no immediate link between production costs and prices. If one accepts that prices on the various world markets are determined by supply and demand and by the other special features of each markets (i.e. demand patterns, taxation and so fourth), it seems feasible that firms and industries from certain countries might achieve good results regardless -to some extent- of their costs. Nevertheless, even this path leads back to the central importance of costs. Although they might not have a direct influence on foreign trade performance, in conjunction with prices they affect the profitability of production and by extension, the potential for investment and for increasing productivity and, ultimately, the industry's chances of survival and of competing on world markets in the long run". See "Commission of the European Communities, *The Competitiveness of the Community Industry*, p.42.

(87) H.M. Treasury, "International Competitiveness", p.1.

which are not directly linked to costs and prices<sup>(88)</sup>.

### Aspects of Non-Price Competitiveness

According to Stout, two kinds of non-price aspects have been considered. The first aspect is the act of selling and the second concerns the product itself<sup>(89)</sup>.

The European Management Forum<sup>(90)</sup> used an approximately similar classification in relation to the dynamism of the market and its influence on the overall industrial competitiveness. This Forum grouped the factors affecting market dynamism into five classes, two of which concern the non-price aspect of competitiveness. The first non-price factors has been called the "sales and marketing emphasis of companies" and are held to consist of: company attitudes to marketing, company sales orientation and market analysis. The second concerns the non-price attributes of the product itself, and has been called the "product and service emphasis of companies". It includes: product quality, product design, product safety, packaging of consumer goods, on time delivering and after-sales service.

A more comprehensive description is provided by Piercy<sup>(91)</sup>. The elements of his classification include, as above, the nature of the product itself and the services that accompany it, but he looks in more detail at the latter aspect and classified it into "commercial services (the speed with which orders can be filled, or the ability to keep to an agreed delivery schedule, the ability to meet emergency orders, the delivery of goods in acceptable conditions; the policy on returned goods, the options offered on minimum order sizes and transport modes, and the charges for services 'if any' and financial services (credit offered, or even loans in some cases, or the establishment of links with sources of finance) in addition to product support services (technical

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(88) Commission of European Communities, *The Competitiveness of the Community Industry*, p.42.

(89) David Stout, p.34.

(90) European Management Forum Report on International Competitiveness, pp. 75-78.

(91) Nigel Piercy, pp. 193-202.



services: advice to sales prospects and customers about product and model choice and product uses)". Moreover, Piercy added a third type of non-price factors and called it "marketing intangibles". This includes factors such as: "the hidden values" in products whether created by advertising or social factors, the psychological satisfaction derived from consuming products and the importance of brand, corporate and national image.

Thus, non-price factors of competitiveness are related to the product itself, the services that accompany it, and the marketing intangibles.

### **Significance of Non-Price Competitiveness**

Competitiveness cannot be based solely on price for several reasons. First, much of international trade is in differentiated and not identical products, which reflect different qualities, designs, styles and other qualities. Second, products have become more distinctive and more sophisticated with the advent of the high technology era as, for example, is the case with industrial machinery. Third, price differentials have narrowed for many products on world markets as a result of intensification of IC. Therefore, the competitive spotlight is focusing increasingly on non-price terms<sup>(92)</sup>. Fourth, some countries concentrate on non-price terms to compensate for their high-cost environment. Fifth, a good which underprices its competitors at the expense of quality, usually enjoys only short-term success.

With regard to empirical evidence, there are numerous studies of the non-price aspects of IC. The EMF Report covered a large number of countries and more importantly a great number of criteria. It found that Japan's emphasis on non-price attributes (in particular, products' quality, on-time delivery and after-sales service) has helped it to penetrate large markets such as the US and France whose performance in this respect is poor<sup>(93)</sup>. Switzerland, one of the leading countries according to the

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(92) European management Forum Report on International Industrial Competitiveness, p.71.

(93) Ibid., p.72.

ranking of competitiveness in the same Report, has overcome its handicap of high labour cost by top design, styling of high quality, a good reputation for on-time delivery, and a reliable environment<sup>(94)</sup>. Also, measurement of corporate attitudes to marketing and the related aspects have indicated that, the top countries in the overall classification of IC (Japan, Germany, Switzerland and US) also dominate here<sup>(95)</sup>. Connell finds that one of three factors which has contributed to the deterioration of export performance of the UK industries was that "companies have devoted insufficient effort to increasing competitiveness in non-price terms. Foreign firms seems to have paid more attention to this aspect of exporting"<sup>(96)</sup>.

In sum, competitiveness is a multi-dimensional notion, and price is only one dimension of the purchasing decision. Therefore, in assessing the overall competitiveness of a country both price and non-price elements should be considered. However, price-competitiveness can be measured quantitatively using relevant indicators, albeit with shortcomings, whereas non-price competitiveness cannot be measured quantitatively because of its very nature. One cannot neglect non-price factors, however, because the assessment of IC in their absence might be wrong and incomplete, especially in the light of the increasing importance of these factors as products in world markets become increasingly sophisticated and distinctive. The method applied by the IMD and World Economic Forum may be useful in this regard<sup>(97)</sup>.

#### 4.4.3 MEASURES OF THE RESULT OF IC

The measures of the competitive process that are built on the basis of prices and costs have been criticised essentially for measuring only changes and not levels, and for

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(94) *Ibid.*, P.71.

(95) *Ibid.*, p.70

(96) David Connell, *The UK's Performance in Export Markets: Some Evidence from International Trade Data* (London: NEDO, 1980), p.6.

(97) See in this Chapter, subsection 4.4.4 on measuring IC using the "Multi-dimensional" approach.

neglecting non-price factors. Therefore, other indicators that assess the result of the process of IC rather than the process itself have been developed. These alternatives are mainly concerned with a country's position in world trade, especially, market shares. But these indicators may capture something more than the impact of competitiveness, and the shift in market shares can be attributed to changes in factors other than changes in competitiveness.

#### 4.4.3.1 **The Trade Balance**

The position in world trade represented by the current account balance (or trade balance) and market shares is regarded as a familiar measure of IC. The current account provides a comprehensive annual assessment of a nation's international economic performance since it includes a variety of goods and services in addition to other transactions. Some economists<sup>(98)</sup> consider the current account, and particularly the merchandise trade balance within that, as an indicator of competitiveness, since IC is concerned essentially in the manufacturing industrial sector of the economy. A trade deficit is widely interpreted as an indicator of declining competitiveness, at least, as Fröhlich puts it, "in the case the deficit is not merely due to the country's relative business cycle position, but rather extends over a protracted period of time"<sup>(99)</sup>.

Despite considering the trade balance as one of the measures of IC, Lenz<sup>(100)</sup> described it as a "flawed" measure and Scott felt it requires to be handled with great caution<sup>(101)</sup>. The major limitations are:

- ① The trade balance is affected by many factors other than IC, and a deficit is not necessarily evidence of a lack of IC. Also, fluctuations in this deficit are not evidence of changes in IC. Indeed, the trade deficit and its fluctuations may be

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(98) In the Report of the President, the trade balance and its composition are considered one of the measures of IC that gives some indication about competitiveness. See pp. 7 and 8.

(99) Fröhlich, p.22.

(100) Lenz, p.14.

(101) Scott and Lodge, p.4.

attributed to quite different factors which are related not only to domestic policy and economic performance, but also to developments in foreign economies. A good example is the oil price shocks of the 1970s which affected the trade balances of many industrial countries. The balance of trade of Japan, which is heavily dependent on oil imports, turned from surplus into deficit in 1973 and 1980. Obviously, these deficits are not related to IC but rather to exogenous factors and, thus, cannot be interpreted as reflecting a loss of Japan's IC.

- ② A trade balance surplus or deficit may be looked upon from various angles when they are used as indicators of IC. A surplus is not necessarily a sign of well being, and a deficit may reflect signs of good performance when interpreted from a flow of funds point of view. Fröhlich, Scott and Lenz<sup>(102)</sup> have argued, correctly, that the trade deficit, represented by a net inflow of capital, will enable a country to retain its consumption and hence its living standards (the ultimate goal of IC) while increasing its investment through borrowing and not through increasing domestic savings and cutting consumption, provided that investment projects are profitable enough to cover their costs.

To conclude, recognising the drawbacks of the balance of trade as an indicator of IC, it is recommended not to use it alone while assessing IC. In empirical investigations, it should be treated cautiously, taking into consideration the effect of the business cycle and the necessity of examining the balance's composition and not merely the overall balance position.

#### 4.4.3.2 *Market Shares*

For a particular economy two main market shares have to be considered: the country's shares in markets abroad and the shares of imported products in the country's home markets<sup>(103)</sup>. The export market share may be measured in relation to world exports or

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(102) See: Fröhlich, p.22; Scott and Lodge, p.4 and Lenz, p.3.

(103) See, for example, Ray, p.3 and Balassa, *Japan in the World Economy*, p.62.

may be restricted to some countries or regions, depending on data availability and the purpose of the comparisons. The import penetration ratio is defined as imports as a proportion of apparent consumption<sup>(104)</sup>. Thus, a decline in a country's share in export trade and/or a rise in import penetration of manufactured goods in the country may be interpreted as indicating a lack of competitiveness. However, these measures are also unsatisfactory for a number of reasons to be discussed in the following section.

The literature on market shares as measures of competitiveness contains various views and treatments of these measures. A number of organisations and authors such as the IMF, the OECD and H.M. Treasury<sup>(105)</sup> put more emphasis in their measurement of IC on the process itself and hence on price and cost criteria<sup>(106)</sup>.

On the other hand, many theoretical and empirical studies concerned with trade and export performance have frequently used market shares as indicators of performance. Richardson, for example, pointed out, that "in studies of export growth and performance, 'constant-market-shares' analysis is a frequently employed technique. Using this approach, export growth is ascribed to structural or competitive forces"<sup>(107)</sup>. A recent OECD study on Spain<sup>(108)</sup> analysed the export sector by decomposing the rise in Spanish manufacturing export shares in OECD countries between (1985-1989) and attributed the increase in exports to favourable regional specialisation, positive

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(104) Other market shares and ratios in the field of external trade and industrial performance may be used to assess IC. These include "revealed" comparative advantage, "dynamic" comparative advantage, export/import ratio and export sales ratio. For definition, application and advantages & disadvantages of each of these measures see Johns, Chapter 8.

(105) See P.R. Narvekar, "The Role of Competitiveness in Japan's Export Performance, 1954-1958", International Monetary Fund, *Staff Papers, Vol. VIII* (November 1960), pp. 85-100; OECD, "International Competitiveness of Selected OECD Countries", pp. 35-50; Martine Durand, "Method of Calculating Effective Exchange Rates and Indicators of Competitiveness", *OECD Department of Economics and Statistics Working Paper*, No.29 (February 1986); Durand and Giorno, "Indicators of International Competitiveness: Conceptual Aspects and Evaluation" and H.M. Treasury, "*Measure of Competitiveness in British Manufacturing Industry*", pp. 6-8.

(106) Durand and Giorno, p.153.

(107) Richardson, "Some Sensitivity Tests For a 'Constant- Market-Shares' Analysis of Export Growth", *The Review of Economics and Statistics*, Vol. LIII (November 1971), p.300.

(108) OECD, *Economic Survey of Spain*, 1990/1991 (Paris: OECD, 1991).

adaptation of export activities towards both fast growing products and markets, and an improvement in competitiveness. Thus, while market share analysis is used basically to assess export performance, the effect of the competitive process, as one of the components of the shift in market shares, is measured as well.

A third group considered price and cost criteria as measures designed to assess competitiveness (the process itself) and market shares as being designed to assess the results of this process. Francis<sup>(109)</sup>, for example, pointed out that market shares are used to assess the result or output of the competitive process and are alternatives to the price and cost measures which assess the competitive process and which have major limitations. Also, the Bank of England<sup>(110)</sup> distinguished clearly between the process of IC and its effects and between the appropriate measures for each of them.

The disagreement on market shares as measures of export performance and the result of competitiveness confirms the earlier criticism with respect to the other aspects of competitiveness such as its definition and nature. This implies that the concept and measurement of competitiveness remain an area of continuing controversy which require more attention especially on the theoretical side. However, market shares may be used in analysing the competitive position of a country (through measuring the competitive result) provided that they are applied and interpreted carefully. Also, the efficacy of these indicators will be improved by further breakdowns of manufacturing industry into individual industries and groups of industries.

### *Export Shares*

Export shares refer to the country's shares of exports in world markets<sup>(111)</sup>. They can be used to assess the result of the competitive process, but are regarded by some

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(109) Francis, p.8.

(110) Bank of England, "Measures of Competitiveness", pp. 369 and 371.

(111) The world market could be defined as all the markets abroad, or restricted to the close competitors with respect to exports, they could be calculated for goods and services, goods alone, or just manufactures.

researchers as misleading<sup>(112)</sup> and unsatisfactory<sup>(113)</sup> indicators which require careful attention. The major drawbacks of this measure are:

- ① This measure is merely a quantity index. Frölich considers this to be the most serious (short-term) drawback arguing that, “consider a country whose industry is gaining additional market shares as a consequence of slashing prices, if this price cuts squeeze profit margins, it is clearly not justified to regard this country as more competitive than before”<sup>(114)</sup>.
- ② Changes in export shares of a particular country's industries cannot be merely ascribed to changes in competitiveness. There are many factors that have an impact on export growth in addition to competitiveness. Detailed analysis of these factors will be presented in the next section on constant-market-share analysis of export growth.

Factors other than competitiveness that influence market shares and which may highlight the weakness of this measure in assessing competitiveness are as follows:

- (a) The ‘internationalisation’ of the division of labour has increased the volume of international trade and the shares of some countries such as the UK have declined.

Francis<sup>(115)</sup> argues that many countries have been exporting and importing a higher percentage of their GDP while others, for example, Britain have over the last decade maintained the proportion of GDP that goes to exports, so the UK's share in world market has declined. An important reason for the increase in the volume of world trade has been the emergence of countries such as the NICs. The share of those already trading internationally is likely to decline as long as the new entrants continue to

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(112) See Frölich, p.22.

(113) Francis, p.9.

(114) See Frölich, p.23.

(115) Francis, p.9.

seize a considerable share over a range of industries<sup>(116)</sup>. This loss in market share does not however necessarily indicate a genuine loss of competitiveness<sup>(117)</sup>.

In fact, the increase in world trade has been considerable (especially during the two decades following the second World War). It was stimulated by the unprecedented growth in the international economy, and facilitated by the developments in world transportation and communications, the general liberalisation of commercial policy (with some notable exceptions), and the increased economies of scale in manufacturing<sup>(118)</sup>.

- (b) Lack of production capacity in a particular country may lead to a short-term loss of market share, as this country will be unable to meet the increase in world wide demand<sup>(119)</sup>. In investigating the reasons behind the loss of market share of British industrial exports, Ray<sup>(120)</sup> attributed the loss for some products to the unavailability of capacity for producing those goods for exports. Hence, loss of market share in this case does not reflect lack of competitiveness.

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(116) The share of the Third World Countries in world manufactured exports has increased since the early 1960s, continued to increase at an accelerated rate during the 1970s, and reached about 14% of the world manufactured exports in the mid-1980s. But this increase was restricted to very small number of Third World Countries. See Rhys Jenkins, "Industrialization and the Global Economy", in Tom Hewitt, Hazel Johnson and David Weild (eds.), *Industrialization and Development* (Oxford: Oxford University Press, the Open University, 1992), pp. 14-18.

However, Gordon pointed out that this share of 14% had been also achieved in the mid-1930s, with a remarkable difference regarding the distribution of these exports. Two thirds of the Third World manufactured exports went to other Third World Countries in the 1930s compared with one third in the 1980s. See V. Gordon: "The Global Economy: New Edifice or Crumbling Foundations?", *New Left Review*, Vol. 168 (March 1988), pp.24-63 cited in Hewitt et. al., p.18.

(117) See Frölich, p.23.

(118) The period since World War II up to the early 1970s witnessed the fastest growth in industrial production that the world has ever seen, and international trade grew even faster. Indeed, the average annual rate of growth of manufactured exports was 8.6% and 9.2% during the 1950s and the 1960s respectively; while those of manufactured output, for the same periods, were 5.8% and 6.1%. However, these rates of growth of both international trade and imports have declined during the 1970s and the 1980s for several reasons, but they are still considered respectable by historical standards. See Jenkins, p.15.

(119) See, for example, Frölich, p.23.

(120) Ray, p.9.



### *Constant-Market-Shares Analysis*

There are numerous factors that influence export growth, such as factor availability, technology, market structure, demand patterns, government policies in the country under study and in its competitor countries. The complexity of a comprehensive analysis of export growth using all these variables has led to the development of a relatively simple technique known as “Constant-Market-Shares” (CMS) Analysis<sup>(121)</sup>. According to this method, changes in a country's exports are attributed mainly to changes in its export structure, to its competitiveness and to changes in world exports. The idea behind this procedure is to account for that part of a country's total export expansion which can be ascribed to those factors that are amenable to quantification, by hypothesising constant export shares of some markets, the competitive effect being then computed as the residual portion of that expansion.

Using this method, a country's export growth can be partitioned to four factors: total growth effect, represented by what the country's export growth would have been if it had maintained a constant market share in total exports, and the commodity (market) effect accounts for any additional growth (+,–) which occur because the exports of the country in question are relatively concentrated on fast or slow growing commodities (geographical markets). These three components assume constant export shares of some markets. The competitiveness factor is then calculated as the growth which occurs as a result of changing export shares. A detailed explanation of these factors will be presented in *Chapter 7* on Jordan's Export Performance.

The general procedure for separating the demand and structural factors was first introduced in the early 1950s<sup>(122)</sup>. Fleming<sup>(123)</sup>, although considering this procedure as

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(121) J. David Richardson, “Constant-Market-Shares Analysis of Export Growth”, *Journal of International Economics*, Vol.1 (1971), p.227.

(122) See E.E. Leamer and R.M. Stern, *Quantitative International Economics*, (Boston: Allyn and Bacon, Inc., 1970), Ch.7. For a comprehensive list on early work on CMS analysis see Richardson, “Constant-Market-Shares Analysis of Export Growth”, pp. 238 and 239.

(123) J.M.Fleming and S.c. Tsiang, pp 218-248.

“somewhat unusual”, applied it in his study to assess changes in the competitive strength of major industrial countries, and Narvekar<sup>(124)</sup> used it to appraise the role of competitiveness in Japan’s export performance. Others have sought to improve the methodology and its interpretation and calculation<sup>(125)</sup>. Subsequently, this technique became widely-used.

### Limits

- ① This technique has been criticised by some economists<sup>(126)</sup> for having a comparatively weak theoretical foundation. Also, there are some reservations regarding the definition of the appropriate standard area. That is, the definition of the proper “world” for world exports and world competitiveness.
- ② The empirical results are sensitive to the variation in computing methods. Richardson’s<sup>(127)</sup> calculations suggest that quite different results may emerge when disaggregation of both markets and exports commodities is introduced and when final rather than initial year weights are used. Also, results may vary considerably depending on which one of the commodity and market effects is calculated first.
- ③ The competitiveness effect may encompass a number of residual and other factors not ordinarily associated with a country’s competitive position. For example, discriminatory non-tariff barriers imposed in some importing countries as a defence against a country’s very competitive exports may decrease the country’s export share.

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(124) Narvekar “The Role of Competitiveness in Japan’s Export Performance, 1954-1958”, pp. 85-100.

(125) See, for example, the works of Richardson. Richardson “*Constant-Market-Shares Analysis of Export Growth*” and Richardson, Some Sensitivity Tests for A Constant-Market Shares Analysis of Export Growth.

(126) For illustration of this point see Leamer and Stern, p.178 and Richardson, “Constant-Market-Shares Analysis of Export Growth”, pp. 230-232.

(127) Richardson, “Some Sensitivity Tests for A ‘Constant-Market-Shares’ Analysis of Export Growth”, pp. 301-303.

Despite these reservations, CMS analysis is considered a useful tool for analysing export performance. It provides useful information regarding the extent to which the country concerned is exporting to markets (commodities) with relatively unfavourable or favourable, growth rates. This information may be useful to the authorities concerned with export policies<sup>(128)</sup>.

Kravis's study<sup>(129)</sup> may be considered a seminal example of the use of the CMS method. He attempted to assess the relative role of demand and supply factors in the export performance of LDCs, using a 1966 GATT study based on the technique of CMS analysis. Kravis examined the relationship between factors in trade performance and growth for the GATT study's sample of LDCs. He considered the world market factor as an indicator of external demand, and the competitive and diversification factors as internal supply indicators. His findings showed that the last two factors are positively correlated with good performance in growth and trade and thus concluded that internal factors affecting resource mobility have more to do with good performance than external demand conditions. This conclusion has been criticised, however, by Crafts and Adams<sup>(130)</sup>.

Crafts had doubts that competitiveness reflects internal supply factors and drawing on the earlier GATT study and other studies he argued that export performance in LDCs is determined largely by the demand for their traditional products. Adams doubts the validity of the competitiveness index calculated by GATT and used by Kravis. Adams suggested that the size and market position of LDCs may have an impact on the competitiveness factor; larger exporters, for example, with important market positions in individual commodity may curtail expansion of its

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(128) See Leamer and Stern, p. 179.

(129) Irving B. Kravis, "Trade as Handmaiden of Growth: Similarities Between the Nineteenth and Twentieth Centuries", *The Economic Journal*, Vol. LXXX (December 1970), pp. 850-872.

(130) See N.F.R. Crafts, "Trade as Handmaiden of Growth: An Alternative View", *The Economic Journal*, Vol. 83 (September 1973), pp. 875-884; N.A. Adams, "A Note on Trade as a Handmaiden of Growth", *The Economic Journal*, Vol. 83 (March, 1973), pp. 210-212.

exports so as not to “spoil” the market.

In his reply to Adams, Kravis<sup>(131)</sup> argued that the market share of a country can be an important variable affecting its export performance, but he suspected that market share would account for a substantial part of the competitiveness factor.

Love<sup>(132)</sup> developed an alternative approach to analyse the determinants of export performance depending on a regression model instead of the decomposition procedure. Application of this approach to export data for a sample of twenty seven developing countries suggested that export performance in most countries was relatively more sensitive to domestic factors particularly competitiveness than to other factors.

An important issue may be raised with respect to the method of calculating the competitiveness factor. As competitiveness consists of qualitative and quantitative factors, the methods that calculate the competitiveness component as a residual (even though it might have other non-competitiveness factors) seems to be preferable to the method adopted in other studies. However, Leamer and Stern<sup>(133)</sup> consider the competitiveness residual a result of the complex interaction of demand and supply, and the problem of identifying the separate influences of the demand and supply sides is basically the same as the simultaneity problem of ordinary regression analysis.

In a recent study on IC, it was assumed that competitiveness comes in layers and at the centre is the internal efficiency of the enterprise. The other layers are the national environment and the international environment. Also, the sectoral environment is added. The study considers that “ultimately competitiveness is determined by the enterprises”<sup>(134)</sup>. This is to some extent valid but one should remember that many

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(131) Irving B. Kravis, “A Reply to Mr Craft's Note”, *The Economic Journal*, Vol. 83 (September 1973), pp. 212-217.

(132) James Love, “External Market Conditions, Competitiveness, Diversification and LDCs Exports”, *Journal of Development Economics*, Vol.16 (1984), pp. 279-291.

(133) See Leamer and Stern, p.179.

(134) IMD and World Economic Forum, p.5.

factors affecting competitiveness will be beyond the direct control of industrialists. Some of these factors are at the national level such as endowment of natural resources and the impact of the state, while the international environment, the international trade and monetary systems are external.

### *Import Penetration Ratio*

The ratio of import penetration is the share of imported products in the country's home market. It is defined<sup>(135)</sup> as  $\text{imports}/\text{home demand}$ , where  $\text{home demand} = \text{manufactures sales} + \text{Imports} - \text{Exports}$ . A rise in a country's import penetration ratio for manufactured goods may be interpreted as a lack of competitiveness. But as this definition of home demand does not take into account exports, especially when their level is high, another measure has been developed; the import penetration ratio corrected for export sales and this is defined<sup>(136)</sup> as  $\text{imports}/(\text{home demand} + \text{exports})$ .

However, some authors, prefer the first definition even in cases of high levels of exports. Balassa<sup>(137)</sup>, for example, calculated an import penetration ratio for Japan (with very high level of exports) according to the first definition where the ratio was defined as the ratio of imports to apparent consumption (production plus imports, less exports).

Essentially, this indicator is used to analyse a country's position in international trade. As an indicator of competitiveness and international trade performance of a country's industries it encounters the same principal criticism as export shares, i.e. the existence of other factors that may affect it other than competitiveness. The main factors are:

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(135) See Johns, p.239.

(136) Ibid.

(137) Balassa, *Japan in the World Economy*, p.62.

- ① Economic growth and growth in internationalisation of world trade are important factors that may lead to increases in the ratio of import penetration without signalling a decline in competitiveness. Indeed, this ratio will increase (because of the increase in imports) as a result of rising home demand (associated with shortage of capacity in booms)<sup>(138)</sup>, and of liberalisation of international trade.
- ② The shift in composition of demand in some countries in favour of certain goods which have high import content. Francis<sup>(139)</sup> argues that as the economy grows, import volume of manufacturing rises, especially in countries whose initial imports were food and raw materials which are characterised by low income elasticity compared with the elasticity of more sophisticated manufactured goods. Consequently, as GNP rises, it could be expected that the proportion of manufactures in total imports will rise.
- ③ The arbitrary manipulation of import flows by governments in some countries may result in a decline in this ratio which reflects balance of payments adjustment policies rather than changes in competitiveness. Bienkowski<sup>(140)</sup> gives an example of East European countries in the early 1980s when severe cuts in imports (ranging between 20% and 40% a year) occurred as a response to balance of payments considerations. Many developing countries have faced a similar situation, particularly in the last decade<sup>(141)</sup>.

In spite of these shortcomings, this indicator (if carefully calculated and interpreted) may be used as a general measure in addition to other indicators that show how a country is performing against its partners. Thus, it is argued that a researcher should analyse the trends of a representative cross-section of product groups for a reasonable

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(138) In this regard, shortage of capacity seems to be more important in booms than in other years, because of the "ratchet effect" that is "the tendency for foreign suppliers to stay in the market permanently once they have entered it, even though the original cause of their entry is temporary", see (NEDC), *Imported Manufactures: An Inquiry Into Competitiveness*, p.29.

(139) Francis, p.10.

(140) Wojciech Bienkowski, p.45.

(141) Jordan's case in 1988 and 1989 may serve as an example.

period<sup>(142)</sup>. A study on British industry revealed that “there is no single dominant reason for rising imports that applies over the whole range of manufactures”<sup>(143)</sup>. Import penetration should be investigated, therefore, industry-by-industry and not for industry as a whole.

Separate empirical studies about imported manufactures and competitiveness are relatively limited, and those that have been undertaken are not always related directly to competitiveness; they in most cases constitute a part of other studies on international trade or industrial performance and not competitiveness.

Three of these studies will be considered here. The first study is a NEDC (1965) study in the UK. The aim of this study was to analyse the competitiveness of British goods, and to investigate their ability to compete with imported goods in the domestic market. The study presented the reasons for increases in imports and suggested proposals for action on industry-by-industry basis, and then summarised in a general way the factors behind the increase in imports as: prices and costs, shortage of capacity, technical performance, and marketing. However, the relationship -if any- between the lack of competitiveness and the increase in import penetration was not considered separately in this study.

Another study was carried out by the New York Stock Exchange in 1984 on US industrial competitiveness<sup>(144)</sup>. It revealed that within total manufacturing, import penetration ratios increased during the 1972-1982 period in 30 out of 42 industries, accounting for roughly 70% of total US domestic production in 1977. In interpreting the results, changes in the rates of import penetration were used to reflect changes in the US competitiveness without considering any other factors that might have had an

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(142) Commission of the European Communities, *The Competitiveness of the Community Industry*, p.8.

(143) See NEDC, *Imported Manufactured: An Inquiry into Competitiveness*, p.28.

(144) New York Stock Exchange, *U.S. International Competitiveness*.

influence on these ratios.

A third study was undertaken recently by OECD (1991) on Spain<sup>(145)</sup>. In an analysis of the impact of EC membership on Spain's economy, use was made of import penetration ratios calculated in current and constant prices. However, taking into consideration the general nature of this study, these ratios were calculated for goods in general and not for separate industries or industrial groups. The rise in the import penetration ratio was 'explained' by many factors and here again there was no distinction drawn between competitiveness and other factors.

#### **4.4.3.3 Conclusions and Implications**

There is no unique measure of competitiveness, but a number of complementary ones. Each has advantages and deficiencies, both theoretical and statistical. A number of indices have been developed or computed by some organisations such as the IMF and the OECD. In the OECD "Economic Surveys", for example, three sets of measures are used in most cases to assess competitiveness of each of the OECD countries in each year. Relative export unit value is the most widely-used indicator to assess price-competitiveness, and relative unit labour cost is used to assess cost competitiveness. In most cases another measure of price competitiveness is added such as relative import price or real effective exchange rate and sometimes relative profit margin indices. Also, a second group of measures related to export shares and export performance are applied. Moreover, import penetration ratios constitute a third group of measures. In the IFS published by the IMF real effective exchange rates for 17 industrial countries are computed and published regularly for manufacturing. Five indicators of this rate are computed on the basis of relative unit labour costs, relative normalised unit labour costs, relative value added deflators, relative wholesale prices and relative export unit values.

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(145) OECD, *Economic Survey of Spain*, 1990/1991.



The applicability of the above mentioned measures to the Jordanian case as a developing country does not, in general, have serious limitations, and any researcher who deal with this issue is not forced to look for new devices and instruments of measurement. Most problems faced in applying these measures are statistical. Some indicators, however, should be used and interpreted with caution.

Price and cost measures may be easily be applied as price and cost distortions in Jordan are in general not high. Final manufactured goods produced for both the home and the foreign markets are almost entirely free of subsidy, and only a small number of raw materials and intermediate goods used in the industrial production are supported. The number of these items has been declining, particularly after the adoption of the economic adjustment programmes in the late 1980s. The number of goods subject to price control is also limited and declining. No minimum wage is imposed in the labour market, and Jordan introduced some flexibility to its exchange rate policy. Interest rates, which were subject to a ceiling for a long period of time, are now determined freely.

Jordan has followed a relatively liberal and outward-orientated strategy. Virtually all export and import transactions in manufactures are conducted through the private sector. The availability of foreign reserves did not impose constraints on imports, and imports were not cut arbitrarily (except once in the late 1980s). But because Jordan's economy has been confronted with dramatic changes, the applicability of certain indicators, and particularly, the import penetration ratio at the overall level, becomes questionable. Consequently, this ratio when applied to the Jordanian case, and in fact in many other cases, should be used with caution and should be applied to specific sectors rather than to the whole economy.

#### 4.4.4 THE MULTIDIMENSIONAL APPROACH<sup>(146)</sup>

This approach differs from the above approaches of assessing IC as it is based on an extensive sets of variables. These variables not only cover economic aspects such as export prices, unit labour costs and, export shares but also other cultural and socio-political dimensions both quantitative and qualitative. Moreover, a relatively large number of countries are featured in an annual survey to measure and analyse IC for these countries, and rank them relative to each other. The methodology used in each report remains constant but changes take place continuously regarding the number of criteria covered and the number of countries included. This approach asserts that ultimately competitiveness is determined by the enterprise (specifically, its internal efficiency) which should deal successfully with its national, international and sectoral environments<sup>(147)</sup>. A nation's role is, however, critical. The annual reports presenting IC for a number of developed and developing countries provide the academics, policy makers and businessmen with a rich insight into IC.

The geographical scope of the Reports changes according to changing circumstances. In 1984, for example, the number of countries covered was 28 countries (22 industrialised and 5 newly industrialising). This number increased to 33 in 1989 and further to 34 in 1990 after the addition of Hungary. Thus, the Report of 1990 encompassed two separate groups: the OECD countries (with the exception of Iceland) in addition to Hungary, and the 10 -newly industrialised countries. These are Brazil, Hong Kong, India, Indonesia, Republic of Korea, Malaysia, Mexico, Singapore, Taiwan and Thailand. The separation into two groups was mainly justified for lack of uniform statistical data.

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(146) This subsection on the "multidimensional" approach as it is named in the World Competitiveness Reports, draws basically on European Management Forum (EMF), *Report on International Industrial Competitiveness*, 1984 (Geneva, EMF Foundation, 1984) and IMD & World Economic Forum, *The World Competitiveness Report, 1990* (Geneva: IMD, 1990).

(147) See for this point Michael E. Porter, *The Competitive Advantage of Nations* (London and Basing Stoke: Macmillan, 1990), pp. 577-617.

With respect to the criteria used to assess IC of the above countries a total number of 284 criteria were used in 1984 in comparison with 326 criteria in 1990. Two kinds of criteria were selected: those which describe the quantitative elements of IC (200 criteria in 1990, of which two thirds were economic) and those which are of qualitative nature (the remaining of 126 criteria). The latter kind indicates the perception of a country's competitiveness by the international business commodity (obtained from the Business Confidence Survey). The criteria are grouped under 10 principal factors of competitiveness. These are: dynamism of the economy, industrial efficiency, market orientation, financial dynamism, human resources, impact of the state, natural endowment utilisation, international orientation, future orientation and socio-political stability. For each of the ten factors average country results are compiled to arrive at the individual factor rankings. The overall "Competitiveness Scoreboard" is compiled as an average of these factor rankings with weights reflecting their importance. This scoreboard present the result for each country as a percentage<sup>(148)</sup> and then ranks the countries in descending order according to these percentages. This means that the country which has the highest percentage will rank first.

In conclusion, although annual reports are issued presenting the results of a global survey of country competitiveness, and although the approach applied cover in depth a wide range of criteria, most countries in the world are not covered in such reports. Also, the approach adopted requires sufficient and reliable data which may not be available.

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(148) Percentages are computed on the following basis: if a country ranked first in all ten factors, it would score 100 percent; if it came last it would score zero percent. Factors are weighted. See European Mangement Forum, p.11.

#### **4.4.5 A MATHEMATICAL MODEL FOR THE MEASUREMENT OF INTERNATIONAL PRICE-COMPETITIVENESS**

This section attempts to discuss the question of constructing indicators to measure IC according to a specific mathematical model. Assessment will be confined to competitiveness based on price or some other variable that can be quantified such as costs or exchange rates. Non-price competitiveness will be ignored here since it depends on qualitative factors which do not lend themselves to quantification.

General considerations regarding competitiveness indicators will be introduced first, and will be followed by examination of the main elements used in constructing these indicators, with emphasis being placed on country coverage and weighting schemes. Finally, the framework for calculating the measures of import, export and overall competitiveness will be set out in detail.

##### **4.4.5.1 General Considerations in Constructing Competitiveness Indicators**

A variety of indicators may be constructed to measure competitiveness. This variety reflects the existence of different purposes and subject areas for which these indicators could be used. In this respect price (cost) indices may be used to measure competitiveness. As indicators of price (cost) competitiveness they could measure different subject areas or aspects. In principle, competitiveness could be defined as import or export or overall competitiveness which means that the researcher has three alternatives: to study the home market or export market or both of them together. There is no single measure which is suitable for all aspects and for all purposes.

Even in the case of the same aspect more than one indicator may be introduced. That is, for one and the same aspect a number of different measures could be constructed. The range of indicators may be attributed to the differences in methodology adopted, which in turn may be due to the difference in the elements used

in constructing them such as the components of the indicator, the country coverage and weighting procedures. In general, the choice of specific elements depends on the purpose of the study, the application for which the indicator is to be used and the data quality, comparability and timeliness.

These factors have led to the production of various indicators by many organisations and institutions such as the International Monetary Fund (IMF), the Federal Reserve Board (FRB), the Organisation for Economic Cooperation and Development (OECD), Morgan Guaranty trust company (MG) and others. These organisations have introduced considerable theoretical and practical improvements to the measurement process. Methods of calculation have been revised and changed, reflecting improvements in the methodology with respect to weighting procedures, averaging methods, deflation procedures of nominal exchange rates and others. Also, developments in the construction of the different indicators have occurred as a consequence of the changing pattern of international trade. Thus, the pattern of weights has been updated to take account of recent years' rather than earlier years' trade flows; and the base year for building the different indices has been updated as well. The list of countries included in the calculation of IC for industrial countries has been extended in most cases to include LDCs or a subset of them (mostly NICs) in addition to the developed countries.

The Morgan Guaranty<sup>(149)</sup> indicators may serve as an illustration here. This company has constructed over a long time period well-known dollar exchange rate indices. The base of weights has been trade, basically trade with the group of ten (G-10) industrial countries and Switzerland, with weights according to the bilateral weighting scheme. In 1983 the geographical coverage of countries was enlarged to 15 countries and the weights were updated. Important modifications were made in 1986

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(149) Morgan Guaranty Trust, "Dollar Index Confusion", *World Financial Markets* (October-November, 1986), pp. 14-19.

when the number of countries (and currencies), rather than being restricted to the industrial countries, was extended to cover 40 principal US trade partners including 22 LDCs. Another alteration concerning the methodology has taken place; the bilateral weights have been replaced by a modified procedure. The third and most significant improvement has been adjustment for the inflation differentials between the US and its trade partners by calculating the “real effective exchange rate index”.

Very substantial differences can arise in the calculation of the magnitudes of the indicators and, hence, in the impact of these indicators on competitiveness and other macroeconomic variables. This is due to differences in the components and technical elements adopted in constructing these indicators and to data availability and comparability. A salient example may be the construction of the dollar exchange rate index. The real value of the dollar appreciated after January 1980 and reached its peak in February 1985 before declining. Numerous institutions constructed dollar indices. The dollar has declined in nominal terms between the first quarter of 1985 through the fourth quarter of 1986 by 3%, 12%, 25% and 33% according to the Federal Reserve Bank of Dallas, Morgan (board index, 1986), Morgan (traditional index, 1983) and Federal Reserve Board<sup>(150)</sup> respectively. Using real indices, Morgan's traditional index showed a decline of 25%, while depending on the broad one the decline was 20%<sup>(151)</sup>. These broad divergences made Feldstein<sup>(152)</sup> wonder about the actual decline. His own calculations told a different story. He estimated the decline in the real dollar exchange rate to have been 24%, and in nominal terms to have been 19%.

Which of the above results is the ‘right’ one? and which one of the previous indicators is the ‘reliable’ indicator? Perhaps the best answer is that of Belongia/Federal Reserve Bank of Saint Louis, which stated that “neither economic nor

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(150) Federal Reserve Board (FRB), “Measuring the Foreign Exchange Value of the Dollar”, *Bulletin* (June 1987), pp. 411-422.

(151) Morgan Guaranty, pp. 14 and 15.

(152) M. Feldstein and P. Bacchetta, “How Far Has the Dollar Fallen?”, *National Bureau of Economic Research Working Paper*, No. 2122 (January 1987), p.8.

statistical theory gives a clear indication of which exchange rate index is the best measure”<sup>(153)</sup>. Durand has suggested that, “the measurement of competitiveness even within a well-defined conceptual framework is very much a matter of compromises with available data and entails a number of trade-offs among different criteria and objectives. In addition, a number of technical considerations arise in the construction of competitiveness indicators, not all of which have unambiguous solutions, even in theory”<sup>(154)</sup>.

#### **4.4.5.2 Main Elements in Constructing Competitiveness Indicators**

Competitiveness indicators measure competitiveness between producers located in different countries. Therefore, in constructing these indicators the aspect of competitiveness to be measured should be defined clearly, the countries relative to which it is wished to measure competitiveness have to be specified, and markets on which competitiveness operates must be determined.

However, there are other components and technical elements that arise in the construction of competitiveness indicators which should be considered. Rhomberg, Maciejewski and Durand<sup>(155)</sup>, among others, have counted several elements required in the construction of indices: the base period, the partner countries included, the weighting procedure, the mathematical formulation of the index, the method of averaging (arithmetic or geometric average), and the source of the data.

The number of countries and the weighting procedures are the most important elements, and practical evidence -as will be shown below- has indicated that these two elements are the principal sources for divergence in the measures produced. Therefore,

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(153) Michael T. Belongia, “Estimating Exchange Rate Effects on Exports: A Cautious Note”, *Federal Reserve Bank of Saint-Louis* (January 1986), p.14.

(154) Durand and Giorno, p.153.

(155) Rudolf R. Rhomberg, “Indicies of Effective Exchange Rates”, International Monetary Fund, *Staff Papers*, Vol. 23 (1976), pp. 88-112; Maciejewski, pp. 491-541; and Durand and Giorno, pp. 147-182.

they will be discussed in detail below.

### **(I) Country Coverage**

Once the aspect of competitiveness is specified, the countries with which the country concerned competes should be assigned according to both theoretical and practical criteria. However, the number used in constructing an index may change according to international trade developments.

#### **(a) Theoretical Criteria**

Durand and Giorno have argued that in principle, it is desirable to consider all the competitors in the world when constructing competitiveness indicators. Similarly, it was suggested by the Bundesbank that the list of countries in competition with a particular country should be as comprehensive as possible. But since the assumptions underlying the calculation of the indices and interpretation of the results have to be simplified, the informative value of the calculations is not necessarily improved by extending the countries included in the calculations<sup>(156)</sup>. Therefore, the countries chosen according to the Bundesbank should be limited to those countries which are:

- (i) in close competition with the country concerned.
- (ii) as comparable as possible to the country concerned regarding the range of goods they supply.
- (iii) as comparable as possible in their economic structure.

#### **(b) Practical Criteria**

The main practical considerations are:-

- (i) The countries which are candidates for inclusion in the calculation of an index should have the largest shares in the foreign trade of the country concerned; and

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(156) For examples illustrating this point see Bundesbank, "Revision of the Method of Calculating the External value of the Deutsche Mark and Foreign Currencies", *Monthly Report* (April 1989), p.44.



the number of countries chosen has to be large enough to represent as much as possible of the total foreign trade of that country.

The Federal Reserve Bank of Saint Louis<sup>(157)</sup> has pointed out that the usual currencies included in the exchange rate index of the dollar are those of the countries that account for the five or ten largest shares of total trade of US foreign trade. Examples were shown with respect to FRB, IMF (the MERM) and MG indices which have included (until that date) primarily the (G-10) countries and Switzerland reflecting trade among developed industrial countries. UK Treasury<sup>(158)</sup>, whose index of Sterling is built on the bases of the IMF's effective exchange rate (the MERM) has revised the list of the countries to include all the principal exporters of manufactures reaching 17 countries. The OECD indicators include the 23 OECD member countries in the index of the effective exchange rate, while the number is confined to 15 for relative export price index and relative unit labour costs index<sup>(159)</sup>.

Other indices have taken into account the developing countries, especially the NICs or some of them. Morgan's broad index of 1986<sup>(160)</sup> includes 22 (LDCs) in addition to 18 industrial developed countries. Feldstein<sup>(161)</sup> enlarged his sample even more reaching 80 countries consisting of 59 (LDCs) and 21 developed countries.

For a particular country how many principal competitors should be included in the index? The Dallas Federal Reserve has constructed an exhaustive index embracing no less than 130 countries representing virtually all US foreign trade (except that of the Soviet Union); while Feldstein's sample of 80 countries accounted for 89% of the adjusted non-Soviet non-US trade. The 18 countries in

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(157) Belongia, p.6.

(158) H.m. Treasury, "The effective Exchange Rate For Sterling", *Economic Progress Report*, No. 84, (March 1977), pp. 1-3.

(159) Durand, p.6.

(160) Morgan Guaranty, pp. 14-19.

(161) Feldstein, p.4.

the Bundesbank index represent 80% of Germany's foreign trade turnover in industrial products<sup>(162)</sup>.

However, Morgan<sup>(163)</sup> has demonstrated that an index including 40 countries and representing 90% of total US trade has provided a relatively similar change in the exchange rate index of the dollar in comparison with the Dallas Federal Reserve index which includes 130 countries accounting for virtually all US foreign trade. For that reason Morgan has suggested that even the index of 40 countries could be reduced to the leading 20 countries and still provide much the same reading on the dollar.

From this it may be concluded that it is not merely the number that may matter but how much of the foreign trade of the country concerned is represented by the chosen countries, especially when the countries at the bottom of the list become more and more marginal.

- (ii) Some economists<sup>(164)</sup> believe that there are other general considerations that have to be taken into account in selecting the list of countries:
- ① Countries recorded in the index should have well-developed foreign exchange markets.
  - ② Foreign trade prices and exchange rates of the chosen countries have to be determined by market forces.
  - ③ Countries whose inflation rates are high may be omitted because this will impair the suitability of the weighted nominal<sup>(165)</sup> exchange rate.
  - ④ Data on trade and domestic production and prices should be available in adequate quality otherwise the country coverage has to be restricted.

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(162) For a discussion of the choice of number of countries included in an index to assess IC see: Morgan Guaranty, p.15; Felfstein, p.6.; and Bundesbank, p.45.

(163) Morgan guaranty, pp. 17-19.

(164) See, for example, the Bundesbank, ,p.44; Federal Reserve Board, p.418 and Durand , 1987, p.155.

(165) This depends in fact on the purpose for which the index is to be used. In assessing competitiveness the weighted real exchange rate index is the relevant index and not the nominal one.

Indeed, Durand<sup>(166)</sup> who has used 15 countries in constructing cost and price indicators and 23 countries in building the index of the exchange rate has argued that the difference in the number of countries chosen for the indicators to measure competitiveness is due to the differences in data availability.

(iii) There are other practical considerations. For example, special relations with the country concerned may be a factor that contributes to choosing the countries. The Bundesbank<sup>(167)</sup> has given an example with respect to Germany. The countries of Spain, Portugal and Greece were included in the calculation of the Deutsch Mark index of 1989 because these countries joined the EC.

**c) The importance of the number of countries in constructing IC indicators**

The importance of the number of countries in constructing an indicator has been investigated in several studies. Durand has tried to examine the movement of overall competitiveness for the US in three samples consisting of: the OECD competitors alone; the NIC group alone; and both. The results have indicated that from 1982 onwards the relative position of the US overall competitiveness has worsened faster against NICs than against its OECD competitors. However, there was some improvement in this competition after 1985 against the OECD countries. The competitiveness indicator versus NICs has continued to rise; but the importance of this trend in US competitiveness is limited.

The FRB<sup>(168)</sup> compared a narrow multilateral trade weighted exchange rate of the dollar based on the (G-10) countries alone with a broader index which consisted of the (G-10) and the rest of the OECD countries. The results obtained have indicated that both indices had similar movements through the years 1980-1986. The FRB also

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(166) Durnad, pp. 4 and 5.

(167) Bundesbank, pp. 44 and 45.

(168) Federal Reserve Board, pp. 411- 422.

compared another two indices where the number of countries in the first index (G-10) was extended to 18 by adding 8 developing countries instead of adding developed countries as in the above case. According to these multilateral trade weighted indices, the real value of the dollar decreased 40% versus a weighted average index of the currencies of the (G-10) from the first quarter of 1985 through the fourth quarter of 1986; in contrast with a depreciation of 30% against the 18 countries.

Similar results have been reached by Feldstein<sup>(169)</sup> who compared an index of 21 OECD countries with a broader one of 21 OECD + 59 LDCs, and found that the real multilateral weighted value of the dollar declined 31% from February 1985 through July 1986 against the currencies of 21/OECD countries, versus a 24% depreciation against the 80 countries.

We can conclude that it is desirable to include the most comprehensive number of countries in any index which reflect global trade realities provided that the theoretical and practical basis mentioned before are taken into consideration. It should be recognised that selecting countries accounts to a compromise between various requirements. Therefore, in practice, only a subset of the major competitors will be chosen.

## 2) Weighting Schemes

In calculating competitiveness indicators, the overall value of the variables used in constructing these indicators has to be compiled as a weighted average, with the weights reflecting the relative significance of these variables. Determining or defining this significance depends on the purpose for which these indicators are to be put<sup>(170)</sup>.

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(169) Feldstein, pp. 5 - 9.

(170) For example, a weighted average index of the real exchange rates could be used as a summary measure of price competitiveness, the optimal weighting procedure in this case would be some form of trade weights. Also, the effective exchange rate index could be used as a summary measure of the influence of changes in the currency prices of foreign goods on domestic prices. A somewhat different weighting pattern would in practice be desirable.

Since IC is related to external trade, some form of trade-weighting to average out the variable values could be used (simple trade weighting schemes or weights derived from general equilibrium models).

Several approaches or schemes have been constructed and used by various organisations. Some of these organisations have changed the theoretical base of their weighting procedures in accordance with improvements in the theory and methodology. In addition, the weights assigned for each country in the indices constructed have been changed according to the changes in trade relations. Empirical studies -as can be seen later- have been undertaken to indicate that using different schemes may lead to divergence in measures obtained.

#### **a) Criteria for Choosing Weights**

Four criteria for choosing the weighting system used to calculate relative indicators of competitiveness have been presented in Durand<sup>(171)</sup>:

- (i) weights should depend on the analysis that is to be made with these indicators. For example, the adequate weighting procedure in the case of export competitiveness when the domestic producers in the importing markets are the main competitors for the exports of the reporting country's producers has to be based on weights that represent the shares of the major foreign trading partners in the reporting country's total exports and not total trade.
- (ii) simplicity of calculation method and utilisation.
- (iii) ease of comprehension and interpretation of the weights calculated.
- (iv) data availability, comparability and timeliness.

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(171) Durand, p.11.

## b) Types of Weighting Schemes

Several definitions of a weighting system are available to calculate various measures of competitiveness (mainly unit export values, unit labour costs and effective exchange rates). In the case of the effective exchange rate index, for example, when the aim of the calculation is to assess the effect of changes in exchange rates on a country's trade position, trade-weightings are the appropriate weights. There are several approaches that could be used such as bilateral and multilateral weighting schemes. These simple procedures, which depend mainly on the size of the trade flows involved, are inadequate to construct appropriate indices. More information is needed regarding inter-country differences in the response of trade flows to price changes and in the effects of exchange rate changes on the prices of exports and imports and the sensitivity of producers and consumers in each of the markets involved. The IMF's multilateral exchange rate model (MERM) attempts to incorporate this and other related information.

But reliable estimates of these price sensitivities are not available in practice. In the IMF's model, for example, some of the price sensitivities are simply assumed. Therefore, in light of the difficulties of obtaining reliable information, a researcher is forced to use some measure of simple trade shares as an approximation to the theoretically preferred weights. Thus, the required weights could be drawn from general trade models or calculated as simple trade shares. The most common weighting schemes are bilateral, multilateral and double trade shares. Other types of weighting procedures may be considered as modifications of these main schemes.

### *Bilateral Scheme*

In an index of a particular variable value<sup>(172)</sup> (export price and exchange rate) bilateral trade weights correspond to the shares of each country in the index in total exports of

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(172) The same weighting approach could be used in the case of export prices, unit labour costs and effective exchange rates. See Durand, p.11.

the country concerned plus imports (sometimes the weights for the imports and exports are calculated separately). These weights reflect trade of each country with the country concerned alone and ignore entirely competition between the two countries on third markets.

Durand<sup>(173)</sup> has suggested that this procedure has the advantage of simplicity, but FRB<sup>(174)</sup> has criticised it for its unrealistic assumption regarding the absence of third country effects. According to this procedure, in an index of dollar exchange rates a bilateral weight on the Japanese Yen, for example, influences only US-Japan trade and ignores the abilities of the two countries to compete for sales to other nations.

Despite this drawback, Feldstein and Maciejewski<sup>(175)</sup> among others have suggested that bilateral weights are to be recommended in specific cases. For example, import shares of the major trading partners in the given country's total imports may be the ideal weight for measuring the competitiveness of this country's products vis-a-vis imports. In practice, many organisations have used this procedure such as the US Treasury, Morgan Guaranty (the old index) which used bilateral imports and exports, and Banque de France which used bilateral exports.

The mathematical formula<sup>(176)</sup> representing this weight may be expressed for an index of the exchange rate for the US dollar, for example, as:

$$w_i = \frac{x_{US}^i + m_{US}^i}{\sum_k (x_{US}^k + m_{US}^k)}$$

where

$w_i$  = weight of currency  $i$

$x_{US}^i$  = U.S. exports to country  $i$

$m_{US}^i$  = U.S. imports from country  $i$

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(173) Durand, p.11.

(174) Federal Reserve Board, p.413.

(175) See Feldstein, p.7. and Maciejewski, pp. 505 and 506.

(176) For the various weighting schemes formulae see FRB, p.414.

$x_{US}^k$  = U.S. exports to country  $k$

$m_{US}^k$  = U.S. imports from country  $k$

### **Multilateral Schemes**

Multilateral trade weights are the shares of each country in the combined total trade of all the countries included in the index. This procedure has been developed in an attempt to meet the difficulty of considering the third market effect by reflecting the role of each country as a competitor in the world market<sup>(177)</sup>. Thus, it attempts to capture the effects of competition in markets besides the home market. Therefore, this procedure may be a better general approximation than bilateral weights. However, these weights consider the third market effect only partially, because they do not adequately reflect important bilateral trading partners; that is, they overlook the importance of specific markets to specific countries.

The mathematical representation of this measure, applying the same notations as used in the bilateral case, is:

$$w_i = \frac{x_i + m_i}{\sum_{\substack{k \\ k \neq US}} (x_k + m_k)}$$

where

$x_i$  = exports from country  $i$  to the rest of the countries in the index.

$m_i$  = imports of country  $i$  from the rest of the countries in the index.

### **Double Schemes**

The basic characteristic of this system, which is used mainly by OECD and EC, is the incorporation of third-country effects in a more detailed way by taking account of which countries compete in which markets.

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(177) Sometimes this weight is expressed as shares in total world trade on the assumption that the trade of major trading partners of the US, for example, in constructing the dollar exchange rate, will constitute virtually the total world trade or the major part of it.



The method involves several steps. The first is that of calculating the share of each country in each market or importing country in total supply or sales of this market. The sales of the country considered, however, are excluded on the grounds that a country cannot compete with itself. But the calculations include the impact of the domestic producer in each market, that is, a particular country is considered as a competitor to other exporters to its own market. Thus, if the index is for the US dollar, Germany's market share in Canada's total sales, for example, is calculated as the ratio of German exports to Canada to total sales of all countries to Canada, including sales of Canadian producers, and excluding those of all the United States. The next step is to calculate the proportion that each market represents, in total US sales. Hence, the proportion that Canada's market represents in total United States sales, including sales of United States producers, is calculated. Finally, these measures are combined to obtain a set of weights that reflect the importance of each US competitor overall. The weight for the Mark is the sum of Germany's share in each market (Canada, France, ...) weighted by the importance of that market to the United States. A detailed explanation of this system will be presented in the next section.

The mathematical expression of this scheme is:

$$w_i = \left( \frac{y_i}{\sum_{k \neq US} x_k^i + y_i} \right) \left( \frac{x_{US}^i}{\sum_k x_{US}^k + y_{US}} \right) + \sum_{\substack{j \\ j \neq i}} \left( \frac{x_i^j}{\sum_{k \neq US} x_k^j + y_j} \right) \left( \frac{x_{US}^j}{\sum_k x_{US}^k + y_{US}} \right)$$

where

$y_i$  = sales by country  $i$  in its own domestic markets.

$x_i^j$  = exports by country  $i$  to country  $j$ .

### *Morgan Guaranty Scheme*

Morgan Guaranty Trust Company used to publish dollar exchange rate indices based on bilateral imports and exports. In 1986 it introduced a new broad index, which is, according to the FRB, a modified bilateral trade weighted scheme. This is regarded by

Feldstein as a hybrid of multilateral and bilateral procedures and by OECD as a special case of the OECD's double scheme<sup>(178)</sup>.

Regardless of these considerations, the weighting patterns for overall trade competitiveness are slightly different from the OECD's weights as they are based on exports and imports and not on supply or sales. Also, each of import and export competitiveness are calculated separately, then combined either with equal weight, or with weights reflecting the ratio of imports to exports<sup>(179)</sup>.

The mathematical formula may be expressed as:

$$w_i = \left( \frac{y_i}{\sum_k x_k^i + y_i} \right) \left( \frac{x_{US}^i}{\sum_k x_{US}^k} \right) + \frac{m_{US}^i}{\sum_k x_{US}^k}$$

### *IMF Scheme (MERM)*

The weights based on the Multilateral Exchange Rate Model (MERM) are a special type of weights<sup>(180)</sup>. The indicators calculated on the basis of these weights are derived from a general equilibrium model of trade. This model focuses on the effects of exchange rate changes on trade flows taking into account the simultaneous interaction among prices, incomes and spending of the countries whose exchange rates have been changed and the trading partners of these countries. An important aspect of this scheme is that the (MERM) takes account not only of the third-market effects but also of all the markets for traded and non-traded goods.

(178) See FRB, p.145; Feldstein, p.7 and OECD, Durand et. al., p.172.

(179) For a detailed description of this procedure see: Morgan Guaranty, p.16; FRB, pp. 414-416 and Durand and Giorno, pp. 159, 169 and 170.

(180) For this model see Jacques R. Artus and Rudolf Rhomberge, "Multilateral Exchange Rate Model", International Monetary Fund, *Staff Papers* (November 1973), pp. 591-611; Rhomberge, "Indicies of Effective Exchange Rates" and Maciejewski, "Real Effective Exchange Rate Indicies".

The MERM weights could be obtained for a country and its partners by “shocking” a model and observing the results on a specific variable (imports, exports or trade balance).

The formula for MERM weights may be expressed as<sup>(181)</sup>:

$$w_{ij} = \frac{W_{ij}}{\sum_{k \neq i} W_{ij}}$$

where

$W_{ij}$  is the effect, calculated from the fund’s MERM, of a change of 1% in the price of currency  $i$  in terms of currency  $j$  on the trade balance of country  $i$  measured in its own currency and deflated by the induced change in the average of its export and prices in its own currency.

Some institutions such as the UK treasury base their calculations of exchange rate indices on the MERM.

### *The importance of weighting schemes in constructing indicators of IC*

The empirical evidence of the importance of weighting schemes has been presented in numerous studies. A study undertaken by Morgan Guaranty (1986)<sup>(182)</sup> compared simple bilateral trade and modified bilateral trade indices. The results of this study may not be considered accurate because the number of countries in the indices was not fixed (15 countries were included in the bilateral weighted index versus 40 in the other). However, Guaranty has argued that there was a role for the weighting procedure used in the calculations in explaining the large differences between the two indices.

The FRB and Feldstein<sup>(183)</sup> have carried out more accurate studies comparing bilateral and multilateral trade weighted indices of the dollar. Feldstein’s study

(181) For this formula see Rhomberg, p.103.

(182) Morgan Guaranty, pp. 14-19.

(183) See FRB, pp. 411-422 and Feldstein, p.8.

demonstrated that the multilateral trade weighted index of the real values of the dollar against the OECD countries declined by 31% from February 1985 through July 1986, versus 25% according to the bilateral index. The FRB has shown a similar general result. In interpreting the results, the divergence between the two indices in both studies, has been ascribed to the weight assigned to Canada. According to the FRB, for example, the weight of Canada in the currency index is four times as great as its multilateral weight, and since the Canadian dollar has changed relatively little in terms of the US dollar during this period, the overall decline in the bilateral dollar index was less than that of the multilateral weight index.

The FRB also compared four weighting schemes. The exchange value of the dollar against the (G-10) currencies was calculated using four alternative trade weights: simple bilateral weights, simple multilateral trade weights, IMF weights and OECD weights. Each one has given different values over the period (1980-1986) although the general trend for each is roughly similar.

In sum, the weighting scheme adopted in constructing competitiveness indicators is one of the major factors that might lead to divergence in the measures of competitiveness.

#### **4.4.5.3 The OECD Mathematical Model for the Measurement of Import, Export And Overall Competitiveness**

The OECD indicators are adopted here for several reasons; the simplicity of calculation and utilisation (especially when the same method could be used for the calculation of cost and price indicators and effective exchange rates as well); the weights used in constructing the indicators are also easily comprehended and interpreted; and manufacturing industries, the focus of this study, are those that have been assessed using these indicators by the OECD Secretariat (which calculates regularly indicators of relative competitiveness for the OECD countries based on the export unit values of

manufactures and unit labour costs). Also, export and import competitiveness could be assessed separately in addition to overall competitiveness.

Other methods could be used. The simple bilateral and multilateral weighting procedures are not preferred mainly because they do not take into account competition in third markets in a detailed way. Many organisations such as the IMF, UK Treasury, OECD and EC do not depend on these procedures. Even those who used to calculate and publish indices of the effective exchange rates based on these weights such as Morgan Guaranty and the Bundesbank have modified or replaced them by other systems. The IMF indicators are based on a general equilibrium model for the economy which covers not only traded or tradable goods but other goods and services which are not traded. The calculations regarding the industrial sector are not confined to manufacturing. Durand and Giorno / OECD have criticised the IMF's weights with respect to competitiveness because they take into account effects other than just competitiveness effects. The OECD method is set out below<sup>(184)</sup>.

### *Import Competitiveness*

Import competitiveness for a given country  $k$  is the differential between the producer's market price and that of their competitors which may be defined by aggregating the export price of all competitors exporting to  $k$  according to the pattern of imports in country  $k$ . Thus,

$$PCM_k = \sum_i m_{ik} \cdot PX_{ik} \quad (1)$$

where

$PCM_k$  = Competitors' price on market  $k$

$PX_{ik}$  = Country  $i$ 's export price to country  $k$

$m_{ik}$  = Country  $i$ 's market share in  $k$ 's total imports

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(184) See Martine Durand, Jacques Simon and Colin Webb, "OECD's Indicators of International Trade Competitiveness, *OECD Department of Economics Working Papers*, No. 120 (1992), pp. 7-11.

$PCM_k$ , the weighted average of bilateral export prices is an approximation of  $PM_k$ , the import price on market  $k$ . These two terms are not equal because of the statistical divergence between the price measures supplied by the importing and exporting countries, and because average export prices on all markets are only an imperfect proxy for bilateral export prices, as exporters may discriminate on price in different markets.

Taking these points into account, import competitiveness for the past may be expressed as:

$$P_k - PM_k$$

where

$P_k$  = Producer price on market  $k$

$PM_k$  = Actually measured (rather than calculated) price of imports on market  $k$

Import competitiveness for the future may be expressed as:

$$P_k - PCM_k$$

$PCM_k$  is used as a proxy for  $PM_k$ ; in practice, due to lack of homogeneity across countries in the producer price series, domestic deflators are used instead of producer prices as the measure of domestic prices in each market.

### ***Export Competitiveness***

Export competitiveness of a given country's manufactured exports is measured by the differential between the country's export price and the competitor's export price on their common markets.

It may be expressed for a given country  $i$  as:

$$PX_i - PCX_i$$

where:

$PX_i$  = Export price of country  $i$ .

$PCX_i$  = Price of country  $i$ 's competitors on all markets.

The price of competitors is computed according to this approach on the basis of a double weighting system. According to this system, both bilateral competition and induced third-market competition are considered. So, the competition faced by country  $i$ 's exporters in the markets of the countries included in the calculation takes account not only of goods inside the respective country but also of the goods imported from other countries. Hence, in calculating the weights, the basic approach consists of two stages: the first, obtaining the price of the competitors of country  $i$  on a certain market  $k$  by aggregating the prices of all these competitions (including country  $k$ ) according to the pattern of supply (imports plus domestic production) in country  $k$ . The second stage, obtaining the price of country  $i$ 's competitors on all markets (except its market) weighted by the pattern of exports of country  $i$ .

So, if market  $k$  (the US market for example) is considered a market for exports of a given country  $i$  (Japan for instance), then the Japanese products are competing in the US market with both the US domestic production, and the goods imported from Japan's competitors  $j$  (Germany, the UK, South Korea for example). In this case, the weighted average price of Japanese competitors on the US market is the average of the domestic US prices (weighted by the share of the US domestic production in the US total supply) and the export prices of the countries exporting to the US as Germany (weighted for each exporter by the share of the US imports from this country in the total supply of the US).

Thus, on market  $k$ , the weighted average price of country  $i$ 's competitors is equal to the average of the total produces' prices and export prices of countries exporting to  $k$ :

$$PCX_{ik} = \left( \frac{S_{kk}}{1 - S_{ik}} \right) \cdot P_k + \sum_{j \neq i, k} \left( \frac{S_{jk}}{1 - S_{ik}} \right) \cdot PX_j \quad (2)$$

where:

$PCX_{ik}$  = Price of  $i$ 's competitors on market  $k$

$P_k$  = Producer price on market  $k$

$PX_j$  = Export price of country  $j$

$S_{jk}$  = Share of imports from  $j$  on market  $k$  in  $k$ 's total supply (imports + output)

$S_{kk}$  = Share of domestic output in  $K$ 's total supply

$\left( \frac{S_{jk}}{1 - S_{ik}} \right)$  = Share of imports from  $j$  in supply on market  $k$ , excluding imports from  $i$ . This exclusion is because the calculation of export prices has to be restricted to those who compete with country  $i$ , and country  $i$  will not be in competition with itself

To obtain the price of country  $i$ 's competitors on all markets, the prices of  $i$ 's competitors ( $PCX_{ik}$ ) on market  $k$  is weighted by the pattern of exports of country  $i$ .

Thus:

$$PCX_i = \sum_{k \neq i} X_{ik} \cdot PCX_{ik} \text{ where}$$

$X_{ik}$  = Share of  $i$ 's exports to market  $k$  in country  $i$ 's total exports.

The differential between the export price ( $PX_i$ ) of country  $i$  and the price of country  $i$ 's competitors on all markets ( $PCX_i$ ) is the measure of export competitiveness of country  $i$ .

Similarly, the same calculations can be made using labour costs. A rough indicator of changes in relative profit margins of exports may be derived by comparing overall cost and price competitiveness. Nominal effective exchange rates can also be



calculated using the same method.

### Overall Competitiveness

The overall competitiveness indicator is the average measure of a country's competitive position on both home and export markets. In principal, the basic method and type of calculation used to assess export competitiveness is used here with two points to be considered: first, import competitiveness should be taken into account, that is, the role of home market; second, new weights for aggregation have to be used. So, to calculate the price of all competitors of country  $i$  on a given market  $k$  the same pattern of weighting (according to total supply on this market) and the same notation as in (2) may be used:

$$PCX_{ik} = \left( \frac{S_{kk}}{1 - S_{ik}} \right) \cdot P_k + \sum_{j \neq k, i} \left( \frac{S_{jk}}{1 - S_{ik}} \right) \cdot PX_j \quad (k \neq i)$$

and

$$PCX_{ii} = \sum_{j \neq i} \left( \frac{S_{ji}}{1 - S_{ii}} \right) \cdot PX_j$$

The above first equation defines the prices of  $i$ 's competitors on market  $k$ . The second equation defines the prices of  $i$ 's competitors on market  $i$  (that is on the home market of country  $i$ ) as the export price of country  $j$  (who exports to country  $i$ ). The price is aggregated for all exporting countries by the share of imports from  $j$  on market  $i$  in country  $i$ 's total supply (excluding output in country  $i$ ).

In order to calculate the prices of country  $i$ 's competitors in all markets including the home market, the competitors' prices are aggregated according to the pattern of demand directed at  $i$  (exports plus domestic demand).

Thus

$$PCX_i = \sum_k t_{ik} \cdot PCX_{ik}$$

where:

$t_{ik}$  = Share of demand directed at  $i$  by country  $k$  in total demand

and hence

$t_{ii}$  = Share of domestic demand in total demand directed at  $i$ .

$PCX_i$  may be expressed as

$$PCX_i = \sum_{k \neq i} t_{ik} \cdot PCX_{ik} + t_{ii} \cdot PCX_{ii}$$

The first part of this equation is related to export competitiveness. The aggregation of weights or of the shares of demand in total demand directed at  $i$  for all the countries (except country  $i$ ) equals the share of total foreign demand in total demand directed at  $i$ . In other words, it equals  $(1-t_{ii})$ , that is, one less the share of domestic demand in total demand directed at  $i$ . Also, for the second part of the equation, which is related to import competitiveness, aggregation of the weights for all competitors to obtain  $(PCX_{ii})$  by the pattern of imports in country  $i$  and weighting of the price in the home market by the share of domestic demand in total demand means that the overall weight for import competitiveness is  $(1-S_{ii}) t_{ii}$ . In this case the overall competitiveness is a proxy for a weighted average of export and import competitiveness, with weights equal to  $(1-t_{ii})$  and  $t_{ii}(1-S_{ii})$  respectively.

In this case, competitiveness may also be calculated using the variables for unit labour costs and exchange rate by applying the same type of calculations. Relative profitability derived by comparing overall cost and price competitiveness relates here to both domestic producers and exporters.

The following points regarding this approach should be kept in mind: first, since this approach is based on the concepts of total demand directed at countries and total supply on the markets, it gives a measure of overall competitiveness; second, demand

on the home market is taken into account; third and last, the influence of domestic producers is considered on all markets in which the country is present. However, there is a drawback regarding the specification of the proportion of domestic goods that should be considered to be competing with imported goods. According to this method, all domestic production is assumed to be in competition with imports on all markets which is at odds with the 'real' world.

### *Summary*

It has been shown in this section that several indicators may be advanced to measure relative price competitiveness. They are chiefly based on relative export unit values of manufactures, relative labour costs in manufactures, in addition to real effective exchange rates. Many organisations and institutions have constructed and used several types of indicators to assess competitiveness. The IMF, Central Banks of industrial countries, OECD and others publish some of these indicators regularly. The OECD mathematical model to assess import, export and overall competitiveness has been presented in detail.

The measures constructed by these organisations may differ according to the aspect and purpose of the analysis and thus to the technical elements adopted in constructing these measures. However, these measures have been developed and are likely to continue developing in response to the improvements in the methodology of constructing them and to the changes in the international trade relations.

Using different measures may lead to very substantial differences in the results and hence in the interpretation and policy implications for the same phenomenon. In light of this, and as there is no single perfect measure it is suggested that several relevant indices should be used together, with results interpreted carefully. As such, these indicators may serve as useful tools for analysing and forecasting international trade trends and industrial performance.

### ***Analysis of Jordan's External Manufacturing Trade***

#### **5.1 INTRODUCTION**

This *Chapter* reviews developments from the mid-1970s through 1992 in the external trade sector of Jordan. It examines some aspects of exports and imports that might reveal the capacity of Jordan's exports to explore new foreign markets; as well as its capability to export new commodities. This will help in analysing at a later stage the competitiveness of Jordan's industries.

This *Chapter* is in seven sections. Following the introductory section 1, section 2 examines overall trade flows and trends in Jordan and in the Middle East, in addition to Jordan's ability to finance its imports from its export proceeds. Terms of trade are also examined. Section 3 deals with the commodity structure of trade by economic function and also by major SITC categories. Section 4 indicates the direction of trade by major regional groups. Manufactured trade by region and by commodity is examined in some detail, concentrating on exports of each SITC category, in section 5. The next section focuses on diversification of export markets and commodities and the role of new export products in achieving diversification. This is followed by the summary in section 6.

#### **5.2 OVERALL TRADE PERFORMANCE**

##### **5.2.1 THE WORLD AND THE MIDDLE EAST**

During the second half of the 1970s the value of world exports witnessed remarkable growth, increasing by an average of about 18% a year and reaching a peak value in

1980 (at around \$2 trillion)<sup>(1)</sup>. But in the early 1980s the world faced economic recession and associated stagnation in trade. World exports declined for three successive years before they recovered in 1984 and very low growth was attained in 1985. Exports during 1980-1985 declined by an average of 0.6% per annum<sup>(2)</sup>. The annual average growth rates of world exports since 1986 have exceeded 10% except in 1989, and the average for 1985-1990 was 11.9% per year. At the beginning of the 1990s the pace of the world's export expansion decelerated again together with a slow-down in the growth of world output. World export growth declined to 4.3% in 1990 and further to 3% in 1991.

*Tables 6-1 and 6-2* below, in addition to *Table A-1* in the Statistical Appendix, present the values of exports and imports for Jordan and for the Middle East countries<sup>(3)</sup> and show the growth in their values. In the Middle East region an unprecedented expansion in external trade (exports + imports) was achieved during the second half of the 1970s, reaching its peak of \$282 billion in 1980; with an average rate of growth of 26.1% a year. This was an outcome of the high increase in exports (an average of 25.8% per annum) and in imports (an average of 26.9% per annum). In 1981 total external trade stagnated and from 1982 until 1986 it recorded successive declines (especially in 1986) averaging 15.2% per annum during 1981-1985. This drop in the value of total trade resulted from an average annual decrease of 19.5% per year in exports and of 10.2% in imports. Between 1987 and 1990 the external sector recovered and registered an average annual rate of growth of 12.7%. Exports' average annual growth was 17.5% and that of imports was 6.7%.

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(1) United Nations, *Monthly Bulletin of Statistics*, Various Issues.

(2) The average annual variation in world volume of merchandise exports during 1980-1985 was 2.3%. See: UNCTAD, *Analytical Report by the UNCTAD Secretariat to the Conference*, Vol. III (United Nations:, 1992), P.49.

(3) The Middle East countries in this section refer only to the so known Western Asia Countries (ESCWA) comprising the Arab countries of Western Asia in addition to Egypt.

Table 6-1. Jordan's Exports and Imports

	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
<b>A 1. Values (\$ Thousand)</b>										
1. General Exports <sup>1/</sup>	153185	561407	789937	731598	927569	1035690	1089115	1063062	1113065	1220358
2. Domestic Exports	125641	401549	648989	645133	730320	884796	920659	921788	880981	932600
3. General Manufactured Exports	48111	200831	408224	297824	487277	473761	582873	582649	576043	659822
4. Domestic Manufactured Exports	25069	135745	281025	234989	349266	396188	440685	468233	400316	463928
5. General Imports	730831	2394425	2732979	2445425	2705195	2786082	2132691	2602706	2512047	3256531
6. General Manufactured Imports	459845	1470727	1371958	1329640	1543576	1563869	1167007	1341767	1357275	2010298
7. Trade Balance (deficit)	577646	1833018	1943042	1713827	1777626	1750392	1043576	1539644	1398782	2036173
<b>A 2. Values in Real Terms (\$ Thousand) <sup>2/</sup></b>										
8. General Exports	169640	561407	862377	823872	1089975	1145675	1185109	1129715	1090367	1238942
9. Domestic Exports	139137	401549	708503	726501	858190	978746	1001805	979583	862861	946802
10. General Manufactured Exports	48548	200831	378335	280966	465848	426428	608427	614781	549659	643729
11. Domestic Manufactured Exports	25297	135745	260449	221688	333906	366605	460005	485719	381981	452613
12. General Imports	915828	2394425	3123405	3295721	3398486	3632441	2941643	3087433	3063472	4201975
13. General Manufactured Imports	564920	1470727	1656954	1653781	1754064	1741502	1428405	1311600	1297586	2120568
14. Trade Balance (deficit)	746188	1833018	2261028	2471849	2308511	2486766	1756534	1957718	1973105	2963033
<b>B. Percentage Ratios (%)</b>										
15. General Exports to General Imports	21.0	23.4	28.9	29.9	34.3	37.2	51.1	40.8	44.3	37.5
16. General Exports to General Imports (Real Terms)	18.5	23.4	27.6	25.0	32.1	31.5	40.3	36.6	35.6	29.5
17. General Manufactured Exports to General Manufactured Imports	10.5	13.7	29.8	22.4	31.6	30.3	37.8	34.9	29.5	32.8
18. General Manufactured Exports to General Manufactured Imports (Real Terms)	8.6	13.7	22.8	17.0	26.6	24.5	42.6	46.9	42.4	30.4
19. Domestic Manufactured Exports to General Imports (Real Terms)	5.5	9.2	20.5	17.7	22.6	25.3	15.6	15.7	12.5	23.1
20. Domestic Manufactured Exports to Domestic Non-Manufactured Exports.	24.9	51.1	76.4	57.3	91.7	81.1	91.8	103.2	83.3	99.0
<b>C. Memorandum Item:</b>										
Western Asia Region (Value in \$ million) <sup>3/</sup>										
21. Total Exports	62382	196224	79045	57013	66618	67615	85079	108070	.....	.....
22. Manufactured Exports	2526	4606	3594	3701	5236	9261 <sup>4/</sup>	10076 <sup>4/</sup>	11070 <sup>4/</sup>	.....	.....
23. Total Imports	25613	84132	72216	64267	58413	66620	67120	70907	.....	.....
24. Manufactured Imports	16126	57324	53949	46944	49271	42269 <sup>4/</sup>	36250 <sup>4/</sup>	40312 <sup>4/</sup>	.....	.....
25. Non-Oil Countries' Manufactured Exports <sup>5/</sup>	596	673	981	1246	1610	1784	2904	3244	.....	.....

**Source:** For Jordan: For the Years 1975-1988 and 1992 data were compiled from: United Nations, (UN), *Commodity Trade Statistics, Statistical Papers Series, Series D (S/ESA/STAT/SER.D)*; New York: UN, Various Issues). For the Years 1989, 1990 and 1991 no data were reported for Jordan in the above source and data for imports and for exports were compiled from: UN, *International Trade Statistics Yearbook, Vol.1* 1991. But Data for exports were revised to exclude re-exports as they were reported in the United Nations reference for "General Exports" and not "Domestic Exports". For Western Asia Region's data see: United Nations, Economic and Social Commission for Western Asia (ESCWA), *Analytical Review of Developments and Issues in the External Trade and Payments Situation of the Countries of Western Asia (E/ESCWA/DPD/1992/10, August 1992)*; ESCWA, *External Trade Bulletin of the ESCWA Region (E/ESCWA/STAT/1992/20, December 1992)* and ESCWA, *Developments in the External Sector of the ESCWA Region in the 1980s (E/ESCWA/DPD/89/2, August 1989)*.

- Notes**
- 1/ General Exports = Domestic Exports + Re-exports.
  - 2/ Exports and imports in real terms were computed by deflating the values in current prices by the CBI export and import price indices. Dinar-based indices were converted to US dollar-based indices.
  - 3/ The countries of Western Asia which are known as the countries of the Economic and Social Commission for Western Asia (ESCWA) are all Arab Western Asian countries (Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Yemen) in addition to Egypt from North Africa.
  - 4/ Excluding Iraq and Lebanon for lack of data.
  - 5/ Western Asia Non-Oil Diversified Economies comprises Egypt, Syria, Lebanon and Jordan. Lebanon is excluded in this study.
- ..... = Not available

Table 6-2. Average Annual Rate of Growth of Jordan's Exports and Imports

(Percentage)

	1975 ↓ 1980	1980 ↓ 1985	1985 ↓ 1990	1985 ↓ 1986	1986 ↓ 1987	1987 ↓ 1988	1988 ↓ 1989	1989 ↓ 1990	1990 ↓ 1991	1991 ↓ 1992
<b>A<sub>1</sub>. Current values</b>										
1. General Exports	29.66	7.07	6.12	-7.39	26.79	11.66	5.16	-2.39	4.72	9.62
2. Domestic Exports	26.16	10.08	7.27	-0.59	13.20	21.15	4.05	0.12	-4.43	5.86
3. General Manufactured Exports	33.08	15.24	7.74	-27.04	63.61	-2.77	23.03	1.68	-2.80	14.54
4. Domestic Manufactured Exports	40.19	15.67	10.75	-16.38	48.63	13.43	11.23	6.25	-14.50	15.89
5. General Imports	26.79	2.68	-0.97	-10.52	10.62	2.99	-23.45	22.04	-3.48	29.64
6. General Manufactured Imports	26.18	-1.38	-0.44	-3.08	16.09	1.31	-25.38	14.98	1.16	48.11
7. Trade Balance (deficit)	26.00	1.17	-4.55	-11.80	3.7	-1.53	-40.38	47.55	-9.15	45.57
<b>A<sub>2</sub>. Real values</b>										
8. General Exports	27.04	8.96	5.55	-4.46	32.30	5.11	3.44	-4.67	-3.48	13.63
9. Domestic Exports	23.61	12.03	6.69	2.54	18.13	14.05	2.36	-2.22	-11.92	9.73
10. General Manufactured Exports	32.84	13.50	10.20	-25.74	65.80	-8.46	42.68	1.04	-10.59	17.11
11. Domestic Manufactured Exports	39.94	13.92	13.27	-14.88	50.62	6.80	29.00	5.59	-21.36	18.49
12. General Imports	21.19	5.46	-0.23	5.52	3.12	6.88	-19.02	4.96	-0.78	37.16
13. General Manufactured Imports	21.09	2.41	-4.57	-0.19	6.06	-0.72	-17.98	-8.18	-1.07	63.42
14. Trade Balance (deficit)	19.69	4.29	-2.84	9.32	-6.61	7.72	-29.36	11.45	0.74	50.17
<b>C. Memorandum Item:</b>										
15. Total Exports	25.76	-16.63	6.46	-27.87	16.85	1.50	25.83	27.02	.....	.....
16. Manufactured Exports	12.77	-4.84	25.23	2.98	41.48	76.87	8.80	9.87	.....	.....
17. Total Imports	26.85	-3.01	-0.37	-11.01	-9.11	14.05	0.75	5.6	.....	.....
18. Manufactured Imports	28.87	-1.21	-5.66	-12.98	4.96	-14.21	-14.24	11.21	.....	.....
19. Non-Oil Countries' Manufactured Exports	2.46	7.83	27.02	27.01	29.21	8.57	66.13	11.71	.....	.....

Source: Based on data given in Table 6-1.

Notes: ..... = Not available.

The performance of the external sector in this region when compared with that of the world was remarkable only during the second half of the 1970s when export growth in the region exceeded that of world exports. This performance deteriorated during the first half of the 1980s. Although it improved in the second half of the 1980s, the regional growth was less pronounced than that of the world. However, a more favourable performance was recorded in 1990.

The variations in the value of external trade in the Middle East have been an outcome of various external and internal factors. One of the important factors is the role played by the oil sector in the region. This factor has direct and indirect effects on the economies and external trade of most countries of the region. However, there are differences in the extent of dependence on oil, and consequently in development patterns and in the features of external trade (size, structure and growth) among the countries of the region. The oil sector dominates the economies of the major oil exporting countries and therefore affects them directly. These oil exporters are the Gulf Co-operation Council (GCC) countries (Bahrain, Kuwait, Oman, Qatar, Saudi-Arabia and the United Arab Emirates) and Iraq. Although the oil sector dominates its economy, Iraq has managed to diversify its economic structure with manufacturing linked to both minerals and agriculture. The other countries in the region have relatively more diversified economies. These countries include Egypt, Jordan, Lebanon, Syria and Yemen.

Some countries of the second group (Egypt and Syria) are, to some limited extent, affected directly by the changes in oil prices and proceeds, as they are producers and exporters of oil, but relatively minor ones. These countries, in addition to Jordan, Lebanon and Yemen, are also affected indirectly by the oil sector in the Gulf States. This is because of the increased dependence of the former countries on the latter group, not only in terms of aid, but also in terms of workers' remittances and trade. The Gulf States are labour-receiving countries while the relatively diversified economies' countries are labour-exporting countries. Changes in oil revenues lead to changes in the level of economic activity in the Gulf States, which in turn change the demand for labour from the labour-exporting countries, and, therefore, the remittances of the workers employed there. Furthermore, a considerable portion of exports of the



relatively diversified economies go to the Gulf States' markets, particularly exports from Jordan, Lebanon and Yemen. The share of Lebanese exports going to the Middle East region in Lebanon's total exports in 1985, for example, was 46%, that of Jordan 51%, and of Yemen 43%.

The surges in oil prices in 1973, 1979 and 1981 led to huge increases in the value of exports and in the external surpluses of the Gulf States. These helped to finance their increasing imports. When oil prices declined after 1981 and collapsed in 1986, the growth in the regions' external trade stagnated and then deteriorated. The improvement in oil prices from 1987 affected the performance of the region's trade positively until the end of the decade. The impact of the oil sector on the overall performance of the region's trade may be seen when we compare the share of the trade of the major oil exporting countries in the total trade of the region. This share increased from 78.3% in 1970 to about 95% in 1980 (when export proceeds reached their peak), and then dropped to 89.3% in 1989.

During 1990 and 1991 the factors that affected the world's trade performance also affected the performance of the external sector of the Middle East region. These factors include: the slackness of the world economy, the re-unification of Germany, the disintegration of the former Soviet Union, the transition process in Eastern Europe and the Gulf War.

The most important factors for the region were the Gulf crisis and its aftermath. This had an overall negative impact on human, social, economic and environmental issues. The region as a whole experienced a negative growth rate of 3.8% in 1990. External trade flows were disrupted in Iraq and Kuwait, and declined in Jordan and Yemen Arab Republic. However, exports of the other countries, in particular Saudi-

Arabia and the United Arab Emirates, expanded considerably due to the sharp increases in their oil production and in prices during the second half of 1990. Consequently, total exports of the region grew by 15.4% while that of imports was 3.2%<sup>(4)</sup>.

As for Jordan, which has strong links with the GCC countries and Iraq through workers remittances, financial assistance and exports of goods and services, the impact of the Gulf crisis had a significant negative impact on the economy. With regard to external trade, the Gulf Crisis had a devastating effect on Jordan. Before the war, exports of goods and services to the GCC countries increased from \$225.6 million in 1986 (35% of total Jordanian exports) to \$520.5 million (56% of total exports) in 1989. Exports of goods to Iraq amounted on average to around one-fourth of total exports of goods during the 1986-1989 period, while exports of manufactured goods were higher, reaching about 40.% of their corresponding total. Exports of goods to the GCC countries have been less than directed at Iraq. The imposition of the United Nations sanctions against Iraq brought a halt to vital Jordanian exports. The embargo which was imposed on Aqaba port increased the cost of freight and insurance<sup>(5)</sup>. Furthermore, transit trade, international flights, and shipping into and out of Aqaba were halted or seriously disrupted. Losses in air traffic, civil aviation, inland transport, Aqaba port and the Marine Corporation, in addition to transit trade, were estimated at \$513 million for 1990 and 1991<sup>(6)</sup>.

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(4) United Nations (UN), Economic and Social Commission for Western Asia (ESCWA), *The Impact of the Gulf Crisis on the Economies of Western Asia* (E/ESCWA/DPD/ 1992/11, December 1992), P.19.

(5) The continuity of the inspection operations of vessels arriving at and departing from Aqaba port after the end of the Gulf War in addition to the embargo imposed on Iraq caused a damage to Jordan's economy. It was estimated that the annual loss arising from vessel inspection rose to JD 322.5 million in 1993. See Jordan, CBJ, *Thirtieth Annual Report*, 1993, p.84.

(6) See: UN, ESCWA, *The Impact of the Gulf Crisis on the Jordanian Economy* (E/ESCWA/DPD/1992, June 1992), P.4.

## 5.2.2 JORDAN'S EXTERNAL MERCHANDISE TRADE

### A) Total Trade

#### Exports

Domestic exports fared very well during the second half of the 1970s (see *Tables 5-1* and *5-2* above and Statistical Appendix A, *Table A-1*). Their average annual rate of growth was 26.2% compared to 25.8% in the group of the Middle Eastern countries. This considerable growth continued in 1981 but slowed down in 1982 before it registered its first decline in 1983. Hence, the average annual increase during 1975-1982 became 22.8% (20% in real terms). The ratio of exports to GDP during this period increased to 14.1% in 1982<sup>(7)</sup>. The expansion in exports resulted mainly from the strong regional demand boosted by the huge oil revenues, and from the expansion in the productive capacity of the Jordanian economy, in addition to the measures adopted by the Government to encourage exports.

After the considerable growth during the previous period, exports registered their first negative growth in 1983. But this was followed by a very remarkable rise in 1984, then it dropped in 1985 and stagnated in 1986. The overall performance over this period was, however, positive (13.6% per annum or 15.8% in real terms). The decline recorded in 1983 and 1985 has been ascribed to a drop in manufactured and agricultural exports, while the huge increase in 1984 was attributed to increases in almost all categories, particularly, minerals (phosphates and potash). The rise in exports resulted exclusively from the increase in quantity as prices fell. In 1987 exports expanded significantly after their decline in 1985 and stagnation in 1986.

Over the period 1988-1992 the performance of exports has been influenced by the depreciation of the Jordan dinar in 1988 through 1990 when it fell considerably

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(7) Jordan, Central Bank of Jordan (CBJ), *Yearly Statistical Series (1964-1989)*, October 1989, Tables 26, 30-33 and 47; Jordan CBJ, *Monthly Statistical Bulletin*, May 1994, Tables 36, 42 and 46.

against world major currencies, and by the Gulf crisis in 1990 and its aftermath which disrupted Jordan's export markets. During 1988, 1989 and 1990 an average growth of 35% (in dinar terms) was achieved. In fact, this rise is largely illusory due to expressing exports in terms of the new lower exchange rate of the dinar. In US dollar terms, the average growth for 1988, 1989 and 1990 was slightly more than 8% per year. In 1991 export growth became negative (-4.4%) and in 1992 exports expanded by 5.9% (in current dollar terms) or 9.7% (in constant dollars), reaching their highest level of \$933 million in current terms. This rise has been ascribed to the increase in quantum of about 10%, while prices dropped by 3.5%. The contribution of exports to GDP became 20% in comparison with 11.4% in 1987 and 23.4% in 1990.

### Re-exports

During 1975-1982 the value of Jordan's re-exports<sup>(8)</sup> increased considerably with an average rate of growth as high as 35% per annum, 31.9 in real terms (see Statistical Appendix A, *Table A-1*). The proportion of re-exports to GDP rose from 2.8% in 1975 to 6% in 1982 and their share in general exports (domestic exports + re-exports) averaged 29.1%. The growth rates of re-exports over 1982-1986 were negative and their share in both GDP and general exports dropped.

The 1986-1992 period witnessed significant improvement. The average annual value for the period was \$180.6 million, reaching \$287.8 million in 1992, with a share of 4.1% in GDP and 18.3% in general exports. Most of the expansion during this period (23.9% annually) was ascribed to the sharp rise in 1991 and 1992. Re-exports of capital goods, particularly of machinery and equipment, are of special importance,

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(8) Re-exports in Jordan are defined as "exports less than 40% value added in Jordan. Most re-exports are used goods, scrap metals and goods re-exported after making minor modifications". See: The World Bank, *Jordan: Responding to Changing Environment*, December 1987, P.16.

19% (in real terms). The rise of imports during 1990 by 22% (or 15% in real terms), in spite of the recent fall in the dinar, was mainly caused by the Gulf crisis and its aftermath. This was quite clear in the rise of imports in the "food and live animals" category by 78% over its 1989 level to meet the increased demand owing to the influx of evacuees passing through Jordan as well as the returnees from the Gulf region. The increase in the value of imports also reflected the rise in costs of shipping and insurance as a consequence of the war. In 1991 a drop of 3.5% in the value of imports was registered but 1992 witnessed a considerable increase of 29.6% reaching \$3257 million.

## ***B) Trade in Manufacturing***

### ***Manufactured Exports***

The value of total manufactured exports has grown considerably since the mid 1970s, averaging 18.7% per year. It stood at \$464 million in 1992 against \$25 million in 1975 (see *Tables 5-1* and *5-2* above). In real terms the growth achieved was also remarkable. The most significant growth was realised during the first period 1975-1980, averaging 39.9% per annum. Although the growth dropped to 13.9% in 1980-1985 and to 13.3% in 1985-1990, it is still high especially when judged in the light of the difficult circumstances that faced Jordan in the late 1980s and at the beginning of the 1990s.

Comparison with the performance of the other countries in the region such as the group of non-oil diversified economies of West Asia indicates that the average annual rate of growth in their manufactured exports (at current prices) was 2.5%, 7.8% and 27% during 1975-1980, 1980-1985 and 1985-1990, respectively, against 39.9%, 13.9% and 13.3% in the case of Jordan. Only during the last period did the

averaging one-fourth of total re-exports over this period. The two most important single categories are aeroplanes and gold (mostly unprocessed).

### Imports

Imports increased each year during the 1975-1982 period, with an average annual rate of 23.7% and 19% in real terms (see *Tables 6-1* and *6-2*). This pushed the ratio of imports to GDP from 75% in 1975 to 86.5% in 1982. Such growth resulted from the growth in both prices and more importantly from quantities. The expansion in imports resulted mainly from the significance performance of the various economic sectors which boosted imports from capital goods and raw materials needed in the production process. Also imports of consumer goods increased due to the increase in population and in the standard of living.

After the peak level in 1982, continuous negative growth rates were registered in imports during the subsequent four years, with an average of 6.9% a year. Consequently, imports' proportion to GDP dropped to 40% in 1986, the lowest share in the whole period (1975-1992). This was mainly caused by the decrease in prices as the quantum change was minimal. The drop in prices was felt in almost all major categories, and especially in fuels and chemicals.

The pattern of growth of imports after 1986 showed a sharp drop in their values in 1989 and a sharp increase in both 1990 and 1992. The growth in 1987 and 1988 was relatively moderate in the former and small in the latter. This pattern, which was to some extent similar to that of exports, reflects the effect of the internal economic conditions prevailing in 1988 and 1989, in addition to external conditions in 1990.

The prohibition of certain luxury goods and the depreciation of the Jordan dinar at the end of the 1980s reduced imports by around 24% (in current US dollar terms) or

achievement of these countries surpass that of Jordan. This might be attributed, in part, to special circumstances at that time<sup>(9)</sup>.

### Manufactured Imports

The value of Jordan's manufactured imports greatly exceeds that of manufactured domestic exports and also manufactured general exports. These imports stood at \$2010 million in 1992 against \$464 million of manufactured domestic exports. They grew by an average of 9.1% per annum during 1975-1992, with high growth rates during 1975-1980. Over the periods 1980-1985 and 1985-1990, small negative growth was recorded (see *Table 5-2*). Valued in real terms, this growth was also high in the first period, averaging 21.1% per annum and fell to 2.4% during 1980-1985 and became negative with -4.6% in 1985-1990.

Compared with the growth rates of manufactured imports in the region it seems that nearly the same performance was achieved during the second half of the 1970s and that of the first half of the 1980s (*Table 5-2*). During 1985-1990 the drop of the value of imports of the region was more pronounced, averaging -5.7% per annum against merely -0.4% in Jordan. The sharp drop in oil prices and thus export proceeds of the majority of countries of the region may explain this negative growth.

### **5.2.3 EXPORT / IMPORT RATIO**

The ability to finance imports from export proceeds is reflected in the export / import ratio. *Table 5-1* above shows this ratio for Jordan. The following points can be made:

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(9) The high growth rates of the above group in the last period reflect basically the increase in Syrian exports, which reached 123.5% in 1989 and 35.2% in 1990. The major factor explaining this rise was that Syria sold goods to the former Soviet Union at inflated prices under an agreement to reduce the Syrian debt to the Soviet Union estimated at \$15 billion. See: UN, ESCWA, *Analytical Review of Developments and Issues In the External Trade and Payments Situation of Countries of Western Asia (E/ESCWA/DPD/ 1992/10, August 1992)*, p.18.

- ① Jordan's ratio (general exports / imports) has been less than one (or 100%) in every year. This means that export proceeds were inadequate to cover imports. The maximum level reached was slightly more than 50% in 1989, and the minimum was 18% in 1977.
- ② The general level of this ratio was rising:
  - (i) Measured in dollar current prices, this ratio increased on average from 21.8% during 1975-1982 to 26% during 1983-1986 and rose further to 40.3% during 1987-1992. In general, the fluctuations within each period were within a narrow range.
  - (ii) In most years, this ratio declined when measured at constant prices, thus the averages for the previous periods became 16%, 24% and 40% respectively.
  - (iii) As domestic exports are part of general exports, the previous ratio declined when computed as a ratio of domestic exports to imports. This ratio became 28.6% in 1992.
- ③ Comparisons with the position of other countries in the region show that Jordan's ratios are less than those of the non-oil diversified economies (Egypt, Syria and Lebanon). The ratio in Jordan in 1980 was 23.4% but increased to 40.8% in 1990. While these ratios in the non-oil countries were 47.1% and 49.9% respectively. Only in 1988 and 1989 (two exceptional years in Jordan) were the ratios comparable (or even higher). However, it is clear that Jordan's position could not be compared with that of the major oil producing countries in the region, as they realised financial surpluses and their ratios (combined) were always more than 100%.
- ④ In spite of its weak position and inability to finance its imports (or at least a large part of them) from the proceeds of exports, Jordan's position has been improving slightly, and its dependence on domestic sources to finance its imports has been increasing. In 1992 exports were able to cover 4.5 months of imports at current prices and 3.5 months at constant 1985 prices, while in 1975 the



previous ratios were only 2.5 months and 2.2 months respectively. This capacity when computed on the basis of domestic exports to imports declines, and it declines further when computed in real terms.

#### 5.2.4 TERMS OF TRADE

As *Table 5-3* indicates the terms of trade facing Jordan during 1975-1981 witnessed a slow decline at the beginning of the period (1975-1978) and a faster one later on. The prices of Jordan's main exports (phosphates which accounted for about one-third of total exports at that time) increased at a moderate rate, while the price of oil (which constituted 40% of Jordan's import bill at that time) increased at a relatively high rate (20%). Thus, the result was a deterioration in the terms of trade.

*Table 5-3.* Jordan's Terms of Trade  
(US Dollar-Based Indices)

(1985=100)

Year	Export Price	Import Price	Terms of Trade
1975	98.6	91.3	108.0
1976	85.1	77.9	109.2
1977	85.8	80.2	107.0
1978	89.0	84.0	106.0
1979	91.2	91.5	99.7
1980	109.2	114.3	95.5
1981	113.0	125.7	89.9
1982	115.9	119.7	96.8
1983	102.7	106.2	96.7
1984	105.8	105.4	100.4
1985	100.0	100.0	100.0
1986	97.0	84.8	114.4
1987	92.9	91.0	102.1
1988	98.7	87.7	112.5
1989	100.4	82.9	121.1
1990	102.7	95.9	107.1
1991	111.4	93.7	118.9
1992	107.5	88.6	121.3

Source Computed from: Jordan, CBJ, *Monthly Statistical Bulletin*, Various Issues.

Note: Figures were originally reported in Jordanian dinar. They were converted to US dollars using the exchange rates for exports and for imports that are presented in Statistical Appendix C, *Table C-3.1*.

During 1987-1992, the general trend was favourable but with larger fluctuations. Prices of exports increased by 3% per annum, while those of imports nearly stabilised (-0.5%). The rise in export prices was mainly attributed to the increase in prices of phosphates and potash (an average of 6.6%) and food (3%). Chemicals prices also increased slightly while those of "manufactured goods" decreased slightly. With respect to imports, oil prices fell by 4% while the increases for food (3.6%) and machinery (2.8%) compensated for the drop in oil prices and the final result was a -0.5% change in import prices.

### **5.3 COMMODITY STRUCTURE OF TRADE**

#### **5.3.1 COMMODITY STRUCTURE OF TRADE BY ECONOMIC FUNCTIONS**

*Tables 5-4 and 5-5* below and *Table A-2* in the Statistical Appendix A indicate the following points with respect to the economic functions of Jordan's trade:

- ① The proportion of exported raw materials in total exports and imported raw materials in total imports are relatively high. During 1984-1992 the ratio for exports ranged between 57% and 74% and that for imports ranged between 36% and 43%. In the case of exports the figures reflect two points. First, some natural resources (mainly phosphates and potash) are available in Jordan in reasonable amounts and are exported mainly in crude form. Secondly, the relatively high proportion of the share of raw materials is the other side of the coin, i.e., the relatively small share of consumer and capital goods.

In the case of imports the unavailability of many natural resources needed in production and the ease of obtaining raw materials from outside (because, in general, there have been no exchange rate restrictions or high import duties on such imports) increased their imports and may have hindered what could be produced locally. With respect to oil and fuel, Jordan is not an oil producing country and virtually all its needs are imported. The value of imported oil

**Table 5-4.** Jordan's External Trade by Economic Functions  
(Shares in Total)

Commodity Group	(Percentages)								
	1984	1985	1986	1987	1988	1989	1990	1991	1992
<b>Total Domestic Exports</b> (Value in Thousand US \$)*	677889	64890910	645167	7344934	882336	9263023	9217889	8809812	9325412
<b>Consumer Goods</b>	41.66	38.78	34.61	33.81	24.60	24.78	28.34	33.49	40.33
Food Stuffs	13.42	14.40	13.04	12.78	7.30	7.65	10.16	13.42	13.11
Consumer Goods	19.05	17.25	18.00	17.91	12.97	11.57	15.21	15.70	21.85
Durable Goods	9.20	7.13	3.56	3.12	4.33	5.55	2.97	4.38	5.37
<b>Raw Materials</b>	56.95	60.02	64.53	64.64	73.67	72.68	69.05	64.96	57.36
Oil and Fuels	.....	0.00	0.06	0.13	0.24	0.11	0.04	0.02	0.12
Construction Materials	2.70	4.31	3.80	6.17	3.22	4.96	5.69	5.20	5.11
Other	54.25	55.71	60.66	58.34	70.21	67.60	63.32	59.73	52.13
<b>Capital Goods</b>	1.38	1.20	0.87	1.55	1.73	2.54	2.62	1.55	2.31
Machinery & Trans. Equip.	0.34	0.23	0.13	0.20	0.58	1.61	0.18	0.11	0.16
Other	1.04	0.98	0.73	1.35	1.15	0.93	2.44	1.44	2.15
<b>Miscellaneous</b>	.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Imports (Value in Thousand US \$)</b>	2784365	2732566	2431919	27031150	2788298	2132472	2602666	2514278	3256364
<b>Consumer Goods</b>	38.93	35.81	42.13	39.54	36.34	33.69	38.23	42.59	40.67
Food Stuffs	15.04	14.20	15.80	14.43	14.99	13.96	18.89	19.11	13.82
Consumer Goods	11.91	12.88	13.54	12.70	9.85	10.67	11.83	14.84	16.35
Durable Goods	11.98	8.74	12.80	12.42	11.50	9.06	7.51	8.63	10.51
<b>Raw Materials</b>	42.35	43.25	36.41	40.52	38.51	42.58	42.31	39.27	35.68
Oil and Fuels	19.15	18.02	13.06	16.28	12.88	16.58	17.79	14.46	13.71
Construction Materials	3.23	4.12	2.98	2.31	2.98	3.01	1.70	0.95	1.73
Other	19.98	21.11	20.36	20.93	22.65	23.00	22.82	24.35	20.24
<b>Capital Goods</b>	15.92	18.74	16.64	17.78	21.46	21.31	18.51	17.02	23.03
Machinery & Trans. Equip.	5.78	7.55	5.30	6.10	8.73	9.70	9.12	7.11	9.68
Other Machinery	0.30	0.32	0.38	0.41	0.21	0.17	0.21	0.16	0.28
Other	9.84	10.86	10.96	11.27	12.53	11.44	9.19	9.74	13.08
<b>Miscellaneous</b>	2.79	2.20	4.82	2.15	3.68	2.42	0.96	0.63	0.62

Source: Based on data given in Statistical Appendix A, Table A-2.

Notes: \* Figures for Jordan's total exports and total imports in this table may differ slightly from those in other tables because of differences in sources.

..... = Not available

**Table 5-5.** Jordan's External Trade by Economic Functions  
(Average Annual Rate of Growth)

(Percentages)

Commodity Group	1984	1985	1986	1987	1988	1989	1990	1991	1984
	↓	↓	↓	↓	↓	↓	↓	↓	↓
	1985	1986	1987	1988	1989	1990	1991	1992	1992
<b>Total Domestic Exports</b>	-4.3	-0.6	13.8	20.1	5.0	-0.5	-4.4	5.9	4.1
Consumer Goods	-10.9	-11.3	11.2	-12.6	5.7	13.8	13.0	27.5	3.6
Food Stuffs	2.7	-9.9	11.6	-31.4	10.0	32.2	26.2	3.4	3.8
Consumer Goods	-13.3	3.7	13.3	-13.0	-6.3	30.8	-1.3	47.3	5.9
Durable Goods	-25.8	-50.3	-0.5	67.0	34.6	-46.9	41.0	29.9	-2.7
Raw Materials	0.9	6.9	14.1	36.9	3.6	-5.5	-10.1	-6.5	4.2
Oil and Fuels	.....	.....	140.7	115.7	-49.7	-67.7	-43.6	459.5	.....
Construction Materials	52.9	-12.3	84.7	-37.3	61.7	14.2	-12.6	4.0	2.0
Other	-1.7	8.3	9.5	44.6	1.1	-6.8	-9.8	-7.6	3.5
Capital Goods	-16.8	-28.4	103.4	34.4	54.0	2.4	-43.4	57.7	11.0
Machinery & Transport Equipment	-36.6	-41.3	73.8	244.4	191.0	-88.9	-39.8	47.8	-5.5
Other	-10.3	-25.4	108.8	2.8	-15.2	160.6	-43.6	58.5	13.9
Miscellaneous	.....	.....	.....	.....	-36.2	-65.3	.....	.....	.....
<b>Total Imports</b>	-1.9	-11.0	11.2	3.2	-23.5	22.0	-3.4	29.5	2.0
Consumer Goods	-9.7	4.7	4.3	-5.2	-29.1	38.5	7.6	23.7	2.5
Food Stuffs	-7.3	-0.9	1.5	7.1	-28.8	65.2	-2.2	-6.4	0.9
Consumer Goods	6.1	-6.4	4.3	-19.9	-17.2	35.3	21.2	42.7	6.1
Durable Goods	-28.4	30.4	7.8	-4.4	-39.8	1.1	11.1	57.6	0.3
Raw Materials	0.2	-25.1	23.7	-2.0	-15.4	21.2	-9.2	16.2	-0.2
Oil and Fuels	-7.6	-35.5	38.5	-18.4	-1.6	31.0	-21.5	22.8	-2.2
Construction Materials	25.3	-35.7	23.5	-7.2	-22.7	-31.2	-46.0	135.7	-5.7
Other	3.7	-14.1	14.3	11.6	-22.3	21.1	3.1	7.6	2.1
Capital Goods	15.5	-21.0	18.8	24.5	-24.1	6.0	-11.2	75.3	6.8
Machinery & Transport Equipment	28.3	-37.5	27.8	47.6	-15.0	14.7	-24.6	76.1	8.8
Other Machinery	4.2	5.6	20.3	-48.1	-36.1	46.2	-23.2	117.5	0.9
Other	8.4	-10.2	14.4	14.7	-30.2	-2.0	2.4	73.9	5.7
Miscellaneous	-22.7	94.6	-50.3	76.5	-49.7	-51.7	-36.6	28.0	-15.5

Source: Based on data given in Statistical Appendix A, Table A-2. For notes see Statistical Appendix A, Table A-2.

constitutes a relatively high proportion of the total import bill averaging 85% of the proceeds of exports of mineral resources<sup>(10)</sup>. Generally speaking, Jordan is relatively poor in natural resources and the ratio of raw materials exported is, on the average, half that imported.

- ② Though the ratio of exports of consumer goods to total exports (33% on average) is low compared to that of raw materials, it is very much higher than the ratio for capital goods (2%). This reflects a similar pattern to that prevailing in most developing countries. However, the percentage of imported consumer goods (39% of the total on average) is higher than for exports. This might be because of one or more of the following factors: *first*, the production of consumer goods in Jordan is initially for the home market and not for exports, what is left after local absorption being exported; *secondly*, the dearth in Jordan of the natural resources needed in the various kinds of manufacturing production or the deficiency in exporting what is available; *thirdly*, the inability to produce domestically a larger proportion of domestic demand for durable goods; and *fourthly*, the application of a relatively liberal trade policy which allows for the importation of a high proportion of consumer goods even though some of them are produced locally.
- ③ A very low percentage of capital goods (2% of the total) is exported and this is associated with a high ratio of imported capital goods & transportation equipment in total imports (about one-fifth). This is because the conditions and requirements for the production of capital goods such as a large market, high technological capability, huge financial resources and highly educated and experienced manpower are not fully available in Jordan.

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(10) Computed from *Table A-5* in Statistical Appendix A.

- ④ The average rates of growth of total domestic exports during the period 1984–1992 was 4% per annum which is slightly higher than that of imports of 2% (see *Table 5-5*). The rates of growth of capital goods were the highest among the other groups in both exports and imports. Negative growth rates were registered in 1985, 1986 and 1991 for both exports and imports but with different rates of change. However, a remarkable change was recorded for imports in 1989 as they declined by 23.5% owing to the prohibition of imports of luxury goods. Another opposite but considerable change was registered in 1992 when the rate of growth of imports became about 30%. Almost all categories registered high growth rates, particularly capital goods & transport equipment which grew by more than 75%. This reflects the recovery of the Jordanian economy and the need for these goods to expand and initiate different kinds of projects. Domestic exports, however, registered moderate growth in 1992 (about 6%) after two successive years of negative growth.
- ⑤ No obvious structural changes could be observed during the period 1984–1992. The participation of consumer goods in total exports was 41.7% in 1984 and 40.3% in 1992. The same pattern applies to raw materials, with 57% in 1984 compared with 57.4% in 1992.

### **5.3.2 COMMODITY STRUCTURE OF TRADE BY SITC CATEGORIES**

The following points may be made on the structure of Jordan's trade by SITC categories using *Tables 5-6* and *5-7* below in addition to *Table A-3* in Statistical Appendix A:–

- ① The contribution of manufactured imports in total imports is the largest among all groups, ranging between 50% and 63%. The contribution of manufactured exports in total exports is also the highest, except in the first period when ores & metals were more important. The share of manufacturing in total exports ranged between 20% and 50%.

**Table 6-6.** Jordan's Commodity Structure of Trade by Major SITC Categories  
(shares in Total)

(Percentage)

Commodity Group	SITC	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
<b>DOMESTIC EXPORT</b>											
Total Value (Thousand US \$)	0-9	125641	401549	648989	645133	730320	884786	920659	921788	880981	932600
Food Items	(0+1+22+4)	28.94	24.94	17.89	19.87	14.81	9.90	10.60	11.07	16.54	15.59
Agricultural Raw Materials	2 less (22+27+28)	0.53	0.53	0.46	0.52	0.73	0.45	0.61	0.44	0.48	0.73
Fuel	3	0.70	0.25	0.00	0.06	0.14	0.10	0.00	0.00	0.00	0.00
Ores and Metals	(27+28+68)	49.86	40.48	38.35	43.11	36.49	44.77	40.92	37.69	37.54	33.93
Total Manufactured Goods	5 to 8 less 68	19.95	33.81	43.30	36.42	47.82	44.78	47.87	50.80	45.44	49.75
of which:											
Chemicals	5	4.85	9.11	19.96	24.14	28.24	28.34	29.38	30.86	29.58	31.07
Basic manufactures	(6-68)	9.96	15.55	15.29	8.41	15.25	11.13	11.78	12.52	10.17	10.33
Machinery & Trans. Equip.	7	1.16	1.99	0.78	0.62	1.02	1.14	2.05	2.33	1.24	1.87
Other Manufactured Goods	8	3.98	7.17	7.28	3.27	3.29	4.18	4.66	5.08	4.45	6.47
Unallocated	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>IMPORTS</b>											
Total Value (Thousand US \$)	0-9	730831	2394425	2732979	2445425	2705195	2786082	2132891	2602706	2512047	3256531
Food Items	(0+1+22+4)	22.40	18.16	17.85	21.49	18.89	18.97	16.86	25.79	26.74	21.22
Agricultural Raw Materials	2 less (22+27+28)	1.99	1.53	1.83	1.97	2.19	1.95	1.58	1.61	1.80	1.25
Fuel	3	10.64	17.06	20.77	14.18	17.17	15.46	18.49	18.08	14.47	13.70
Ores and Metals	(27+28+68)	0.68	1.33	1.98	1.90	1.96	2.35	1.50	1.28	2.13	1.29
Total Manufactured Goods	5 to 8 less 68	62.92	61.42	50.20	54.37	57.06	56.13	54.72	51.55	54.03	61.73
of Which:											
Chemicals	5	5.21	5.48	6.31	8.75	9.99	9.92	10.50	11.04	12.86	11.09
Basic Manufactures	(6-68)	18.88	19.85	14.73	15.63	17.15	16.45	17.70	16.41	18.25	19.30
Machinery & Trans. Equip.	7	31.76	27.93	11.97	20.63	20.54	22.55	19.79	18.96	17.49	24.52
Other Manufactured Goods	8	7.07	8.17	9.88	9.36	9.38	7.22	6.74	5.13	5.43	6.82
Unallocated	9	1.37	0.50	7.37	6.08	2.72	5.14	6.85	1.68	0.83	0.80

Source: Based on data given in Statistical Appendix A, Table A-3. For Notes, see Appendix A, Table A-6.

**Table 6-7.** Jordan's Commodity Structure of Trade by Major SITC Categories  
(Average Annual Rate of Growth)

(Percentage)

Commodity Group	SITC	1975	1982	1986	1987	1988	1989	1990	1991	1975
		↓ 1982	↓ 1986	↓ 1992	↓ 1988	↓ 1989	↓ 1990	↓ 1991	↓ 1992	↓ 1992
<b>DOMESTIC EXPORTS</b>	<b>0 - 9</b>	22.8	5.1	6.3	21.2	4.1	0.1	-4.4	5.9	12.5
Food Items	(0+1+22+4)	19.8	-0.2	2.1	-19.0	11.5	4.5	42.8	-0.2	8.5
Agricultural Raw Materials	2 less (22+27+28)	11.0	24.8	12.5	-25.1	39.6	-26.7	2.4	62.6	14.7
Fuel	3	.....	.....	.....	-11.0	.....	.....	.....	.....	.....
Ores and Metals	(27+28+68)	15.2	13.3	2.2	48.6	-4.9	-7.8	-4.8	-4.3	10.0
Total Manufactured Goods	5 to 8 less 68	37.2	0.6	12.0	13.4	11.2	6.3	-14.5	15.9	18.7
Of which:										
Chemicals	5	41.0	23.3	10.9	21.5	7.9	5.2	-8.4	11.2	25.5
Basic Manufactures	(6 - 68)	31.5	-10.7	10.1	-11.6	10.1	6.4	-22.3	7.5	12.8
Machinery & Transport Equipment	7	29.5	18.3	27.9	35.0	88.2	13.8	-49.1	59.1	15.7
Other Manufactured Goods	8	45.1	-25.5	19.2	53.7	15.9	9.3	-16.3	54.0	15.8
Unallocated	9									
<b>IMPORTS</b>	<b>0 - 9</b>	23.7	-6.8	4.9	3.0	-23.5	22.0	-3.5	29.6	9.2
Food Items	(0+1+22+4)	20.0	-2.7	4.7	3.4	-32.0	86.7	0.0	2.9	8.8
Agricultural Raw Materials	2 less (22+27+28)	17.0	2.6	-2.9	-8.3	-38.0	24.5	8.0	-10.5	6.2
Fuel	3	36.4	-15.6	4.3	-7.3	-8.4	19.4	-22.8	22.8	10.8
Ores and Metals	(27+28+68)	33.0	6.2	-1.7	23.2	-51.1	3.8	60.8	-21.3	13.4
Total Manufactured Goods	5 to 8 less 68	22.1	-8.1	7.1	1.3	-25.4	15.0	1.2	48.1	9.1
Of which:										
Chemicals	5	22.1	8.9	9.1	2.2	-18.9	28.3	12.4	11.8	14.1
Basic Manufactures	(6 - 68)	22.2	-9.2	8.6	-1.2	-17.6	13.2	7.3	37.1	9.3
Machinery & Transport Equipment	7	21.7	-13.9	8.0	13.1	-32.8	16.9	-11.0	81.8	7.5
Other Manufactured Goods	8	23.7	0.04	-0.5	-20.8	-28.5	-7.0	2.1	62.7	9.0
Unallocated	9	17.7	47.6	-25.1	94.6	1.9	-70.1	-52.2	25.4	5.8

**Source:** Computed from data given in the Statistical Appendix A, Table A-3.



Within manufactured exports, chemicals has become the most important category since the mid-1980s. It accounted for 24% of total manufactured exports in 1975, increased to 46% in 1985 and then further to 62% in 1992. The production and exportation of fertilisers supported by increases in almost all other categories explain this rise in the percentage of chemicals. "Basic manufactures" was the most important section before the mid-1980s. Its contribution, however, declined to about one-third of chemicals in 1992. "Other manufactured goods" follows with 13% of total manufactured exports in 1992. The least important group is machinery & transport equipment. With regard to manufactured imports, machinery & transport equipment section has the highest share in total manufactured imports accounting for about 40%, followed by basic manufactures with 31% then by chemicals 18% and the least important group is "other manufactured goods" with 11%.

- ② Jordan does not satisfy all its needs (nor indeed most of them) for food domestically. The import bill for food is high, particularly for specific necessary items such as wheat, live animals, meat, rice and sugar<sup>(11)</sup>. The ratio of imported food in total imports is about one-fifth in each of the periods studied except the last and for non-recurrent circumstances. With respect to exports, the proportion of exports of food items in total exports ranged between 10% and 29% with a general declining trend. Agricultural raw materials constitute a small portion of total imports. The proportion of agricultural raw materials in total exports is even smaller than that for imports.
- ③ In spite of the importance of ores & metals exported (ranging between 36% and 39% of the total), they do not dominate Jordan's exports. Thus, Jordan's production and exportation patterns are to some extent diversified, especially in comparison with some of its neighbouring countries where oil dominates their economies and their external trade.

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(11) Jordan, CBJ, *Monthly Statistical Bulletin*, Various Issues.

- ④ During the 1975–1992 period the average annual rate of growth in exports was 12.5% which exceeded the 9.2% growth for imports. The highest rates of growth among the exports groups were for manufactured goods, especially chemicals, while the highest rates for imports were for fuel and ores & metals. The average growth in exports was positive in each period (although negative growth was registered in some years) with the highest growth in the first period 1975-1982, whereas the average growth for imports was negative during 1982-1986 and the highest growth recorded was also during the first period.
- ⑤ While there has been an obvious structural change in exports with respect to their grouping according to SITC categories, no such change has been observed in the case of imports. Manufactured exports constituted one-fifth of total exports in 1975, increased to one-third in 1980 and to one-half in 1992. This was at the expense of the share of ores & metals which dropped from one-half of total exports in 1975 to one-third in 1992. Also, the share of food in total exports declined from 29% in 1975 to 16% in 1992.

The pattern of change in imports is quite different. Food items' share in total imports was 22% in 1975 and 21% in 1992, while that of manufactures was 63% in 1975 and 62% in 1992. However, some fluctuations were registered in both cases. Larger changes were recorded in fuel imports which ranged between 10% and 20%.

#### **6.4 DIRECTION OF TRADE**

The following points may be made on the geographical destination of exports and imports.

- ① While most of Jordan's exports go to the developing countries and only a small proportion of the total goes to the developed countries, a large proportion of total

imports comes from developed countries and a low proportion from developing countries. 85% of Jordan's exports in 1988 and 77% in 1992 went to the developing countries (see *Table 5-8*). With respect to imports, 52% of total imports in 1992 came from developed countries and 42% came from developing countries (see *Table 5-9*). East Europe and the former USSR are not important trade partners. Their share in exports in 1992 was 1.5% and in imports 6%.

- ② At the more disaggregated level, within the group of developing countries, the proportion of exports going to the Middle East is the largest, followed by those going to the countries of "Other Asia". Next in importance come the shares of Africa and Latin America. Within the developed countries group, the EEC countries have the largest share, followed by Japan, the USA and then the EFTA countries.

With regard to imports, the proportions of imports coming from major countries and groups of developed countries in total imports are arranged in descending order according to their ratios in total imports in 1992 as: the EEC, the USA, Japan and the EFTA. While the corresponding ordering for the developing countries is: the Middle East, "Other Asia", North Africa, "Other Africa" and Latin America.

- ③ ⇨ The average annual rate of growth in exports going to the developing countries over the whole period was 12.8% which is almost the same as for the exports directed at the world (12.5%). However, the growth in exports to developed countries was less than that (8.7%), and that of East Europe and the former USSR was a small negative figure (see *Table 5-10*). The EEC countries registered the highest rate of growth among developed countries while "Other Asia", specifically India, recorded the highest growth among the developing countries. The trend in growth of exports to the developed countries indicated that moderate growth was achieved in the first period. This growth became

**Table 5-8. Jordan's Domestic Exports by Geographic Destination**  
(Shares in Total)

								(Percentage)		
								Average		
	1975	1980	1985	1986	1987	1988	1992	1975 ↓ 1982	1982 ↓ 1986	1986 ↓ 1992
World (Value in Thousand US \$)	125641	401549	648989	645133	730320	884786	832600	297697	588027	845181
<b>Developed Countries</b>	<b>11.1</b>	<b>7.5</b>	<b>7.6</b>	<b>12.4</b>	<b>10.6</b>	<b>11.0</b>	<b>6.3</b>	<b>6.8</b>	<b>9.6</b>	<b>9.7</b>
EEC	4.9	1.7	4.5	8.6	6.9	8.0	3.0	2.1	4.8	5.2
EFTA	0.0	0.0	0.1	0.4	0.1	0.5	0.1	.....	0.4	0.1
USA	0.0	0.0	0.0	0.1	0.4	0.4	0.7	.....	.....	0.4
Japan	4.8	3.3	2.3	2.6	3.0	2.0	1.9	3.0	2.2	2.4
Other	1.5	2.4	0.7	0.7	0.2	0.1	0.6	1.7	2.1	0.4
<b>Developing Countries</b>	<b>74.2</b>	<b>84.1</b>	<b>86.0</b>	<b>81.1</b>	<b>83.6</b>	<b>84.7</b>	<b>77.4</b>	<b>84.0</b>	<b>82.7</b>	<b>82.5</b>
Africa	4.7	1.0	1.8	4.8	6.6	6.6	7.4	2.5	2.5	6.4
North Africa	2.8	0.3	1.6	3.4	6.6	4.3	4.0	2.0	1.7	4.6
Latin America	0.0	0.0	1.8	1.7	1.5	0.3	0.8	0.0	0.8	1.0
Asia	69.5	83.1	81.3	71.1	72.8	74.9	68.3	81.5	78.3	71.9
Middle East	57.4	65.1	51.6	44.9	47.6	40.4	36.5	66.9	52.6	41.6
Other Asia	12.1	18.1	29.7	26.1	25.1	34.5	31.7	14.6	25.7	30.4
India	4.9	6.7	17.7	15.6	8.9	17.0	15.2	6.7	13.1	16.5
Other	0.0	0.0	1.2	3.5	2.8	3.0	1.0	.....	1.0	2.4
<b>Developing Countries of Which:</b>										
Arab Countries	42.3	60.7	51.5	46.7	51.9	41.9	35.1	62.9	53.0	41.1
Iraq	6.1	23.6	25.8	19.4	23.9	19.9	7.7	23.4	24.7	18.7
Saudi-Arabia	11.9	16.4	15.3	12.7	10.5	9.7	11.1	17.3	15.5	9.0
Arab Common Market	24.0	35.3	29.0	23.4	33.1	23.3	11.7	35.2	28.5	22.0
Western Asia	42.1	60.4	51.2	45.1	50.7	39.8	31.7	61.6	52.0	34.7
<b>Eastern Europe &amp; Former USSR</b>	<b>14.7</b>	<b>8.4</b>	<b>6.4</b>	<b>6.3</b>	<b>5.8</b>	<b>4.3</b>	<b>1.5</b>	<b>9.2</b>	<b>7.7</b>	<b>4.2</b>
Eastern Europe	14.7	8.4	6.4	6.3	5.8	4.3	1.3	9.2	7.7	3.5
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	14.9	0.0	0.0	0.0

Source: Based on data given in Statistical Appendix A, Table A-4.

Notes: For notes see Statistical Appendix A, Table A-4.

.....= Not available.

**Table 5-9. Jordan's Imports by Geographic Destination  
(Shares in Total)**

								(Percentage)		
								Average		
	1975	1980	1985	1986	1987	1988	1992	1975 ↓ 1982	1982 ↓ 1986	1986 ↓ 1992
World (Value in Thousand US \$)	730831	2394425	2732979	2445425	2705195	2786082	3256531	1920751	2847081	2631342
<b>Developed Countries</b>	<b>62.1</b>	<b>60.5</b>	<b>57.4</b>	<b>56.4</b>	<b>52.0</b>	<b>53.4</b>	<b>51.7</b>	<b>60.3</b>	<b>57.5</b>	<b>53.2</b>
EEC	32.9	36.3	29.5	35.0	31.4	29.3	29.4	33.6	30.5	37.7
EFTA	3.5	2.7	8.0	3.7	3.7	4.6	3.4	3.5	5.2	3.8
USA	10.5	8.6	11.9	8.8	10.2	12.6	11.1	11.4	11.4	12.0
Japan	7.3	7.2	6.3	7.8	6.1	5.3	6.0	6.9	7.7	5.1
Other	8.1	5.8	1.6	1.0	0.7	1.6	1.8	5.0	2.7	1.3
<b>Developing Countries</b>	<b>30.4</b>	<b>34.5</b>	<b>38.0</b>	<b>38.4</b>	<b>42.7</b>	<b>40.8</b>	<b>42.4</b>	<b>33.3</b>	<b>37.5</b>	<b>41.1</b>
Africa	3.4	2.5	1.2	2.9	2.4	2.4	4.3	2.7	1.7	3.3
North Africa	2.8	1.0	0.8	1.6	1.5	1.5	2.6	1.4	0.9	1.8
Latin America	0.4	0.9	1.2	1.4	1.5	1.6	1.8	1.2	1.4	1.6
Asia	26.6	31.1	34.6	33.7	37.9	36.2	36.1	29.5	34.1	36.0
Middle East	21.4	24.9	28.6	26.0	30.3	28.2	23.0	23.7	27.8	26.7
Other Asia	5.2	6.2	6.6	7.7	7.6	8.0	13.1	5.8	6.3	9.3
Other	0.0	0.0	1.0	0.5	0.8	0.6	0.3	.....	0.3	0.5
<b>Developing Countries of Which:</b>										
Arab Countries	21.8	24.1	26.4	24.0	27.6	26.4	20.9	23.0	25.6	24.2
Iraq	0.3	0.3	6.8	9.5	11.0	11.5	13.3	0.2	12.3	12.7
Saudi-Arabia	9.9	17.0	15.8	7.4	8.9	7.5	1.8	15.5	17.7	3.8
Arab Common Market	6.2	2.6	7.7	11.7	13.2	13.7	16.4	3.2	4.6	15.2
Western Asia	21.6	23.8	26.0	23.5	27.3	25.8	19.9	22.7	25.2	23.8
<b>Eastern Europe &amp; Former USSR</b>	<b>6.7</b>	<b>5.0</b>	<b>4.7</b>	<b>5.2</b>	<b>5.3</b>	<b>5.9</b>	<b>5.6</b>	<b>6.3</b>	<b>5.0</b>	<b>5.1</b>
Eastern Europe	6.0	4.3	4.1	4.5	5.0	5.5	4.0	6.0	3.9	4.3
Miscellaneous	0.8	0.0	0.0	0.0	0.0	0.0	0.4	0.3	.....	0.1

**Source:** Based on data given in Statistical Appendix A, Table A-5.

**Notes:** For notes see Statistical Appendix A, Table A-5.

..... = Not available.

**Table 6-10.** Jordan's Domestic Exports by Geographic Distribution  
(Average Annual Rate of Growth)

(Percentage)

	1975 ↓ 1982	1982 ↓ 1986	1986 ↓ 1987	1987 ↓ 1988	1988 ↓ 1989	1989 ↓ 1990	1990 ↓ 1991	1991 ↓ 1992	1986 ↓ 1992	1975 ↓ 1992
<b>World</b>	22.8	5.1	13.2	21.2	4.1	0.1	-4.4	5.9	6.3	12.5
<b>Developed Countries</b>	14.3	21.4	-0.6	25.4					-4.7	8.7
EEC	7.5	51.2	-6.0	39.6	-38.5	-23.4	-18.1	2.8	-10.3	9.3
EFTA		-17.6	-68.9	499.1	-97.5	329.7	-41.7	70.0	-23.6	
USA		294.6	217.2	18.7	48.8	8.4	-36.9	83.9	38.5	
Japan	8.8	10.9	34.9	-17.9	74.8	-38.0	-19.8	13.2	1.4	6.6
Other	34.6	34.0	-71.8	-27.5					4.4	7.1
<b>Developing Countries</b>	24.7	4.9	20.6	22.7					5.3	12.8
Africa	11.3	24.3	63.3	20.5					15.1	15.6
North Africa	19.7	14.6	125.7	-21.8					9.9	15.0
Latin America		362.4	-2.1	-75.2					-6.9	
Asia	25.3	2.4	19.6	24.7					5.4	12.4
Middle East	25.0	-4.9	23.8	2.7					3.3	9.6
Other Asia	26.8	23.1	12.4	66.3					8.2	19.1
India	33.7	20.0	-33.3	131.5	9.3	18.0	-17.0	-12.1	6.4	20.2
Other			-7.0	29.0					-13.4	
<b>Developing Countries of Which:</b>										
Arab Countries	31.0	-4.5	29.8	-2.2	12.9	-6.8	-34.9	29.0	1.9	11.3
Iraq	58.1	-10.5	43.6	0.8	30.8	-13.4	-33.7	45.5	-8.4	14.1
Saudi-Arabia	26.8	0.3	-3.9	11.7	9.8	-19.4	-76.1	470.1	4.4	12.1
Arab Common Market	33.6	-9.9	60.0	-14.8	22.2	-12.2	-45.6	-9.5	-5.3	7.8
Western Asia	30.4	-4.5	31.4	-4.9	-46.2	88.5	-43.1	45.2	0.8	10.7
<b>Eastern Europe &amp; Former USSR</b>	17.4	-8.9	7.8	-9.6	49.6	-55.3	32.3	-59.5	-16.1	-1.7
Eastern Europe	17.4	-8.9	7.8	-9.6	49.0	-82.0	-13.5	31.8	-18.2	-2.6
Miscellaneous										

**Source:** Based on data given in Statistical Appendix A, Table A-4.

**Notes:** For notes see Statistical Appendix A, Table A-4.

greater in the second period and became negative during the last period. The growth in the case of developing countries was high during the first period and became much smaller during the second and third periods. During the last period exports to the USA grew at high rates, while those to the EEC and EFTA declined. As for developing countries, exports to Africa and "Other Asia" grew with rates more than the average for the world (and of developing countries) while the rates for the Middle East were less than the world average.

With respect to imports, the patterns of growth in trade with developed and developing countries over the previous periods are to a large extent similar (see *Table 5-11*). The most salient changes within the developed countries were during the last period when the average rates of growth of imports from the USA were much higher than the average for developed countries. Within the developing countries, the rates of growth for Northern Africa, Latin America and "Other Asia" were higher than the average for developing countries while that of the Middle East was lower.

- ④ The changes in the growth rates in exports resulted in small structural changes with regard to the three major groups (developed countries, developing countries and East Europe). The share of developed countries in total exports increased from 6.8% to 9.6% and then to 9.7% during 1975-1982, 1982-1986 and 1986-1992 respectively. This was mainly at the expense of the share of Eastern Europe, since the share of the developing countries remained almost the same (84%, 82.7% and 82.8% over the three previous periods respectively). However, within the group of developing countries some marked changes took place. The shares of Africa and "Other Asia" more than doubled between the first and the last periods, while that of the Middle East declined by 25%.

As for imports, the developed countries' share in total imports declined gradually reaching 53% over the last period, while that of the developing countries increased also gradually and stood at 41%. The share of East Europe and the former USSR remained almost the same.

**Table 6-11.** Jordan's Imports by Geographic Distribution  
(Average Annual Rate of Growth)

	(Percentage)									
	1975 ↓ 1982	1982 ↓ 1986	1986 ↓ 1987	1987 ↓ 1988	1988 ↓ 1989	1989 ↓ 1990	1990 ↓ 1991	1991 ↓ 1992	1986 ↓ 1992	1975 ↓ 1992
<b>World</b>	23.7	-6.8	10.6	3.0	-24.0	23.0	-3.7	29.9	4.9	9.2
<b>Developed Countries</b>	22.3	-3.3	2.1	5.7					3.4	8.0
EEC	21.4	-2.2	-0.9	-3.9	-24.0	19.1	1.7	27.3	1.8	8.5
EFTA	27.7	-14.8	10.1	28.4	-26.7	-3.4	-5.8	29.8	3.4	9.1
USA	27.1	-6.4	27.2	27.8	-16.1	53.3	-42.2	38.7	9.0	9.6
Japan	24.5	-33.5	-13.8	-10.2	-46.2	3.3	9.6	116.6	0.3	7.9
Other	11.6		-21.0	128.6					15.6	0.0
<b>Developing Countries</b>	27.1	-5.7	22.8	-1.7					6.6	11.4
Africa	11.1	8.6	-8.5	1.1	16.7	-0.2	33.9	35.2	11.8	10.7
North Africa	3.4	10.4	2.1	7.7					14.2	8.7
Latin America	50.7	-9.6	23.1	11.4	-31.6	23.8	36.2	11.5	9.9	19.5
Asia	27.9	-6.7	24.6	-1.8					6.1	11.2
Middle East	28.4	-8.4	29.1	-4.3					2.8	9.6
Other Asia	25.4	0.4	9.3	8.2					14.5	15.3
Other	-1.4		388.3	-27.7					-4.3	48.6
<b>Developing Countries of Which:</b>										
Arab Countries	27.0	-8.8	2.7	-1.4	-20.6	12.2	-28.4	44.7	2.5	8.9
Iraq	12.4	173.4	27.3	8.0	15.2	11.6	-33.1	57.6	10.9	37.9
Saudi-Arabia	38.2	-28.7	33.8	-13.3	-71.7	102.6	-66.1	44.4	-17.3	-1.3
Arab Common Market	0.1	58.3	25.0	6.9	14.1	6.3	-23.8	18.2	11.1	15.7
Western Asia	26.8	-8.9	28.5	-2.4	-19.4	12.1	-28.6	39.8	2.1	8.7
<b>Eastern Europe &amp; Former USSR</b>	21.9	-10.2	12.8	14.1	-45.5	30.1	-4.6	64.0	6.1	8.0
Eastern Europe	17.7	-5.4	21.9	13.6	-47.2	21.3	-14.3	54.1	2.7	6.6
Miscellaneous										4.3

For sources and notes see Statistical Appendix A, Table A-5.



## **6.5 STRUCTURE OF MANUFACTURED TRADE BY REGION AND BY COMMODITY CLASS**

### **6.5.1 DOMESTIC MANUFACTURED EXPORTS**

#### **6.5.1.1 Exports of Total Manufacturing**

Before the mid-1980s, Jordan's manufactured exports were directed almost exclusively to the developing countries (see Statistical Appendix A, *Table A-6* and *Table 6-12*, total manufactures). In 1985 their shares in the total declined slightly to 98.2%. A drop of 10.5 percentage points has been recorded in this ratio in 1988 when it became 87.7%. Thus, the developed countries' share rose from 1.8% in 1985 to 12.3% in 1988, with 10.6% of the total directed at the EEC countries. Within the developing countries group, Asia's share is the largest, although it dropped from 99.2% in 1980 to 74.3% in 1988. The share of Africa rose to 13% in 1988 against less than 1% in 1980. Latin America accounted for merely 0.4% in 1988. Most of the goods exported to Asia were sold in the Middle East. Although still the most substantial partner area, this region's share had dropped from 99% in 1980 to 61.9% in 1988. Arab countries absorbed 70% of the total in 1988 compared with 99.5% in 1980. Saudi-Arabia's contribution declined continuously from 31% in 1975 to 15.3% in 1988 and further to 12.3% in 1992. Iraq's share climbed in both 1980 and 1985 to 45% and dropped after 1990 due to the Gulf crisis.

High growth rates were achieved in manufactured exports directed at most of these groups. Exports to Africa rose at 20% annually (based on Statistical Appendix A, *Table A-6*). North Africa, in particular, witnessed substantial growth in recent years averaging 51.4% per annum. The group of "Other Asia" also fared well. Although the share of the Middle East in the total declined, the value of manufactured exports directed at that region rose in absolute terms from \$22.0 million in 1975 to \$245.2 million in 1988.

**Table 6-12. Direction of Jordan's Domestic Manufactured Exports According to SITC, Selected Years (Shares in Total)**

	(Percentage)																									
	5				6 - 68				7				8													
	1975	1980	1985	1988	1982	1975	1980	1985	1988	1982	1975	1980	1985	1988	1982	1975	1980	1985	1988	1982						
World (Value in Thousand US \$)	6090	36563	129510	250708	289794	12513	62426	99198	88467	96368	1462	7980	5070	10046	17420	5004	28776	47247	36667	60346	25069	135745	281025	398188	463928	
Developed Countries	0.00	0.00	3.79	16.65	0.40	0.00	0.00	0.00	0.07	2.44	0.00	0.00	0.00	0.00	0.87	2.06	0.42	0.27	18.77	10.31	0.41	0.09	1.79	12.30	2.13	
EEC	0.00	0.00	3.74	16.31	0.17	0.00	0.00	0.00	0.06	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	3.28	3.73	0.00	0.08	1.72	10.64	0.84	
EFTA	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	0.00	0.00	0.00	0.00	0.00	7.29	0.00	0.00	0.00	0.00	0.68	0.00	
USA	0.00	0.00	0.00	0.08	0.21	0.00	0.00	0.00	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.06	6.45	0.00	0.00	0.00	0.80	1.23	
Japan	0.00	0.00	0.00	0.25	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	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	
Other	0.00	0.00	0.05	0.01	0.01	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.14	0.13	0.00	0.00	0.02	0.02	0.03	
Developing Countries	100.00	99.99	96.21	83.35	77.68	99.99	99.86	99.94	99.94	65.44	100.07	99.57	99.96	99.57	43.50	97.94	99.58	99.73	81.21	38.34	99.59	99.82	98.18	87.68	68.74	
Africa	8.65	2.04	3.19	14.02	16.84	11.00	0.19	2.89	11.49	9.08	13.27	0.00	38.01	17.69	10.71	16.91	0.00	0.54	8.40	10.59	11.74	0.64	3.27	12.96	14.18	
North Africa	6.12	2.01	2.99	5.89	6.97	11.00	0.19	2.88	11.47	8.19	13.27	0.00	38.01	17.69	10.60	16.91	0.00	0.54	8.39	10.51	11.13	0.63	3.17	7.81	7.82	
Latin America	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.28	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	0.38	0.06	
Asia	91.35	97.95	93.01	68.69	60.85	89.00	99.65	97.05	88.45	56.08	86.80	98.66	61.97	81.88	32.78	81.04	99.27	99.19	72.82	27.74	87.85	99.05	94.92	74.32	54.50	
Middle East	91.35	97.95	47.21	49.03	42.66	89.00	99.89	97.05	88.45	34.20	86.80	98.66	61.97	81.88	32.78	81.04	99.27	99.19	72.82	27.45	87.85	99.16	73.81	61.88	38.55	
Other Asia	0.00	0.00	45.81	19.65	18.19	0.00	0.00	0.00	0.00	21.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	21.11	12.44	15.94	
India	0.00	0.00	37.13	15.44	15.74	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	0.00	0.00	0.00	0.00	17.11	9.77	9.83	
Other	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.00	1.02	0.00	0.00	0.01	0.00	0.31	0.00	0.00	0.00	0.00	0.13	0.00	0.02	0.00	
Developing Countries of Which:																										
Arab Countries	95.22	99.82	48.30	54.90	39.68	99.65	99.82	99.80	99.73	42.32	93.30	98.51	97.99	98.58	41.72	94.02	98.99	99.25	80.37	37.69	97.08	99.57	75.94	69.53	40.05	
Iraq	26.88	48.92	14.60	20.99	9.02	26.17	40.67	64.39	74.70	0.00	16.96	44.21	18.54	56.01	0.00	14.43	50.31	87.77	51.77	0.00	23.46	45.14	44.55	38.10	5.63	
Saudi - Arabia	19.90	24.41	20.30	19.40	12.33	42.49	37.74	25.54	8.22	10.77	15.18	14.15	20.89	15.05	17.21	23.78	28.20	8.14	6.86	13.30	31.68	30.74	20.12	15.34	12.32	
Arab Common Market	66.8	65.7	22.4	27.5	17.7	50.8	57.3	70.4	85.8	22.2	78.1	71.1	62.9	67.9	7.0	62.9	62.5	88.4	55.8	8.3	58.7	61.5	51.1	45.6	17.0	
Western Asia	90.95	97.82	47.06	51.56	34.05	99.65	99.63	99.62	97.69	35.70	93.30	98.51	97.99	92.79	31.69	94.02	98.99	99.25	75.72	27.39	96.04	98.94	75.31	66.32	33.44	
Eastern Europe & Former USSR	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.82	0.00	0.60	0.00	0.00	1.83	0.00	0.00	0.00	0.00	0.54	
Eastern Europe	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.29	
Miscellaneous	0.00	0.00	0.00	0.00	21.57	0.00	0.00	0.00	0.00	31.87	0.00	0.00	0.00	0.00	54.81	0.00	0.00	0.00	0.00	49.52	0.00	0.00	0.00	0.00	28.60	

For source and notes see Statistical Appendix A, Table A-6.

Iraq was Jordan's main trading partner from the beginning of the 1980s until the end of the decade. Exports to Iraq reached \$150.9 million in 1988, constituting 38.0% of the total, and grew by an average rate of 11.9% per annum over the 1980-1988 period. Saudi-Arabia's market was the largest before 1980. It took 32% of total exports in 1975. Although exports to Saudi-Arabia increased continuously, its share declined to 15.3% of the total in 1988 and the export growth achieved was less than that of Iraq. Syria was also one of the major trading partner of Jordan in the 1970s, as its share in the total was 17.1% in 1979, but it ranged between 1.2% to 5.6% later.

With respect to East Europe and the former USSR, these countries did not constitute export markets for Jordan's manufactures until recently, and then only in very small amounts. Their share in total manufactured exports was less than 1% in 1992.

### **5.5.1.2 Exports of Major SITC Sections of Manufacturing**

#### *a) Exports to Developing Countries*

Manufactured exports going to the developing countries dominate Jordan's exports for each section, particularly sections "6" and "7", and accounted for 99% of the total in 1988. Although most of sections "5" and "8" are also directed at developing countries' markets, with 81% for the former and 83% for the latter in 1988, an increasing portion is being directed at the developed countries.

#### SITC "5", Chemicals

Chemicals is the most important section in Jordan's manufactured exports. Their contribution in total manufacturing accounted for 25.4%, 50.2% and 62.4% during 1975-1982, 1982-1986 and 1986-1992 respectively (*Table 5-12*, section 5). Although still dominating export markets for chemicals, the Middle East countries' shares in the total dropped from 91.4% to about 50% between 1975 and 1988 (*Table 5-12*). The

loss in this share was offset, within the developing countries group, by the gains realised by Africa and "Other Asia", particularly India.

Exports to Africa registered sharp increases in 1981 and stagnated during the first half of the 1980s, but recovered after 1986 and achieved very high rates of growth averaging 30% per annum. Exports directed at both North Africa and the group of "Other Africa" have grown considerably. Most exports of this section to Libya, Sudan, Tunisia, Algeria and Morocco were pharmaceuticals and some other items, while most exports going to "Other Africa" were manufactured fertilisers and medicaments. Exports of fertilisers to Ethiopia were considerable, reaching \$28.2 million or more than one-quarter of fertilisers' export value in 1992.

Arab countries as a group are the main importers of this section, accounting for 55% of the total in 1988 against 100% in 1980. Exports of this section go to every Arab country with various amounts and cover different items. The main exported categories in 1992 were: pharmaceuticals (\$67 million), fertilisers (\$32 million), inorganic chemicals (\$15 million) and plastics in primary form (\$5 million). Iraq and Saudi-Arabia bought more than three-quarters of pharmaceuticals<sup>(12)</sup>.

Regarding the group of "Other Asia", India started to import manufactured goods from Jordan in 1982. Other countries followed such as China in 1983, Pakistan and Thailand in 1984 and Malaysia in 1985. Indonesia and Singapore also import from Jordan. India ranked first among these countries with about \$45 million in 1992, constituting around 16% of the total exports of this section. The share of the rest of the countries of "Other Asia" accounted for 3% of the total. In 1987, for example, all exports to these countries from this section were fertilisers, but in 1992 other items were also exported, albeit in small amounts, such as pharmaceuticals to Malaysia and inorganic chemicals to India which represented 85% of the total of this item.

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(12) UN, *Commodity Trade Statistics*, Statistical Papers Series, Series D, Vol. XLII, No. 1-17 (S/ESA/STAT/SER.D/111-117; New York: UN, 1994).

SITC 6-68, Basic Manufactures

The relative importance of exports from this section in total manufactured exports is secondarily to that of section 5. Its contribution stood at about one-quarter during 1986-1992 against a large share of 47% over 1975-1982.

Analysis of exports of this grouping (*Table 5-12* above, section 6-68) shows that:

- ① This category has been exclusively exported to the developing countries with values fluctuating as follows: \$12.5 million in 1975, \$119 million in 1981, \$54 million in 1986, \$115 million in 1990 and \$96 million in 1992.
- ② The same pattern that had prevailed in 1975 prevailed also in 1988. Most exports were directed at the Middle Eastern countries (89% in 1975 and in 1988) and 11% for Northern Africa.
- ③ Iraq's share increased from one-fourth to three-quarters between 1975 and 1988. This was partly at the expense of the drop in Saudi-Arabia's share from 43% to only 8%. The share of Arab Common Market (ACM), which includes Iraq, increased significantly.

Data reported by commodity and by region after 1988 are available only for the year 1992. Analysis of these data might be somewhat misleading because of the high percentage recorded for the miscellaneous item (28.6%), see Statistical Appendix A, *Table A-6*. Despite this, the following points may be made:

- \* The group of "Other Asia" has become one of the new export markets for this section, with a relatively high share reaching 22% of the total.
- \* Latin America has also become one of the export markets for this category, although with a very limited share in the total (0.3%).

This section consists of a wide range of items, which are exported to almost every market in the region. Sudan, Libya and Egypt take the largest portion of this section's exports directed to North Africa; while Iraq, Syria, Saudi-Arabia and Yemen absorb the largest portion of this section's exports directed at West Asia. Cement has been exported to these countries in relatively large amounts. Other items also found their way to these markets, particularly textile yarn and fabrics, paper and cardboard in addition to manufactures of metals.

#### SITC "7", Machinery & Transport Equipment

Exports of this category are the smallest among the other categories of manufacturing. In 1988 almost 100% (\$10 million) was exported to the developing countries, with a share of about 82% directed at the Middle East and the rest to Africa (specifically North Africa). Saudi-Arabia's share has been moderate (about 15%), while that of Iraq was increasing and reached 56% in 1988. General industrial machinery, particularly heating and cooling equipment, constituted about one-half of the total of this category in 1992, i.e. \$8.3 million out of \$17.4 million. Other items are parts of electrical machinery. The direction of exports of these items indicates that they were distributed across a wide range of markets with very small amounts for each. Only Saudi-Arabia, Egypt and Iraq had relatively large amounts.

#### SITC "8", Miscellaneous Manufactured Goods

In 1988 the share of exports of this category directed at the developing countries in the total was 81.2% with high concentration on the Middle East region. The remainder, which was directed at the developed countries group, was spread over the EEC and EFTA countries in addition to the USA.

Before the Gulf War Iraq's share climbed to 88% in 1985 and then declined to slightly more than one-half in 1988. Exports to Saudi-Arabia and the UAE were less

important, with 13% of the total for the former and 10.3% for the latter in 1992. Clothing, footwear, furniture and plastic articles were the main articles exported to this region.

Libya has the largest share in total exports among the Northern African countries. In 1992 it absorbed two thirds of the exports of this category directed at North Africa. Sudan and Tunisia absorbed smaller amounts. The same previous categories were exported to this region in addition to small amounts of medical instruments.

*b) Exports to the Developed Countries and Eastern Europe*

Most exports going to these countries are some items of SITC "5" and SITC "8". Exports of section "8" to developed countries constituted about 19% of total Jordan's exports from this section in 1988, while that of section "5" was about 17%. This was in contrast with only 0.3% for the former and 3.8% for the latter in 1985. With respect to the shares in the total directed only at the developed countries, the EEC countries accounted for 17.5% of the total in 1988. The EFTA countries' share was 38.3% and that of the USA 42.9%. Japan did not take any exports from this category. The USA market seems to be absorbing increasing shares of Jordan's exports, although these shares remain relatively small. In 1992 they reached about 6.5% from this category and 1.2% from total manufacturing. An opposite pattern prevailed in the case of section "5". The EEC countries took \$40.9 million out of the total of \$41.7 million for developed countries in 1988 leaving very small shares for the USA and Japan. Most of the developed countries' imports from section "5" were manufactured fertilisers, while the major portion of section "8" were clothing.

With respect to section "6", exports were very small. They stood at \$2.3 million in 1992, or 2.4% of the total of this section. They were directed nearly equally between the EEC countries and Japan. Exports of section "7" were minimal.

## 6.5.2 MANUFACTURED IMPORTS

### 6.5.2.1 Imports of Total Manufacturing

The major source of Jordan's manufactured imports is the developed countries. The developing countries' role in providing Jordan with its requirements is less than one-third of the total (see Statistical Appendix A, *Table A-7* and *Table 6-13* below). Imports from the EEC countries constitute the largest part, followed by the USA and Japan, then by the Middle Eastern and "Other Asia" countries. Only recently (since 1988) have the last two groupings surpassed the USA and Japan, with the EEC countries still being the dominant partners.

The relative importance of the developed countries has been declining continuously. However, in absolute terms the value of imports from these countries has increased considerably between 1975-1992 with an average rate of increase of 7.4% per annum. The share of the EEC countries has also declined from 45% to 38% of the total over the same period. The EFTA countries have maintained their share at around 5% while the share of the USA dropped in 1992 to half of its share in 1985, reaching 8.8% in 1992. Japan's contribution increased in 1985 to 12.3% then dropped in 1988 and 1992 to slightly more than 9%. The participation of Eastern Europe and the former USSR was relatively small, averaging around 6%. East Europe, however, was more important than the USSR. It provided Jordan with about 80% of the total of this group. In 1992, its share dropped to 60%, the rest being provided by Russia.

The developing countries' contribution has been growing steadily, amounting to 31.6% of the total in 1992. This is more than double their share in 1975. All the major groups and countries' shares increased. But the increase of the group of "Other Asia" was the highest. The share of this group has been doubled four times between 1975 and 1992, reaching 14.8%. The shares of each of Africa and Latin America more than doubled, becoming 4.7% for the former and 1.4% for the latter. The contribution of the Middle Eastern countries has fluctuated within narrow ranges (7.5% to 12.5%), standing at 10.3% in 1992 or \$207 million.



**Table 6-13.** Direction of Jordan's Domestic Manufactured Imports According to SITC, Selected Years  
(Shares in Total)

	5				6 - 68				7				8				Total Manufactures									
	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992						
World (Value in Thousand US \$)	38095	131214	172352	276315	361165	137965	475223	402549	458256	628579	232101	688712	527075	628276	798586	51684	195578	269982	201022	221968	459845	1470727	1371958	1563869	2010298	
<b>Developed Countries</b>	<b>82.40</b>	<b>88.25</b>	<b>73.00</b>	<b>65.13</b>	<b>64.57</b>	<b>69.00</b>	<b>67.69</b>	<b>68.00</b>	<b>45.30</b>	<b>34.92</b>	<b>93.20</b>	<b>90.18</b>	<b>93.20</b>	<b>87.55</b>	<b>83.58</b>	<b>46.64</b>	<b>67.51</b>	<b>67.26</b>	<b>57.85</b>	<b>55.52</b>	<b>80.05</b>	<b>79.73</b>	<b>78.20</b>	<b>67.29</b>	<b>61.85</b>	
EEC	60.30	68.08	58.69	50.71	48.18	39.68	36.44	45.64	29.53	22.57	48.57	54.35	41.75	38.09	45.92	27.22	45.89	36.39	41.18	36.52	44.48	48.66	43.97	38.21	37.99	
EFTA	6.65	7.95	7.06	7.40	7.28	4.75	3.96	5.66	5.45	5.85	3.54	2.71	4.71	5.52	3.36	4.86	2.69	5.37	3.63	3.04	4.31	3.55	5.41	5.59	4.80	
USA	8.85	7.56	5.09	5.21	5.27	2.08	5.02	2.33	3.59	2.91	24.21	16.28	32.14	27.13	15.26	5.02	6.50	10.35	7.35	7.50	14.14	10.56	15.71	13.82	8.75	
Japan	3.46	1.27	1.74	1.38	2.32	16.87	11.83	12.36	6.49	3.43	6.98	13.98	14.32	15.64	18.27	7.72	7.90	14.98	5.34	7.89	9.74	11.34	12.29	9.11	9.62	
Other	3.14	3.75	0.43	0.43	1.52	6.42	10.44	2.00	0.25	0.15	9.91	2.86	0.39	1.17	0.78	1.82	4.52	0.16	0.34	0.58	7.39	5.61	0.82	0.66	0.69	
<b>Developing Countries</b>	<b>15.68</b>	<b>10.64</b>	<b>21.27</b>	<b>32.56</b>	<b>29.66</b>	<b>20.80</b>	<b>22.20</b>	<b>26.61</b>	<b>44.32</b>	<b>51.25</b>	<b>5.91</b>	<b>8.18</b>	<b>5.94</b>	<b>9.79</b>	<b>13.74</b>	<b>22.49</b>	<b>29.86</b>	<b>30.95</b>	<b>38.63</b>	<b>43.17</b>	<b>13.05</b>	<b>15.81</b>	<b>18.85</b>	<b>27.64</b>	<b>31.58</b>	
Africa	0.00	0.00	0.64	1.86	6.04	1.66	1.51	2.67	5.04	10.19	0.00	0.00	0.04	0.20	0.42	0.67	0.11	1.00	2.07	2.30	0.57	0.50	1.08	2.15	4.69	
North Africa	0.00	0.00	0.61	1.85	5.45	1.66	0.08	1.15	2.16	2.88	0.00	0.00	0.04	0.20	0.42	0.67	0.08	0.98	2.07	2.30	0.57	0.04	0.62	1.31	2.30	
Latin America	0.00	0.00	0.00	0.21	0.58	0.00	0.82	2.97	3.71	3.42	0.00	0.14	0.12	0.65	0.53	0.00	0.07	0.06	0.18	0.35	0.00	0.34	0.93	1.41	1.42	
Asia	15.40	10.55	20.34	28.94	22.35	19.10	19.86	20.34	35.15	37.17	5.89	8.03	5.46	7.74	12.59	21.72	29.69	28.82	35.82	40.29	12.42	14.96	16.29	23.13	25.09	
Middle East	12.57	7.07	18.14	26.34	17.39	12.65	8.27	9.74	19.34	15.11	4.90	5.77	3.34	2.15	2.32	13.46	11.41	9.79	11.18	13.97	8.83	7.45	8.34	12.62	10.31	
Other Asia	2.83	3.47	2.20	2.59	4.97	6.45	11.59	10.60	15.81	22.06	0.98	2.26	2.13	5.58	10.26	8.25	18.27	19.03	24.65	26.32	3.59	7.51	7.95	10.50	14.77	
Other	0.29	0.09	0.30	1.56	0.69	0.03	0.00	0.63	0.42	0.47	0.02	0.01	0.31	1.21	0.21	0.10	0.00	1.08	0.54	0.23	0.05	0.01	0.55	0.95	0.38	
<b>Developing Countries of Which:</b>																										
Arab Countries	11.94	6.68	16.74	26.59	18.98	13.31	7.52	4.98	11.24	8.35	1.81	5.50	2.74	1.52	1.46	13.89	9.91	8.61	10.97	11.77	7.46	6.85	6.31	10.01	7.88	
Arab Common Market	0.9	1.0	2.1	4.8	5.3	4.7	1.8	1.7	3.2	3.1	0.2	0.6	0.2	0.3	0.5	7.6	3.6	2.2	3.3	8.7	2.5	1.4	1.3	2.4	3.1	
Western Asia	11.94	6.68	16.41	26.35	17.45	13.31	7.52	4.73	10.57	7.09	1.81	5.50	2.74	1.42	1.22	13.89	9.91	8.25	9.98	10.71	7.46	6.85	6.12	9.60	7.02	
<b>Eastern Europe &amp; Former USSR</b>	<b>1.80</b>	<b>1.09</b>	<b>5.72</b>	<b>2.31</b>	<b>3.77</b>	<b>9.41</b>	<b>10.12</b>	<b>5.39</b>	<b>10.38</b>	<b>13.73</b>	<b>0.88</b>	<b>1.63</b>	<b>0.76</b>	<b>2.66</b>	<b>2.63</b>	<b>30.86</b>	<b>2.58</b>	<b>1.79</b>	<b>3.53</b>	<b>0.72</b>	<b>6.88</b>	<b>4.45</b>	<b>2.95</b>	<b>4.97</b>	<b>6.10</b>	
Eastern Europe	1.80	1.09	3.65	2.23	2.05	7.74	8.34	4.40	9.22	8.91	0.83	1.17	0.59	2.06	0.90	30.63	2.58	1.65	3.34	0.61	6.33	3.67	2.30	4.35	3.58	
Miscellaneous	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.48	

For source and notes see Statistical Appendix A, Table A-7.

### 6.5.2.2 Manufactured Imports by Major SITC Sections

Analysis of *Table 6-13* and Statistical Appendix A-7 indicates the following points:

#### a) *Imports from Developed Countries*

- ① The developed countries are the main source of Jordan's manufactured imports of each SITC section (except SITC "6" in recent years). The relative importance of these countries has declined, with the smallest drop in their share being in section "7" and the largest in section "6".
- ② These countries provide Jordan with most of its requirements of machinery & transport equipment, with 83% of the total in 1992 against 93% in 1975. The salient change within this group was the increase by 2.6 fold in the share of Japan which climbed to 18.3% in 1992. The share of the USA increased slightly between 1975 and 1988, reaching 27%, but dropped to only 15% in 1992. The share of the EEC countries, which is the largest, was more stable at around 46%. The share of the EFTA group also did not witness significant changes, and ranged between 2.7% and 3.4% of the total.
- ③ Imports of chemicals from the developed countries are also important. Two-thirds of Jordan's needs in this category come from these countries (against 88% in 1980). The drop in the share of this section between 1980 and 1988 was more pronounced than the decrease in the case of machinery & transport equipment.

The EEC countries are again dominant, with 50% of the total. The share of EFTA averaged around 7% which was higher than its average in total manufacturing. The USA's share has declined slightly but it is to some extent near to that of EFTA's (5.3% in 1992). Japan's share is the smallest among these groups ranging between 1.3% and 3.4% which is less than its contribution in other categories such as "7" and "6".

- ④ In section "8", although the developed countries' share is relatively less important than for the previous sections, these countries are still the major

suppliers to Jordan within this category. The contribution of the developed countries in the total dropped from 68% in 1980 to 56% in 1992 but the decline was less pronounced than that in group 5 and 6. The EEC countries are also the main exporters, with 37% in 1992. The shares of the USA and Japan are to some extent similar, with around 8% in 1992. The share of EFTA was the smallest ranging between 2.7% and 4.9%.

- ⑤ The pattern of change in section "6" was different from those of the previous sections. It witnessed continuous declines, as with the other groups, but the declines in the case of this section resulted in pushing the share of the developed countries down to 35% and thus giving the lead to the developing countries. In absolute terms this section grew by an average of 5% per annum over the whole period 1975-1992, but the growth in the case of the developing countries was more pronounced, as it reached 15.3% per annum. The decline in the developed countries' shares was attributed to the drop in the share of the EEC countries from 40% in 1975 to 22% in 1992 and that of Japan from 17% to only 3.4% over the same period. The USA and EFTA have maintained their small shares which ranged between 2%-3% for the former and 4%-6% for the latter.
- ⑥ Eastern Europe and the former USSR had relatively stable shares. Their combined share in both 1975 and 1992 was around 6% with small fluctuations in other years.

The most important exports of these countries to Jordan are category "6", which reached 14% of the total in 1992 against 9% in 1975, followed by group "5" which increased from 1.8% to 3.8% during the same period. The most salient change was a large declines in the share of category "8" in total imports, from 30% in 1975 to merely 3.5% in 1985 and to less than 1% in 1992.

It should be noticed that the relative importance of the countries of East Europe within the group of "East Europe and the former USSR" has been

declining. The reason was that Russia's share has been increasing since 1990. Its shares increased in the category of machines & transport equipment and in basic manufactures. The increase was from 0.6% to 1.7% of the total between 1988–1992 for the former and from 1.2% to 4.2% for the latter. Section "8" was less important.

### *b) Imports from Developing Countries*

- ① Manufactured imports from the developing countries are satisfying less than one-third of Jordan's needs for manufactured imports. More than one-half of Jordan's imports from section "6" is supplied by the developing countries, but these countries are not important suppliers of machines and transport equipment. Their shares in sections "8" and "5" are relatively small although increasing.
- ② Asia is the main supplier to Jordan in section "6". The shares of Africa and Latin America are small but larger than their shares in other categories. Africa's share has increased considerably between 1975 and 1992, from 1.7% to 10.2%. The larger proportion of this increase did not come from Northern Africa as with the case in other categories, but rather from other countries in Africa such as Zimbabwe.

The shares of "Asian countries other than the Middle East" have climbed from 6.5% in 1975 to 22.1% in 1992. As this category includes a large variety of goods, many countries in Asia, particularly of the South East, provide Jordan with its needs in various amounts. South Korea, China, Indonesia and recently India were the main sources (from this group of countries) for wood and cork, rubber products, textiles, non metallic minerals, iron and steel, manufactured metals and machinery.

The Middle East region fared well in this category in comparison with categories "7" and "8". However, its performance, in contrast with that of

“Other Asia”, was weak. Its share in the total doubled 1.2 times between 1975 and 1992 while that of “Other Asia” doubled 3.4 times. Turkey in particular is important. In 1987, for example, its exports to Jordan in this category stood at \$67 million, i.e. 63% of the Middle East’s share or 14% of total imports from this category. Imports from Turkey were mainly iron and steel, textiles, non-metallic minerals (glass) and clothing. Saudi-Arabia was also important in providing some metal manufactures. Syria was also a supplier of textiles.

- ③ Category “8” is also accounted for, to a relatively large extent, by the developing countries. The share of imports in this category coming from the developing countries amounted to 43.2% in 1992 as against 22.5% in 1975. The major providers are the countries of South East Asia. Their share in 1992 stood at 26.3% which is double that of the Middle East. Africa and Latin America are not important suppliers.
- ④ The contribution of the developing countries in Jordan’s imports of section “5” was about 30% of the total in 1992. Most of these imports came from the Middle East. This region’s share in the total coming from the developing countries was 58% in 1992 as compared to 81% in 1988. The share of Northern Africa is comparable with that of “Other Asia” at about 5% of the total in 1992. Arab countries are the main source, and imports comprise mostly inorganic chemicals from Kuwait, fertilisers from Bahrain, Kuwait, Saudi-Arabia, Iraq and Lebanon, plastic materials from Saudi–Arabia and chemical manufactures from Iraq.
- ⑤ The developing countries’ least important share in imports is found in category “7”. However, this share is increasing. Between 1975 and 1992 it rose from 5.9% to 13.7%. The main source of the increase in this share was the group of “Other Asia”. Its share increased ten-fold. The shares of Africa and Latin America are limited, and that of the Middle East was small and decreasing.

## 6.6 DIVERSIFICATION OF EXPORT MARKETS AND COMMODITIES

The need for a reduction in the degree of external dependence, along with ensuring stable markets, has long been a preoccupation for Jordan's officials. This has led to a focus on diversification of sources and outlets for Jordan's goods, and on widening the export base and diversifying exported commodities. The need for diversification in markets has been reinforced recently after the closure of the Iraqi market which in 1989 took one-quarter of Jordan's exports. Furthermore, the dependence on the Indian market for exports of phosphates and potash has led to a series of bilateral deals for the import of Indian goods and services, which have sometimes proved expensive for Jordan<sup>(13)</sup>.

As stated before<sup>(14)</sup>, diversification in both commodities and markets has been taking place during the period under consideration, particularly in recent years. Such diversification is related to total exports and imports and also to manufactures. The major changes in this regard have been the decline in the Middle East's share in total manufactured exports and the increase in the number of "new" export products.

### 6.6.1 ROLE OF NEW EXPORT PRODUCTS IN DIVERSIFICATION

The significance of New Export Products (NEP) attaches to their participation in trade expansion and diversification, and more importantly, to their direct impact on, and link with the process of industrialisation and with the broadening of the productive base.

According to a recent study conducted in 1992 by the United Nations for Western Asia Countries<sup>(15)</sup>, the number of "new" items<sup>(16)</sup> exported each year over the

(13) Indeed, the value of Jordan's imports from India has risen significantly during the last few years, from merely \$7.6 million in 1988 to \$33.4 million in 1990 and \$84.9 million in 1991. These imports include Indian wheat and electrical machinery for the power sector.

(14) See sections 6.4 on "Direction of Trade" and section 6.5 on "Structure of Manufactured Trade by Region and by Commodity Classes" in this Chapter.

(15) See the UN, ESCWA, *Developments in the External Sector of the ESCWA Region: Performance of New Export Products in the 1980s* (E/ESCWA/DPD/1992/1), June 1992.

(16) According to the above UN study items were basically considered as new exports if they were not exported at all in the base/reference period, or were exported before but in three or more years subsequently and in amounts averaging more than \$50,000.

period 1980-1985 ranged between 114 and 131. The value of the "new" items exported rose by more than ten fold between 1977 and 1984/1985 contributing for 73% of export expansion<sup>(17)</sup>. With respect to geographic diversification, in 1985 Iraq took 38% of Jordan's total new exports, while the shares of Saudi-Arabia and India in the total were 15% and 21% respectively. These were followed by less important markets such as France, Italy and Brazil. The remaining part of the new exports was spread over a large number of countries such as Syria, Indonesia, Pakistan, South Korea, Canada, Turkey, Venezuela, Egypt and the UAE. It is clear that new exports were concentrated in three markets, Iraq, India and Saudi-Arabia, which collectively accounted for about three-quarters of the total. Some of the countries which took a relatively substantial share of total exports at the beginning of the period, notably Syria, Iran, Lebanon, Kuwait, Japan, Taiwan and Turkey absorbed a lower share of new exports by the end of the period (or no share at all as in the case of Iran). As for commodity diversification, at the SITC "two digit" level, 19 product categories constituted 98.7% of the total value of the new export products in 1984/1985. Nine of these products were manufactured goods constituting 63% of the total value. These include manufactured fertilisers, medical and pharmaceutical products, clothing, non-metallic mineral manufactures, wood & cork, feeding stuff for animals, and manufactures of metals.

Comparison of Jordan's performance in this field with that of other countries in the region (depending on the same ESCWA study) revealed that Jordan's involvement was significant in most of the product categories listed as new in this study. As for geographical diversification, the concentration of Jordan's new exports on a few markets (three markets) was to some extent similar to the situation in other countries in the region such as Iraq where two-thirds of its new exports in 1985 went to two

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(17) Defined as the change in exports of new exports/the change in total exports. See ESCWA, *Developments in the External Sector of the ESCWA Region*, p.43

countries only. In the case of Syria, about two-thirds of its new exports in 1985 went to only four markets.

### 5.6.2 RECENT DEVELOPMENTS

The most important developments that have taken place since 1985 and which led to greater diversification in commodities and markets may be summarised as follows:

#### *a) Diversification in Commodities*

Some SITC sections, of revision 3 in 1992<sup>(18)</sup>, at the two digit level were exported for the first time (in comparison with 1985 as a base or reference year). These include metal working machinery, scientific equipment, and photo apparel. Exports of other sections have increased, as a result of a rise in previously exported goods and/or of exporting new items (at the three or more digit level). The following are examples of new items of manufacturing: section 5; synthetic colours, printing ink, antibiotics and perfuming and cosmetics, of section 6; man-made fibres, floor coverings, cast, rolled and glass sheets, and safety glass, of section 7; civil engineering equipment, "other machinery parts", pumps and centrifuges, taps and valves and electric distributions, of section 8; parts of footwear and gold & silverware.

Gold & silverware (\$7606 thousand), floor coverings (\$3929 thousand) and perfuming & cosmetics (\$2022 thousand) were the most important items. Other items, although smaller in value, reflect the persistent efforts of Jordan to diversify its export commodity composition.

#### *b) Diversification of Markets*

An increasing, albeit still small, proportion of Jordan's exports, has gone to "new" markets in recent years. This may be explained as a favourable effect of the

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(18) UN, *Commodity Trade Statistics, 1985*, Statistical Papers, Series D. Vol. XXXV, No. 1-14 (S/ESA/STAT/SER. D/97-14, New York: UN, 1987) and UN, *Commodity Trade Statistics, 1992*, Statistical Papers, Series D Vol. XLII, No. 1-17 (S/ESA/STAT/SER. D/111-17; New York: UN, 1994)



depreciation of the Jordan dinar in 1988 and 1989 as Jordan's exports became cheaper to some countries which did not find it favourable to import from Jordan previously. Also, it may be an outcome of extensive government efforts to encourage exports in general, to identify new export markets for exporters and to conclude commercial agreements. Furthermore, the Gulf crisis which resulted in the closure of the Iraqi market and the temporarily closure of the GCC markets appears to have stimulated Jordanian exporters to find new markets for their products.

Comparisons of export markets in 1992 with those in 1985 reveal several features. First, some goods had been exported in 1992 to markets that did not figure on the export markets list in 1985, including Algeria, Morocco, Djibouti, Mauritius, Zimbabwe, USA, Panama, Iran, Nepal, Philippines, Sri Lanka, Thailand, Kazahstan, Portugal, Spain and Russia. Iran (which took \$28716 thousand), Thailand (\$12969 thousand) and the USA (\$6145 thousand) were most important new markets. Secondly, other goods had been exported for the first time to already known export markets that used to import other items from Jordan, and these "new" items were in most SITC sections but particularly sections 6 and 8.

Most of manufactured articles from (SITC 5) that went to Asia were manufactured fertilisers, while most of the goods that went to East Europe, Portugal and Africa were pharmaceuticals. Exports of SITC (6) went to 23 markets in 1992 in comparison with 11 in 1985. North Africa's imports of this section from Jordan were basically floor covering, textile yarn and thread, and manufactured metals in addition to cement. Imports of the countries of South East Asia from Jordan were concentrated on cement. Exports of SITC (7) went mainly to North Africa, and those of SITC (8) went to a large number of countries (21 in 1992 compared to 8 in 1985). This category consists of a large range of goods; of particular importance were clothing for North Africa, the USA, the UK, Germany, Greece and Russia; medical instruments to North Africa and Russia; and gold and silverware to the USA.

## **6.7 SUMMARY AND CONCLUDING REMARKS**

- ① Realising the significance of the role played by the external sector in the economies of 'small' countries, Jordan has traditionally pursued a liberal outward-looking policy in trade. In general, external trade in Jordan has moved in line with the trends in the regional economies. Thus, it benefited in the second half of the 1970s from the favourable world demand conditions regarding its mineral exports (phosphates), and benefited from the economic boom in the region which started during the first third of the 1970s. However, its trade flows slowed during 1982–1986 due to the regional and domestic recessions. The depreciation of the Jordan dinar at the end of the 1980s and the regional conditions related to the Gulf crisis and its aftermath at the beginning of the 1990s had noticeable impacts on Jordan's economy and external trade.
- ② The proportion of total trade (exports + imports) to GDP is generally high, ranging between 50% and 105% during the period, 1975-1992. Exports are substantially less than imports and Jordan suffers from a chronic trade deficit. The shares of domestic exports, re-exports and imports in GDP in 1992 were 20%, 6% and 43% respectively. The shares of manufactured domestic exports, re-exports and imports in their corresponding totals in 1992 were 50%, 68% and 62% respectively.
- ③ The highest real growth rates of both exports and imports were achieved during the 1975–1980 period. Manufactured domestic exports, in particular, fared very well, growing by an average of 40% annually. During the decade of the 1980s both total and manufactured imports stagnated after their peak values in 1981 and 1982 and registered negative growth in some years. With respect to exports, their growth slowed and a 14% average annual growth was registered for manufactured exports compared with a 9% for the total. In early 1990s negative

growth rates were recorded in most of these variables. The reactivation of the economy in 1992 resulted in high increase of 48% in manufactured imports and of 15% in manufactured exports.

- ④ The export /import ratio in Jordan is always less than 100%. However, in spite of its inability to cover all its imports (or the larger portion) from export proceeds, Jordan's position is improving, since the general trend in this ratio is positive.
- ⑤ The terms of trade for Jordan, as in most oil-importing countries, deteriorated during the second half of the 1970s and the beginning of the 1980s. Since 1982 the general trend has been improving. Over the period 1982-1986 both export and import prices have declined but the drop in export prices was less pronounced, while in the period 1986-1992 the improvement achieved in these terms was because export prices increased but those of imports stabilised.
- ⑥ The commodity structure of Jordan's external trade shows that the contribution of both manufactured exports and imports in their corresponding totals is the largest among the other categories. In the case of exports, ores & metals follow and then food items, while in imports food items follow and then fuel.
- ⑦ The direction of Jordan's exports and imports indicates that most of Jordan's exports go to the developing countries and only a small proportion goes to the developed countries. Compared with imports, a large proportion of Jordan's imports comes from developed countries followed by the developing countries. East Europe and the former USSR are not important trading partners.

With respect to manufacturing, trade with the developed countries may be considered a one-sided relationship since manufactured imports from these countries constituted 67% of the total in 1988 and 62% in 1992, compared with 12% and 2% respectively for exports. The situation is, however, different with respect to developing countries: a very high proportion of manufactured exports

goes to the developing countries, 88% in 1988 and 69% in 1992, compared with 28% and 32% respectively for imports.

Most of Jordan's manufactured exports directed at the developing countries were destined for the Middle East followed by "Other Asia", then North Africa, "Other Africa" and then Latin America. With respect to the developed countries, most of Jordan's manufactured exports were directed at the EEC countries then the USA which is followed by Japan and then the EFTA countries. With regard to manufactured imports and within the group of developed countries, the EEC countries were the major supplier, followed by Japan, the USA and then the EFTA countries. The main supplier in the developing countries was the group of "Other Asia" followed by the Middle East, then "Other Africa", North Africa and Latin America.

At the more disaggregated level of commodities, the developing countries absorb most of Jordan's manufactured exports of each major SITC category. Some exports of chemicals and "Other manufactures" are destined for the developed countries. exports of "basic manufactures" and capital goods are very small.

- ⑧ Diversification has been observed recently in Jordan's export markets and commodity groups. The Middle Eastern countries constitute Jordan's main regional markets. In spite of this concentration, continuous improvement is taking place as the contribution of the Middle East has fallen from about two-thirds in 1980 to slightly more than one-half in 1985 and to one-third in 1992.

With respect to commodity composition, three exported categories: phosphate, potash and fertilisers, natural resource based industries, account for 45% to 60% of total exports. The addition of another two categories, namely, vegetables & fruits and medicaments, has raised this ratio from 60% to 70%. This degree of concentration in commodities is becoming less and less over time.

As for concentration of commodities and markets at the same time, most of the exports of the resource based industries go to countries other than the Middle Eastern countries, and most of the agricultural and manufactured goods go to the Middle East. With regard to manufacturing alone, 99% of the total exports in 1980 were directed at the Middle Eastern countries. This ratio dropped to around three-quarters of the total in 1985 and further to 62% in 1988. This remarkable change is mainly due to the increase in the exports of chemicals; particularly manufactured fertilisers, which started to be produced and exported from 1982 and which went basically to the non-middle Eastern countries. Exclusion of this item from manufactured goods raised the percentage of manufactured goods exported to the Middle East to 96% in 1985 and to 85% in 1988. However, in spite of the impact of the fertilisers' category on the diversification process, the recent shares of this product in chemicals' exports have declined as the shares of other categories, particularly medicaments, have restored their previous relative importance. Also, the relatively large changes in the previous other ratios within a limited period of time are obvious indicators of the continuous diversification trend that is taking place in both commodity groups and export markets.

### ***Factors Influencing The International Competitiveness of Manufacturing Industry in Jordan***

#### **6.1 INTRODUCTION**

International competitiveness depends on a large number of factors. First, there are factors that enhance industrial production. These relate to the availability of resources in terms of quantity and quality. Second, the goods produced should be able to compete with similar imported goods in the local market and more importantly with goods in foreign export markets, and this requires production of goods at prices and of acceptable quality to satisfy internal and external demands. Utilising resources to produce goods competitively may be encouraged through the assistance of the government.

In Jordan, production in the manufacturing sector is essentially in the hands of the private sector, with Government providing the incentive environment, necessary institutions and the legal framework that keep the resource flows in balance and stimulate incentives for investment.

In this *Chapter*, factors affecting international competitiveness (IC) are grouped into two sets. The first is related to the cost and quality of the resources available i.e. the human, financial and natural resources, and the infrastructural utilities. The other set of factors relates to the Government's incentive and institutional framework. These

factors include macroeconomic policies, with emphasis on the exchange rate policy which have a direct effect on IC. Sectoral policies affecting IC are examined in this *Chapter* in three sections. Commercial policy (protection) comes first, to be followed by industrial policy and institutions which consist of investment licensing, Encouragement of Investment Laws, price controls, and Standards & Specifications. The last section covers issues of export promotion and includes institutional arrangements in export finance, the Jordan Export Development and Trade Centres Corporation and trade agreements.

## **6.2 RESOURCES**

### **6.2.1 HUMAN RESOURCES**

According to Todaro, “most economists would agree that it is the human resources of a nation, not its capital or its natural resources, that ultimately determine the character of pace of its economic and social developments”<sup>(1)</sup>. Human resources in any nation are the most valuable, especially in countries, such as Jordan, with relatively limited natural resources. Jordan’s human resources are relatively educated. However, while skilled and semi-skilled labour is available, technicians, highly-skilled specialists and marketing managers are relatively scarce. As many qualified Jordanians working in the Gulf countries returned to Jordan after the Gulf War, we can assume that this scarcity has been reduce, at least partially.

#### **6.2.1.1 Labour: Productivity and Wages**

##### *Productivity*

The labour force in Jordan is relatively highly-educated and well-trained. Comparison with other Arab countries showed that in 1990 the Jordanian adult literacy rate was 80.1%, which exceeded that of every country in the Arab world except Qatar (82.0%),

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(1) Michael P. Todaro, *Economic Development* (New York: Longman, 1994), p.325.

and the measure of educational attainment surpassed the measure for all the Arab countries and other neighbours such as Turkey<sup>(2)</sup>. At the beginning of the 1980s labour productivity in Jordan was high. This may be ascribed to factors such as the favourable attributes of the labour force and the relatively capital-intensive nature of the industries. The capital-intensive methods of production in the industrial sector were due to both the scarcity of labour during the late 1970s and the beginning of the 1980s, and to the cheap price of capital resulting from the price ceiling imposed during that period on nominal interest rates (8%-9%) at a time of about 11% inflation rates.

The favourable characteristics of the labour force accompanied with capital-intensive production industries resulted in labour productivity that was comparable with or more favourable than that of competitors in the region. *Table 6-1* below presents productivity (defined as value added per employee) in manufacturing industry for selected countries in selected years. In 1980 real productivity (expressed in US dollars) was higher in Jordan than in Egypt and Syria. In 1987 it was higher than in Egypt and Turkey. Productivity, however, deteriorated in 1985 in both nominal and real terms, but recovered in 1987 before it deteriorated again in 1990. This was more pronounced in real than in nominal terms. Hence, real productivity in Jordan in 1990 was below that in Syria although it remained higher than in Turkey. The decline in real productivity in 1985 may be ascribed to the unutilised capacity in Jordan's companies<sup>(3)</sup>, and in 1990 it is due to both the high increase in the general price level owing to the depreciation of the dinar and to the excess capacity of Jordan's companies<sup>(4)</sup>.

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(2) United Nations Development Programme (UNDP), *Human Development Report, 1993* (New York: Oxford University Press, 1993), Table 1.

(3) Arab Consultant Center, *Competitiveness of Jordan's Manufacturing Industry, 1987*, p.26.

(4) Jordan, CBJ, *Twenty Seventh Annual Report, 1990*, p.15.



**Table 6-1.** Manufacturing Nominal and Real Wages and Labour Productivity in Selected Countries (Selected Years)

US Dollars

	Jordan				Turkey			
	1980	1985	1987	1990	1980	1985	1987	1990
Productivity (nominal)	15210	13815	17358	13193	39345	11203	14814	26436
Productivity (real)	20226	14331	17758	11000	354459	28506	14814	6870
Wage / worker (nominal)	4170	3508	3983	3200	15727	2368	2549	5748
Wage / worker (real)	5409	3501	3983	2055	148368	4426	2549	1252
	Egypt				Singapore			
	1980	1985	1987	1990	1980	1985	1987	1990
Productivity (nominal)	2584	6000	8014	12611	14043	19295	25022	34031
Productivity (real)	3957	7792	8014	7184	16900	20000	25022	31900
Wage / worker (nominal)	1474	3336	4177	4681	3838	7317	7224	10794
Wage / worker (real)	4211	4949	4177	3977	4458	7252	7224	10041
	Syria				South Korea			
	1980	1985	1988	1990	1980	1985	1987	1990
Productivity (nominal)	8587	n.a.	14125	17318	9688	12830	16712	34353
Productivity (real)	14704	n.a.	n.a.	13099	13569	13000	16712	29898
Wage / worker (nominal)	1747	n.a.	3109	4468	2834	3476	4544	9352
Wage / worker (real)	6960	n.a.	2310	2496	4230	3682	4544	7603
	Kuwait				United Kingdom			
	1980	1985	1987	1988	1980	1985	1987	1990
Productivity (nominal)	40240	29151	55017	48954	25357	25030	38416	53257
Productivity (real)	56359	49492	55017	48231	37455	33870	38416	n.a.
Wage / worker (nominal)	9550	12539	12967	12529	12376	10831	15860	22391
Real wage / worker	12073	12743	12967	n.a.	18866	11671	15861	18086

Source: Calculated from the following sources:

- For manufacturing value added, average number of employees and wages & salaries of employees: United Nations, *Industrial Statistics Yearbook* (New York: United Nations), Vol. 1, Various Issues.
- For Consumer price index and domestic prices for manufacturing: The World Bank, *World Tables 1992* (Baltimore & London: John Hopkins University Press, 1992).
- For Exchange rate: International Monetary Fund (IMF), *International Financial Statistics* (Washington, D.C.: IMF), 1993.

Notes: ① Nominal productivity is computed as: 
$$\frac{\text{Nominal Gross Manufacturing Value Added}}{\text{Number of Employees}}$$

$$\text{Real Productivity} = \frac{\text{Nominal Productivity}}{\text{Domestic Prices for Manufacturing}}$$

$$\text{② Wage / Worker} = \frac{\text{Nominal Total Wages and Salaries of Employees}}{\text{Number of Employees}}$$

$$\text{Real Wage / Worker} = \frac{\text{Nominal Wage/Worker}}{\text{Consumer Price Index}}$$

③ Productivity and Wages are converted to US Dollars using exchange rates presented in Statistical Appendix C, Table C-3-1.

Productivity growth is a prime factor in obtaining and maintaining international competitiveness. As can be seen from *Table 6-1*, real productivity has increased by 2.2 fold in South Korea in the last decade, while that of Singapore increased 1.9 fold. Productivity in the United Kingdom, as a developed industrial country, is very much higher than in Jordan and also in the newly industrialising countries; however, the growth in UK productivity has not been steady and its level in 1987 was only slightly more than that in 1980.

With respect to productivity in Jordan's manufacturing subgroups, the following points may be made with reference to *Table 6-2* below:

- ① Productivity is relatively high in mining & quarrying, chemicals and electricity. This may be ascribed to the advanced technology employed. Productivity is also high in beverages, tobacco manufacture, non-metallic minerals and basic metals. This is a reflection of efficient use of resources<sup>(5)</sup>.
- ② Productivity is lowest in traditional activities such as wearing apparel, footwear, wood and furniture and food processing. The number of enterprises in most of these industries is large, and the enterprises are small. Most of them are labour-intensive industries.
- ③ Productivity has declined in some industries such as tobacco manufacture, textiles, wearing apparel, furniture, paper, rubber products, plastic products, and fabricated metal products. The reason behind this decline is the inefficient use of resources and underutilisation of capacity. One of the factors behind this situation is the closure of the Iraqi market to Jordanian exports after 1990, since many enterprises were established or expanded as a response to anticipated growth in demand from Iraq for products such as wearing apparel.

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(5) See Arab Consultant Centre, p.26.

**Table 6-2.** Jordan's Gross Manufacturing Value Added and Wages per Employee by ISIC Subsectors

ISIC code	Industry	US Dollars*			
		1984		1992	
		Gross value added/employee	Compensation of employees / employee	Gross value added/employee	Compensation of employees / employee
290	Mining and quarrying	24892	7494	28717	7401
311 + 312	Food Manufacturing	9464	2653	6613	2385
313	Beverage industries	27139	5039	31790	3779
314	Tobacco manufactures	117524	7942	88910	5504
321	Manufacture of textiles	12507	3190	8586	2767
322	Manufacture of wearing apparel	5910	1930	4003	1768
323	Manufacture of leather products	7576	3313	15129	5126
324	Manufacture of footwear	10263	3363	5111	2053
33	Manufacture of food & products	4694	2406	5023	2035
341	Paper and paper products	10549	4498	7848	3447
342	Printing and publishing	8896	4673	9210	3672
351 + 352	Manufacture of industrial chemicals	17695	6001	17312	4601
353	Petroleum refineries	29422	9364	11478	7084
355	Manufacture of rubber products	15917	594	10400	3141
356	Manufacture of plastic products	11005	3593	7608	2748
36	Non-metallic mineral products	22048	3608	13253	2894
37	Basic metal industries	14789	4312	39531	4008
381	Manufacture of fabricated metal	.....	.....	9923	2067
382	Non-electrical machinery	7128	2435	9406	2657
383	electrical machinery	7699	3489	10792	2844
384	Manufacture of transport equipment	7477	3428	4715	3137
385	Manufacture of professional and scientific goods	.....	.....	9319	3137
390	Handicrafts	6670	1464	12619	1865
410	Electricity	14114	6430	16276	5721
951	Repair and maintenance	6183	1147	4317	1833
	<b>Total industry</b>	<b>15920</b>	<b>3986</b>	<b>12558</b>	<b>3515</b>
	<b>Manufacturing</b>	<b>15900</b>	<b>3813</b>	<b>11402</b>	<b>3095</b>

**Source:** Computed from: The Hashemite Kingdom of Jordan, Department of Statistics, *Industrial Census, 1984 and Industrial Survey, 1992*.

**Notes:** \*: Original figures are expressed in Jordan dinars. They are converted to US dollars using exchange rates presented in Table C-3.1 in the Statistical Appendix C.

..... = Not Available

### *Cost of Labour*

In 1980 nominal wages paid in manufacturing in Jordan were higher than those in other countries in the region such as Egypt, Syria and Turkey, but were lower than those in the Gulf states such as Kuwait, and also very much lower than wages in the developed countries such as the UK (see *Table 6-1* above). Jordan's wages were high in comparison with the low wages of the South East Asian countries such as South Korea and Singapore. In 1987, although wages in Jordan declined (in comparison with 1980), they were still higher than in Syria and Turkey. Wages in manufacturing in Jordan in 1990 declined further due to the economic crisis that faced Jordan in the late 1980s and the high unemployment rates in subsequent years which pushed wages down.

Real wages increased considerably in both Singapore and South Korea over the last decade (by 2.25 fold in the former country and by 1.8 fold in the latter). In contrast, real wages in Egypt and Turkey decreased at the end of the 1980s while those of Syria increased slightly. In Britain, these wages increased after the mid-1980s reaching in 1990 nearly the same level of 1980. As for Jordan, real wages were generally declining in the 1980s, particularly at the end of the decade. This was mainly due to the depreciation of the dinar and price increases in 1988 through 1990.

With regard to wages in Jordan industry by subgroup, *Table 6-2* shows that the highest wages are paid in the large capital-intensive industries such as mining and quarrying, petroleum refining, electricity and chemicals. The tobacco and leather industries also paid "good" wages. The explanation appears to be that large industries employ qualified personnel in engineering, management and marketing activities in high productivity activities.

Unit labour costs (the ratio of labour earnings to productivity of labour) are not readily available for all the selected countries, and the calculation of such a measure is not easy because data available on wages and productivity are not sufficiently comparable<sup>(6)</sup>.

### 6.2.1.2 Management

Jordanian managers working in Jordan and those who occupy managerial administrative positions in the Arab region have an excellent reputation for their competence, diligence and reliability<sup>(7)</sup>. However, management in Jordan faces many obstacles when world competitiveness is considered. Experts working in the Manufacturing and Marketing Improvement Section of the Jordan Institute of Management and in A.T. Kearny, an international management consulting firm sponsored by USAID, have been focusing on helping Jordanian companies to become competitive in world markets. They found that there are two obstacles limiting Jordanian private sector companies from becoming world competitors. The first is that of defining clearly the market the company wishes to serve so as to match its output to market demand. Relevant factors here include methods of distribution, product features, price and services. The second obstacle to competing in world markets lies within the human resource area. It has been found that in the Jordanian business sector there is a limited tendency to develop

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(6) The best source for data on labour (earnings, hours of work, productivity, and so on) is the "Yearbook of Labour Statistics" published by the International Labour Organisation (ILO). Unfortunately, not all the countries concerned join this organisation. Data produced in the "Industrial Statistics Yearbook" published by the United Nations are used instead. Data in this source on the countries concerned suffer from discontinuity and incomparability. For Example, data for Egypt are available only until 1988. Also value added is not priced in a uniform way. They are priced at factor cost in Syria and Egypt whereas they are priced at producers' prices in Jordan and Turkey. Moreover, data for Egypt are related to the private establishments with 10 or more persons engaged and all public enterprises, and in Syria data refer to the public sector only; while in Jordan, These data cover all establishments. This, perhaps, underestimate Jordan's value added and wages since, in general, they are higher in large establishments.

(7) Zaki Ayyoubi, "Organisational and Management Effectiveness", in *The Industrialisation of Jordan: Proceedings of a Conference held in Amman, Jordan, on July 2-3 1988*. (Amman: Friedrich Ebert, 1989), p.116.

internal skills within the work force. It has been suggested that local companies should review their organisational structures and human resource policies and should emphasise delegation of authority<sup>(8)</sup>.

Improvement in Jordanian management requires the provision of proper infrastructure. A study conducted in 1992 by ESCWA<sup>(9)</sup> covering six countries in the region (Egypt, Iraq, Jordan, Lebanon, Syria and Yemen) on the promotion of entrepreneurship in small-scale industrial enterprises concluded that Jordan was comparatively well-developed with respect to the provision of industrial development support infrastructure. When this is taken with the country's high level of education, the prospects for the development of entrepreneurship may be considered promising. Entrepreneurial encouragement in Jordan is provided for the private sector by Jordan Institute of Management which runs courses for middle management personnel from all business sectors and trains approximately 1200 people each year of which around one-quarter are from the industrial sector<sup>(10)</sup>. Although useful, the courses have been criticised because the teaching has not been creative or challenging and because graduates need more knowledge about Jordan's firms and the overall business environment. In addition, it has been argued that there is a need for more interaction between the universities and the business community<sup>(11)</sup>.

Industry personnel on training courses come almost exclusively from major corporations with virtually no participation by small companies. Managers in these latter firms either have little faith in the training provided and/or do not have the time or

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(8) John D. Andrica, "Organisational and Management Effectiveness: A Case for Jordan" in *The Industrialisation of Jordan*, pp. 117-119.

(9) UN, ESCWA, *Promotion of Entrepreneurship in Small-Scale Industrial Enterprises* (E/ESCWA/ID/1992 /1, August 1992).

(10) Industrial training in Jordan offered to management and other personnel in the industrial sector is undertaken in addition to Jordan Institute of Management- by the Royal Scientific Society through the Industrial Chemistry Research Centre, the Economic Research Centre and the Electronic Services and Training Centre. See: ESCWA, *Strengthening the Functioning of Industrial Training Institutions in the ESCWA Region* (E/ESCWA/ED/1992/3, October 1992), pp. 18-20.

(11) Zaki Ayyoubi, *The Industrialisation of Jordan*, p.18-20.

resources available to attend training courses. However, there are some organisations involved in assisting very small-scale enterprises. Similarly, at the other extreme, training of top managers of industrial enterprises to upgrade their skills has been limited. The available management institutions focus on middle managers. Jordan can perhaps benefit from Egypt's experience in this field of establishing in 1990 the Managers Development Centre for Industry for top managers.

Other forms of infrastructural improvements needed for promotion of entrepreneurship are related to reduction of bureaucracy, provision of extension services, finance, business information centres, entrepreneurship encouragement and project identification. Most of these points are discussed in this *Chapter* under different sections. Mention, however, should be made at the stage of the provision of business information and project identification. Jordan suffers from a lack of ready access to information services. This is very important in the highly developed industrial economies where access to computerised data bases on all kinds of business information is readily available. Perhaps Egypt is relatively more advanced in having useful company data banks in the "General Organisation for Industrialisation and the Information Service"<sup>(12)</sup>. With respect to project identification, a number of worthwhile initiatives are underway. Assistance to the Jordanian authorities is being offered by UNIDO and by the German Agency for Technical Cooperation<sup>(13)</sup>.

### **6.2.2 FINANCIAL RESOURCES**

The financing of the manufacturing sector in Jordan depends basically on the financial resources of the private sector itself. Public sector injections of capital are important in some activities especially in large projects in the phosphate, potash, fertilisers and cement industries. The government has a direct role in investment and also has equity contributions through the special credit and investment institutions such as the

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(12) ESCWA, *Promotion of Entrepreneurship in Small-Scale Industrial Enterprises*, p.52.

(13) ESCWA, p.58.

Industrial Development Bank (IDB), the Housing Bank, the Pension Fund, the Social Security Corporation and the Postal Saving Fund. These institutions either participate directly in the capital of project companies or provide medium- and long-term credit and syndicated loans on relatively soft terms. The commercial banks, as well as the specialised financial corporations, provide industry with loans.

Lending to industry by the IDB has been increasing in the last few years, with interest rates that are 4% to 6% below commercial interest rates. Loans from the IDB are offered on a medium- to long-term basis. Slightly less than one-third of the total loans offered to industry by the (IDB) in 1990 has been directed at chemicals and plastics, followed by paper products, food and beverage then fabricated metal products. Wood and wood products and textiles were at the bottom of the list<sup>(14)</sup>. Although the overall performance of the IDB is good, entrepreneurs complain about the level of collateral sought (1.25 times the loan) and about the insufficiency of funds being directed to start-ups. In fact the financing of industrial projects is constrained by the absence of proper feasibility studies of projects submitted to IDB and to other financial institutions. The higher risks to the Bank of reducing the current high levels of collateral and directing more funds to start-ups could be reduced by improving the level of project assessment through further upgrading the skills of staff working in these institutions<sup>(15)</sup>.

The commercial banks' facilities are extended to all sectors of the economy. Credit to manufacturing industry totalled JD 176 million in 1986 and increased to JD 224.6 million in 1990 and further to JD 265.8 million in 1992. In 1993 an increase of 23% in these facilities has been achieved with JD 326.8 million (compared with an increase of 18% in the total credit facilities offered to all sectors)<sup>(16)</sup>. This suggests increasing attention being paid to industry recently by these institutions. However, the

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(14) Jordan, *Industrial Development Bank, Annual Report 1990*.

(15) ESCWA, *Promotion of Entrepreneurship in Small-Scale Industrial Enterprises*, p.4.

(16) Computed from: CBJ, *Monthly Statistical Bulletin*, Different Issues.



average percentage share of credit directed at manufacturing during 1986-1990 was only 12% of the total and increased to 12.5% in 1993. It should be noted that the credit offered by these banks is relatively small. The IDB had loans extended of JD 45 million 1990 while total commercial bank lending to industry was only five times greater than IDB lending. In 1990 USAID established a \$5.5 million Loan Guarantee Fund, operated by the IDB to help finance small-scale industry in Jordan. Projects approved under this Fund can obtain a loan guarantee for 50% of borrowing from Commercial Banks subject to a maximum of JD 10,000<sup>(17)</sup>. However, the full benefits of the relatively well-developed financial infrastructure in Jordan (compared to the other countries in the region) are not being reaped, owing to an over-conservative approach in-lending to industry both in the IDB and the commercial banks<sup>(18)</sup>.

With regard to the cost of borrowing, interest rates on loans in Jordan were floated in 1990. This led to a steady decrease in interest rates paid on deposits and a slight decline in interest rates charged on credit facilities by licensed banks and financial institutions. The weighted average for interest rates on various types of credit facilities dropped from 11.0% in 1991 to 10.8% in 1992<sup>(19)</sup>.

### **6.2.3 INFRASTRUCTURAL UTILITIES**

As a non-oil producing country, Jordan is at a disadvantage compared with many neighbouring countries with respect to power prices. Fuel prices have been determined by the government. In 1990 electricity price rates were modified to charge higher rates for higher consumption strata. Also electricity tariffs for major industrial usage during daylight and night hours were raised from 16 and 12 fils/KWh to 38 and 21 fils/KWh respectively<sup>(20)</sup>. In 1992 the prices of certain petroleum products such as supergasoline,

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(17) ESCWA, *Promotion of Entrepreneurship in Small-Scale Industrial Enterprises*, p.43.

(18) ESCWA, p.39.

(19) Jordan, CBJ, *Twenty Ninth Annual Report*, 1992, p. 43.

(20) Jordan, CBJ, *Twenty Seventh Annual Report*, 1990, P.12.

diesel and fuel were increased by varying amounts<sup>(21)</sup>. The objective of these modifications was to rationalise consumption and to reduce budget support for these items. Water supply in Jordan, as well as in other countries in the region, is a major concern for industry and other users. However, measures to correct the water balance have been taken. Recently measures to rationalise consumption of water and to alleviate budget support for this item were introduced and the price rates were modified to charge higher rates for higher consumption strata.

Comparisons with the neighbouring countries show that Jordanian power prices are higher than in Syria and Lebanon, and also much more expensive than those of the oil-producing countries<sup>(22)</sup>. Therefore, manufactures in Jordan usually use self-generators during the peak hours of work in an attempt to cut the cost of energy. Water is also more expensive in Jordan than in Syria and in Lebanon. The latest increases in the price rates of fuel, electricity and water might worsen Jordan's position. Industry might suffer from a competitive disadvantage in this regard, and, hence, the intraregional competitiveness of Jordan's products might be affected adversely. Recognising this situation, the government offered some reductions in fuel prices for export industries in an attempt to make them competitive with other countries in the region with respect to these utilities<sup>(23)</sup>.

Transport facilities (roads, Aqaba port and airports) are convenient for the transport needs of Jordan's industries and for transit trade. Jordan enjoys a favourable geographical position vis-a vis the Arab world. The sea-freight charges on Jordanian goods are uncompetitive, except for those which are exported southbound via the Red

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(21) Jordan, CBJ, *Twenty Ninth Annual Report*, 1992, P.18.

(22) Arab Consultant Centre, p.55.

(23) The export policy in Jordan includes a 50% refund on fuel used in the production of export-orientated goods. See ESCWA, *Development in the External Sector of the ESCWA Region: Performance of New Export Products in the 1980s* (E/ESCWA/DPD/1991/1, June 1992), p.83.

Sea to East Africa, Yemen and the Far East which could be exported economically by sea. Northbound exports are cheaper by land transport (and sometimes by air freight than by sea). "Queen Alia International Airport" in Amman might help Jordanian industry to avoid a competitive disadvantage<sup>(24)</sup>.

#### 6.2.4 NATURAL RESOURCES

Jordan's natural resources can be grouped into two sets, mineral and agricultural resources. Industrial minerals are important to the economy. Phosphates is the most valuable mineral in Jordan at present. In 1992 it was exported to at least 21 countries constituting 15.3% of the world trade phosphates. The value of exports in 1992 was JD 122.5 million and accounted for 19.3% of total domestic exports. This ratio dropped to 14.2% in 1993 due to the absolute drop in quantities and prices and to the increase in the value of total domestic exports. In spite of this decline, it is still the biggest single item in Jordan's balance of trade. Exports of fertiliser intermediate based on the phosphate rock such as phosphoric acid, mono-ammonium phosphate and aluminium fluoride have increased over time reaching JD 72.6 million in 1992. Potash quarried from the Dead Sea is also important. Exports of this brine in 1992 amounted to JD 86.2 million accounting for 13.6% of total domestic exports and was exported to more than 24 countries<sup>(25)</sup>.

Development of downstream products from these basic raw materials increases employment and value-added generated in the economy. It also gives these industries flexibility to face the changes and fluctuations in the world markets for unprocessed raw materials due to structural, political, climatic and investment factors.

The cement industry in Jordan also benefits from indigenous raw material resources, limestone, marly limestone, gypsum and silica sand. These resources are

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(24) Arab Consultant Centre, p.52.

(25) Jordan, CBJ, *Monthly Statistical Bulletin*, Vol. 30 (May 1992), Table 37, p.62.

assessed to be likely to last for a great number of years. Three cement factories are now producing cement, one of which is producing white cement and another is export-orientated. Jordan's exports of cement in 1992 totalled JD 22.2 million.

Agricultural resources are also important to Jordan's economy. Agricultural's contribution to GDP has ranged between 7% to 8% in the last few years. Most commodity groups, with the exception of fresh vegetables and citrus fruits, run a balance of trade deficit. In recent years packing and part-processing of Jordan's agricultural commodities has increased, and, thus, has increased Jordan's value added.

In conclusion, Jordan has some valuable natural resources, but most materials required by manufacturing industries are imported. On average, inputs amount to more than 50% of the gross output of manufacturing, and the share of imported raw materials in total raw materials is around 70%. Thus, competitiveness is greatly affected by the cost of raw materials and efficiency of their usage.

### **6.3 GOVERNMENT POLICES AND INSTITUTIONS**

In support of Jordan manufacturing industry the Government has offered manufacturing enterprises protection from import competition, regulated market entry- in some periods- through investment licensing -and applied series of fiscal and credit incentives to encourage output growth. Also, the Government has created and maintained infrastructure such as industrial estates, export processing zones, roads, power and the port of Aqaba. Furthermore, in order to enhance exports it concluded bilateral trade agreements with neighbouring countries on a duty free basis. Macroeconomic policies affecting the various sectors in the economy are also important to the industrial sector.

### **6.3.1 MACROECONOMIC POLICIES AND THE EXCHANGE RATE**

The Jordan Dinar (JD) exchange rate has not been used until recently as a tool to promote exports. The policy adopted by Jordan has traditionally been aimed at the stability of the dinar exchange rate. It was believed that this policy was important for transfers of remittances into Jordan which used to finance about one-third of Jordan's total imports. It was feared that adjustments to the exchange rate could have an adverse impact on these transfers. Stability was achieved through the linking of the dinar with the Special Drawing Rights (SDRs) at a par value of JD 1=SDR 2.579, with a margin determined with reference to Jordan's trade basket. This basket was made up of the same constituent components of the SDR unit but with different weights that reflect Jordan's trade relations with other countries.

From the early 1980s, Jordan's economy started to be adversely affected by the slowdown in the regional economies. Jordan's export markets for agricultural and manufactural goods shrank, the remittances of Jordanians working abroad declined and grant aid decreased. These developments resulted in a slowdown in the economy. This was followed by stagnation in real GDP for most of the second half of the 1980s, the overall fiscal situation worsening, and the balance of payments position deteriorating. The nominal exchange rate was maintained through external borrowing and drawing down reserves. At the end of 1988 the crisis facing Jordan's economy deepened and large deficits in the balance of payments led to the depletion of official reserves to a level of only half a month of imports. The exchange rate in the parallel foreign exchange market started to rise gradually from mid-1988, reflecting the overvaluation of the Jordanian dinar.

In an attempt to counter the emerging crisis the Government adopted a set of measures in mid-1988 which included some tax and trade reforms in addition to putting the dinar in mid-October on a managed floating system. The major realignment

of the exchange rate that took place during 1988-1989 resulted in the depreciation of the JD by 25% in real terms. In May 1989 the exchange rate of the dinar was linked with a basket of major foreign currencies at weights proportionate to the importance of each currency in Jordan's external sector. Later, the Government adopted a comprehensive adjustment programme covering the period 1989-1993 which was endorsed by the IMF and the World Bank, and a series of policy measures were implemented including fiscal adjustment and trade reforms.

In 1989 real interest rates were repressed to well below zero due to the ceiling of 9% imposed on nominal rates. In September 1989 interest rates on deposits were floated and in 1990 the CBJ liberalised the interest rates charged by banks and financial companies on different kinds of credit facilities. However, loans granted by specialised credit institutions for export promotion and other uses continued with their lower interest rates.

### **6.3.2 COMMERCIAL POLICY**

Commercial policy plays an important role in easing the pressure on the trade balance through encouraging domestic production, promoting exports, and rationalising imports. Also, it protects and helps domestic production and supports infant industries. During most of the 1970s and early 1980s Jordan's commercial policy was, in general, liberal and outward-oriented. The protection to manufacturing was mainly through tariffs on competing imports coupled with a low level of tariffs on inputs. Selected firms could count on a high degree of protection but the average economy-wide level of these tariffs was low. During the 1980s changes occurred in the structure of protection owing to the changing economic conditions. The period from 1984 can be divided conveniently into the following two subperiods:

*1984-1987*

At the beginning of the 1980s the slowdown in the regional economies resulted in a slowdown of the Jordanian economy, with a decline in both external and internal demand for Jordan's products. The government increased the level of protection to stimulate demand for domestic products by introducing bans and high import tariffs on competitive imports.

*Quantitative Restrictions (QRs)*

The number of manufactured goods prohibited in the middle of 1984<sup>(26)</sup> by introducing QRs was 32, belonging to most commodity categories. According to a World Bank Report on small- and medium-scale industries (SMI)<sup>(27)</sup>, the macroeconomic impact of these restrictions was small (applied to only about 4% of total value of imports in 1985) due to the small size of the SMI sector. But it protected a significant portion of manufacturing industry (applying to products which accounted for over 40% of the total manufacturing value added in 1985).

*Tariffs*

The structure of Jordan's tariffs was complex, offering a wide variation in the effective protection to different firms within the SMI sector. The complexity of this structure was due to the presence of tariff rates, additional fiscal charges (including cumulative additional duties, special tax, licence fee, and fiscal tax), and internal taxes levied on imported and domestic products. Customs duties alone were in the range of 0 to 130%, and some specific duties were applied mainly on luxury consumables. Duties on basic foods were low from 0 to 23%, whereas duties on other consumer goods were from 0 to 85%. Raw materials, intermediate goods and investment products had duties

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(26) Before that, at the late of the 1970s, very few restrictions were imposed on imports. See UN, ESCWA, *Developments in the External Sector of the ESCWA Region: Performance of New Export Products in the 1980s, Supplement III, Tariff Structure and Trade Control Measures in the ESCWA Countries*, (E/ESCWA/DPD/1992/1/Suppl.3), p.30.

(27) The World Bank, *Policies and Prospects for Small and Medium Scale Manufacturing Industries*, p.17.

which were largely from 0 to 28% except for motor vehicles which had higher duties from 65-130%<sup>(28)</sup>.

As for the structure of protection, Jordan's average level of nominal protection was not high. This average, computed in the World Bank's Report on SMI, was 26% after taking into account all exemptions. It was considered comparable to that in other countries at a similar level of development such as Morocco, Argentina and Mexico, and was lower than in some neighbouring countries such as Egypt and Turkey. An ESCWA study on the tariff structures of the ESCWA region<sup>(29)</sup> showed that Jordan's weighted average tariff rate (taking into consideration all other charges on imports) for all goods was 27.1%. The maximum rate was 32.2% in manufactured goods followed by primary products (14.5%) and agricultural raw materials (12.9%) and then by mineral ores (10.4%)<sup>(30)</sup>. Within the manufacturing sector, the highest rates were in footwear (67.4%), furniture (63.9%), textiles and clothing (44.1%), leather and travel goods (42.4%), electric machinery (45.5%) and toiletries (43.7%) and perfumes. The lowest rates were for manufactured fertilisers (8.0%). Comparison with other countries in the region showed that Egypt's average tariff for all goods was 41.4% which is higher than that in Jordan by 14.3 percentage points; it was also higher for manufactures as it was 42.6% against 32.2% in Jordan. Syria, however, had a slightly lower average of 24.5% for all goods and 25.2% for manufactures. Other countries in the region such as the Gulf states have, in general very low tariff rates (about 4%).

The Effective Protection Rate (EPR) in Jordan which measures the protection on value-added given to any industry was lowest in mining, and then in agriculture,

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(28) ESCWA, *Developments in the External Sector of the ESCWA Region: Performance of New Export Products in the 1980s*, pp. 29-30.

(29) ESCWA, *Developments in the External Sector of the ESCWA Region, Supplement 111: Tariff Structures and Trade Control Measures in the ESCWA Countries*, Various Tables.

(30) Jordan's weighted average tariff rate considering customs duties only was 13.7% for all goods and 17.7% for manufactured products. For Egypt these ratios were 30.6% and 30.8% respectively, and for Syria 12.6% and 13.1% in the same order.



whereas the protection offered to manufacturing was almost double that offered to the economy as a whole. Within manufacturing industry itself, the highest EPRs were in wearing apparel and bakery products, and the lowest in basic metals and printing & publishing. The wide variations in the effective rates of protection were not only because of the tariff structure but also because of an extensive exemptions system. Twenty-seven institutions were exempted from paying customs duties on their imports, and all exports were exempted from duty on imported inputs. The value of imports coming into Jordan in 1988 without paying any tariff was about half the total value of imports.

### ***1988-1992***

The Government response to the crisis that confronted Jordan's economy in the late 1980s started in 1988 with the introduction of some measures relating to the trade regime and the devaluation of the JD. This response culminated in mid-1989 with the adoption of a comprehensive adjustment program. The tariff adjustment measures were phased to complement the fiscal adjustment and were supported by continuous adjustment of the exchange rate and by de-control of interest rates and were coordinated with reforms on the supply-side (particularly within the industrial policy framework), in addition to tax reforms. In 1988 several resolutions were issued to reduce fiscal imbalances, liberate the external trade and protect manufacturing enterprises. In order to cut public expenditures and rationalise the use of foreign exchange, a resolution was taken in November prohibiting the importation of a number of luxury commodities including all passenger and cargo vehicles and consumer durables. Also customs duties were increased on several luxury commodities. As value added generated in the manufacturing sector dropped in this year to its lowest level since 1982, the Government offered protection to this sector through removing or reducing custom duties on a number of raw and intermediate materials used in

domestic industry. Also custom duties were increased on several import competing goods. However, protection offered previously to this sector through quantitative restrictions, which were imposed on a large number of imported commodities in 1984, were lifted and replaced by higher tariffs.

In the context of the trade policy reform program which started by converting the quantitative restrictions to tariffs, the Government adopted in 1989 several measures aiming at restructuring the tariff system through:

- ✱ Replacement of specific tariff rates with ad-valorem tariff rates.
- ✱ Rounding tariff rates to the nearest 5.0% or its multiples in order to facilitate the collection of custom duties.
- ✱ Decreeing a rate of 40% as a ceiling for tariffs on all goods, with the exception of certain luxury goods.
- ✱ Additional tax, levied on all tariff-free imports, was raised from 2.0% to 5.0%<sup>(31)</sup>.
- ✱ At the end of the year import ban on luxury imports was lifted and replaced by high tariffs.

During 1990, 1991 and 1992 the Government continued to adopt measures to check luxury imports, protect certain domestic industries and liberate trade. Of particular importance is the resolution of November 1991 which reduced custom duties on 205 imported commodity with rates ranging between 5.0% to 10.0%.

### *The impact of the trade reform program on tariff structure*

**Table 6-3** below indicates that the average tariff rate was reduced from 34.4% to 25.0% between 1987 and 1992 (after the implementation of the trade policy reform). The disparities across different sectors of the economy were reduced. The tariff coefficient of variation dropped sharply to about half the previous level (from 166.9%

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(31) Jordan, CBJ, *Twenty Sixth Annual Report*, 1989, p.40.

to 88.5% between 1987 and 1992). Tariff frequency rates have been simplified to a multiple of 5 percentage points. The weighted average tariff rate for the group falling between 5.1-10.0% has slightly increased, whereas those for all other groups above 10 percentage points have been reduced significantly.

**Table 6-3.** Distribution of Nominal Tariff Rates

1987						
Tariff range <sup>1/</sup>	Coefficient of variation <sup>2/</sup>	Share of import values	Share of tariff revenue	Tariff revenue <sup>3/</sup> (JD million)	Import value (JD million)	Weighted average tariff <sup>4/</sup> (%)
0.0 – 5.0	26.6	15.7	1.4	24	79.6	3.1
5.1 – 10.0	0.1	24.4	5.1	8.9	123.3	7.2
10.1 – 20.0	10.9	4.3	2.2	3.9	21.8	17.8
20.1 – 30.0	7.8	7.3	5.3	9.2	36.9	25.0
30.1 – 40.0	6.4	13.0	13.1	22.8	66.0	34.5
40.1 – 50.0	5.9	13.1	17.4	30.3	66.4	45.6
> 50.1	65.4	22.2	55.5	96.6	112.5	85.8
<b>Total</b>	<b>166.9</b>	<b>100.0</b>	<b>100.0</b>	<b>174.1</b>	<b>506.6</b>	<b>34.4</b>
1992						
Tariff range <sup>1/</sup>	Coefficient of variation <sup>2/</sup>	Share of import values	Share of tariff revenue	Tariff revenue <sup>3/</sup> (JD million)	Import value (JD million)	Weighted average tariff <sup>4/</sup> (%)
0.0 – 5.0	0.0	2.8	0.0	0.1	60.5	0.2
5.1 – 10.0	25.7	32.6	9.8	53.6	717.8	7.5
10.1 – 20.0	8.3	18.9	7.8	42.9	415.2	10.3
20.1 – 30.0	8.4	13.8	12.7	69.8	303.8	23.0
30.1 – 40.0	6.5	10.0	13.2	72.4	219.3	33.0
40.1 – 50.0	5.3	5.4	8.9	49.1	118.1	41.6
> 50.1	59.2	16.6	47.6	261.5	365.3	71.6
<b>Total</b>	<b>88.5</b>	<b>100.0</b>	<b>100.0</b>	<b>549.4</b>	<b>2200.0</b>	<b>25.0</b>

**Source:** See the World Bank Report on the Hashemite Kingdom of Jordan, "Industry and Trade Policy Adjustment Loan", June 1993, p.14.

**Notes:** 1/ Defined at the 8 digit level of the Brussels Tariff Nomenclature (BTN) codes.  
2/ Standard deviation divided by mean.  
3/ Assuming there was no exemption.  
4/ Weighted by nominal import values.

As for protection provided to the manufacturing industry, the estimated effective rate of protection dropped from 42% in 1987 to 27% in 1992<sup>(32)</sup>. During this period the weighted average tariff rate on final goods decreased from 35.6% to 25.0% whereas that imposed on intermediate goods increased only by two percentage point (from 16.0% to 18.0%). Thus, changes in the effective rate were an outcome of restructuring tariffs on both outputs and inputs. When the impact of the removal of QRs and the replacement of specific tariff rates with ad-valorem rates are considered, the decline in the effective rate is greater than the above drop that resulted only from the decline in tariffs. A high tariff rate has been maintained on non-competing luxury imports, these imports accounted for 16.6% of total imports in 1992 and provided 47.6% of tariff revenue. In spite of these reductions in tariffs, import-competing goods still enjoy considerable tariff protection; therefore, these tariffs are taxing export production as a large proportion of production will be directed at the local market. The anti-export bias may need further reduction in the rates of tariffs and revamping of the financial incentive scheme offered to exports.

### **6.3.3 INDUSTRIAL POLICES**

#### **6.3.3.1 Investment Licensing**

Investment licensing in Jordan is carried out by the Department of Industry, Ministry of Industry and Trade. It has been to regulate market entry and, thus, affects internal competitiveness. The large number of steps required to obtain an industrial license, and the difficulties associated with processing new investments are considered cumbersome from the point of view of businessmen<sup>(33)</sup>. Several amendments have been introduced, but in practice most of them increased the complexity and uncertainty.

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(32) The World Bank, Report on the Hashemite Kingdom of Jordan " *Industry and Trade Policy Adjustment Loan*", June 1993, p.13.

(33) Sudhir Chitale, "The Role of Small and Medium Scale Enterprises in Jordan" in *The Industrialisation of Jordan*, p.58.

However, in 1989 the condition compelling all investors to acquire a licence when they wanted to establish industrial projects was abolished<sup>(34)</sup>.

### **6.3.3.2 Encouragement of Investment Law (EIL)**

The Encouragement of Investment Law of 1989 was revised in October 1991. The broad objectives of this Law have been to:

- \* Encourage investment in productive sectors (manufacturing, mining, agriculture, hospitals and tourism).
- \* Encourage a regional dispersal of investment.
- \* Encourage the use of high technology and capital intensity.

The EIL offers income tax and customs duty exemption to projects that meet at least one of the above criteria. This law differentiates between an “Economic Project” and an “Approved Economic Project” on the basis of the extent to which they conform to the objectives of the national plan. Capital goods imported for the implementation of an “Economic Project” are exempted from customs duties. An “Approved Economic Project” is exempted in addition from profits tax for a stipulated period. In both cases expansions of existing enterprises have benefited also from duty exemptions.

In spite of the recent revision in 1991, this Law remains ambiguous with respect to its project screening process and involves arbitrary differentiation between “Economic” and “Approved Economic” projects. Amendment of the EIL with a view to strengthening the objectivity in project selection has been proposed. The main proposed amendments are to:

- ① Expand the list of sectors to any sector approved by the minister.

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(34) See Jordan, CBJ, *Twenty Sixth Annual Report*, 1989, p.12.

- ② Remove the distinction between an “Economic Project” and an “Approved Economic Project”, with no eligibility criteria applying, except that investment must be in approved section.
- ③ Drop the provision regarding the priority for local fixed assets and raw materials. Some other provisions are also to be dropped.

These proposed amendments are desirable since they do away with the discretionary aspects and reduce the administrative and information demands of its implementation.

Arab and foreign capital invested in Jordan also benefit from exemptions from duty and taxes. EIL provides for equal treatment with domestic capital, and Government guarantees that their investment shall not be cancelled and that profits, dividends, revenues and interest may be transferred. Law No. 27 of 1992 covering regulation of Arab and Foreign Investments has replaced the previous one of 1986. The most important amendment is that more flexibility has been offered in transferring capital and profits.

Although its overall macroeconomic impact has been relatively small, the EIL has had a significant impact on the manufacturing sector. A study carried out by Dar-AL Handasah<sup>(35)</sup> showed that the tax revenue forgone from the exemption from both the customs duty and profits tax was a small portion of the total budgetary revenue. The study on “Small and Medium Scale Industry, SMI” conducted by the World Bank<sup>(36)</sup> indicated that investment by projects benefiting from the EIL in 1985 accounted for less than three percent of the total investment in the economy. This study showed also that, although the number benefited from the EIL in 1985 was only 16 out of 116 projects approved by the Ministry of Industry, their investments accounted for about

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(35) Dar-Al-Handasah, *Industrial Programming Study, Task 1.17* (Amman, March 1982).

(36) The World Bank, Jordan: *Policies and Prospects for Small and Medium Scale Manufacturing Industries*, p.27.

45% of the total investment in the SMI sector, and that the benefits offered for these 16 projects were important in determining their profitability.

### **6.3.3.3 Price Control**

One of the policies which affects competition within firms in the domestic market is that of price control. It also has an impact on external competition through changing relative prices in the domestic and foreign markets. Price controls were introduced for consumer goods and regulated by the Ministry of Supply to ensure the supply of basic food items such as wheat, rice, sugar and meat at 'reasonable' prices. The Ministry of Industry and Trade regulated the prices of items that had been protected by QRs or high tariffs.

Imports of the above basic goods have been restricted to the Ministry of Supply. These goods have been sold to the wholesalers at predetermined prices (which could involve a subsidy). Prices of some locally-produced goods have also been fixed. In 1986, for example, about 30 imported and domestically-produced manufactured items were subject to price control. However, more recently the impact of the pricing system on consumers and on manufacturing has not been significant. Since 1986 price control has been exercised on eight items produced by the SMI manufacturing sector and on only three manufactured imports which were competing with domestic products<sup>(37)</sup>.

During 1985-1987 the Government realised a surplus, in contrast to the subsidy cost to the budget in the previous years, as a result of selling selected imported commodities at the same prices as in previous periods in spite of the decline in their prices internationally. During 1989 as a result of the depreciation of the JD prices of imported goods rose sharply. The Government, however, decided not to raise the

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(37) The World Bank, p.28.

prices of basic foodstuffs so as not to increase the burden on the poor. This resulted in a substantial rise in government expenditures on food subsidies amounting to about 3% of GDP<sup>(38)</sup>. Later on, during the implementation of the adjustment program, in view of restructuring of the public expenditure and in an effort to combat distortions resulting from subsidy policy, the Government cancelled and reduced the subsidies on several goods. In 1990, for example, the subsidies for mutton, beef and maize were eliminated. Also the government introduced the Coupon System for the consumption of sugar, rice and dried milk. Furthermore, the prices of electricity and water, were modified to charge higher rates for higher consumption strata. The objective of these modifications was to rationalise consumption of electricity and water and to alleviate budget support for these items<sup>(39)</sup>. In 1992 prices of special gasoline, fuel and oil were increased by 11.1%, 40.0% and 57.0% respectively, so as to rationalise the use of these commodities and to reduce government subsidies, particularly because a good portion of these goods are used in transit activities<sup>(40)</sup>.

#### **6.3.3.4 Standards and Specifications**

Improving the quality and reliability of Jordanian products<sup>(41)</sup> is important not only because it protects the consumers and the environment but also because it enables these products to compete in internal and international markets. Export quality, in particular, is important for companies which try to win and to hold market shares against strong international competition.

Activities in the fields of metrology, standardisation, quality control and testing are conducted in Jordan by a variety of government and public/private organisations.

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(38) The World Bank, *Jordan: Industry and Trade Policy Adjustment Loan*, p.3.

(39) Jordan, CBJ, *Twenty Eighth Annual Report*, 1991, p.41.

(40) Jordan, CBJ, *Twenty Ninth Annual Report*, 1992, p.60.

(41) Standards and Specifications are not applied only on Jordanian products (exports and local products) but also on imports.



Suggestions to improve and restructure the institutions in the above fields have ranged from establishing a Central and Independent National Standard Bureau to improving coordination and cooperation between the main responsible bodies such as the Jordan Directorate of Standards and the Royal Scientific Society. Also, it has been suggested, particularly for industry, that a quality control and standardisation department should be established in each factory<sup>(42)</sup>.

Recently, a study has been carried out on industrial standards with the assistance of the German government<sup>(43)</sup>. It included a number of legislative and administrative changes in the standards system to improve the quality of goods produced and adhering to international specifications and requirements, and in 1989 a temporary law on standards and specifications was promulgated.

#### **6.3.4 EXPORT PROMOTION**

An import substitution strategy has been the long-standing basis for industrial development in Jordan. The export expansion strategy started to be important in the first third of the 1970s and, in particular, since the second half of the 1970s and beginning of the 1980s.

Incentives to promote manufactured exports have been offered through several institutions but proved to be inadequate<sup>(44)</sup>. The institutional responsibility for export promotion was fragmented between the Ministry of Industry, trading houses and the Commercial Centre Corporation. There was no central organisation which could provide the various incentives at one time. The incentives offered could not, however, remove the anti-export bias, which means that it was more profitable to produce for

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(42) Hassan Saudi, "Standards and Quality Control in Industrialisation", in *The Industrialisation of Jordan*, p.97.

(43) See The World Bank, *Jordan: Industry and Trade Policy Adjustment Loan*, p.6.

(44) ESCWA, *Developments in the External Sector of the ESCWA Region: Performance of New Export Products in the 1980s* (E/ESCWA/DPD/1992/1, June 1992), p.89.

substituting imports rather than for exports. Thus, in most cases, the goods exported were that portion of output that remained after selling in the domestic market, and were directed almost exclusively at neighbouring Arab countries. Government assistance to export beyond the regional market was limited.

In recent years legislative measures and establishment of institutions were taken to promote exports directly and also indirect measures through promoting investments in export-oriented products, with an emphasis on the promotion of new exports.

### *Legislative Measures*

These measures include granting of financial incentives and the provision of credit facilities. The amendment of the 1989 Law for the Encouragement of Investment emphasised investment in export-orientated projects. The Law exempted imports of machinery & transport equipment and raw materials for production of export-orientated industries from tariffs. It also granted exporters partial exemption from income breaks on export returns. Other tax incentives were offered through the Department of Income Taxation. A portion of the taxable income earned from exporting industrial products (except fertilisers, phosphates and potash) has been exempted from the corporate profit-tax. In 1993 the Government exempted from income tax 70% of net profits resulted from non-traditional exports outside the scope of protocols. Exporters in 1992 were exempted from the condition of returning the value of exports<sup>(45)</sup>.

A number of measures have been introduced for the promotion of investment. A drawback system and temporary entry are amongst these measures. The drawback system involves payment of dues upon importation and re-claiming them upon exportation, or "pay now, claim later". It covers imports for further processing and

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(45) Jordan, CBJ, *Thirtieth Annual Report*, 1993, p.113.

re-export. Despite its advantages, it faces some problems in practice relating to the calculation of the amount to be refunded and also the delays in refunding duties. This system, however, was improved to allow importers to submit bank guarantees to cover the duties on imported inputs, instead of paying now and claiming later. Six months are granted for export transactions to be completed, after which the customs authorities will use the guarantee to settle import duties. The temporary entry scheme applies to imported inputs entering in the production of export-oriented goods. This system is also applicable in the case of goods imported into the free zones and on which duties shall not be paid unless they enter the local market for processing or consumption. Export policy in Jordan also includes a 50% refund on fuel used in the production of export-oriented goods.

With respect to credit facilities, support for financing industrial exports has not been considered an urgent matter in the past and no export-import agency or agency for guaranteeing exports was available. However, the financial institutions such as the Industrial Development Bank and the commercial banks were relatively active in financing exports. But no institutionalised financing was available for capital goods which require medium- and long-term loans. The Central Bank of Jordan, through its administration of the Export Rediscounting Facility (EDF), provides funds to finance exports through commercial banks at a discount. In the late 1980s it provided refinancing facilities up to 80% of the value of exports at a relatively low interest rate. Within the framework of the Adjustment Economic Program the Government took measures to improve the operation of the EDF. The discount rate was adjusted to hold the average interest rate margins to about 5% to exports. Furthermore, a two percentage point rate differential was offered for goods destined for traditional and nontraditional markets. In 1993 this discount rate was reduced to 3.5%<sup>(46)</sup>. In practice, the use of EDF has declined since 1990, possibly because commercial banks are not interested in

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(46) Jordan, CBJ, *Monthly Statistical Bulletin*, May 1994, Table 23.

this scheme due to the low operational margin permitted in handling EDF as compared to the operational margin relating to general lending under the prevailing market lending rates (10% to 13%). Recently, this margin was increased from 1.5% to 2.5%<sup>(47)</sup>. Other measures in this regard are related to the recent Government steps to establish an Export Credit Guarantee Corporation to insure against risky importers and importing countries.

### *Institutional Framework for Export Promotion*

The institutional framework to support the policies formulated to promote exports includes the conclusion of agreements, the establishment of joint ventures and the strengthening of trade representation abroad, in addition to the establishment of corporation and centres for this purpose. Jordan Export Development and Trade Centres Corporation (JEDCO), trade agreements and the International Trade Centre are of special importance in this regard.

### *Jordan Export Development and Trade Centres Corporation*

The Jordan Export Development and Trade Centres Corporation (JEDCO) is a joint venture operating with funds from both the public and the private sector. It was originally established to function as a central institution in export promotion. In practice, its role has basically been to monitor the implementation of bilateral agreements. It has organised export exhibitions and participated in international trade fairs abroad. The recent reorganisation of the Corporation's structure and the improvement in its role and responsibility resulted in finding new export markets for Jordan's exports, particularly during the year following the Gulf crisis which disrupted Jordan's traditional markets<sup>(48)</sup>.

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(47) Jordan, CBJ, *Thirtieth Annual Report*, 1993.

(48) For a detailed picture on the recently developed functions of this corporation see Jordan, CBJ, *The Thirtieth Annual Report*, 1993, pp. 86-87.

The Corporation has implemented the "Export Trade Service Project" financed by USAID to study the US and European markets, and has forged cooperative relations with other bilateral and multilateral agencies. The effectiveness of this Corporation would be strengthened if it could overcome its shortage of manpower and expertise in marketing<sup>(49)</sup>. However, it seems that some success has been achieved in the case of the USA and also recently in the EEC markets. Jordan's domestic exports to the USA increased from JD2.8 million in 1989 to 3.5, 2.3, 4.2 and 7.3 million during the years 1990-1993; exports to the ECC countries decreased in 1990, 1991 and 1992 in comparison with their level of JD25 million in 1989, but in 1993 their value climbed to around JD28 million<sup>(50)</sup>.

### *Trade Agreements*

The efforts to expand export markets have focused in the past on expanding the scope of bilateral agreements, mainly with the neighbouring Arab countries. In spite of the importance of these traditional markets, where Jordan's companies have some track record, efforts were recently made to expand exports outside the region. The temporary closure of the traditional markets following the Gulf crisis forced Jordanian exporters -with the assistance of the Trade Centres Corporation- to find new markets and to expand exports in previously relatively unimportant markets such as those of North Africa.

Trade agreements work towards promoting and strengthening cooperative economic and trade relations with many Arab and foreign countries. Thus, they play a role in marketing exports. Trade agreements may be common with Arab countries such as the agreement among the Council of Arabic Economic Unity comprising most Arab

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(49) See for this point, the World Bank, *Jordan: Industry and Trade Policy Adjustment Loan*, June 1993, p.17.

(50) Jordan, CBJ, *Monthly Statistical Bulletin* (March 1994), Table 39.

countries, and the Arab Common Market which includes Egypt, Iraq, Jordan, Libya, Mauritania, Syria and the People's Democratic Republic of Yemen. Activities through these organisations concentrate on preferential trading arrangements, particularly the reduction and sometimes the elimination of tariff duties. Several member countries of the above organisations also apply bilateral trade agreements amongst themselves. These bilateral agreements are also applied with other Arab countries not members in the above organisations such as Saudi-Arabia, Tunisia, Morocco and with some other countries in the world.

The fields covered in these trade agreements are not confined to exchange of trade but also cover fields such as energy, tourism, communications and contracting in addition to non-economic areas such as culture, information, health, technical and scientific and research fields. Furthermore, they sometimes provide facilities to establish joint industrial, agricultural and tourist projects.

In the field of trade, emphasis is put on ways and means of expanding and diversifying the commodity base between Jordan and other trading partners with preference given at most times to national products. Commodities covered in the trade agreements are not always specified on the grounds that all domestic goods are eligible provided they are accompanied by a duly signed certificate of origin. Commodities included cover various sectors: agriculture, mining, and manufacturing.

As for customs duties and other taxes and fees, these depend on the partner country and the nature of relations. Sometimes all kinds of barriers are removed including exemptions from all taxes and other duties within the ceiling decided (Syria's case in 1990 may serve as an example). At other times only some exports are exempted from custom duties and other items had tariffs reduced by 50% (such as the case with Sudan in 1989). Benefits obtained from these trade preferential agreements

may be limited in the case of the GCC countries because of their low level of custom duties (around 4.0%). Also these benefits may be not great in the case of Egypt and Syria because of their small share in Jordan's manufactured exports. It seems that exports to Iraq, whose custom duties are somewhat higher than those in the GCC countries and who constitute a large export market for Jordan, generate more benefits<sup>(51)</sup>.

The impact of trade agreements on fostering exports growth through marketing facilities is not easily assessed, and there are no studies available on separating this impact from the impacts of various incentives and the role played by different corporations to facilitate the marketing of exports. In general, we can say that the larger portion of Jordan's export flows is marketed through these agreements but that the major proportion of Jordan's imports does not flow in through these arrangements. Although not accurate, trade with the Arab Common Market (ACM) (in which Jordan has common and bilateral trade agreements with its members) may be taken as an indication of the above observation. The proportion of domestic exports directed at the ACM countries in total domestic exports were 39.8%, 29.0%, 32.9%, 24.0% and 15.7% in the years 1980, 1985, 1987, 1990 and 1993, respectively, whereas imports' shares were 3.5%, 2.6%, 7.7%, 13.2%, 17.7% and 15.8% during the same years. It should be noted, however, that on average since 1985 about 70% of imports from the ACM countries have been fuels. As for exports, most of Jordan's exports to these countries are agricultural and manufacturing products<sup>(52)</sup>. The share of manufactured exports directed at this group in total exports ranged between 84% in 1987 and 51% in 1993.

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(51) Other fields of mutual cooperation include the setting up of exhibitions and trade centres for marketing both countries products. Also arrangements for using Aqaba port to conduct Iraqi external trade have been discussed. See Jordan, CBJ, *Annual Report*, Various Issues.

(52) Jordan, CBJ, *Monthly Statistical Bulletin*, Various Issues.

### *The International Trade Centre*

This Centre provides technical assistance for export promotion in Jordan. Efforts of this Centre are centred on manufactured goods. The Centre provides assistance to improve the quality of goods, locate markets for new products and improve marketing techniques. Export-related services were emphasised including packing, labelling, grading, adherence to specifications, quotations by land or sea, weight requirement, technical information on the content of items considered, and other services.

This Centre emphasises the creation of export awareness among the business community through trade missions and participation in international trade fairs and exhibitions. Missions have been organised to East Africa and Europe to carry market surveys and provides training experience in selling goods. In addition to the above incentive measures and institutions to promote exports, new administrative procedures were recently introduced to facilitate cumbersome and bureaucratic export formalities and procedures. Jordan has abolished the requirement to obtain an industrial licence to set up export-orientated projects, and the Industrial Estate Corporation which administers the Sahab Industrial Estate near Amman acts as a “one-stop shop” for many of the administrative forms required by manufacturing units.

### **6.4 SUMMARY**

Although the various kinds of incentives offered to Jordan's manufacturing are important, the provision of a stable political and economic environment is most significant in creating the appropriate investment climate. And the regional economic and political situation still affects Jordan's output and exports despite the recent efforts of the Government to concentrate on the principle of self-reliance. However, creating a competitive environment requires intervention from the Government to improve the



resources available and to direct their utilisation towards the desired ends in the most efficient possible way.

The quality of human resources available in Jordan is relatively distinctive, particularly in the resource based industries and some bigger medium-sized firms. Other firms, however, suffer from ineffective management and an inappropriately skilled labour force. Such deficiencies have been declined recently. The cost of labour had been higher than that in some neighbouring countries but declined in the late 1980s and beginning 1990s. The availability of financial resources and infrastructural utilities such as power, water and transportation are comparable to those in other countries in the region but their costs are relatively high. Jordan's high dependence on imported raw materials indicates the vulnerability of competitiveness to the cost of these imports as this cost and prices are subject to world market conditions.

The level and quality of the incentives and institutions available in Jordan are to some extent comparable to those offered in developing countries in the same stage of development. A recent comparative study conducted on some countries in West Asia stated that "Jordan's industrial development institutional infrastructure is well advanced compared to other countries in the study"<sup>(53)</sup>. The steady improvement in the macroeconomic environment after the economic crisis of 1988, particularly the depreciation of the JD and the pursuit of a flexible exchange rate policy in addition to the reduction in protection, have stimulated exports. But the quality and reliability of Jordan's products are still relatively inferior. Standardisation, quality control, marketing skills and financial exports support are areas that need more attention. Nevertheless, the growth in manufactured exports with diversification in commodity composition and in export markets, as have been shown in previous Chapters, may be considered as *prima facie* indicators of an improvement in Jordan's competitiveness.

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(53) ESCWA, *Promotion of Entrepreneurship in Small-Scale Industrial Enterprises*, p.14.

***Export Performance of Jordanian Manufacturing Industry***

**7.1 INTRODUCTION**

This *Chapter* attempts to assess the impact of changes in the competitiveness of Jordan's manufactures on export expansion. It consists of three sections. The first concerns the method and statistical procedure applied. Export expansion and some other related issues are examined in the second section. In section three detailed calculations of export performance are summarised and are followed by analysis of this performance with respect to commodity and market structures using measures such as revealed comparative advantage and the market dependence ratio. The competitiveness effect is then examined.

**7.2 METHOD**

Measuring export performance for Jordan is useful in itself in analysing general trade performance and is also useful in assessing the impact of international competitiveness on export growth through the attempt to determine the extent to which the expansion in Jordan's exports during the period studied was associated with changes in competitiveness.

The Constant Market Share (CMS) approach to analysing export growth, a widely-used technique to separate actual export growth into a world growth effect in addition to commodity composition, market-distribution and competitiveness effects,

is applied here using Leamer and Stern's formula<sup>(1)</sup>. This formula has been presented and applied in many studies including the OECD's studies on member countries<sup>(2)</sup>.

This approach assumes that the world growth effect equals what a country's export growth would have been if it had just maintained its share of total world exports. The commodity (market) effect accounts for any additional growth which occurred because the export structure of the country in question was concentrated on commodities (importing regions) with relatively rapidly growing demand. The competitive effect accounts for growth which arises from changing export shares.

The formula used by Leamer and Stern is presented below:

$$\underbrace{x' - x}_{\text{Growth in Exports of Focus Country}} = \underbrace{\sum_i r x_i}_{\text{World Growth Effect}} + \underbrace{\left( \sum_i r_i x_i - \sum_i r x_i \right)}_{\text{Commodity Effect}} + \underbrace{\left( \sum_i \sum_j r_{ij} x_{ij} - \sum_i r_i x_i \right)}_{\text{Market Effect}} + \underbrace{\left( \sum_i \sum_j x'_{ij} - \sum_i \sum_j x_{ij} - \sum_i \sum_j r_{ij} x_{ij} \right)}_{\text{Competitive Effect}}$$

where:

- $r$  : percentage change in world exports to all countries other than the focus country.
- $x$  : the focus country total exports in the initial year.
- $x'$  : the focus country total exports in the second year.
- Subscript  $i$  ( $i = 1, 2, \dots, m$ ) : each commodity class.  
:  $m =$  number of commodity classes.
- Subscript  $j$  ( $j = 1, 2, \dots, n$ ) : each different market.  
:  $n =$  number of markets.

Essentially, the CMS method is based on measuring the differential between a country's export growth and 'world' export growth. In the case of Jordan, aggregate

(1) E.E. Leamer and R. Stern, *Quantitative International Economics* (Boston: Allyn and Bacon, 1970), Chapter 7.

(2) See, for example, OECD, *OECD Economic Survey of Yugoslavia 1987/1988* (Paris: OECD, 1988) and OECD, *OECD Economic Survey of Spain 1990* (Paris: OECD, 1990).

'world' exports of manufactures need a relevant measure, since Jordan's share in the world's manufactured exports is minimal (0.022% in 1988). Jordan is a small country and, although manufactures' share was 50% of total exports in 1992, its industrial base is still narrow and, thus, its exports are small in international terms.

The geographical distribution of Jordan's manufactured exports (see *Table 5-12, Chapter 5*) reveals that the Arab countries in Western Asia and North Africa are Jordan's main export markets for manufactures, and especially the countries of Western Asia. No data are available on an intraregional basis for Arab countries as a group. But for Western Asia Arab countries, the so-called Economic and Social Commission for Western Asia (ESCWA) region countries, such data are available. Almost all Jordan's manufactured exports in 1975 and 1980 were directed at this region. The share of total Jordanian exports directed to ESCWA countries was about three-quarters in 1985 and in 1987 and around two-thirds in 1986 and 1988.

Accordingly, in this study all ESCWA countries (except Lebanon) represent Jordan's "World" for manufactured exports. Lebanon was at one stage an important exporter in this region. Its manufactured exports to the region accounted for more than one-half of total intra-regional exports of ESCWA countries in 1975, but data have become unavailable after that and Lebanon's relative importance in the region's exports declined as its exports decreased dramatically in absolute terms owing to the civil and Israeli wars. Moreover, other countries in the region have become more important as producers and exporters of manufactured goods as a result of applying ambitious industrial plans. Thus, excluding Lebanon from the calculations below is warranted.

The period of the study covers the years 1975 through 1988 with the following subperiods: 1975-1980, 1980-1985 and 1985-1988 and the entire period 1975-1988.

The sub-periods 1985-1986, 1986-1987 and 1987-1988 were also covered and although not presented the results are used below to support or clarify some points (see *Appendix I* on "Sources and Data"). The decisive factor behind the choice of these subperiods was the availability and continuity of data. Data were available on an intraregional basis for 1975, 1980, 1985 and then for every year until 1990 for a few countries only. For the majority of the countries in the region 1988 was the final year for which data were available<sup>(3)</sup>. This prevented the period of study being extended beyond 1988, although the years after 1988 might be of particular interest for the analysis of Jordan's exports after the large depreciation in the Jordanian dinar of the end of 1988 through 1990.

The calculations are based on 4 commodity groups classified according to the Standard International Trade Classification (SITC)- chemicals ("group 5"), basic manufactures ("group 6"), machinery and transport equipment ("group 7"), and other manufactures ("group 8"). A more disaggregated commodity classification would be more satisfactory, but the readily available data were for the four commodity groups mentioned above.

Accordingly,

- ① the effect of the change in ESCWA trade<sup>(4)</sup> in these four groups of manufactures on Jordan's exports is

$$\sum_{i=1}^4 r x_i = r x \quad (7-1)$$

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(3) Data used in calculating export expansion were basically obtained from: United Nations (UN), Economic and Social Commission for Western Asia (ESCWA), *External Trade Bulletin of the ESCWA Region* (E/ESCWA/STAT/1992/20, December 1992), Various Tables.

For more information on the sources for and calculations of the variables used in this Chapter see, *Appendix I* on "Sources and Data", subsection on export performance.

(4) Throughout the following the words "ESCWA trade", "ESCWA exports" and "ESCWA imports" refer to ESCWA countries trade, ESCWA countries exports and ESCWA countries imports respectively.

- ② the effect of the commodity composition of the change in ESCWA trade in manufactures on Jordan's exports is

$$\sum_{i=1}^4 (r_i x_i - r x_i) = \sum_{i=1}^4 r_i x_i - r x \quad (7-2)$$

- ③ the effect of the market pattern of the change in ESCWA trade in manufactures on Jordan's exports is

$$\begin{aligned} & \left( \sum_{j=1}^{11} r_{1j} x_{1j} - r_1 x_1 \right) + \left( \sum_{j=1}^{11} r_{2j} x_{2j} - r_2 x_2 \right) + \left( \sum_{j=1}^{11} r_{3j} x_{3j} - r_3 x_3 \right) + \left( \sum_{j=1}^{11} r_{4j} x_{4j} - r_4 x_4 \right) \\ & = \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} - \sum_{i=1}^4 r_i x_i \end{aligned} \quad (7-3)$$

- ④ the effect of the change in ESCWA trade in manufactures on Jordan's exports, allowance being made for the commodity composition and market pattern of this change, is ① + ② + ③, or

$$r x + \sum_{i=1}^4 r_i x_i - r x + \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} - \sum_{i=1}^4 r_i x_i = \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \quad (7-4)$$

- ⑤ the effect of the increased (decreased) competitiveness of Jordan's exports is

$$(x' - x) - \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \quad (7-5)$$

The corresponding amount for commodity group (i) is

$$(x'_i - x_i) - \sum_{j=1}^{11} r_{ij} x_{ij} \quad (7-6)$$

Assuming constant market shares, the commodity (market) effect will be positive if Jordan's manufactured exports are more heavily concentrated on higher-growth

commodities (importing countries) relative to the ESCWA average. The competitive effect accounts for the growth which arises from changing export shares. Since it is calculated as a residual it includes the effects of non-price competitive elements in addition to non-market factors. Hence, the competitiveness effect measured according to CMS approach is not confined to "price" competitive elements.

### **7.3 EXPORT EXPANSION**

This issue has been examined in some detail in the earlier *Chapter* on Jordan's external trade. Hence, only some relevant data and remarks are set out here.

Jordan's domestic exports have witnessed substantial increases since the mid-1970s. They grew by an average of 32.3% per annum during 1975-1980 and by 15.8% per annum during the entire period 1975-1988. Manufactured exports, however, grew by even more pronounced rates. From \$25 million in 1975, domestic manufactured exports increased to \$136 million in 1980, and further to \$281 million, \$335 million, \$349 million and \$396 million in the years from 1985 through 1988. The average annual rates of growth were 40.3% during 1975-1980 and 15.6% during 1980-1985. The annual growth over the previous year for 1986, 1987 and 1988 was -16.4%, 48.5% and 13.5% respectively. For the entire period the average annual growth rate was 23.7% per annum. In real terms, the growth in domestic manufactured exports was also considerable. The average rates of real growth were 46%, 13.9%, 11.4% and 22.6% during the periods 1975-1980, 1980-1985, 1985-1988 and 1975-1988 respectively. This growth was reflected positively in Jordan's share in ESCWA's intraregional exports. This share increased from 4.1% in 1975 to 6.7%, 10.7%, 10.3%, 17.8% and 9.2% in the years 1980, 1985, 1986, 1987 and 1988 respectively.

Comparison of the performance of manufactured exports directed at all Jordan's export markets with those going only to the ESCWA countries shows that nearly the same pattern of growth prevailed in both cases (see *Chapter 5*). The main reason for this similarity is that Jordan's manufactured exports to ESCWA countries constituted, in general, a very high proportion of the total except in 1986 and 1988 when this proportion decreased.

#### **7.4 ANALYSIS OF EXPORT PERFORMANCE**

*Table 7-1* summarises the detailed calculations of the changes in Jordan's manufactured exports directed at ESCWA countries. Substantial increases were achieved in the intraregional manufactured exports of ESCWA during 1975-1988, the average increase being 13.7% per annum (see Statistical Appendix B, *Tables B-1* and *B-7*). This means Jordan's "theoretical" exports will have expanded also by considerable rates (since by definition application of CMS analysis assumes maintaining export shares). As Jordan's actual exports have increased considerably and by higher growth rates averaging 20.9% per annum, its actual export growth exceeded the "theoretical" growth.

If Jordan had just maintained its share in total ESCWA exports, its exports would have increased by \$96 million. And if this expansion in exports (also assuming constant market shares) had been concentrated on high-growth commodities and importing regions, Jordan's exports would have increased by an additional \$78.4 million for the commodity pattern in ESCWA's exports and by -\$13.9 million for the unfavourable effect of the market pattern. However, Jordan's actual increase of \$240.7 million was more than the net increase in exports attributable to changes in ESCWA's exports of \$160.8 million<sup>(5)</sup>; the remaining \$80.0 million is attributable to the increased competitiveness of Jordanian exports.

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(5) The net increase in Jordan's exports attributable to changes in ESCWA's exports = change due to increase in value of ESCWA exports + change due to commodity effect + change due to market effect. Thus, during 1975-1988, this net increase = 96267 + 78380 + (-13895) = \$160752 thousand = \$160.8 million.



**Table 7-1.** Summary Statistical Analysis of Changes in Jordan's Manufactured Exports to ESCWA Region, 1975-1988

Exports in Thousands of US Dollars	(5) Chemicals	(6 - 68) Basic manufac- tures	(7) Machinery & transport equipment	(8) Other manufac- tures	Total manufac- tures
1. Exports in 1975	5676	10455	1438	4798	22367
2. Exports in 1980	34329	59046	7429	27802	128606
3. Exports in 1985	60755	98600	4815	46893	211063
4. Exports in 1986	78888	51594	3382	19734	153698
5. Exports in 1987	120343	109934	6438	20480	257195
6. Exports in 1988	128889	96679	9379	28157	263104
<b>7. Change in exports from 1975-1980</b>	<b>28653</b>	<b>48591</b>	<b>5991</b>	<b>23004</b>	<b>106239</b>
8. Of the Above::					
(a) Change due to increase in value of ESCWA trade	14343	26420	3634	12125	56522
(b) Change due to commodity pattern of increase in ESCWA trade.	-4177	8834	-43	-4693	-81
(c) Change due to market structure of increase in ESCWA trade.	3812	8720	1067	888	14487
(d) Change due to increased competitiveness of Jordan's exports	14685	4617	1335	14684	35311
<b>9. Change in exports from 1980-1985</b>	<b>26426</b>	<b>39554</b>	<b>-2614</b>	<b>19091</b>	<b>82457</b>
10. Of the above:					
(a) Change due to decrease in value of ESCWA trade	996	1712	216	806	3730
(b) Change due to commodity pattern of decrease in ESCWA trade	42396	3602	-2081	8897	52814
(c) Change due to market structure of decrease in ESCWA trade	-23225	-22591	-2108	1099	-46825
(d) Change due to increased competitiveness of Jordan's exports	6259	56831	1359	8289	72738
<b>11. Change in exports from 1985-1988</b>	<b>68134</b>	<b>-1921</b>	<b>4564</b>	<b>-18736</b>	<b>52041</b>
12. Of the above:					
(a) Change due to increase in value of ESCWA trade	28008	45455	2220	21618	97301
(b) Change due to commodity pattern of increase in ESCWA trade	49819	52356	-2321	-33623	66231
(c) Change due to market structure of increase in ESCWA trade	39749	-111243	-521	31421	-40594
(d) Change due to decreased competitiveness of Jordan's exports	-49442	11511	5186	-38152	-70897
<b>13. Change in exports from 1975-1988</b>	<b>123213</b>	<b>86224</b>	<b>7941</b>	<b>23359</b>	<b>240737</b>
14. Of the above:					
(a) Change due to increase in value of ESCWA trade	24429	44998	6189	20651	96267
(b) Change due to commodity pattern of increase in ESCWA trade	51680	43817	-3941	-13176	78380
(c) Change due to market structure of increase in ESCWA trade	33338	-49667	-1315	3749	-13895
(d) Change due to increased competitiveness of Jordan's exports	13766	47076	7008	12135	79965
<b>15. Change in exports from 1980-1987</b>	<b>86014</b>	<b>50888</b>	<b>-991</b>	<b>-7322</b>	<b>128589</b>
16. Of the above:					
(a) Change due to decrease in value of ESCWA trade	-8445	-14525	-1827	-6839	-31636
(b) Change due to commodity pattern of decrease in ESCWA trade	84827	5963	-2541	139	88388
(c) Change due to market structure of decrease in ESCWA trade	-27817	-11921	-1294	3504	-37528
(d) Change due to increased competitiveness of Jordan's exports	37449	71371	4671	-4126	109365

Source: Based on Tables (B-1) to (B-7) in Statistical Appendix B. For notes see notes of Table (B-1).

Hence, 40% of the total increase in Jordan's actual exports was explained by the increase in the value of ESCWA's exports, 33% was explained by the commodity pattern of ESCWA's exports, and -5.8% was due to the market pattern of ESCWA's exports. The other 33% was attributable to increased competitiveness.

Three possible approaches may be employed in analysing the expansion of Jordan's manufactured exports. The first approach is based on the division of the period studied into relevant subperiods and the analysis of the effects of export expansion in each subperiod (analysis by period). The second approach is based on the examination of each of the four effects of Jordan's export expansion (the world, commodity, market and competitiveness factors) over the whole period for each commodity group (analysis by factor). The third is related to commodity groups. Each commodity group of manufactures is examined during the entire period with respect to the four effects of Jordan's export growth (analysis by commodity group).

#### **7.4.1 ANALYSIS OF EXPORT PERFORMANCE BY PERIOD**

##### **7.4.1.1 The First Period, 1975-1980**

Between 1975 and 1980 Jordan's exports increased by the substantial amount of \$106.2 million or by an average of 41.9% per annum (see *Table 7-1*). This considerable increase could not be attributable only to the expansion in ESCWA's exports. In fact such expansion "explained" only 53.22% of the total increase in Jordan's exports and the remainder was "explained" by the market pattern (13.6%) and by improvements in competitiveness (33.2%).

##### *(1) Effect of increase in ESCWA's trade*

If Jordan had shared only proportionately in the expansion of ESCWA's trade of \$1368 million during 1975-1980 (see Statistical Appendix B, *Table B-1*), its exports

would have increased by \$56.5 million (see *Table 7-1*). The increase in Jordan's exports, however, was greater than that. Hence Jordan's share in ESCWA's exports increased from 4.1% in 1975 to 5.6% in 1980 (see Statistical Appendix B, *Table B-1*).

### *(2) Effect of commodity pattern of ESCWA's exports expansion*

Two measures are used to analyse the commodity effect of each commodity group and of total manufactures. These are the growth in ESCWA's manufactured imports of each commodity group compared to the growth of total manufactures (*Table 7-2*), and the Export Revealed Comparative Advantage (ERCA) for each commodity group which is defined as the ratio of Jordan's share in ESCWA region exports of each group of manufactures to Jordan's share in ESCWA region exports of total manufactures (*Table 7-3*)

*Table 7-2* below shows that during 1975-1980 the expansion in ESCWA's demand was most pronounced in commodity group (6-68), basic manufactures. The growth in imports of this group averaged 34.3% per annum, which was higher than the average for total manufactures of 28.7% per annum. Also, ERCA of 1.6 for this commodity group was relatively high (see *Table 7-3* below). This means that Jordan was concentrating its exports on a high-growth commodity group. Consequently, the commodity effect accounted for an additional increase of \$8.8 million which explained 18.2% of the actual export growth in this group (see *Table 7-1*).

As for group 5-chemicals, the ERCA of 4.28 was the highest among all manufacturing commodity groups, but the expansion in ESCWA's demand for this group of 22.8% was below the average for total manufactures. Thus, Jordan's concentration on exports of such a group of relatively low growth resulted in a negative commodity effect.

**Table 7-2.** Average Annual Rates of Growth of Intraregional Manufactured Imports of Main Importing Countries in ESCWA Region by Commodity Group

Country ↓ SITC ⇒	1975 - 1980					1980 - 1985					1985 - 1988					1975 - 1988					1980 - 1987				
	5	6-68	7	8	Total	5	6-68	7	8	Total	5	6-68	7	8	Total	5	6-68	7	8	Total	5	6-68	7	8	Total
	Egypt	-34.1	23.1	24.4	19.8	25.8	101.4	-9.4	8.5	20.0	6.2	89.4	17.8	-21.3	-10.3	-3.8	29.2	8.3	6.2	12.1	10.8	109.1	-9.5	-0.8	6.0
Iraq	31.1	56.5	31.9	29.8	39.2	0.6	-3.3	-13.7	6.7	-7.1	30.9	-7.9	7.5	14.3	2.7	18.4	15.1	6.9	16.9	11.1	2.1	-7.5	-19.8	-1.2	-11.3
Kuwait	36.3	50.4	52.1	-4.5	40.0	46.0	15.6	-30.0	30.3	11.4	26.0	34.0	35.4	49.4	34.1	37.4	32.3	9.9	13.4	26.9	32.6	8.0	-27.4	18.0	6.3
Saudi - Arabia	33.8	31.0	16.2	12.8	21.9	19.4	-7.4	-13.0	4.6	-3.5	-5.9	-10.8	-4.7	-23.3	-12.4	18.1	4.9	-0.7	0.2	3.3	13.3	-6.5	-13.6	-6.7	-6.1
Syria	18.7	0.4	40.1	23.0	18.1	-9.9	-29.9	-16.6	-0.1	-17.4	167.9	-2.1	-15.7	-10.1	43.1	28.8	-13.1	2.1	5.6	7.6	20.2	-23.1	-21.0	-3.7	-9.9
Total ESCWA	22.8	34.3	28.4	20.6	28.7	17.8	1.7	-5.6	6.2	0.6	31.6	25.8	-0.7	-9.4	13.5	22.8	18.9	7.5	7.5	13.7	18.2	-2.2	-11.9	-3.9	-3.9

Source: Computed from United Nations (UN), Economic and Social Commissions for Western Asia (ESCWA), *Developments in the External Sector of the ESCWA Region in the 1980s* (E/ESCWA/DPD/89/2, August 1989), Various Tables; ESCWA, *Analytical Review of Developments and Issues in the External Trade and Payments Situation of Countries of Western Asia* (E/ESCWA/DPD/1992/10, August 1992), Various Tables and ESCWA, *External Trade Bulletin of the ESCWA Region* (E/ESCWA/STAT) 1992/20, December 1992), Various Tables.

Table 7-3. Jordan's Export Revealed Comparative Advantage\*

SITC Commodity group	1975		1980		1985		1986		1987		1988	
	Jordan's share in ESCWA region exports of each group	Jordan's ERCA*	Jordan's share in ESCWA region exports of each group	Jordan's ERCA*	Jordan's share in ESCWA region exports of each group	Jordan's ERCA*	Jordan's share in ESCWA region exports of each group	Jordan's ERCA*	Jordan's share in ESCWA region exports of each group	Jordan's ERCA*	Jordan's share in ESCWA region exports of each group	Jordan's ERCA*
(5) Chemicals	17.67	4.28	38.29	5.69	29.93	2.79	40.28	3.91	41.62	2.33	27.84	3.04
(6-68) Basic manufactures	6.56	1.59	8.48	1.26	12.98	1.21	8.79	0.85	18.46	1.03	6.39	0.70
(7) Machinery & transport equipment	0.59	0.14	0.87	0.13	0.75	0.07	0.74	0.07	1.83	0.10	0.50	0.16
(8) Other manufacturers	4.54	1.10	10.31	1.53	12.89	1.20	7.85	0.76	10.01	0.56	10.40	1.14
(5-8 less 68) Total manufactures	4.13		6.73		10.74		10.31		17.85		9.16	

Source: Based on Tables (B-1) to (B-7) in Statistical Appendix B.

Notes: \* Export revealed comparative advantage (ERCA) for a particular country =  $\frac{\text{The country's share in world exports for industry A}}{\text{The country's share in world exports for all industries}}$

In the case of Jordan, ESCWA region, the Arab countries of Western Asia in addition to Egypt, represent Jordan's 'World'. Therefore,

$$\text{(ERCA) for Jordan's manufactures} = \frac{\text{Jordan's share in ESCWA region exports of each group of manufactures}}{\text{Jordan's share in ESCWA region exports of total manufactures}}$$

The demand for group 7 -machinery & transport equipment- was very high. Its share in ESCWA's total imports from all over the world in 1975 was 52%; and its relative importance in ESCWA's intraregional imports was 45%<sup>(6)</sup>. The ERCA for this group was very low (0.14) and the growth in its demand was below the average for total manufactures. Thus the outcome was a negative commodity effect. The growth for group 8 -"other manufactures"- was also less than the average for total manufactures, accompanied with an ERCA of 1.1, and again the effect of the commodity pattern was negative.

The overall commodity effect (*Table 7-1*) was a low negative estimate explaining less than 0.1% of the total increase in Jordan's actual exports. In essence, the favourable effect of "basic manufactures" was large enough to offset the negative effects of all the other groups. In other words, there was no additional increase in Jordan's exports that was attributable to the overall commodity pattern of Jordan's exports.

### *(3) Effect of market pattern of ESCWA's exports expansion*

Two Tables are used to examine the market effect of Jordan's export expansion. *Table 7-2* above on the growth in manufactured imports of main importing countries and *Table 7-4* below on market dependence defined as a ratio of the percentage share of a given market in Jordan's exports to the percentage share of that market in ESCWA's exports.

In 1975 the relative dependence of Jordan's total manufactured exports on the Iraqi market, as presented in *Table 7-4*, was high, with a ratio of 1.66; and this market experienced substantial import growth rates averaging 39.2% as against 28.7% for the average of all markets in the ESCWA region (*Table 7-2*). Similarly, Kuwait which

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(6) ESCWA, *Developments in the External Sector of the ESCWA Region in the 1980s* (F/ESCWA/DPD/89/2, August 1989), Table III-1.

**Table 7-4. Market Dependence Ratios\* of Jordan's Exports, Selected Years**

SITC ⇒ Year ⇒ Country ↓	(5)				(6 - 68)				(7)				(8)				Total manufactures			
	1975	1980	1985	1988	1975	1980	1985	1988	1975	1980	1985	1988	1975	1980	1985	1988	1975	1980	1985	1988
	Egypt	0.48	-	1.37	0.61	1.20	-	5.18	22.15	1.70	-	6.06	1.93	15.67	-	0.21	2.46	1.36	-	0.64
Iraq	2.40	3.03	4.12	5.45	2.45	1.60	3.25	9.78	0.78	1.82	1.21	2.92	2.86	6.66	11.34	4.30	1.66	2.03	3.90	5.09
Kuwait	1.58	0.50	0.16	0.12	1.53	0.60	0.23	0.21	0.56	2.34	5.92	2.87	0.62	2.34	0.31	0.84	1.60	0.87	0.33	0.33
Saudi-Arabia	1.04	0.80	1.28	3.05	1.08	1.00	1.05	0.96	0.55	0.84	1.95	1.61	0.42	0.47	0.21	0.38	0.88	1.07	1.20	2.10
Syria	11.46	5.60	8.44	0.82	3.09	14.59	17.33	3.06	37.95	13.98	6.19	0.33	65.9	22.1	0.56	1.38	11.35	10.50	5.50	2.18

**Source:** Computed from ESCWA, *Developments in the External Sector of the ESCWA Region in the 1980s*, Various Tables and ESCWA, *External Trade Bulletin of the ESCWA Region*, Various Tables and ESCWA, *Analytical Review of Developments and Issues in the External Trade and Payments Situation of Countries of Western Asia*, Various Tables.

**Note:** \* Dependence Ratio =  $\frac{\text{Percentage share of a given market in Jordan's exports}}{\text{Percentage share of that market in world (ESCWA) exports}}$

had a relatively high dependence ratio of 1.6, experienced a high import growth rate (40%). The situation with respect to Syria and Saudi-Arabia was different. Syria had a very high dependence ratio but its imports grew by a relatively low rate of 18.1%, while Saudi-Arabia had a small dependence ratio and grew by rates that were less than the average for the region.

Hence, the unfavourable market pattern of Syria and Saudi-Arabia were more than offset by the favourable effects of Iraq and Kuwait and the overall result was a positive market effect. In other words, because Jordan concentrated its exports on high growing markets an extra \$14.5 million increase in exports was achieved. All commodity groups participated in this result (see *Table 7-1*).

#### *(4) Effect of increased competitiveness*

The net increase in Jordan's exports attributable to changes in ESCWA's exports is estimated at \$70.9 million (computed from *Table 7-1*); the rest, \$35.3 million or one third of the total actual increase in exports, is attributable to the increased competitiveness of Jordanian exports. The proportions attributable to competitiveness for the different commodity groups are presented in *Table 7-5* below. They were 51.2% for chemicals, 9.5% for "basic manufactures", 22.3% for machinery and transport equipment, and 63.8% for "other manufactures".

Between 1975 and 1980 Jordan increased its share of ESCWA's exports in all these groups; from 17.7% to 38.3% in chemicals, from 6.6% to 8.5% in "basic manufactures", from 0.6% to 0.9% in machinery and transport equipment, and from 4.5% to 10.3% in "other manufactures" (see Statistical Appendix B, *Table B-1*).



**Table 7-5.** The Proportion of the Change in Jordan's Manufactured Exports Attributable to Change in Competitiveness\*

(%)

SITC Commodity Group	1975	1980	1985	1986	1987	1975	1975	1980	1985
	↓ 1980	↓ 1985	↓ 1986	↓ 1987	↓ 1988	↓ 1987	↓ 1988	↓ 1987	↓ 1988
(5) Chemicals	51.2	23.7	118.9	- 3.3	- 1667.9	59.6	11.2	43.5	- 72.6
(6-68) Basic manufactures	9.5	143.7	- 44.0	90.2	- 747.4	74.1	54.6	140.3	599.2
(7) Machinery and transport equipment	22.3	52.0	- 76.1	12.3	- 132.8	92.4	88.3	- 471.3	113.6
(8) Other manufactures	63.8	43.4	- 46.7	396.4	- 162.6	56.9	51.9	56.4	- 203.6
Total manufactures	33.2	88.2	- 22.4	55.9	- 4366.2	66.3	33.2	85.1	- 136.2

Source: Computed from Table 7-1.

Notes: \* = 
$$\frac{\text{Change in exports of each group due to change in competitiveness}}{\text{Change in total manufactured exports of the concerned group}}$$

#### 7.4.1.2 The Second Period, 1980-1985

During this period the growth of Jordan's exports was less pronounced than in the previous period, but still averaged 10.4% per annum. This increase could not be attributed only to the increase in ESCWA's exports, since these exports rose only by 0.6% and could merely "explain" a small proportion of Jordan's exports increase (4.5%). Most of the increase was accounted for by factors such as the commodity structure, which "explained" 64.1% of the total, and by the competitiveness effect which "explained" 88.2%. These factors more than offset the unfavourable effect of the market structure of - 56.8%.

##### (1) ESCWA's trade effect

ESCWA's manufactured exports recorded only small increases during this period. They rose by 2.9% for the entire period or by an average of 0.6% per annum (see Statistical Appendix B, Table B-2). If Jordan had maintained its proportion in

ESCWA's exports, its exports would have increased by \$3.7 million. Actually, Jordan's exports increased by \$82.5 million and thus Jordan's share in ESCWA's exports rose from 5.6% to 10.7% between 1980 and 1985.

## *(2) Commodity effect*

The pattern of expansion in ESCWA's trade during this period indicates that only 0.6% average annual growth was recorded in total imports. The highest growth was in the group of chemicals and the lowest was in machinery & transport equipment. However, the change in Jordan's exports (*Table 7-1*) due to the commodity pattern was positive in the case of chemicals, "basic manufactures" and "other manufactures", but negative in machinery & transport equipment.

The effect of the commodity pattern for chemicals, which had an ERCA as high as 5.7 in 1980, was the most favourable of all the groups. Jordan concentrated its exports on this commodity group which had a relatively high growth rate, 17.8% against less than 1% on average.

The growth in demand for "other manufactures" was also high averaging 6.2% per annum. Its relative importance in Jordan's exports compared with that in ESCWA's exports was also high and recorded an ERCA of 1.53. Therefore, the commodity pattern was favourable. "Basic manufactures" had the same pattern as "other manufactures" but the growth in demand was lower (but still more than average) and its ERCA was smaller although still more than unity.

The commodity effect of the group of "machinery & transport equipment" which had a very small ERCA of 0.13 was negative since the growth in its demand of -5.6% was the lowest of all commodities. The favourable effects of the previous commodity groups more than offset the unfavourable effect of machinery & transport equipment and hence, the overall commodity effect was positive.

### *(3) Market effect*

During this period Kuwaiti and Egyptian imports grew by positive growth rates in comparison with negative growth in the other main markets and stagnation on average for all ESCWA markets. In 1980 the dependence ratio was highest on the Syrian market, but the growth of that country's imports during this period was a very large negative figure (17.4%). The dependence ratio in the Iraqi market was also high and again the growth rate was negative (7.1%). As for Saudi-Arabia, the dependence ratio was 1.1 and the growth in its demand for ESCWA's goods was also negative.

The unfavourable impact on Jordan of these market patterns was not offset by the performance of Kuwait, because, although the growth in Kuwait's demand was the highest in the region, its market was relatively unimportant to Jordan. Consequently, the overall effect for total manufacturing during this period was unfavourable. This was an outcome of the negative effects of all commodity groups except "other manufactures".

### *(4) Competitiveness effect*

The net increase in Jordan's exports attributable to changes in ESCWA's exports was \$97.2 million, the remaining increase of \$72.7 million or 88% of the total actual increase in exports, being attributable to the increase in competitiveness of Jordan's exports. The proportion attributable to competitiveness was highest in "basic manufactures" followed by "other manufactures" and then by chemicals. Machinery & transport equipment did not fare well, recording a negative competitiveness effect.

Jordan's share in ESCWA's exports increased from 8.5% to 13.0% in "basic manufactures" and from 10.3% to 18.9% in "other manufactures". This share, however, declined in chemicals from 38.3% to 29.9% and in machinery from 0.87% to 0.75%.

### 7.4.1.3 The Third Period, 1985-1988

Jordan's exports during this period rose by an average of 7.6% annually. This increase was just over half of the increase of 13.5% recorded by the ESCWA region as a whole. Consequently, the "theoretical" increase in Jordan's exports of \$97.3 million was more than its actual increase and "explained" 187% of the total actual rise in Jordan's exports. It is obvious that all or some other effects must then be negative. Indeed, the effects of both market pattern and competitiveness were negative and "explained" 78.0% and 136.2% respectively of the change in Jordan's exports. However, the commodity effect in this period was favourable and "explained" 127.3% of the increase in Jordan's exports.

#### *(1) ESCWA's trade effect*

Jordan's exports would have increased by \$97.3 million during this period if it had shared only proportionately in the expansion of ESCWA's trade. However, the actual increase in Jordan's exports of \$52 million was less than the "theoretical" increase.

#### *(2) Commodity effect*

The pattern of demand expansion during this period was to some extent different from that of the previous period. A relatively high increase was registered in the overall value of imports, reaching an average growth rate of 13.5% per annum.

The change due to the commodity pattern of the expansion in ESCWA's exports was positive in chemicals, which had a relatively high ERCA of 2.79 in 1985, and the demand for products in this group was growing very rapidly, i.e. by 31.6% per annum compared to 13.5% for the average of total manufactures. "Basic manufactures" which had a relatively high ERCA of 1.21 and enjoyed a relatively high import demand growth of 25.8% also achieved a favourable commodity effect.

The value of the ERCA was very low for machinery & transport equipment (0.07) and was slightly more than unity for “other manufactures” but the negative growth rates in demand for both resulted in a negative commodity effect for both.

### *(3) Market effect*

The market effect during this period was also unfavourable. This was attributed to the unfavourable market performance of “basic manufactures” and of machinery & transport equipment which were not compensated for by the favourable performances of chemicals and “other manufactures”.

The dependence ratios for Syria, Iraq and Saudi-Arabia were higher than those of other countries. They stood at 5.5, 3.9 and 1.2 for the Syrian, Iraqi and Saudi-Arabian markets respectively, but the growth rates of imports in these markets were -6.4%, 2.7%, and -12.4% respectively. The average growth for all countries in the ESCWA region was 13.5%. United Arab Emirates (UAE), in particular, which took in only 1.1% of Jordan's manufactured exports in 1985, recorded very high growth rates in its imports from the region. Kuwait, in spite of its high growth rates, did not generate a favourable effect due to its relatively low dependence ratio. Thus, the overall result was negative.

### *(4) Competitiveness effect*

During this period the net increase in Jordan's exports attributable to the ESCWA's exports was \$122.9 million; the remainder, -\$70.9 million or -136.2% of the total actual increase, was ascribed to the decreased competitiveness of Jordanian exports in its broad covering of elements.

Actual exports of machinery and transport equipment rose by \$4.6 million and the proportion attributable to competitiveness was 113.6%. In the case of chemicals

exports also increased, but the effect of competitiveness was  $-72.5\%$ . For “basic manufactures”, exports declined and this decline was not the result of decreased competitiveness (which actually improved) but was attributable to the unfavourable market effect.

The commodity group “other manufactures” exhibited a different pattern. The actual decrease in its value was attributable to a decline in competitiveness and to the commodity structure. Overall, the large negative figures for the competitiveness effect in chemicals and “other manufactures” were not compensated for by the small positive effects of “basic manufactures” and machinery & transport equipment. The result was a relatively large decrease in competitiveness in its wide coverage of elements during this period.

#### **7.4.1.4 The Entire Period, 1975-1988**

The increase in Jordan’s exports during this period was considerable, averaging  $20.9\%$  per year. This spectacular increase could not be explained only by the expansion in ESCWA’s exports. Indeed, this expansion was accounted for also by the improvement in competitiveness which explained  $33\%$  of the total increase in Jordan’s exports and by the favourable effect of the commodity pattern which explained  $40\%$  of the total. The unfavourable effect of the market pattern ( $-5.8\%$ ) was relatively small and was more than compensated for by the other favourable effects.

##### *(1) ESCWA’s trade effect*

ESCWA’s exports expanded by  $430.5\%$  during the period, and had Jordan maintained constant market share in its exports its “theoretical” exports would have grown by \$96 million. Actually, the increase exceeded that level, reaching \$241 million. This increase led to a raising of Jordan’s share in ESCWA’s exports to  $9.2\%$  in 1988 from  $4.1\%$  in 1975.

### *(2) Commodity effect*

During the entire period, the pattern of demand expansion in ESCWA's trade was such that chemicals and "basic manufactures" recorded the highest import growth, with 22.8% per annum for the former and 18.9% for the latter. These figures compared with 13.7% on average for import growth of total manufactures. These groups also enjoyed the highest ERCAs of 4.3 for chemicals and 1.6 for "basic manufactures". Accordingly, since Jordan concentrated its exports on these two growing export groups, the result was a favourable commodity effect for each and for total manufactures. In fact, their favourable effect more than compensated for the unfavourable effects of other groups.

Machinery & transport equipment and "other manufactures" are relatively unimportant in Jordan's exports as indicated by their low ERCAs. But as ESCWA's growth rates for these groups were far below the average for total manufactures (7.5% per annum for each), the commodity effect for each was negative.

### *(3) Competitiveness effect*

During 1975-1988 the net increase in Jordan's exports attributable to changes in ESCWA's exports can be placed at \$160.8 million; the remainder, \$80 million or 33.2% of the total actual increase, is attributable to the increased competitiveness of Jordanian exports.

Jordan increased its share of ESCWA's exports in all these groups from 17.7% to 27.8% in chemicals, from 6.6% to 6.4% in "basic manufactures", from 0.6% to 1.5% in machinery, and from 4.5% to 10.4 for "other manufactures" (see Statistical Appendix B, *Table B-1* and *B-7*).

Regarding markets for these groups, the most pronounced changes were in chemicals and "other manufactures". Chemicals' shares increased considerably in some markets such as Saudi-Arabia (see *Table 7-6* below). Saudi-Arabia's share in Jordan's exports of chemicals doubled during this period. In the case of "other manufactures" Iraq was the dominant market, its share in Jordan's exports of this group increased 4.5 fold. The market of Kuwait increased almost six-fold. The shares of Saudi-Arabia, Syria and Egypt in Jordan's exports of this group were declining. With respect to machinery & transport equipment, market shares of Iraq and Kuwait in Jordan's exports increased, but the market share of Syria declined. As for "basic manufactures" Iraq and Egypt shares in Jordan's exports of this group increased at the expense of the decrease in the shares of Syria, Saudi-Arabia and Kuwait.

#### *(4) Market effect*

The pattern of demand growth for Jordan's exports over the whole period 1975-1988 was such that Kuwait recorded the highest growth which exceeded the average for all countries in ESCWA region. While Egypt, Iraq and Syria registered import growth rates that were below that average. With respect to the dependence ratio it was very high on the market of Syria and far below that for the other countries in the region.

Since Kuwait, which recorded the highest growth rates of imports was relatively unimportant for Jordan, and since the other main countries importing from Jordan did not have import growth as high as ESCWA average, Kuwait's favourable effect did not compensate for the unfavourable effects of Syria, Iraq and Egypt and the result was a negative market effect for Jordan.



Table 6-6. Shares of ESCWA Countries in Jordan's Manufactured Exports by Commodity Group

Commodity Group	Value (in million US \$)										Country ↓																			
	1975	1980	1985	1986	1987	1988	1989	1990	1995	1996	1975	1980	1985	1986	1987	1988	1989	1990	1995	1996										
Chemicals	5.7	3.4	60.8	5.7	3.4	60.8	10.5	59.0	98.6	51.6	109.9	96.7	1.4	7.4	4.8	3.4	6.4	9.4	4.8	27.8	46.9	19.7	20.5	28.2	22.4	128.6	211.1	153.6	257.2	263.1
Basic manufactures	0.69	0.03	3.12	0.69	0.36	3.12	0.71	0.00	0.00	0.00	0.00	0.20	2.09	0.13	0.00	1.55	0.00	0.12	0.94	0.23	0.00	0.00	0.09	0.16	0.56	0.15	0.90	2.37	1.66	1.49
Machinery & transport equipment	1.99	0.00	3.71	1.99	0.00	3.71	1.85	0.00	2.72	13.52	32.87	9.57	13.21	0.00	40.02	22.10	18.00	12.74	17.63	0.00	0.43	7.47	1.19	4.79	6.00	0.00	3.35	6.48	15.24	6.81
Other manufactures	28.84	58.51	31.31	28.84	58.51	31.31	29.37	41.16	64.78	47.31	53.95	76.57	17.25	46.00	19.52	15.75	47.86	60.00	15.07	50.68	88.41	63.52	71.40	67.96	25.39	46.00	59.32	47.53	56.40	57.55
Total manufactures	6.09	2.72	2.50	5.09	2.72	2.50	4.50	3.03	2.22	3.33	2.11	2.47	0.62	7.87	4.49	0.93	5.82	5.52	2.60	3.38	1.26	2.71	3.36	15.12	3.89	3.30	2.14	2.88	2.21	3.54
Bahrain	0.00	0.03	3.12	0.00	0.03	3.12	0.00	0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.42	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.02	0.95	1.31	0.44	0.08
Democratic Yemen	1.99	0.00	3.71	1.99	0.00	3.71	1.85	0.00	2.72	13.52	32.87	9.57	13.21	0.00	40.02	22.10	18.00	12.74	17.63	0.00	0.43	7.47	1.19	4.79	6.00	0.00	3.35	6.48	15.24	6.81
Egypt	28.84	58.51	31.31	28.84	58.51	31.31	29.37	41.16	64.78	47.31	53.95	76.57	17.25	46.00	19.52	15.75	47.86	60.00	15.07	50.68	88.41	63.52	71.40	67.96	25.39	46.00	59.32	47.53	56.40	57.55
Iraq	6.09	2.72	2.50	5.09	2.72	2.50	4.50	3.03	2.22	3.33	2.11	2.47	0.62	7.87	4.49	0.93	5.82	5.52	2.60	3.38	1.26	2.71	3.36	15.12	3.89	3.30	2.14	2.88	2.21	3.54
Kuwait	1.25	0.42	0.91	1.25	0.42	0.91	0.00	0.00	0.00	0.00	0.31	0.01	0.00	0.00	0.00	16.94	0.39	0.16	0.15	2.93	0.64	1.03	1.14	0.22	0.34	0.75	0.40	0.33	0.38	0.23
Oman	0.48	1.20	0.26	0.48	1.20	0.26	0.09	0.22	0.18	0.00	0.17	0.18	0.00	1.63	2.41	1.84	0.28	1.82	0.67	1.03	0.23	0.00	0.50	0.17	0.30	0.74	0.27	0.23	0.21	0.30
Saudi-Arabia	21.35	25.16	43.27	21.35	25.16	43.27	47.70	38.40	25.69	25.89	8.08	8.37	15.44	14.33	21.89	11.48	20.11	16.13	24.80	28.45	8.20	22.36	18.62	9.01	34.02	31.33	26.78	27.94	15.31	23.10
Syria	34.39	14.31	5.62	34.39	14.31	5.62	15.34	16.88	3.12	7.25	0.57	0.26	48.96	27.84	6.67	1.21	0.70	0.22	32.87	12.18	0.23	0.93	0.52	0.55	26.12	15.82	3.28	6.70	4.18	2.40
UAE	2.20	3.16	1.34	2.20	3.16	1.34	0.99	0.29	1.03	2.70	0.83	0.88	2.43	2.08	4.90	20.39	6.24	3.10	5.00	0.96	0.59	0.79	1.63	1.98	2.25	1.30	1.11	2.71	1.86	3.04
Yemen Republic	3.72	2.14	5.00	3.72	2.14	5.00	0.04	0.00	0.15	0.00	1.04	1.48	0.00	0.00	0.00	4.37	0.17	0.09	0.17	0.14	0.00	1.19	1.35	0.04	1.00	0.60	1.51	1.53	2.10	1.35
Total*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Computed from Tables (B-1) to (B-7) in Statistical Appendix B.  
 Notes: \* Totals may not added up to 100 due to rounding.

### *Analysis of market effect by major commodity group*

In analysing the market effect in more detail, there is a trade-off between the availability of accurate data and coverage in terms of years. We have chosen the period 1980-1987 instead of 1975-1988 or 1980-1988, and the reasons are:

- ① In 1987 more than three quarters of Jordan's exports were directed at ESCWA countries, whereas this ratio was about two thirds of the total in 1988. Thus, ESCWA countries would represent Jordan's "world" trade more accurately in 1987.
- ② The patterns of Jordan's exports in terms of variety of goods and relative importance of export markets were very much different in 1975 from the pattern of the 1980s.

*Table 7-6* above shows the shares of ESCWA countries in Jordan's exports. The shares of Syria, Saudi-Arabia and Iraq in total manufactures had changed greatly by 1987 in comparison with 1975. They changed from 34% for Saudi-Arabia and 26% for Syria to 23% and 2.4% respectively. While these markets declined in their relative importance, Iraq's share increased from 25% in 1975 to 56% in 1987.

The performance of ESCWA countries during this period (1980-1987) was such that a reduction of about 4% annually was registered in the region's total exports; whereas Jordan's exports increased by 10.4% per annum. The overall market effect was unfavourable and this held for all major commodity groups except "other manufactures".

### *Chemicals*

During 1980-1987 the pattern of demand for this group (*Table 7-2*) indicates that within ESCWA Egypt recorded the highest growth. The relative dependence of Jordan's exports in 1980 was highest on Syria's market, followed by Iraq

(Table 7-4). But, since no exports went to Egypt, the relatively high growth importing country, for political reasons and since the growth rate in Iraq was far below average for the whole region and that of Syria was slightly higher than average, the result was a negative market effect for this group (Table 7-1).

#### *Basic Manufactures*

Only Kuwait among the main countries importing from Jordan registered positive growth in imports during this period. The dependence ratio, however, on the Kuwaiti market was not high whereas the relative importance of the markets of Syria, Iraq and Saudi-Arabia were high but the growth in demand registered for these countries was -23.1%, -7.5%, -6.5% respectively; compared to -2.2% for the average for ESCWA as a whole. Thus, the market pattern effect for this group was also unfavourable.

#### *Machinery & Transport Equipment*

This product group witnessed the most marked deterioration in import growth, because the ESCWA countries cut expenditure on capital goods when oil revenues decreased rather than reducing expenditure on other groups. The decrease in imports of this group during the period was about 12%. Egypt had a small negative rate of growth (less than 1%) and other countries in the region, such as the UAE, had positive growth rates.

The dependence ratios on the markets of Syria, Iraq and Kuwait were relatively high but their growth rates of import demand were lower than the ESCWA average, whereas the relatively high-growth importing countries (such as UAE) did not suck in much exports from Jordan. Therefore the market pattern effect was unfavourable.

### *“Other Manufactures”*

This is the only group that had a favourable market effect during this period. The reason is that the relative dependence of this group was highest on the markets of Syria, Iraq and Kuwait. Kuwait recorded a positive growth rate in imports as high as 18.0%. Iraq and Syria registered growth rates of -1.2% and -3.7% respectively which although negative were more favourable than -3.9% for ESCWA on average. It is obvious, however, that the overall result would be positive since the expansion in Jordan's exports of this group was concentrated on a relatively high-growth importing country (Kuwait).

## **7.4.2 ANALYSIS OF EXPORT PERFORMANCE BY FACTOR**

### *(1) Competitiveness effect*

The so called “competitiveness effect” may not -as mentioned before- be confined to competitive elements as it may capture other elements. The magnitude of the competitiveness effect measured according to CMS approach is the outcome of the “price” competitive element and all other elements that are not reflected on the various effects of export expansion. Such other elements may -or may not- work in the same direction as the “price” competitive effect. If these other factors are more important than the “price” competitive element and work in an opposite direction, the outcome will be influenced more by these factors and reflect their favourable or unfavourable impact. This could be determined -partially- when the price aspect of the competitiveness process is measured. However, the price measures may not give an accurate indication of competitiveness because of the possible non-price elements of competitiveness which are not captured when price competitiveness is measured. Accordingly, a careful and thorough examination and explanation of the competitiveness effect must be carried out in light of the various possible factors influencing competitiveness.

Such an analysis will be conducted in the subsequent *Chapter* on “Analysis of Jordan’s Manufacturing Competitiveness”.

However, based on CMS approach, a general and initial explanation of the results of the measurement of competitiveness effect (in its wide coverage of elements) is that competitiveness of Jordan’s manufacturing improved during the second half of the 1970s, and it “explained” one-third of the total increase in exports. This effect was higher than that at the beginning of 1980s, but during 1985-1988 it became negative. Between 1985 and 1986 the deterioration in Jordan’s competitiveness was apparent in total manufactures and in all commodity groups except chemicals which retained its relatively strong position until 1987 when it then began to follow the pattern of other groups. Between 1987 and 1988 all commodity groups recorded negative competitiveness effects.

## *(2) Market structure*

As mentioned before, the effect of this factor was unfavourable during all subperiods except the second half of the 1970s. This reflects the general pattern of demand in ESCWA countries. Comparison of the growth rates of ESCWA’s imports as a group (intraregional imports) with those from the whole world indicates that nearly the same high growth rates had prevailed during the second half of the 1970s. During 1980-1985 and 1985-1987 imports from the whole world declined and registered negative growth rates of about 5% per annum between 1980 and 1987. ESCWA intraregional trade also registered growth of about -4% per annum. But between 1987 and 1988 the increase in intraregional imports was very much higher than that of the whole world. Across the entire period, intraregional imports grew at higher rates than those coming from all over the world (14% per annum for the former against 8% for the latter). It

should be noted that intraregional imports represent only a small portion of total ESCWA's imports and most imports come from outside the region. In 1980 only 3.6% of total ESCWA imports were intraregional, and this ratio fell to 2.1% in 1985. This is not the situation regarding exports, since 58.2% of the total in 1980 were in intraregional trade exports as against 34.3% in 1985<sup>(7)</sup>.

Analysis of export markets by country showed that Iraq and Saudi-Arabia were Jordan's main exporting destinations. Iraq's share in Jordan's exports increased from one-quarter of the total in 1975 to between 55% and 60% during the 1980s. This increase was in part at the expense of Saudi-Arabia's share which declined from one-third to shares ranging between 15% and 31% (see *Table 7-6* above).

However, comparison of the relative importance of these markets in Jordan's exports with their relative importance in ESCWA's intraregional trade showed that Jordan's dependence on Saudi Arabia's market was very much lower than on Iraq's. This is ascribed basically to the strong relationship among the countries of the Gulf Cooperation Council (GCC). Imports of Saudi-Arabia from the GCC countries in 1987, for example, were two-thirds of its total imports from ESCWA countries, and its imports from Jordan constituted only about 8% of its total. In the same year Iraq's situation was quite different; the percentage of intraregional imports coming from GCC was 13% compared with 64% from Jordan. It should be borne in mind that, due to the smallness of Jordan's economy and its limited industrial production and export base and because Saudi-Arabia's imports are very large, the share of imports from Jordan in Saudi-Arabia's total imports from all over the world is very small reaching only 0.3% in 1985 and 0.2% in 1987. Although this ratio is slightly higher in Iraq, at 1.8% and 4.2% for 1985 and 1987 respectively, than in Saudi-Arabia this still represents very

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(7) ESCWA, *Analytical Review of Developments and Issues in the External Trade Payments Situation of Countries of Western Asia* (E/ESCWA/DPD/1992/10, August 1992), Various Tables.

low participation and indicates that while these markets are large, the pattern of demand growth was such that it was not always favourable to Jordan. The reason for this situation could be summarised as follows:

- \* Demand from ESCWA countries relies heavily on oil revenues directly in the exporting oil countries or indirectly in other countries through workers' remittances and (sometimes) aid coming from the Gulf countries. The recession that started after 1981 affected demand for imports not only from Jordan or ESCWA countries but also from all over the world.
- \* Demand from these countries is subject to fluctuations which are not related to economic factors only. Political relationships sometimes play a decisive role in shaping the pattern of demand growth. Trade relationships between Egypt and Jordan are one example with the flow of trade stopping in 1980 for political reasons. The closure of some markets of the Gulf countries to Jordanian exports in 1990 as a result of the Gulf crisis is another.
- \* Demand in the ESCWA countries is affected by the level of domestic industrial development. The strategies of import -substitution adopted in these countries have created, to a large extent, similar structures of manufacturing which have resulted in reductions in demand for similar products from external sources.
- \* Not all commodity groups are affected by these policies to the same extent and in all periods. Jordan's "basic manufactures" directed at ESCWA countries expanded by 34% a year during 1975-1980, which was above the average for all commodities and more than that of chemicals. This situation was reversed later. For example, during 1980-1985 these growth rates became 1.7% for the former and 17.7% for the latter. This might be attributed to the increased demand for Jordanian chemicals in which Jordan enjoys a comparative advantage. Whereas the group of "basic manufactures", particularly some categories, has been produced in these countries and thus their import demand from Jordan declined.

### (3) Commodity pattern

The commodity pattern during the entire period was favourable. However, not all commodity groups realised gains in this regard.

The commodity pattern effect of the expansion in ESCWA's exports produced a small negative estimate during 1975-1980. But this increased subsequently and "explained" 64%, 127% and 33% of the total increase in ESCWA's trade during 1980-1985, 1985-1988 and 1975-1988 respectively.

Only for "basic manufactures" was the commodity pattern effect positive in every period. The effect for chemicals was positive in most periods. Machinery & Transport Equipment had a negative effect in all periods except during 1980-1985. The explanation of these results is as follows:

- The commodity group "basic manufactures" consists of a variety of consumer and intermediate goods. Examples for this group are leather products, rubber manufactures, cork and wood manufactures, paper & paperboard, textile yarn and fabrics, non-metallic mineral manufactures (cement, clay and glass), iron and steel manufactures, and manufactures of metals. The positive overall effect of such a group could be explained by the favourable effect of one subgroup that more than compensated for the unfavourable effect of other subgroups. Articles of wood, paper and cardboard, and textiles in addition to cement were Jordan's main exports from this group. The growth in exports of wood products, for example, from the end of the 1970s until 1986 has been more pronounced than that of paper and textiles. Cement exports constituted about 40% of this group in 1975, with 83% of the value of exported cement directed at Saudi-Arabia. As a result of the adoption of an import substitution strategy accompanied by the high demand for this good in the Jordanian market owing to the construction boom at



that time, exports declined and fell to zero at the beginning of the 1980s. But after the completion of the branch of the cement company located in the South, which was designed primarily for exports to Saudi-Arabia, those exports restarted in 1984 and increased continuously. The deterioration in the growth of demand for wood and wood products since the mid-1980s has been offset by the introduction of cement and expansion in textiles which doubled in 1985 and increased more than three-fold between 1986 and 1987.

- ⊙ The commodity effect for chemicals which explained 41.9% of the total increase in Jordan's exports of this group during 1979-1988 was higher than the commodity effect of 32.5% for total manufactures. This indicates that Jordan's concentration on exporting this group has generated additional increases in Jordan's export earnings.
- ⊙ The growth in ESCWA countries' demand for Jordan's exports of machinery & transport equipment and "other manufactures" has been less than the average for total manufacturing, during the whole period (except in 1980-1985 for "other manufactures"). Demand for machinery & transport equipment from all over the world had, in general, the same pattern as the intraregional demand growth. But that for "other manufactures" was slightly higher than the average for total manufacturing in each period.

ESCWA's imports of machinery have been declining after reaching their peak value at the beginning of the 1980s. This reflects the fact that financial surpluses generated from oil revenues in the oil exporting countries in the region and the general economic boom prevailing in the region after the surges in oil prices at the end of the 1970s and the beginning of the 1980s have been directed at building the manufacturing base in these countries in an attempt to diversify their economies. Thus, substantial

resources were directed at importing the required machinery & transport equipment to build up their weak infrastructure and limited manufacturing base. This need became less urgent during the 1980s in comparison with other commodity groups, especially in the light of the decline in oil revenues.

### **7.4.3 ANALYSIS BY COMMODITY GROUP**

During the entire period of the study, the commodity effect of chemicals explained the largest proportion, 41.9%, of the increase of exports from this group. This was followed by the market effect with 27.1%, and then by the competitiveness effect with 11%. The competitiveness factor, however, decreased continuously and became negative during the last period.

“Basic manufactures” has a relatively high competitiveness effect, although it has been deteriorating. However, this effect ‘explained’ more than 50% of the total increase in the exports of this group during the entire period. The commodity effect was favourable and ‘explained’ 50% of the total. It is worth mentioning that Jordan’s exports from this group decreased slightly (by about 2.0%) during 1985-1988 whereas exports of total manufactured goods increased by about 25%. The basic factor behind this was the market effect, which was negative over the whole period.

As for machinery, Jordan’s export revealed comparative advantage in this group was very low and the growth of demand for this group was generally declining. Thus, the commodity effect was not favourable. Also its market effect was not positive in each period. With respect to competitiveness, it seems that Jordan’s exports from this group can compete with other sources, since this factor accounts for a relatively high percentage of the increase in exports of this group.

Jordan's commodity effect for "Other manufactures" has been negative and the market effect 'explained' only a small proportion of the increase in exports from this group. Jordan's exports from this group were mostly clothing and plastic products. The most favourable effect was that of competitiveness.

## **7.5 SUMMARY AND CONCLUDING REMARKS**

In examining Jordan's export growth using the CMS technique two questions may be raised. First, did Jordan's exports grow as rapidly as the world (here ESCWA countries) average? Secondly, what are the reasons for the favourable or unfavourable growth? Are they ascribed to structural forces (such as commodity composition and market distribution) or competitive factors or both?

Jordan's exports during the entire period of study 1975-1988 grew faster than ESCWA's exports. They expanded by an average of 21% per annum in comparison to 14% per annum for ESCWA countries.

The reasons for this relatively good performance were:

- ① Jordan's exports were, in general, concentrated on commodities for which demand was growing relatively rapidly. This is especially the case in respect of chemicals and "basic manufactures", whereas machinery & transport equipment and "other manufactures" had unfavourable effects. Indeed, the relative importance of each of the first two groups, particularly chemicals, in Jordan's exports was more than its relative importance in ESCWA's exports. Moreover, ESCWA's import growth was highest with respect to chemicals, followed by "basic manufactures" but machinery & transport equipment's growth was far below average.

② Jordan's exports were able to compete effectively with other sources of supply. All commodity groups contributed to this achievement, especially "basic manufactures" with 59% of total competitiveness effect, followed by chemicals 17%, "other manufactures" 15%, and machinery & transport equipment 9%. The competitiveness effect 'explained' one-third of the increase in total exports. Since it is calculated as a residual this effect includes not only the quantitative elements of competitiveness but also non-price factors. Furthermore, it includes other non-competitive factors such as changes in the degree of preference applied to Jordanian goods in ESCWA countries' policies. For example, the establishment of the Co-operation Council for the Arab States of the Gulf (GCC) led to full liberalisation of the intra-GCC movements of goods and to a reduction in the shares of some other ESCWA countries including Jordan.

With respect to the market effect, exports, assuming favourable supply elasticities, could have been higher had Jordan's exports, or at least most of them, been directed at relatively fast-growing importing countries. Since Jordan's exports have been concentrated on markets whose demand stagnated in the first half of the 1980s and deteriorated between 1985-1987, the market effect was unfavourable. Two points should be considered here:

- (i) Import growth rates during the second half of the 1970s were high and the market effect was positive, but this favourable effect could not offset the unfavourable effect during the rest of the period.
- (ii) Although unfavourable, the market effect was not large. It "explained" only -5.8% of the total change in exports.

The market effect was only favourable during the first period. The pattern of demand growth in Iraq and Saudi-Arabia, whose markets are the largest in the region and which constitute the main export markets for Jordan's manufactures, has been deteriorating.

Therefore, the commodity effect (which 'explained' one-third of the total increase in Jordan's exports) and competitiveness (which 'explained' another one third) caused the increase in Jordan's exports with an average surpassing that of the ESCWA countries as a group.

However, the above result has not been occurring in the same manner for each factor in each year or subperiod. The commodity effect was almost zero during the first period but then increased later on, specifically due to the impact of chemicals and "basic manufactures". The competitive effect has not always been favourable. Competitiveness of Jordan's manufacturing industry has deteriorated since the mid-1980s, and between 1987/1988 all commodity groups had unfavourable competitiveness effect.

### ***Analysis of Jordan's International Competitiveness***

#### **8.1 INTRODUCTION**

This *Chapter* on the analysis of Jordan's International Competitiveness (IC) consists of an introduction and three other sections. The second section illustrates the method adopted to measure Jordan's IC. Two levels of analysis are employed with concentration on the first. The total manufacturing level is the focus of section three, and the major ISIC groups of section four.

Three aspects of competitiveness are analysed in section three: import competitiveness, export competitiveness, and overall competitiveness. For each of these we start by specifying the aspect assessed and the methods used to measure both the IC process and its outcome as reflected in market shares. This is followed by measurement and presentation of the results. Interpretation of these results through the analysis of the factors influencing them come next.

#### **8.2 METHOD**

The concepts and aspects of IC adopted in this study are related mainly to the short-term aspect of IC which concerns the ability of Jordan's manufacturing industry to compete successfully in foreign markets and with imports in Jordan's market. Both export and import competitiveness are considered in addition to overall competitiveness. Assessment of the process of IC in this study concentrates on price-competitiveness. Although important, non-price elements of competitiveness are not evaluated

directly because non-price competitiveness needs special treatment which is outside the scope of this study. The outcome or the result of the IC process is also measured (this may capture non-price elements of competitiveness) by using market shares in both export and domestic markets. The results of measuring the IC process and outcome are then interpreted through the factors that determine IC.

The method of measuring the process of IC that is used in this study is basically the method applied by the OECD (explained earlier in *Chapter ④*). This method has the advantage of the broad definition of competitiveness which includes export, import and overall competitiveness; the clear mathematical formula and the dependence on the double weighting scheme which incorporates third country effects in a relatively detailed way by taking account of which countries compete in which markets.

Although there are basic theoretical points that should be considered regarding the different elements of IC, in practice, all these points may become a matter of choice and compromise. Thus, the choice of the samples, the variables used, the period covered and the weighting system applied were determined to a large extent by the nature of Jordan's trade relationships and by the availability of data. Data availability and comparability, in particular, are in some cases the decisive factor in the choice process.

In the case of this study, two different samples were chosen to build the double weights required for constructing competitiveness indicators (see *Appendix II* on the "Choice of the Samples of Export Markets and Competitors"). One for export markets (those countries which absorb the larger proportions of Jordan's manufactured exports) and the other for competitors on the home market (those who have the largest proportions in Jordan's manufactured imports). This is not always the

case in many studies conducted by different organisations<sup>(1)</sup> especially those on industrial countries whose trade relationships with each other are not one-sided relationships as in Jordan. The main countries from which Jordan imports are not the same countries as those to which Jordan exports. Accordingly, 19 countries were chosen as export markets absorbing 98.0% of Jordan's total manufactured exports in the base year 1985, whereas the sample of import competitors consists of 30 countries supplying 89.0% of Jordan's total manufactured imports in 1985.

As mentioned before, data constraints lay behind the determination of the variables for manufactures to be used (see *Appendix I* "Sources and Data"). Export price was used in measuring export competitiveness, and Jordan's producers' price and import price were used to measure import competitiveness. Because of lack of data unit labour costs could not be used.

The study covered the 1976-1991 period since Jordan's import price and producers' price for manufactures were available for each year in this period. In the case of export prices for manufactures no data were reported for the years after 1988 except for the industrial countries. But since the relative importance of exports from these countries in the total supply of the countries that represent Jordan's markets is high, this may warrant the use of the weighted average export price for these countries to represent that of the whole sample. Therefore, export competitiveness is also measured for the period 1976-1991 and, consequently, overall competitiveness (export competitiveness + import competitiveness) could be measured for this same period.

The weights used depended basically on the double weighting system. But as data for trade in manufactures required for the computation of these double weights

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(1) See, for example, Martine Durand, Jacques Simon and Colin Webb, *OECD's Indicators of International Trade competitiveness* (Paris: OECD, 1992) and Bundesbank, *Bundesbank Monthly Report* (April 1989), pp. 43-50.



were not readily available for each country in each year<sup>(2)</sup> variable weights could not be used and we were forced to use fixed double weights (See Statistical Appendix C, *Table C-6* for the computation of the weights required). 1985 was selected as a reference year because data were available for that year. Also, a number of changes that happened during the 1970s and the beginning of the 1980s, although occurring slowly, could be considered. These changes are mainly related to the size of manufactures exports, the variety of goods exported and the number of export markets.

The export competitiveness indicator is calculated as a trade double weighted relative export price, i.e. as a ratio of Jordan's export price for manufactures to the weighted average export price of Jordan's competitors in all its export markets. The weighted average price on each export market is calculated first using the share of each exporter country (or the domestic producers) in total supply of the market as a weight. The weighted average export price on all markets is then computed by aggregating the weighted prices on each export market with weights based on the share in Jordan's total manufactured exports in 1985 (see Statistical Appendix C, *Tables C-9, C-10 and C-11* and their footnotes for the values and for the computation procedures of the weighted averaged export price of Jordan's competitors).

Import competitiveness is computed using two methods: the first is based on comparing Jordan's producers' price index for manufactures with Jordan's import price index for manufactures. The second method uses export prices of competitors (foreign exporters to Jordan's market) as a proxy for Jordan's import prices. The weighted average export price for competitors is computed by aggregating the weighted prices of all competitors. The weights used are the shares of each exporter to Jordan in total manufactured imports of Jordan in 1985 in the case of the fixed weighting

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(2) The only source that presents imports of a particular country (for a certain good or a group of goods) from a particular another country, or exports to another country, is "*commodity Trade Statistics, Series D*". This reference is published by the UN (basically) for each country in each year. But, in practice, some countries in some years have no data published, and this is the case in our study where not all countries in the sample have data each year.

scheme, and in total imports in the same year in the case of variable scheme (see Statistical Appendix C, *Tables C-13* and *C-14* for the calculation of the weighted average price of competitors in the home "Jordan" market).

Overall competitiveness is the combination of export competitiveness and import competitiveness, each of which is weighted in accordance with its corresponding share in total demand. Import competitiveness based on the weighted average export price of competitors is used in calculating overall competitiveness to be consistent with the method of computing export competitiveness which is based on export prices of competitors also.

The outcome or the result of the IC process is also measured. It is based on export market shares as a tool to examine "success" or "failure" in export markets, and import penetration ratios to measure the result in the domestic market. The export/import ratio indicator is used in the case of overall competitiveness. These ratios are examined for detailed industrial subgroups. The effect of competitiveness or export expansion measured for total manufacturing (and for four major industrial groups) is calculated in the previous chapter on export performance. It is based on the technique of constant-market-share analysis. The results of these calculations are discussed jointly with other indicators in this *Chapter*.

### **8.3 ANALYSIS OF INTERNATIONAL COMPETITIVENESS FOR TOTAL MANUFACTURING**

#### **8.3.1 IMPORT COMPETITIVENESS**

The import competitiveness of Jordan's manufacturing industries refers to the ability of these industries to compete successfully with manufactured imports in Jordan's home market.

### 8.3.1.1 Measurement of Import Competitiveness

Analysis of import competitiveness is based on the results of the measurement of both the price aspect of the competitiveness process and its outcome. Price import competitiveness is measured using relative import price as an indicator (the ratio of Jordan's producer price index to Jordan's import price index). The weighted average export price of competitors (exporters to Jordan), which is a proxy for Jordan's import price, is also used in measuring IC, but the results are basically used in computing overall competitiveness<sup>(3)</sup>. The outcome of the IC process, which is reflected in market shares in Jordan's home market, is measured using Import Penetration Ratio (IPR).

*Table 8-1* and *Figure 8-1* present the results of measuring Jordan's import competitiveness based on relative import price. The general trend in this price indicates that until the end of the 1980s Jordan was in a relatively disadvantageous position compared with the base year 1980<sup>(4)</sup>, but subsequently the general trend showed an improvement. However, Jordan's relative position witnessed short-term changes measured in terms of year-on-year percentage changes in the competitiveness indicator. For example, the annual declines in this indicator at the end of the 1970s reflected improvements in competitiveness<sup>(5)</sup>. Other indicators of these gains are the declines in the (IPR) as shown in *Table 8-2* and *Figure 8-2* below where this ratio witnessed a drop of 6.2 percentage points in 1979, for example, due to a much higher increase in output than in imports.

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- (3) Measurement of competitiveness on the basis of competitors' export prices may also be useful in conducting comparisons with other studies based on the same variable. It should be noted that in most years similar results were obtained depending on the two methods.
- (4) If measurement is based on 1985=100, the same trend, in general, still prevails. Relative import price indicator will become: 105.5, 121.6, 116.9, 105.0, 102.3, 110.7, 119.9, 115.5, 100.0, 114.3, 113.0, 111.3, 100.6, 78.5 and 69.9 for the years 1976 through 1991 respectively.
- (5) The pronounced gains achieved, particularly in 1979, were outcomes of the combined decline in Jordan's producer price and the increase in Jordan's import price. The drop in the producer price probably reflects the reduction in costs of production caused by the rise in capacity utilisation of industries, as substantial rise in manufactured output had taken place in this year reaching 66.6% in real terms. This compensated for any possible increase in production costs ascribed to the sharp rise in the price of fuel resulting from the oil price increase of 1979. Such a rise in oil prices in this year associated with other developments may well explain the relatively high increase in import prices of manufactures.

Table 8-1. Jordan's Import Competitiveness Indicators

(1980 = 100)

Years	Method One					Method Two				
	(1)		(2)	(3)=(1)/(2).100		A: Fixed Weights		B: Variable weights		Change in Indicator (%)
	Jordan's Producer Price for Manufactures	Jordan's Import Price for Manufactures	Jordan's Import Price for Manufactures	Jordan's Import Competitiveness Indicator	Jordan's Import Competitiveness Indicator	(4)	(5) = (1)/(4).100	Weighted Average Export Price for Manufactures of Jordan's Competitors	Jordan's Import Competitiveness Indicator	
1976	78.1	71.2	109.7	-----	64.6	120.9	-----	63.7	122.6	-----
1977	92.7	73.1	126.8	15.6	70.0	132.4	9.5	69.9	132.6	82
1978	92.1	76.0	121.2	-4.4	79.7	115.6	-12.7	80.1	115.0	-133
1979	88.6	81.6	108.6	-10.4	90.5	97.9	-15.3	90.4	98.0	-14.8
1980	100.0	100.0	100.0	-7.9	100.0	100.0	2.1	100.0	100.0	20
1981	108.7	105.2	103.3	3.3	96.1	113.1	13.1	96.7	112.4	124
1982	112.0	98.2	114.1	10.5	95.2	117.6	4.0	96.0	116.7	3.8
1983	109.7	87.1	125.9	10.3	91.7	119.6	1.7	89.9	122.0	4.5
1984	101.3	85.0	119.2	-5.3	90.1	112.4	-6.0	89.1	113.7	-6.8
1985	85.3	82.8	103.0	-13.6	90.4	94.4	-16.0	90.4	94.4	-17.0
1986	93.5	80.4	116.3	12.9	106.5	87.8	-7.0	105.0	89.0	-5.7
1987	103.0	88.1	116.9	0.5	118.4	87.0	-0.9	117.4	87.7	-1.5
1988	100.4	89.8	111.8	-4.4	126.5	79.4	-8.7	125.6	79.9	-8.9
1989	83.2	81.7	101.8	-8.9	126.1	66.0	-16.9			
1990	80.1	102.3	78.3	-23.1	140.3	57.1	-13.5			
1991	77.8	110.5	70.4	-10.1	140.0	55.6	-2.6			

Source: Based on Tables C-12, C-13, and C-15 in Statistical Appendix C.

Table 8-2. Values of Real Manufactured Output, Exports, Imports and Some Relations

Thousands of Jordanian Dinars

Years	Main Production	Imports	Exports	Re-Exports	Net Domestic Supply (NDS)	Import Penetration Ratio IPR (%)	Change in IPR (Percentage Points)	Share of Output in NDS (%)	Export/Import Ratio	Indicator of Competitiveness	Trade Balance Deficit
1976	110103	353317	42222	23048	398150	88.7	—	27.7	0.120	—	311095
1977	111958	464042	42134	21499	512367	90.6	2.1	21.9	0.091	75.8	421908
1978	133425	486847	51383	27231	541658	89.9	-0.8	24.6	0.106	116.5	435464
1979	222308	573653	72533	43305	680123	84.3	-6.2	32.7	0.127	119.8	501120
1980	266846	566900	85070	49933	698743	81.1	-3.8	38.2	0.150	118.1	481830
1981	419971	728703	73923	61410	1013341	71.9	-11.3	41.4	0.101	67.3	654780
1982	458588	731257	76112	51336	1062397	68.8	-4.3	43.2	0.102	101.0	454052
1983	458932	748847	65708	40297	1101774	68.0	-1.2	41.7	0.088	86.3	683139
1984	583547	750430	104580	19395	1210002	62.0	-8.8	48.2	0.139	158.0	645850
1985	667613	779153	94458	38562	1313746	59.3	-4.4	50.8	0.121	87.1	684695
1986	633118	807099	94921	23515	1321781	61.1	3.0	47.9	0.119	98.3	712178
1987	660562	795103	114774	55295	1285596	61.8	1.1	51.4	0.144	121.0	680329
1988	677864	770341	126301	36977	1284927	60.0	-2.9	52.7	0.164	113.9	644040
1989	686734	676104	168204	51041	1143593	59.1	-1.5	60.1	0.249	151.8	507900
1990	674340	560787	145785	43584	1045758	53.6	-9.3	64.5	0.260	104.4	415002
1991	742959	614922	152077	70962	1134842	54.2	1.1	65.5	0.247	95.0	462845

Sources: Main Production: Jordan, Department of Statistics, *Industrial Survey*, issues of 1975-1991.

Imports, Exports and Re-exports for manufactures in current prices: Data are compiled in accordance with the International Standard Industrial Classification (ISIC). Original data are obtained from: Jordan, Department of Statistics, *External Trade Statistics*, issues of 1975-1991.

Real Values of Imports, Exports and Re-exports: These are computed by deflating the current prices by producer price indices for manufactures and by export and import price indices for manufactures (see Table 8-2)

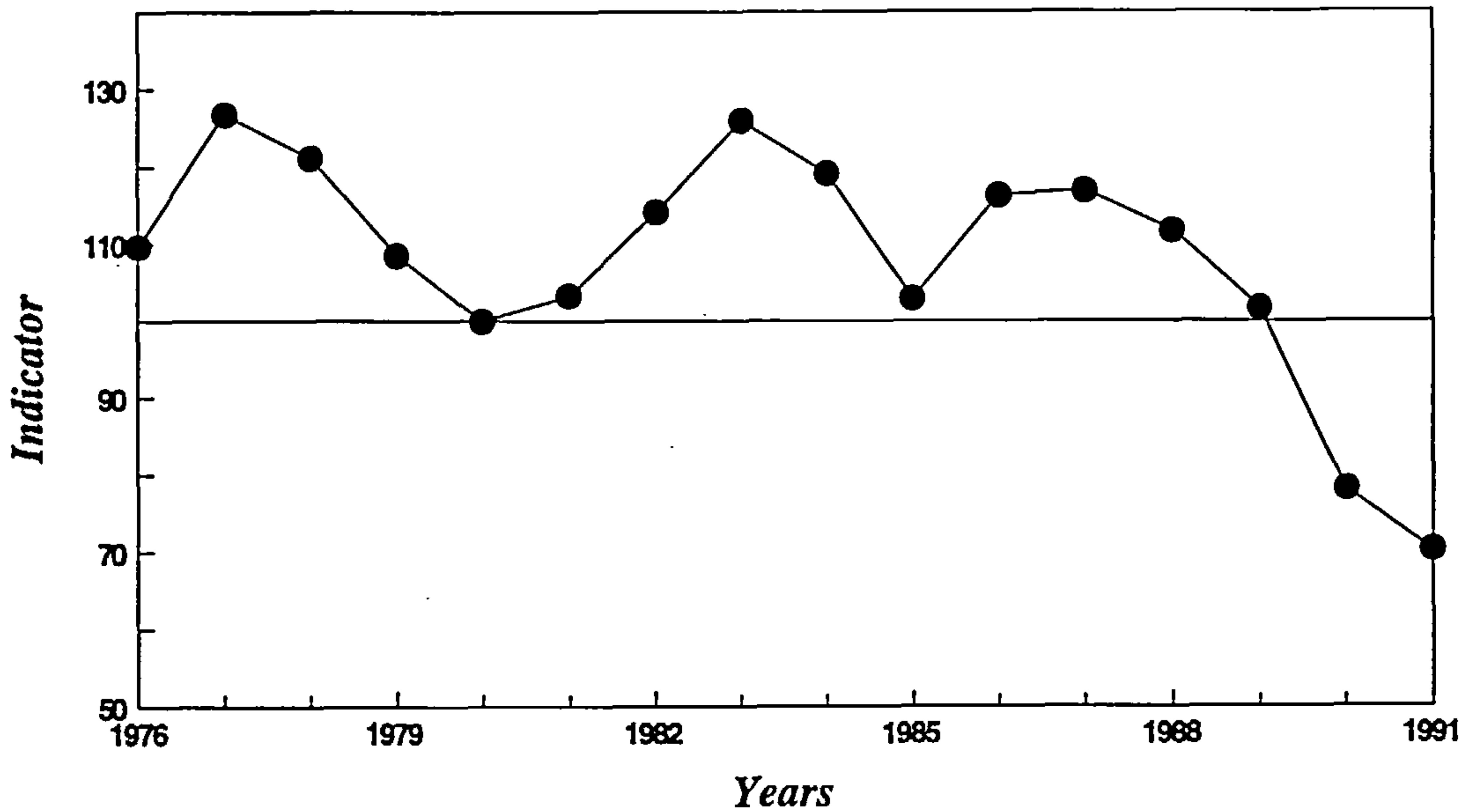
Notes:

- (1) Main Production is valued at producer prices
- (2) Imports are priced c.i.f. and exports f.o.b.
- (3) Values of manufactured exports and imports are defined as those included in ISIC, whereas those compiled previously (see Chapter on International Trade) are compiled in accordance with SITC (including sectors 5-8 except 68). As such, the latter definition does not include processed foods, processed fats on oils, and petroleum products. Data presented here on exports and imports are, however, consistent with those on industrial production
- (4) Net Domestic Supply (NDS) = Output + Imports - Exports - Re-exports
- (5) Import Penetration Ratio (IPR) =  $\frac{\text{Imports}}{\text{Net Domestic Supply}}$
- (6) Indicator of competitiveness =  $\left( \frac{\text{Exports}}{\text{Imports}} \right)_2 + \left( \frac{\text{Exports}}{\text{Imports}} \right)_1 \cdot 100$

where 1 refers to the base year and 2 refers to a subsequent year.

**Figure 8-1.** Trends of Jordan's Indicator of Import Competitiveness  
(Based on Import Price)

(1980 = 100)

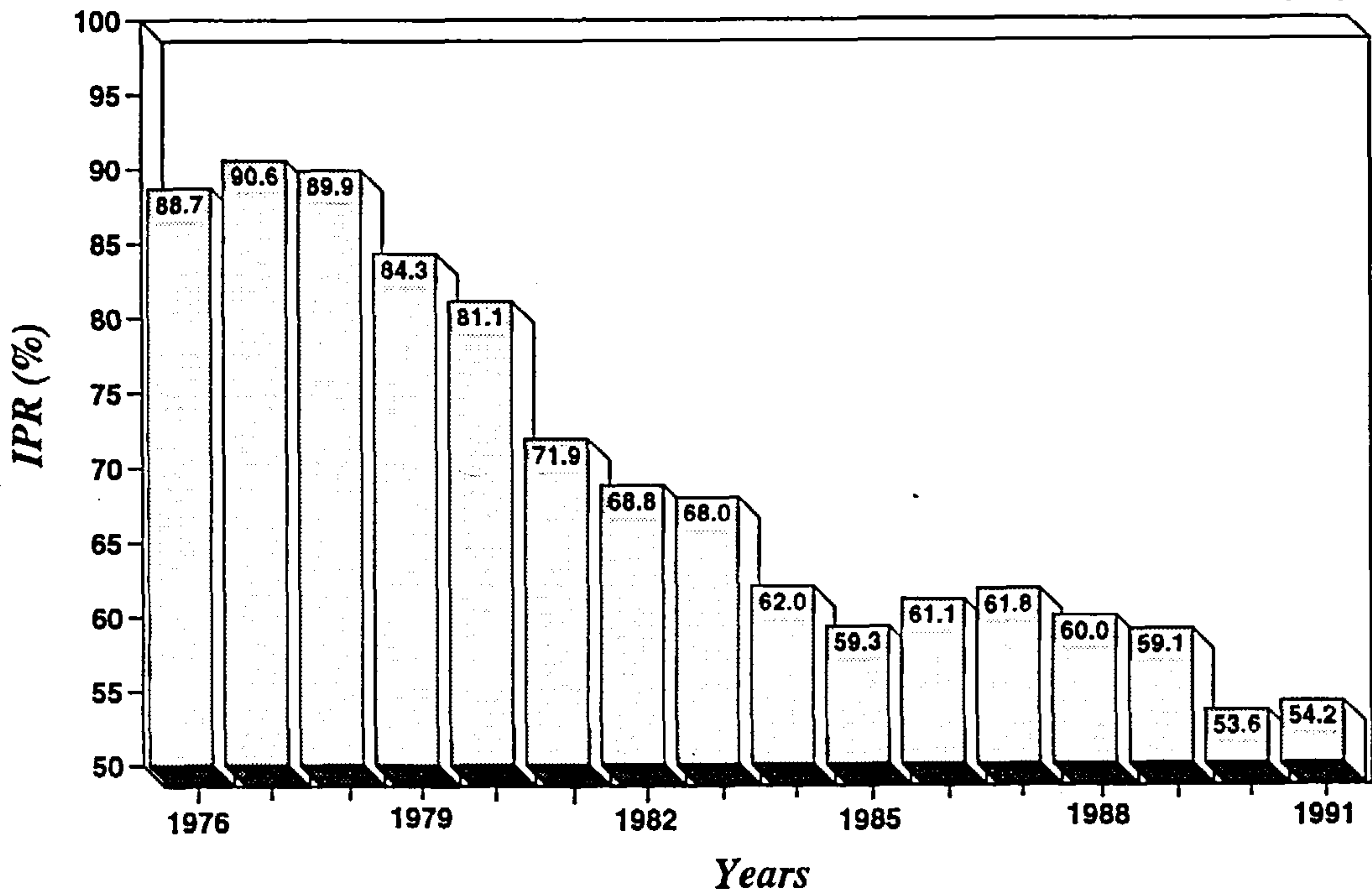


Source: Based on *Table 8-1*.

Note: A rise in the indicator denotes a loss in competitiveness.

**Figure 8-2.** Import-Penetration Ratio (IPR) for Manufacturing

(%)



Later on, competitiveness deteriorated owing to internal and external factors. The Jordanian dinar (JD) had become stronger from the late 1970s due to the economic boom and other circumstances<sup>(6)</sup>. The authorities almost maintained the high price of the JD although these conditions started to change unfavourably after 1982, as economic growth slackened and workers' remittances and grants declined due to the weakening of the economies of the Gulf States following the drop in oil prices after 1981. On the other hand, the prices of Jordan's partner countries (exporting to Jordan) began to fall after their high level of 1981 owing to the recession in the world economy and sluggishness in world trade<sup>(7)</sup>. The continuous declines in these prices associated with the high-priced JD resulted in a relatively low import price for Jordan (see *Table 8-1* above and *Table 8-3* below). Jordan's producers' price increased reflecting increases in costs of production owing to the widespread capacity under-utilisation of industries<sup>(8)</sup>. It seems that such an increase in costs could not be compensated for by the fall in costs resulting from the low import prices of imported inputs used in industrial production. However, this loss in competitiveness was not reflected in consistent changes in market shares (such as the import penetration ratio, IPR) as was the case at the end of the 1970s. According to the results in *Table 8-2* above this ratio declined. The reason can probably be found, for example in 1983, in the drop in the growth of Jordan's import demand which declined to only 2.4% due to the severe recession prevailing at that time.

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(6) Jordan at that time experienced a period of high economic growth, expansion of exports of goods and services and increases in foreign financial aid and workers' remittances. Capital inflow and accumulation of foreign reserves strengthened the JD and the price of imports in terms of domestic currency became relatively low which resulted in a large expansion in import volume and high current account deficits.

(7) These prices have increased at the end of the 1970s and early 1980s owing to several factors including the increase in oil prices in 1979 and 1981. This increase accompanied with the decline in Jordan's producers' price may well explain the improvement in IC at that time. See The IMF, *World Economic Outlook, Occasional Paper* (Washington, D.C., IMF), various Issues.

(8) Jordan's exports to regional markets expanded considerably during the late of the 1970s and the beginning of the 1980s, particularly to markets of Saudi-Arabia, Iraq and Syria. This growth stimulated a spirit of investment designed to serve these markets. The coming on stream of additional capacity in a large number of industrial firms coincided with the decline in external demand from these markets resulted in low profitability and widespread capacity under-utilisation.

**Table 8-3.** Jordan's Producer Prices, Export Unit Price and Import Unit Price Indices for Manufactures  
(in Jordanian Dinars and US Dollars)

1980=100

Years	Exchange Rate (US\$ Per Jordan Dinar)	Jordan Dinars				US Dollars								
		Change (%)	Producer Price	Change (%)	Import Unit Price	Change (%)	Export Unit Price	Change (%)	Import Unit Price	Change (%)	Export Unit Price	Change (%)		
1976	3.0122	-----	87.0	-----	79.3	-----	83.7	-----	78.1	-----	71.2	-----	75.2	-----
1977	3.0375	0.8	102.3	17.6	80.7	1.8	98.4	17.6	92.6	18.6	73.1	2.7	89.1	18.5
1978	3.2733	7.8	94.4	-7.7	77.9	-3.5	95.4	-3.0	92.1	-0.5	76.0	4.0	93.1	4.5
1979	3.3299	1.7	89.2	-5.5	82.2	5.5	85.9	-10.0	88.6	-3.8	81.6	7.4	85.3	-8.4
1980	3.3543	0.7	100.0	12.1	100.0	21.7	100.0	16.4	100.0	12.9	100.0	22.5	100.0	17.2
1981	3.0293	-9.7	120.4	20.4	116.5	16.5	116.2	16.2	108.7	8.7	105.2	5.2	104.9	4.9
1982	2.8384	-6.3	132.4	10.0	116.0	-0.4	133.8	15.1	112.0	3.0	98.2	-6.7	113.2	7.9
1983	2.7550	-2.9	133.6	0.9	106.1	-8.5	125.0	-6.6	109.7	-2.1	87.1	-11.3	102.7	-9.3
1984	2.6036	-5.5	130.5	-2.3	109.5	3.2	149.3	19.4	101.3	-7.7	85.0	-2.4	115.9	12.9
1985	2.5379	-2.5	112.8	-13.6	109.5	0.0	142.6	-4.5	85.3	-15.8	82.8	-2.6	107.9	-6.9
1986	2.8583	12.6	109.8	-2.7	94.3	-13.9	124.4	-12.8	93.6	9.7	80.4	-2.9	106.0	-1.8
1987	2.9522	3.3	117.0	6.6	100.0	6.0	118.8	-4.5	103.0	10.0	88.1	9.6	104.6	-1.3
1988	2.6916	-8.8	125.1	6.9	111.9	11.9	138.4	16.5	100.4	-2.5	89.8	1.9	111.1	6.2
1989	1.7532	-34.9	159.2	27.3	156.3	39.7	183.4	32.4	83.2	-17.1	81.7	-9.0	95.8	-13.8
1990	1.5069	-14.0	178.4	12.1	227.7	45.7	214.5	17.0	80.1	-3.7	102.3	25.2	96.4	0.6
1991	1.4689	-2.5	177.6	-0.4	252.3	10.8	239.3	11.6	77.8	-2.9	110.3	8.0	104.8	8.7

**Sources:** Exchange Rate: Table C-3.1 in Statistical Appendix C.

Producer Price for Manufactures: Unpublished Data, Prepared by the Ministry of Planning in co-operation with the Department of Statistics.

Export Price and Import Price for Manufactures: Computed by averaging the trade weighted prices of the SITC categories 5, 6, 7 and 8. Prices are weighted by the contribution of exports and imports of each category in the corresponding totals. Original price indices are obtained from: CBJ, *Monthly Statistical Bulletin*, Various issues.



But the improvement in price competitiveness at the end of the 1980s and the beginning of the 1990s led to consistent results in market shares, and the IPR witnessed continuous declines except in 1990 when a slight increase in this ratio was registered<sup>(9)</sup>. The gains achieved in competitiveness in this period were substantial and pushed the competitiveness price indicator up to a relatively favourable position compared with that in the base year 1980. One of the factors behind this improvement is the depreciation of the JD. The JD fell against the US dollar by 8.8%, 34.9% and 14.0% during 1988, 1989 and 1990 respectively before stabilising in 1991 (when it dropped only by 2.5%)<sup>(10)</sup>. Another factor relates to developments in the world economy and hence in world prices. In 1988 world export prices rose considerably due to the sharp recovery in the world economy and trade. In 1990 these prices increased even more as a result of the changes in the volumes of exports and imports in large economies and the fall of the dollar. Also world trade and prices were affected by events in this year with respect to the Gulf crisis, Germany re-unification, and the changes in Central and Eastern Europe.

The depreciation of the JD had an impact on Jordan's import prices, export prices, producer prices and competitiveness. In 1989 the dinar import price increased, but it declined in terms of US dollars (see *Table 8-3* above). This was because of the large fall in the JD in this year which was not accompanied by a rise in the price in the countries exporting to Jordan. While the depreciation of the JD in 1988 and 1990 was

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(9) Imports in this year rose considerably (by 9.7% in comparison with declines in each of the four previous years). This is basically attributable to the sudden increase in demand which led to an increase in IPR. This, however, does not mean that IPR for all industries (or commodity groups and commodities) increased especially in the light of the high increase in output. In fact, the substantial sudden increase in population owing to the Gulf War increased both demand for domestic production and imports. Domestic production's response was quick because of the unutilised capacity of industries, but not all commodities demand could be met by domestic production because of the smallness of the industrial sector in Jordan in comparison with demand for manufacturing goods and because there is a large part of imports that has no similar goods produced in Jordan.

(10) The Jordanian dinar average rate of depreciation vis-a-vis the currencies of Jordan's main trading partner countries which is represented by the nominal effective exchange rate was 10.0%, 29.1%, 16.3% and 2.2% during 1988, 1989 and 1990 respectively. (Figures are obtained from unpublished study carried out by the CBJ in 1993).

not sufficient to reduce or maintain Jordan's dollar import price, it slowed its rate of increase. This resulted from the moderate drop in the JD exchange rate and from the high increases in import prices of the countries exporting to Jordan<sup>(11)</sup>. Therefore, the dollar import price rose by 1.9% in 1988 and by 25.2% in 1990. Jordan's producer price in terms of JD rose (at least partially because of the depreciation in the JD) in each of these years, but it declined in terms of US dollars. Compared with the dollar import price which rose in 1988 and 1990 and declined less than the fall in producer price in 1989 competitiveness increased in each of these years (*Table 8-1*). Consequently, the depreciation of the dinar improved import competitiveness in 1989, and participated in this improvement (in addition to the rise in import prices in the countries exporting to Jordan) in 1988 and 1990. Jordan's exchange rate, however, stabilised in 1991 and the improvement attained in this year was an outcome of the decline in producer prices combined with increases in import prices.

The highest gains achieved in import competitiveness were in 1990 as Jordan's relative import price (competitiveness indicator) declined by 23.1%. Analysis of this position shows that Jordan's relative import price declined because producer prices dropped while import prices rose. In fact, dinar producer prices rose by 12.0% as a result of the interaction of the forces of demand and supply. Domestic demand for Jordan's products increased basically for two reasons. The first is the abnormal population growth resulting from the forced return of Jordanian expatriates from the Gulf States. The second is the increase in the prices of imported substitutes for Jordan's domestic products. Such an increase is due to the fall of the dinar and to the increases in import price in Jordan's partner countries. On the supply side, costs of production rose as a consequence of the depreciation of the dinar, because of the

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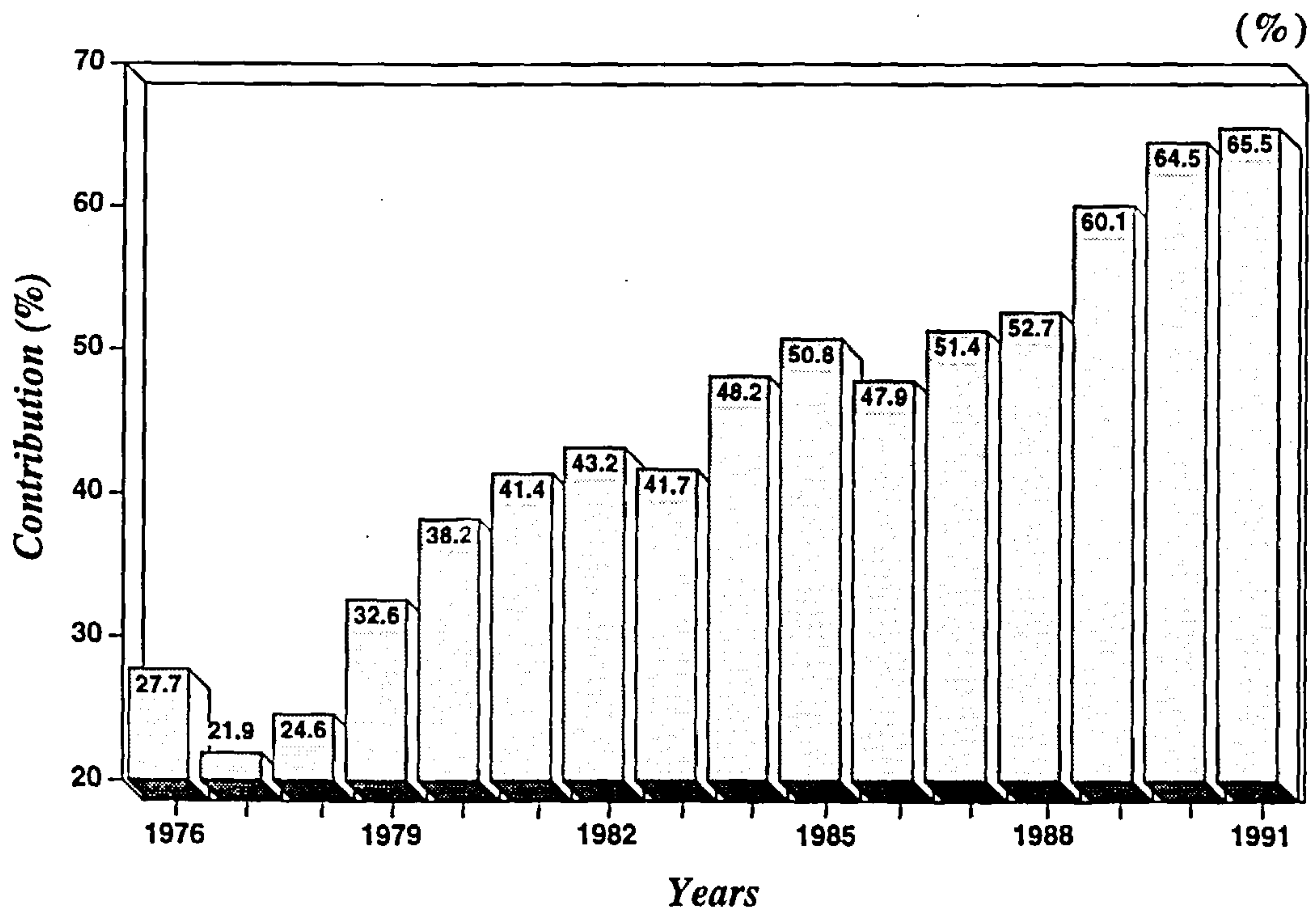
(11) For the whole period, export price index for manufactures was 113, 121, 121 and 131, (1980=100) during 1987, 1988, 1989 and 1990. For the industrial countries, which are the main exporters to Jordan, the corresponding figures were: 116, 124, 123, 136; for 1991 this index became 135. It is evident from these figures that the prices of manufactured exports increased in both 1988 and 1990, and stabilised (or slightly declined) in both 1989 and 1991. The above figures are obtained from: UN, *International Trade Statistics Yearbook, Vol.1, Special Table G* (New York: UN, 1993).

relatively high dependence of Jordan's industry on imported raw materials, and intermediate and capital goods. As the prices of these imported inputs in terms of JD rose, costs of production increased and were reflected in an increase in domestic prices.

Thus, the dinar producer price rose by 12.0% but since the exchange rate against the dollar fell by 14%, the producer price in terms of dollars dropped by 3.7%. On the other hand, the dollar import price increased by 25.2% as a result of the increase in prices in the countries exporting to Jordan and due to the declines in the exchange rate of the dinar. The combined effect of these factors was a drop in Jordan's relative import price and hence gains in competitiveness were achieved.

#### **③.3.1.2 Proportion of Domestic Production in Net Domestic Supply for Manufactures**

As can be seen from *Table ③-2* above and *Figure ③-3* below, the trend in the proportion of domestic production in net domestic supply was increasing. It rose from about one-quarter during the second half of the 1970s to one-half in the mid 1980s and to about two-thirds in early 1990s. This is, in general, a sign of improvement in Jordan's capacity to satisfy its needs for manufactures from domestic production. Such improvement is partially attributable to the protection provided to Jordan's industry. It seems that this protection was sufficient to allow Jordanian industrialists to expand their share of the domestic market from the mid-1970s. As this protection declined in the late 1980s, the steady improvement in the import substitution process reflects -at least in part- an improvement in the price competitiveness of Jordan's manufacturing and the ability of domestically-produced goods to compete successfully with imports.

**Figure 8-3.** Contribution of Manufacturing Output in Net Domestic Supply

Source: Based on Table 8-2.

However, the considerable change in this proportion in the later years cannot be only attributable to the improvement in price competitiveness during these years. In fact, the period of the late 1980s and early 1990s is an abnormal period for Jordan's economy. It witnessed substantial economic developments due to the economic crisis of the late 1980s and the Gulf War and its aftermath in 1990.

### 8.3.2 EXPORT COMPETITIVENESS

The export competitiveness of manufacturing industries of Jordan refers to the ability of these industries to compete successfully with manufactures in foreign markets.

### 8.3.2.1 *Measurement of Export Competitiveness*

Export competitiveness is assessed in terms of the measurement of price competitiveness and of the competitiveness effect of Jordan's manufactured export expansion. This effect has been calculated earlier (*Chapter 7*) for the period (1975-1988) on the basis of the Constant-Market-Share (CMS) approach.

*Table 8-4* and *Figure 8-4* present the results of measurement of export competitiveness based on relative export price (the ratio of Jordan's export price to the weighted average export price of Jordan's competitors). During the second half of the 1970s, Jordan's competitiveness relative position in comparison with the base year 1980 was unfavourable, but its relative export price showed continuous declines indicating improvements in this competitiveness. This result was an outcome of the combined drop in Jordan's export prices and the increase in competitors' export prices. Such decline in the price competitiveness indicator was translated into expansion in exports and larger market shares which increased from 4.1% in 1975 to 6.7% in 1980. According to the CMS approach the competitiveness effect explained 33.0% of the total increase in Jordan's exports between 1975 and 1980.

These gains did not continue and a loss of competitiveness in the first half of the 1980s was registered. This was attributable to several factors including the strong position of the JD. Such a position might have initially benefited the manufacturing industry through the reduction in costs and probably prices resulting from the relatively cheap imported inputs. The net effect of the strong dinar, however, was increases in Jordan's export price. The association of this with a lower increase in competitors' price resulted in a loss of competitiveness in these years.

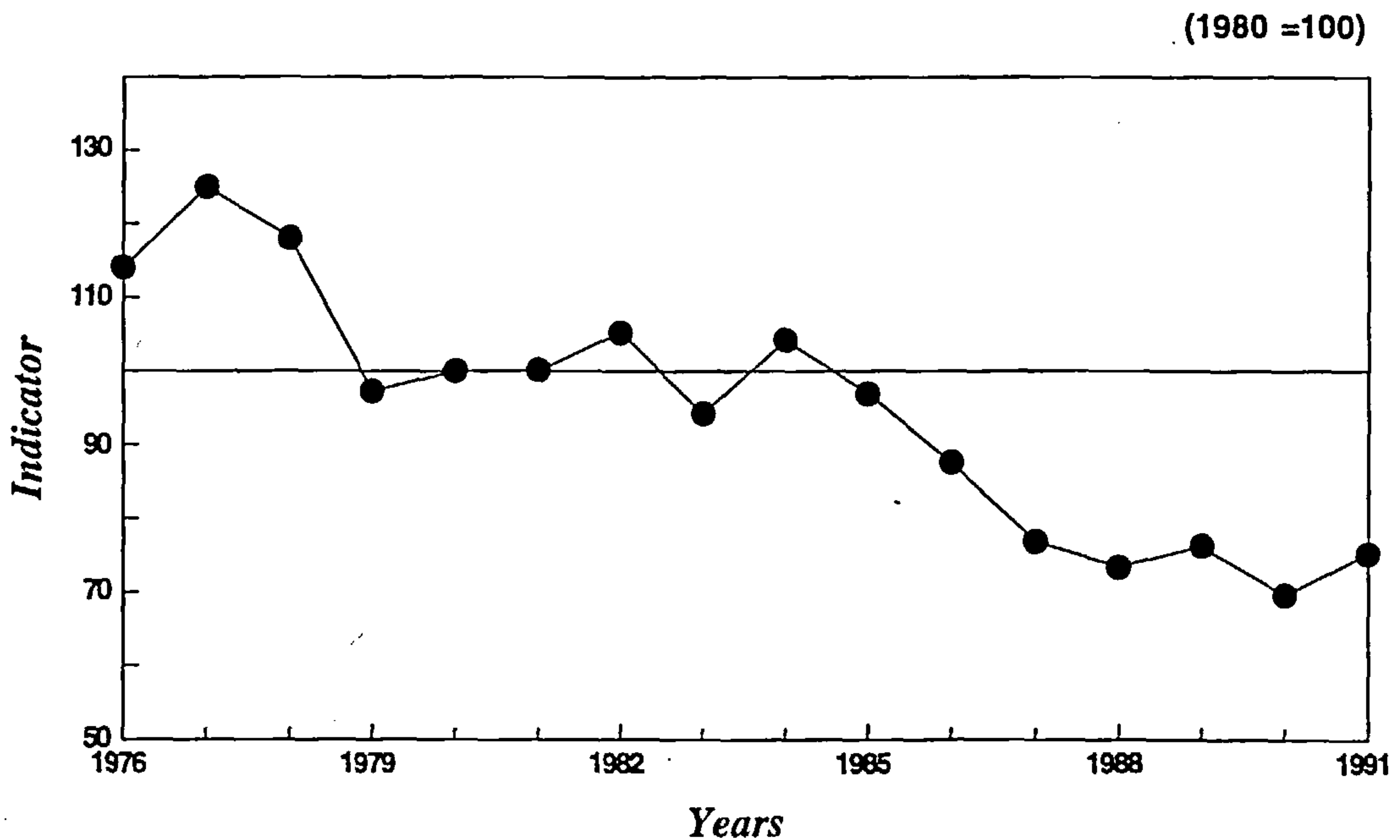
Table 8-4. Jordan's Export Competitiveness Indicator

(1980=100)

Years	(1) Jordan's Export Price	(2) Competitors' Weighted Average Export Price	(3) = (1)/(2).100 Export Competitiveness Indicator	Change in the Indicator (%)
1976	75.2	65.9	114.1	-----
1977	89.1	71.3	125.0	9.6
1978	93.1	78.8	118.1	-5.5
1979	85.3	87.8	97.2	-17.7
1980	100.0	100.0	100.0	2.9
1981	104.9	104.8	100.1	0.1
1982	113.2	107.6	105.2	5.1
1983	102.7	109.0	94.2	-10.5
1984	115.9	111.2	104.2	10.6
1985	107.9	111.3	96.9	-7.0
1986	106.0	121.0	87.6	-9.6
1987	104.6	136.0	76.9	-12.2
1988	111.1	151.2	73.5	-4.4
1989	95.8	125.5	76.3	3.8
1990	96.4	138.3	69.7	-8.7
1991	104.8	139.1	75.3	8.0

Source: Based on Tables C-10, C-11 and C-12 in Statistical Appendix C.

Figure 8-4. Trends in Jordan's Indicator of Export Competitiveness



Source: Based on Table 8-4.

Notes: A rise in the indicator denotes a loss in competitiveness.

Export competitiveness started to improve from the mid-1980s and Jordan enjoyed a favourable position compared with the base year 1980. Such an improvement is indicated by the declines in Jordan's relative export price and the increases in Jordan's export market shares (in some years). The gains in price competitiveness during the third quarter of 1980s were ascribed to the drop in export price coupled with continuous rises in the average export price of competitors. Although the dinar in 1986, for example, appreciated against the dollar by 12.6%, Jordan's export price in terms of dollars fell by 1.8% as a consequence of a higher drop in the dinar export price which declined by 12.8% (see *Table ③-2*). Such a decline in Jordan's dinar export price may be attributable to the drop in external demand due to the recessionary conditions in the Gulf Countries resulting from the sharp fall in oil prices in this year. As for the export market share and export expansion, the results of applying the CMS approach showed that a high proportion of the gains attained in export markets in 1985 and 1987 over 1980 were attributable to the competitiveness effect.

Although the JD witnessed depreciation in its value against the major world currencies including the US dollar for three successive years, this did not result in a sustained decline -or stabilisation- in Jordan's export price in dollar terms. Only the large fall of the dinar against the dollar of 35% in 1989 led to a decline in Jordan's dollar export price. Despite this, Jordan's dollar export price during this period, was, in general, lower than that prevailing in the mid-1980s.

It should be noted that the fall of the dinar reduced the increase in Jordan's dollar export price in 1988 and prevented it from rising in 1990. The rise in the dollar export price in 1988 and the stabilisation in 1990 are basically caused by the high increases in Jordan's dinar export price. This, in turn, may be partially caused by the rise in the costs of production resulting from the increase in imported input prices owing to the depreciation of the dinar. It seems that the benefits obtained from the Government incentives provided to export activity and other favourable developments

were insufficient to offset the increases in costs of imported inputs and other elements of costs.

Since competitors' export prices rose in 1988 and 1990 by higher rates than those of Jordan's export prices, Jordan's relative export prices declined and competitiveness attained gains. Thus, the depreciation of the JD increased competitiveness in 1988 and led to its improvement in 1990<sup>(12)</sup>, but it was not sufficient to overcome the developments of these prices in other years. As for 1989, the decline in Jordan's export price resulting from the large depreciation of the dinar was less than the decline in the competitors' export price which led to deterioration in competitiveness. Hence, the depreciation of the JD reduced the loss in competitiveness in this year. In 1991 the loss in competitiveness was an outcome of the combined increase in Jordan's export price and the stabilisation in the competitors' export price.

The results of assessing export competitiveness as reflected in market shares using CMS approach were inconsistent with those of price competitiveness in both 1986 and 1988. It is generally possible to obtain different results since CMS analysis, as with any other market share measure, has the disadvantage of being influenced by factors other than competitiveness, especially since the competitiveness effect is estimated as a residual. The drop in Jordan's export market shares in 1986 at the same time as achieving improvement in price competitiveness may reflect a loss in non-price competitiveness. But such an assumption is -to some extent- irrelevant as an explanation since Jordan could successfully re-orientate its exports to new export markets<sup>(13)</sup>.

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(12) The boom in the world economy that prevailed in 1988 may explain this rise in competitors' export prices, and the surge in oil prices and other circumstances of the Gulf War may explain that of 1990.

(13) Western Asia countries constituted Jordan's "World" in the calculation of export performance and the effect of competitiveness of export growth based on CMS analysis. However, in 1986 and 1988 only two thirds of Jordan's exports were directed at this group against almost 99% in 1980 and 97% in 1985. Analysis of exports in 1988 showed that Jordan's manufactured exports increased by 11% in real terms, while exports directed at Western Asia countries declined to two-thirds from three-quarters in 1987. This indicates that such share might not have declined had the new markets been considered, and the improvement in price competitiveness in this case may be consistent with market shares.



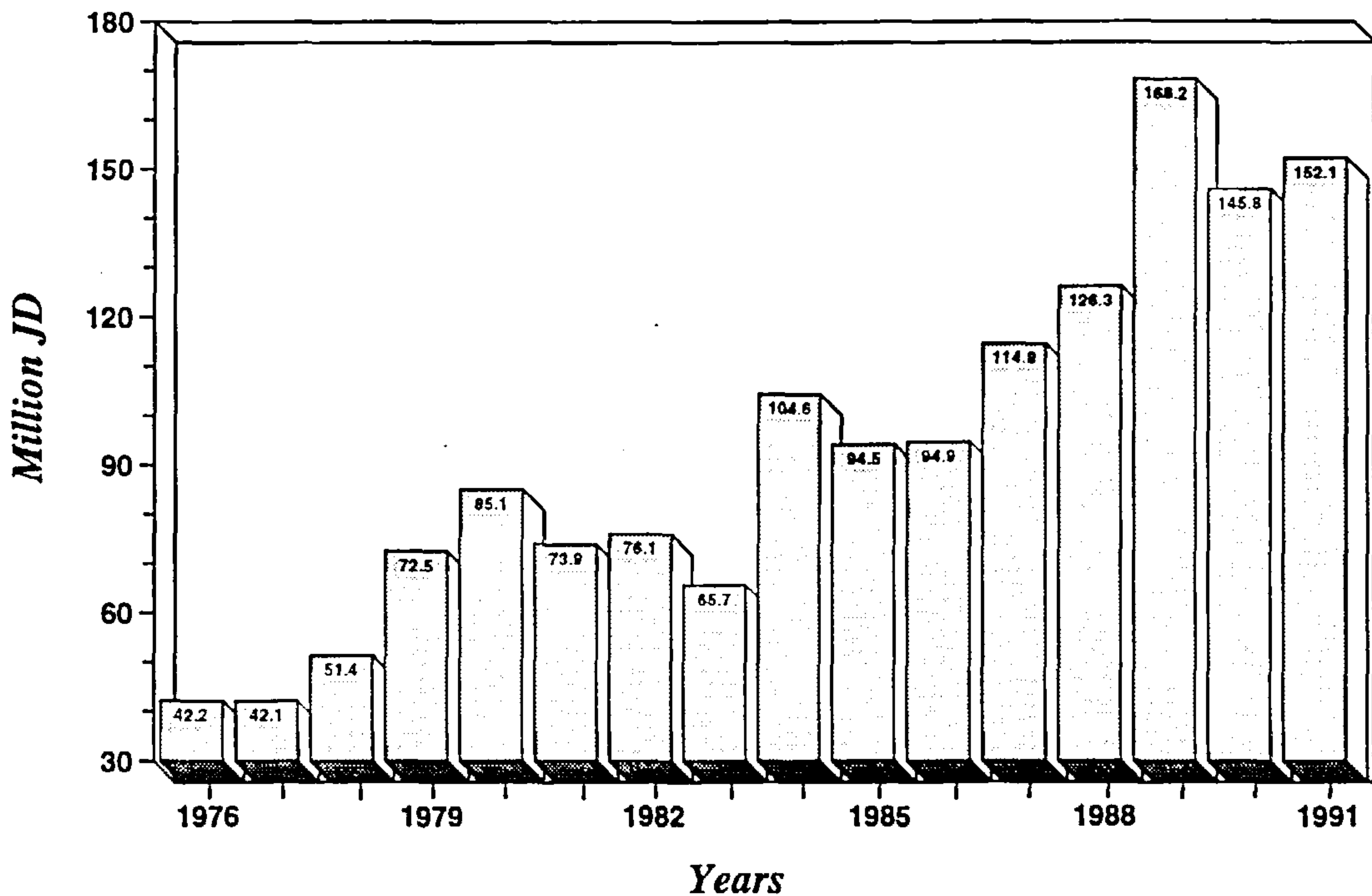
Another possible explanation is that of non-competitive factors such as the unfavourable change in Jordan's trade relationships with its trading partners because of a combination of economic and other factors. For example the establishment of the Cooperation Council for the Arab States of the Gulf (GCC) in 1981 consisting of six Gulf States countries (including Saudi-Arabia) led to full liberalisation of the intra-GCC movement of goods after 1983. The effect of establishing this council on ESCWA intra-regional trade on the Saudi market, the largest market in the region, was an increase in the share of the GCC in total Saudi-Arabia imports from ESCWA countries from 25.7% in 1980 to about 60% in 1986. The share of Jordan declined from 12.5% to 11.0%.

#### **8.3.2.2 Manufactured Exports**

A presentation of manufactured export volumes which covers a longer period of time may help in complementing the analysis of the result of export competitiveness. *Figure 8-5* shows that the general trend in real manufactured exports is increasing. Three phases of change may be easily distinguished. The first covers the last years of the 1970s which witnessed continuous growth. The second, 1981-1986, represents the "worst" period as exports either declined or grew slightly (except in 1984 when exports rose substantially). The third is after 1988, which represents the most rapid growth period. These phases are, to a large extent, consistent with the major changes that occurred with respect to export competitiveness as explained above.

#### **8.3.3 OVERALL INTERNATIONAL COMPETITIVENESS**

The overall international competitiveness of Jordan's manufacturing industries refers to the ability of these industries to compete successfully in both the domestic market (import competitiveness) and in foreign markets (export competitiveness).

**Figure 8-5.** Jordan' Manufactured Exports (Real Terms)

Source: Based on Table 8-2.

### 8.3.3.1 Measurement of Overall Competitiveness

Overall international competitiveness is computed by combining export and import competitiveness with weights built on the pattern of Jordan's demand, i.e. the share of domestic demand in total demand for import competitiveness and the share of exports in total demand for export competitiveness. As the relative importance of the former is greater than that of the latter, the impact of import competitiveness on the overall result is higher than that of exports.

Analysis of Jordan's overall price competitiveness is based on the results presented in Table 8-5 and Figure 8-6 below. They indicate that until the mid-1980s Jordan was in a relatively disadvantageous position in comparison with the base year 1980. Subsequently, competitiveness improved with the most pronounced gains being achieved in the late 1980s and early 1990s.

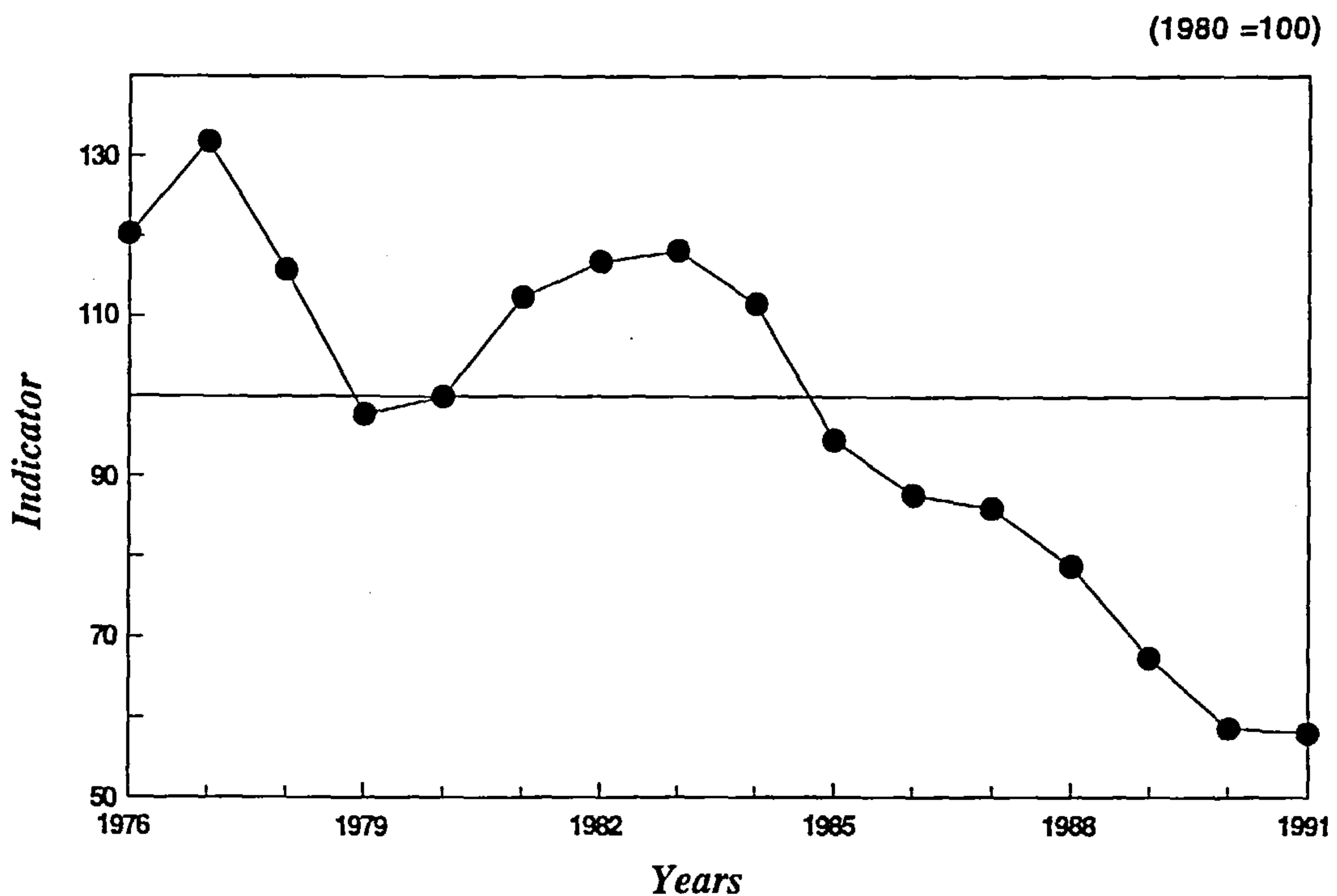
Table 8-5. Jordan Overall Competitiveness Indicator (Based on Competitors' Export Price)

Years	Weights		Jordan Import Competitiveness Indicator (3)	Weighted Import Competitiveness Indicator (4) = (3) · (1)	Jordan Export Competitiveness Indicator (5)	Weighted Export Competitiveness Indicator (6) = (5) · (2)	Overall Competitiveness Indicator (7) = (4) · (6)	Change in Overall Indicator (%)
	Domestic Demand (1)	Exports (2)						
1976	90.7	9.3	120.9	109.7	114.1	10.6	120.3	—
1977	91.7	8.3	132.4	121.4	125.0	10.4	131.8	9.6
1978	90.7	9.3	115.6	104.8	118.1	11.0	115.8	-12.1
1979	90.9	9.1	97.9	89.0	97.2	8.8	97.8	-15.5
1980	90.0	10.0	100.0	90.0	100.0	10.0	100.0	2.2
1981	93.9	6.1	113.1	106.3	100.1	6.1	112.4	12.4
1982	93.2	6.8	117.6	109.6	105.2	7.2	116.8	3.9
1983	94.3	5.7	119.6	112.8	94.2	5.4	118.2	1.2
1984	90.6	9.4	112.4	101.8	104.2	9.8	111.6	-5.6
1985	91.8	8.2	94.4	86.7	96.9	7.9	94.6	-15.2
1986	92.1	7.9	87.8	80.9	87.6	6.9	87.8	-7.2
1987	91.5	8.5	87.0	79.6	76.9	6.5	86.1	-1.9
1988	90.0	10.0	79.4	71.5	73.5	7.4	78.9	-8.4
1989	85.1	14.3	66.0	56.6	76.3	10.9	67.5	-14.4
1990	87.4	12.6	57.1	49.9	69.7	8.8	58.7	-13.2
1991	87.3	12.7	55.6	48.5	75.3	9.6	58.1	-1.2

1980 = 100

Source: Based on Tables 8-1 and 8-4, and Statistical Appendix C, Table C-15.

Figure 8-6. Trends in Jordan's Indicator of Overall Competitiveness



Source: Based on Table 8-5.

Note: A rise in the indicator denotes a loss in competitiveness.

At the end of the 1970s both import and export competitiveness were improving, hence, overall competitiveness was also improving. This is because of the combined favourable changes in Jordan's and competitors' prices. Jordan's producer and export prices were declining, whereas the weighted average export price of Jordan's competitors (exporters to Jordan) and that of Jordan's competitors' on Jordan's export markets were increasing. The results were declines in Jordan's relative prices in both import and export cases.

The loss of overall competitiveness over the first third of 1980s was an outcome of the deterioration in both import and export competitiveness as Jordan's relative prices were increasing. This is because Jordan's prices in some years were increasing more than those of its competitors, and were declining in other cases by less than those of its competitors. The maintenance of a strong Jordanian dinar at a time when

economic conditions suggested the need for a depreciation resulted in relatively low import prices and high export prices. These coupled with unfavourable developments in such prices and in the weighted average prices of competitors led to losses in Jordan's competitiveness.

Overall competitiveness started to improve from the mid-1980s as an outcome of the gains attained in both export and import competitiveness. Competitors' prices were influenced (among other factors) by the fall of the US dollar which started in early 1985, and the weighted average prices registered continuous increases<sup>(14)</sup>. Jordan's prices in terms of the JD declined. This was due to the conditions prevailing at that time in both Jordan and in its export markets, in addition to the impact of the measures introduced by the Government to protect manufacturing industry and increase output.

Subsequently, overall competitiveness continued its improvement at accelerated rates. Such improvement was an outcome of the high and continuous gains acquired in import competitiveness and of the improvement in some years in export competitiveness. Both Jordan's producer prices and export prices in terms of the dinar witnessed continuous increases as a result of the interaction of the various factors including the depreciation of the dinar at the late 1980s. This depreciation led to continuous reductions in the dollar producer price; and reduced the dollar export price in 1989, stabilised it in 1990, and reduced its increase in 1988. Since these developments were associated with increases in competitors' prices in 1988 and 1990, and with declines in these prices in 1989 and stabilisation in 1991, the final result was an improvement in the weighted import competitiveness indicator in each year and an improvement in the weighted export competitiveness indicator in 1990. Because of the high relative importance of import competitiveness in overall competitiveness an improvement in overall competitiveness was registered in each. Thus, the depreciation

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(14) At that time, most industrial countries' currencies has appreciated against the US dollar by different rates. See Peter Lindert, p.6.

of the dinar either led to the improvement of overall competitiveness as in 1989, or contributed (in association with other factors) to its improvement as in 1988 and 1990.

### 8.3.3.2 **Comparison with other Studies**

International competitiveness (IC) for Jordan's whole economy has recently been assessed by several organisations including the World Bank (1987), the International Monetary Fund -IMF- (1988), the World Bank (1993) and the Central Bank of Jordan -CBJ- (1993)<sup>(15)</sup>. IC was measured by the Real Effective Exchange Rate (REER). It was calculated as a trade weighted bilateral nominal exchange rate vis-a-vis trading partner countries adjusted for relative consumer price indices in the studies of the World Bank (1993) and the Central Bank of Jordan; and also adjusted for wholesale price indices in the case of the World Bank (1987). The weights used covered total trade (exports+ imports). These studies were not primarily concerned with Jordan's competitiveness of manufactures or even in competitiveness in general. Some concentrated on Jordan's general economic situation, e.g. World Bank (1987) covering a limited number of years and only a limited number of trading partners. Only the study by the CBJ on the Jordan dinar exchange rate covered a longer period (from the mid-1970s until 1993). The IMF study is somewhat different. REER was calculated by deflating Nominal Effective Exchange Rate (NEER) with consumer price indices. It was built on the double weighting scheme and assigned separate weights for trade in manufacturing and primary commodities over the period 1978-1986. The present study differs from the others with respect to IC measurement in many aspects. Measurement of IC is based on a wide coverage of countries (30 competitors and 19 export markets), a long period of time (1976-1991), the double weighting system, and trade in manufactures only (for both exports and imports, and the use of export and import prices for manufactures).

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(15) See the World Bank, Jordan: *Responding to a Changing External Environment*, December 1987; International Monetary Fund, Jordan: *Real Effective Exchange Rate*, February 1988; the World Bank, *Hashemite Kingdom of Jordan: Industry and Trade Policy Adjustment Loan*, June 1993 and Central Bank of Jordan, *Unpublished Study*, 1993.

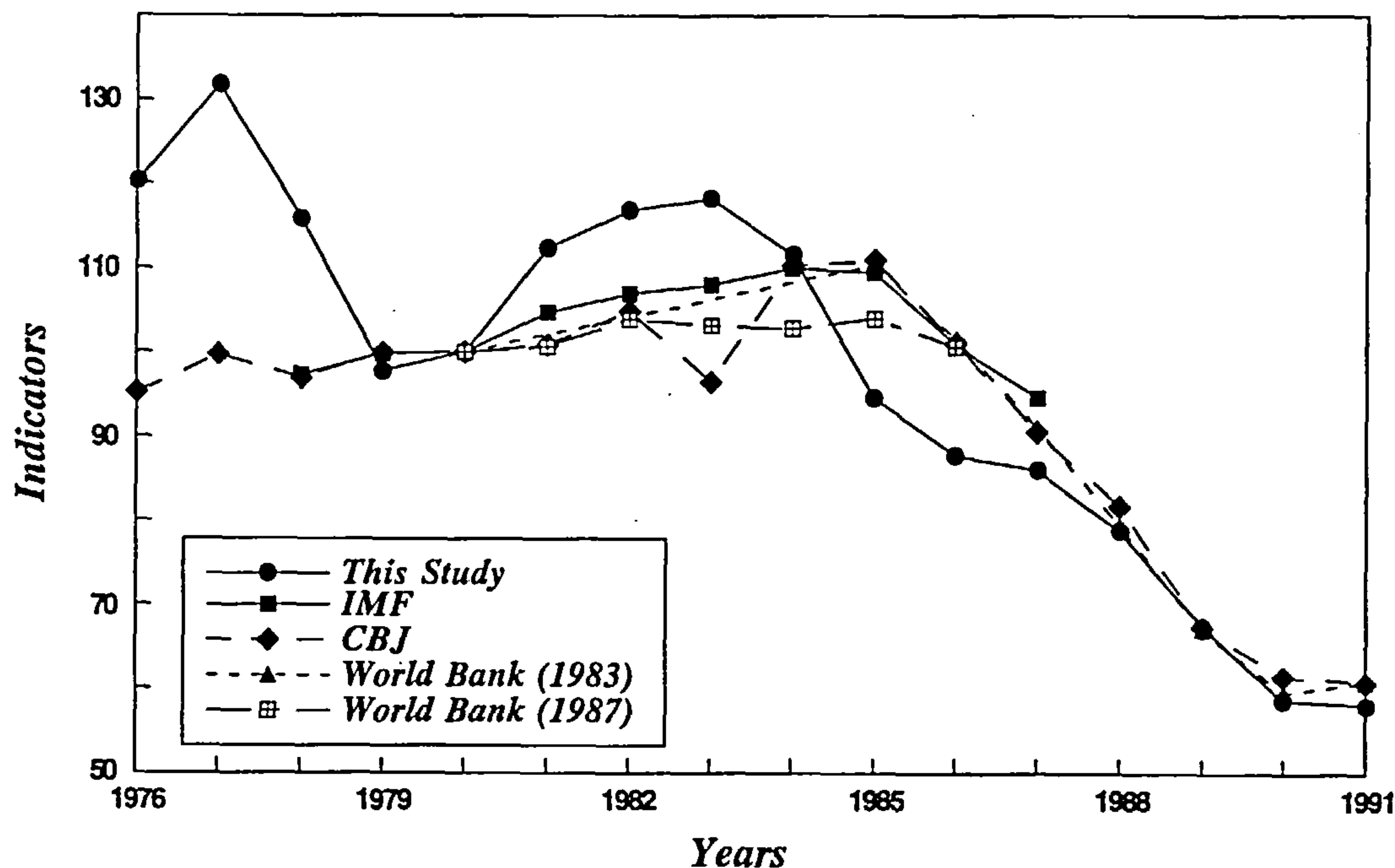
A comparison of the results of measuring Jordan's IC in the previous studies is shown in *Figure 8-7* and *Table 8-6*. The following points may be made:

- (i) The general trend in competitiveness since 1980 according to all these studies is to a large extent similar except in the case of the World Bank (1987) which displayed similarity only during 1983-1986. All studies showed deterioration in competitiveness during 1980-1983. This period has been extended by another year in the IMF study and by another two years in the CBJ study. All the studies indicated improvement in IC after 1985, and with acceleration in this improvement at the end of the 1980s and in the early 1990s.
- (ii) The results of the present study and those of the IMF are the most similar. This may stem from the similarity in the elements used to construct the indicators, such as the use of the double weighting scheme and the explicit consideration of trade in manufacturing.
- (iii) Contradictory results were obtained across the studies for competitiveness over the period 1976-1979. This may reflect the application of different methods yielding different results. In addition, a salient feature of competitiveness in this period which distinguishes the present study from all the other studies is that Jordan's relative prices (competitiveness indicators) were very much higher than those of other studies (see *Figure 8-7*). Such a phenomenon, which extended to the beginning of the 1980s, may be explained by the fact that Jordan's relative price indices for manufactures were at that time higher than relative price indices for all commodities<sup>(16)</sup>. Since prices in this study are confined to manufactures whereas other studies focus on prices of all commodities, competitiveness indicators for manufactures were higher here than elsewhere.

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(16) Jordan's relative import prices for manufactures (i.e. the ratio of producer price to import price, all for manufactures, which is an indicator of import competitiveness, and which in turn constitutes a larger portion of overall competitiveness in Jordan) was higher at that time than Jordan's relative import price for all commodities. For example, these ratios were 126.8 for manufactures and 100 for all commodities in 1977, and became 114.1 for manufactures against 90.8 for all commodities in 1982. Later, this trend has changed. For example, in 1987 the ratio for manufactures was 116.4 compared with 138.2 for all commodities (Figures are computed from CBJ, *Monthly Statistical Bulletin*, Various Issues and *Table 8-3* above).

Figure 8-7. Trends in Jordan's International Competitiveness (Several Studies)



Source: Based on data presented in:  
 (1) The World bank, *Jordan: Responding to a Changing External Environment*, December 1987.  
 (2) International Monetary Fund (IMF), *Jordan: Real Effective Exchange Rate*, February 1988.  
 (3) The World Bank, *Hashemite Kingdom of Jordan: Industry and Trade Policy Adjustment Loan*, June 1993.  
 (4) Central Bank of Jordan (CBJ), *Unpublished Study*, 1993.

Table 8-6. Comparison of Results of Calculating Jordan's International Competitiveness by Various Organisation

(1980 = 100)

Organisation	Period														
	1977-1979			1980-1987									1988-1991		
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
(1) World Bank (1987)	↑	↓	↑	↑	↑	↑	↓	↑	↑	↑	.....	.....	.....	.....	.....
(2) IMF	.....	.....	↓	↓	↓	↓	↓	↓	↑	↑	↑	.....	.....	.....	.....
(3) World Bank (1983)	.....	.....	.....	.....	.....	.....	.....	.....	.....	↑	↑	↑	↑	↑	↓
(4) CBJ (1983)	↓	↑	↓	↓	↓	↓	↑	↓	↓	↑	↑	↑	↑	↑	↑
(5) The Present Study	↓	↑	↑	↓	↓	↓	↓	↑	↑	↑	↑	↑	↑	↑	↑

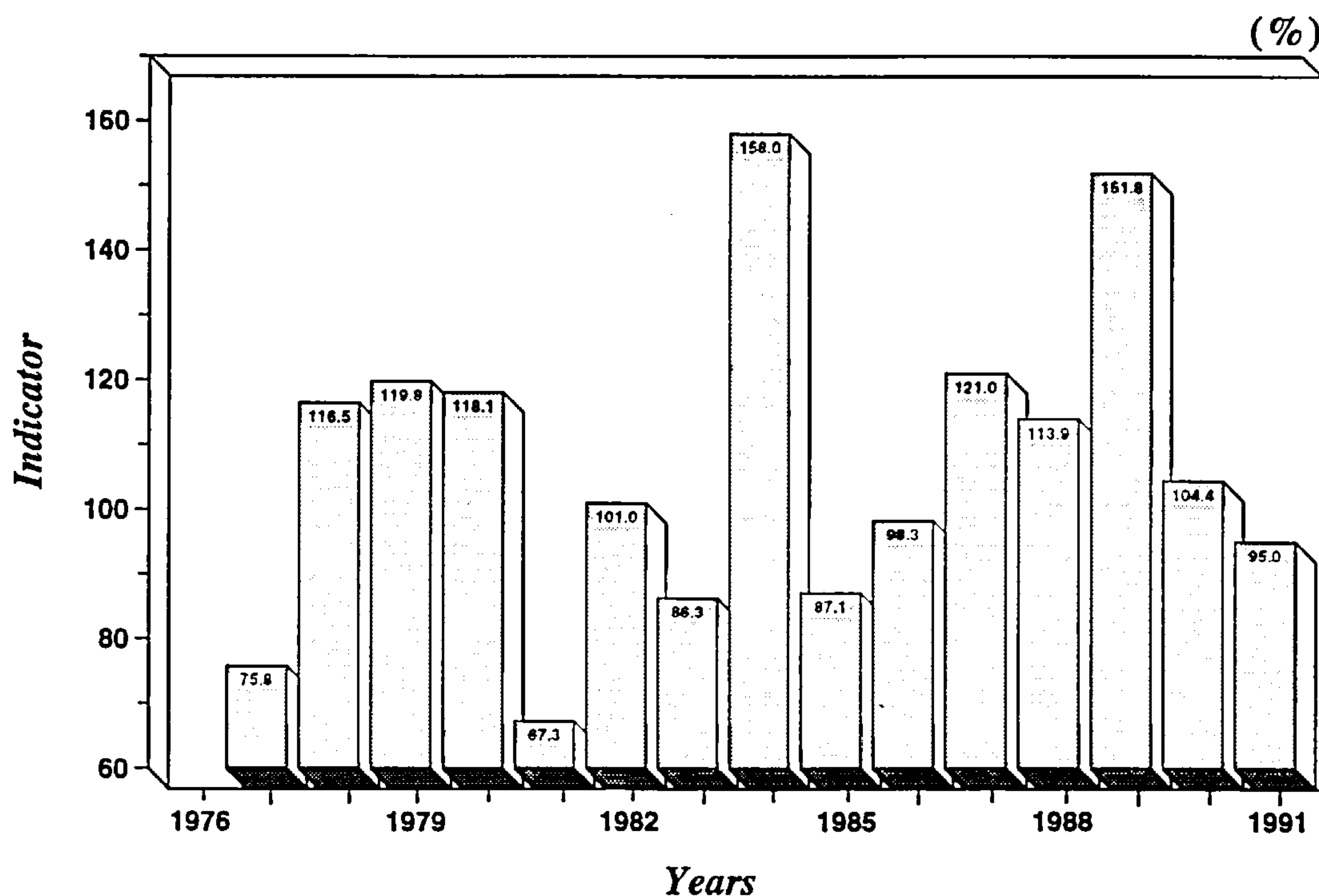
Source: See source of Figure 8-7.  
 Notes: ↑ Indicates a gain in competitiveness.  
 ↓ Indicates a loss in competitiveness.  
 ..... = not available



### 3.3.3.3 Overall Competitiveness and the Export/Import Ratio

The Export/Import ratio indicator is one of the indicators that may be used to assess overall competitiveness<sup>(17)</sup>. *Table 3-2* and *Figure 3-8* exhibit this indicator for Jordan's manufactures. The general trend in this indicator tends to be consistent with that for price competitiveness. As can be seen from *Figure 3-8* the period in which Jordan experienced a loss in competitiveness was that of the first half of the 1980s. At the end of the 1970s and of the 1980s Jordan achieved gains. In some years, results of both methods were inconsistent as in 1982, 1985 and 1991.

*Figure 3-8.* Indicator of International Competitiveness  
(Based on Export/Import Ratio)



Source: Based on *Table 3-2*.

Notes: A rise in the indicator denotes a gain in competitiveness.

(17) See footnote of *Table 3-2* for the calculation of this indicator.

In 1982 competitiveness measured by the price indicator deteriorated. "Theoretically" this should be reflected in a decline in the export/import ratio indicator pointing, in general, to a decline in exports and an increase in imports. The calculated indicator moved in an opposite direction. Exports, in fact, grew slightly, but imports nearly maintained their value. The change in the growth of import demand may explain the change in this ratio owing to the considerable decline in the growth rate of imports from 28.5% in 1981 to only 0.3% in 1982<sup>(18)</sup>.

The opposite occurred in 1985 when this indicator declined. A drop in external demand for Jordan's products was registered while imports recorded a moderate increase. Compared to the position of this ratio in 1984 when it rose sharply (owing to the substantial increase of 59.2% in exports coupled with a slow growth in imports) the indicator declined in this year.

With respect to 1990, this indicator signalled a slight deterioration compared with an improvement in price competitiveness. A key factor influencing this result is the cost of freight. As exports are registered f.o.b. (free on board) and imports c.i.f. (inclusive of costs of insurance and freight), the rise in the freight and insurance rates during 1990<sup>(19)</sup> resulting from the embargo imposed on Aqaba port (the sole Jordanian Sea outlet) caused the fall in the indicator.

#### **8.3.3.4 Export/Import Ratio and the Balance of Trade**

The Export/Import ratio reached its peak levels in 1989, 1990 and 1991. It increased by 51.8% percentage points in 1989 over the previous year and by 105.8 percentage points over the average for the period 1976-1988 (see *Table 8-2* above). This means

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(18) After 1981, and due to the drop in oil prices, Arab grants to Jordan has been reduced and the growth in workers' remittances weakened. Thus, two important sources to finance imports have changed negatively and imports slackened.

(19) See, Jordan, CBJ, *Twenty Seventh Annual Report*, 1990, p.66 and UN, ESCWA, *Impact of the Gulf War on Jordan*, pp. 27 and 28.

that the position of the balance of trade deficit for manufactures, which is a chronic feature of Jordan's trade balance started to improve. It is not obvious, however, which improvements are attributable to the gains achieved in competitiveness and which reflected, in part at least, the impact of the fall of the Jordanian dinar. This is because Government measures and external events, sometimes with contradictory effects, took place at that time.

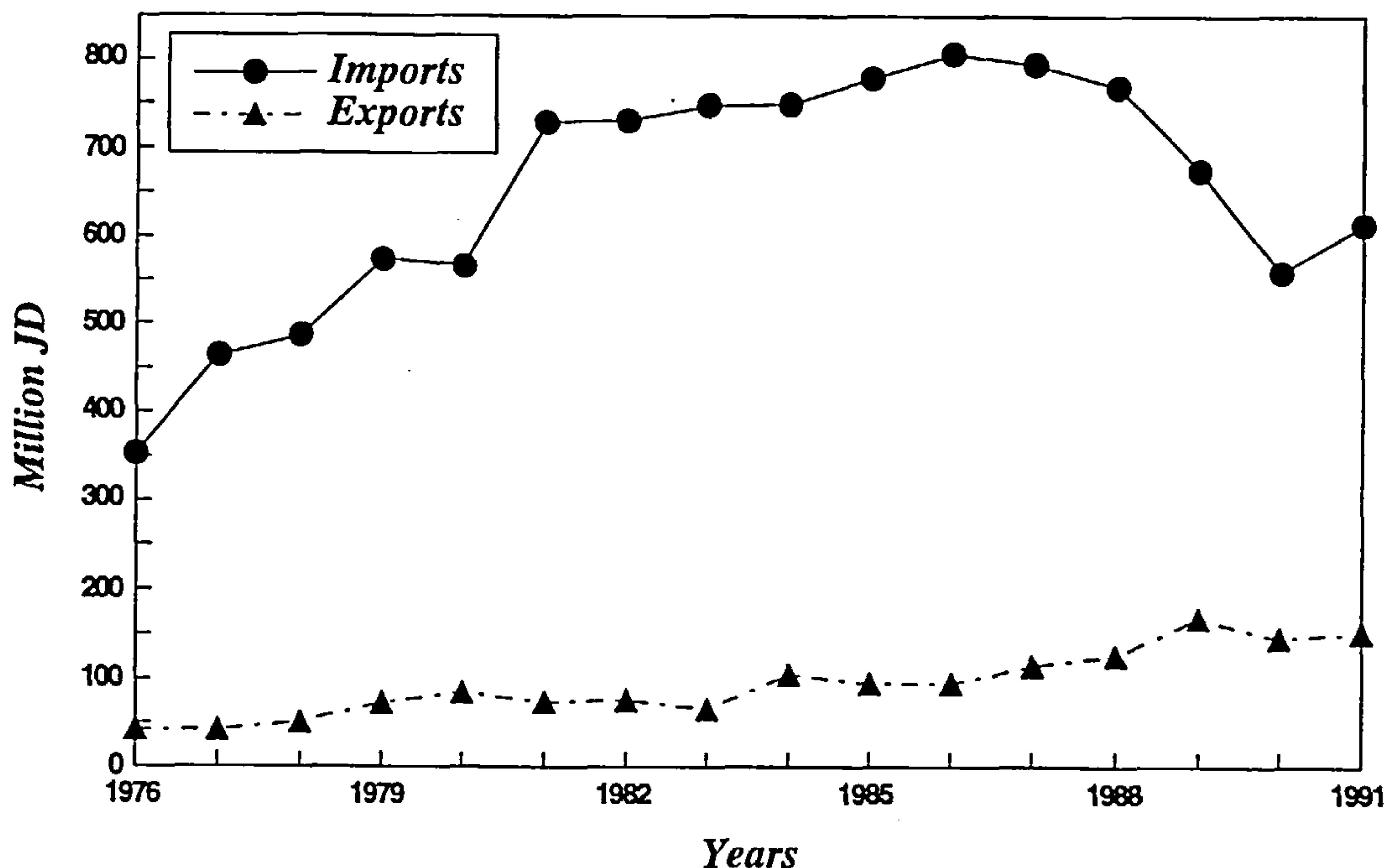
A close analysis of the trade deficit reveals that continuous improvement has been taking place in the position of trade deficit since 1987 (see *Figure 8-9*). In 1988 the decline in this deficit is mainly ascribed to the decline in imports (as exports increased only slightly) which was -in part- due to the ban applied on certain luxury imports. Most probably, no impact was recorded for the fall of the dinar, since this depreciation took place at the end of 1988. With respect to 1989, the trade deficit declined because of the combined effect of the decrease in imports and the increase in exports. The drop in imports is due to the depreciation of the dinar in addition to the continuing prohibition of certain luxury imports, and the raising of the additional tax levied on all tariff-free imports. However, some measures introduced this year with respect to tariffs had an opposite effect on imports and caused their increase. These include abolishing tariffs on some goods such as machines, in addition to decreeing a rate of 40% as a ceiling for tariffs on all goods. Since the depreciation of the dinar in this year was large (34.9% against the dollar) and since the value of imports banned was great<sup>(20)</sup>, the net effect on imports was a reduction in their volume. As for exports, they rose because the main factors influencing their increase such as the depreciation of the JD and the Government encouragement measures worked in the same direction. Exports' response to these factors also was quick due to the un-utilised capacity in

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(20) Prohibited imports include certain expensive goods such as passenger and cargo vehicles, T.V. sets and refrigerators. This was to control public expenditures and rationalise the use of foreign exchange. The exemption of tariffs on some goods aimed at meeting the demand of citizens for basic foodstuffs at reasonable price, and at encouraging the productive sectors. Other measures were introduced in the context of restructuring and liberalising the trade regime.

manufacturing firms<sup>(21)</sup>. Hence exports rose by a rate as high as 33.2% against 12.9% for imports (see *Table 8-2*) and the trade deficit declined.

**Figure 8-9.** Real Manufactured Exports, Imports and Trade Balance



Source: Based on *Table 8-2*.

The lowest level recorded for the trade deficit since 1977 was in 1990. This improvement in the deficit is exclusively attributed to the drop in imports as exports declined. Tariff measures introduced this year had different impacts on imports. The lifting of the ban on luxury imports led to an increase in imports of these goods while the raising of custom duties on some other luxury goods led to a decline in imports. Other factors, however, led to increases in imports from certain goods such as the

(21) According to the "Industrial Census" of 1988, 47.5% of the number of establishments in the manufacturing sector had a utilised production capacity of only 60% or less. Figures are Computed from Jordan, *Department of Statistics*, Industrial Census of 1988.

commodity group "manufactured goods"<sup>(22)</sup> due to the increase in demand resulting from the sudden rise in population because of the Gulf War. The depreciation of the dinar coupled with some of the above measures resulted in a drop of imports of 17.0%. Exports were expected to continue their rise in 1990 (as the fall of the JD continued but at a moderate rate). The Gulf War, however, disrupted Jordan's export markets and exports declined by 13.3%. A slightly higher decline was recorded for import volumes. As the value of imports is very much higher (about four times) than that of exports the trade deficit declined. An opposite change took place in 1991. Both exports and imports increased with a higher rate for imports, and the result was a slight increase in this deficit.

For 1992 and 1993 a rough estimate<sup>(23)</sup> of the trade deficit of manufactures in real terms indicates that this deficit increased considerably. This may not be an unhealthy phenomenon for Jordan if we examine the changes in exports and imports and their components. Exports in fact increased in real terms by 18.2% and by 12% during 1992 and 1993 respectively. But imports grew also in real terms by 72.1% in 1992 and by 20.4% in 1993. The large increase in demand resulting from the sudden large increase in population may explain only part of the story. More important is the restoring of economic activity owing to the growing confidence in the economy. The evidence is the increase in the proportion of capital goods imported to total imports. This ratio rose from 30.8% in 1988 to 39.3% in 1992 and further to 42.2% in 1993. Growth in exports has been noticeable particularly if judged from the perspective of diversification of goods and markets and not only in terms of volume<sup>(24)</sup>.

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(22) The index of unit volume of imports of all major SITC categories declined in this year except that of "manufactured goods" which rose by around 13%. This group includes paper & cardboard, textile yarn, fabrics, made-up articles and related products, in addition to iron and steel.

(23) This estimation is based on data presented in CBJ, *Monthly Statistical Bulletin*, Various Issues, and deflated by the CBJ export and import price indices. Values of manufactured exports and imports were compiled as SITC sections: 5+6+7+8.

(24) See *Chapter 6* on International Trade.

## **8-4 ANALYSIS OF JORDAN'S INTERNATIONAL COMPETITIVENESS BY SUBSECTOR<sup>(25)</sup>**

### **Structure and Performance of Manufacturing**

Manufacturing industries in Jordan are grouped into four major subgroups; chemicals, which in 1991 constituted about 29% of total manufacturing value added, engineering & construction materials accounted for 28% of the total, food processing and related industries with 27% and the non-food consumer and intermediate industries with a share of 16%<sup>(26)</sup>. Most of Jordan's manufacturing industries are of small and medium scale. Petroleum refinery, fertilisers and cement are exceptions. Their combined contribution to total value added is about one-fourth. Within the chemicals subsector, petroleum refiners and fertilisers account for about one-half of chemicals value added<sup>(27)</sup>, followed by medicines (18%), then come plastic and soap. Other components are less important. With respect to the engineering & construction materials subsector, more than one-half of its total value added is generated from non-metallic mineral products, particularly cement. This is followed by basic metals and then fabricated metal, while machinery & transport equipment are not important. The food industry comprises food manufactures, beverages and tobacco. The last section accounts for slightly less than one-half of the total value added of this subsector. The non-food consumer and intermediate goods subsector covers a wide range of industries of which paper, textiles, wood & wood products and clothing are of particular significance.

The overall pattern of manufacturing growth goes in line with the overall economic performance which increased substantially during the late 1970s and beginning of the 1980s and then slowed down before it recovered more recently. The growth in chemicals was highest. The growth in the engineering subsector has been

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(25) For a detailed treatment of Jordan's industry see *Chapter 8* on "Manufacturing Industry in Jordan".

(26) The shares of these subsectors in gross manufacturing output are, however, different. The share of chemicals accounted for 42.7% in 1991 reflecting the relatively low value added in this subsector; while those of other subgroups declined to 24.0%, 19.6% and 13.6% for the subgroups engineering & construction materials, food processing and non-food respectively.

(27) This is equivalent to slightly more than one-third of total manufacturing output.

faster than that of food subsector before the mid-1980s but since then the same pattern prevailed for both. The non-food consumer and intermediate goods subsector grew by slower rates than the other groups.

### International Competitiveness

The result of the competitiveness process for Jordan's manufacturing subgroups will be analysed using the change in export/import (X/M) ratio and import penetration ratio (IPR) for these subgroups. The competitiveness effect computed earlier<sup>(28)</sup> using CMS analysis will also be employed. *Table 8-7* presents the results of calculating export / import ratio and the change in this ratio over the two periods 1979-1982 and the average of (1980, 1981 , 1982) – (1989, 1990, 1991). *Figures 8-10* and *8-11* show this ratio and its changes over these two periods.

The following is a summary of the most important results:

#### The Last Period

- ① During the last decade the largest overall competitiveness gains (the change in X/M) were obtained in the industries of fertilisers, electrical machinery, soft drinks, synthetics, professional & scientific equipment, non-metallic mineral products, basic chemicals and basic metals (see *Table 8-7*).

Fertilisers were very successful in the domestic market and achieved high gains, the change in IPR for fertilisers being highest among all the sections. The reason is that such a section was not produced in the initial period under consideration (the beginning of the 1980s) but was produced in large amounts later<sup>(29)</sup> covering the domestic demand of this category and exporting most of its output. Other kinds of fertilisers are, however, imported. Because, we started from a very low ratio for X/M and because imports declined while exports rose substantially, Jordan obtained such large gains in import competitiveness. Basic

(28) See *Chapter 7* on "Export Performance of Jordan's Manufacturing Industry".

(29) It started to be produced in small amounts in 1982.

**Table 3-7.** Jordan's Export/Import Ratio (X/M) and Competitiveness  
Indicators for Manufacturing Industry  
(Selected Years and Periods)

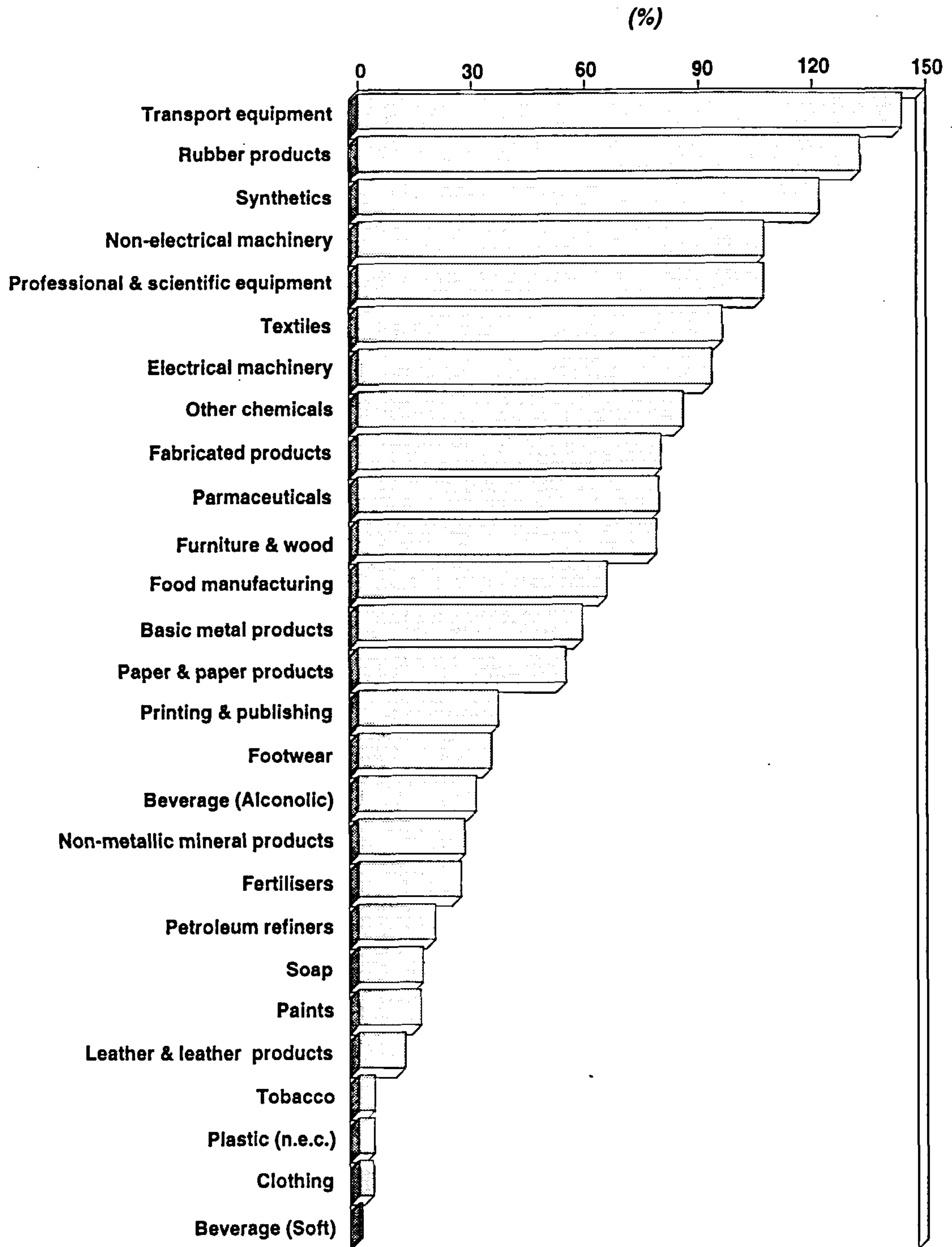
Subsector	X/M 1979	X/M 1982	Change in X/M 1982/1979 (%)	X/M Average 1980, 81, 82	X/M Average 1989, 90, 91	Change in X/M (1989, 90, 91 / 1980, 81, 82) (%)
Food Processing & Related Industries	9.1	10.1	111.0	9.7	11.6	119.5
Food Manufacturing	7.3	5.3	72.6	6.0	9.4	156.7
Beverage (Alcoholic)	55.2	48.1	87.1	59.3	100.8	170.0
Beverage (soft)	360.6	119.9	33.3	284.7	1347.1	473.2
Tobacco	86.9	527.3	606.8	313.6	75.4	24.0
Non-Food Consumer and Intermediate Industries	23.3	29.9	128.3	26.2	31.9	121.7
Textiles	19.8	17.9	90.4	18.3	24.2	132.2
Clothing	441.3	373.8	84.7	413.4	724.2	175.2
Leather	31.5	333.3	1058.9	40.9	65.6	160.4
Footwear	23.9	9.1	38.1	21.2	28.0	132.1
Furniture	39.3	44.9	114.2	46.5	70.4	151.4
Paper	14.7	30.6	208.2	20.9	21.4	102.4
Printing & Publishing	9.8	18.7	190.8	13.1	14.8	113.0
Chemicals	23.6	39.1	165.7	25.9	37.8	145.9
Industrial chemicals	34.8	49.5	142.2	34.8	55.2	158.6
Basic chemicals	25.4	24.7	97.2	19.4	46.5	239.7
Fertilisers	20.6	167.4	812.6	96.5	1116.2	1156.7
Synthetics	16.6	3.4	20.5	8.1	32.4	400.0
Paints	98.9	171.9	173.8	162.8	128.5	78.9
Pharmaceuticals	64.8	70.2	108.3	72.0	93.9	130.4
Soap	51.9	114.1	219.8	164.0	316.4	192.9
Other	8.0	16.3	203.8	9.5	14.0	147.4
Petroleum refiners	0.01	0.1	.....	0.0	0.0	0.0
Rubber	20.1	34.1	169.7	24.4	28.1	115.2
Plastic (n.e.c.)	4.1	3.4	82.9	3.8	6.7	176.3
Engineering & Construction Materials	7.5	5.0	66.7	6.6	14.0	212.1
Non-metallic products	35.7	19.8	55.5	30.1	105.6	350.8
Basic metals	4.0	3.4	85.0	3.6	7.9	219.4
Fabricated products	25.5	15.5	60.8	22.9	43.7	190.8
Non-electrical machinery	5.7	3.3	57.9	5.1	9.4	184.3
Electrical machinery	2.5	0.7	28.0	1.7	8.9	523.5
Transport equipment	0.5	0.5	100.0	0.6	0.6	100.0
Professional & scientific equipment	2.5	0.5	20.0	1.3	5.2	400.0
Total manufacturing	13.2	12.0	90.0	12.4	25.7	207.3

**Source:** Based on Statistical Appendix D, Tables D-3 through D-6.

**Notes:** For the calculation of X/M indicators see footnote of Table 3-2.



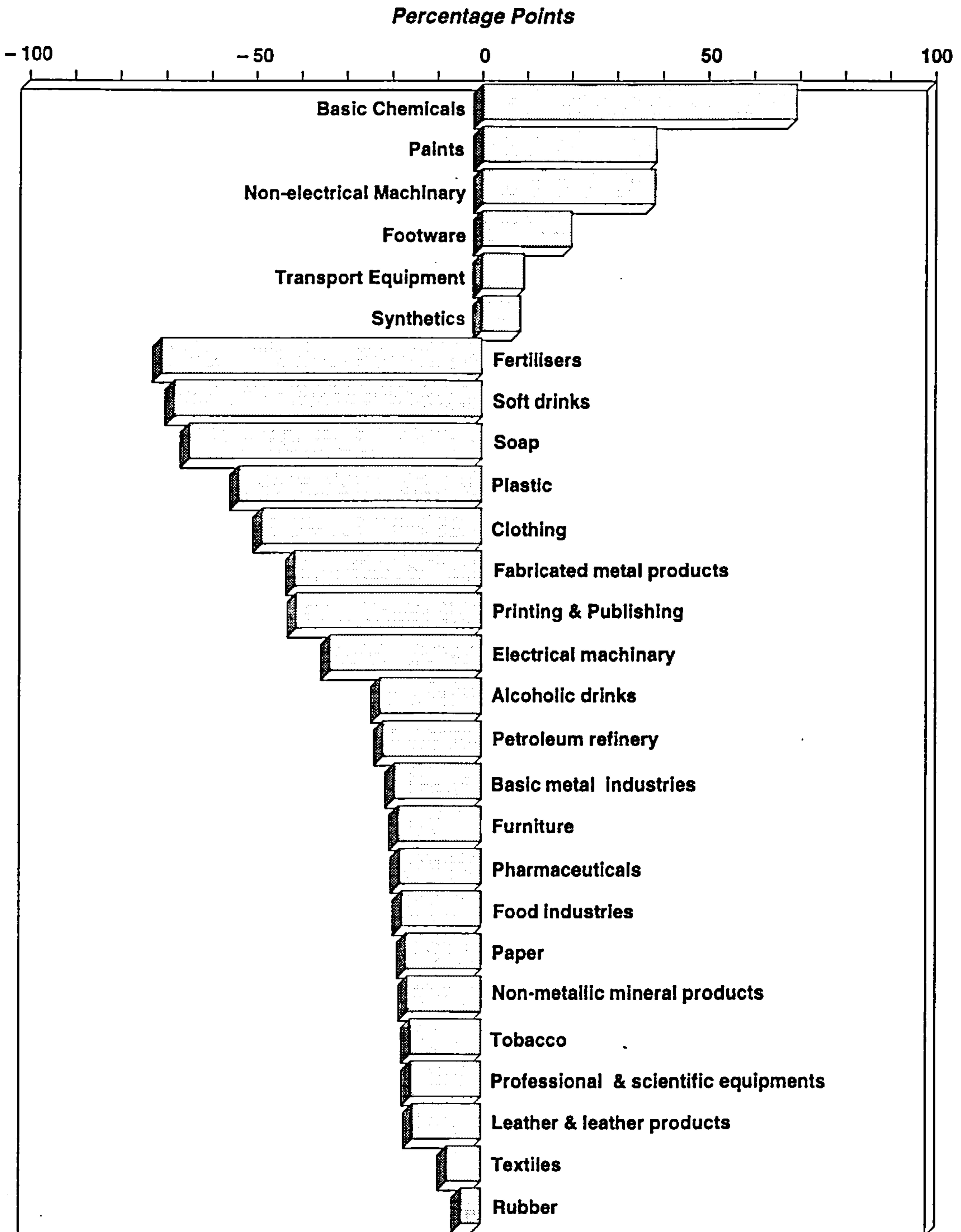
**Figure 8-10.** Import Penetration of Jordan's Market  
(Average of 1989, 1990 and 1991)



**Source:** Based on Appendix D, Tables D-3 through D-6.

**Note:** Ratios may exceed 100% in some sections because of the high values of re-exports in these sections.

**Figure 3-11.** Change in Import Penetration of Jordan's Manufacturing Industry, Average of 1989, 1990, 1991 Vs Average of 1979, 1980, 1981



**Source:** Derived from *Tables D-3 through D-6* in Statistical Appendix D.  
**Notes:** A positive change in the ratio indicates a loss in import competitiveness.

chemicals and synthetics showed a loss in import competitiveness as they registered a positive change in their IPRs. Imports of basic chemicals are very high compared to exports, although most of the output produced is exported. The reason is that Jordan does not produce all the kinds needed, and the needs of the industry to such products are now growing rapidly. Synthetics, as with fertilisers, were not produced earlier and after the establishment of this industry most of its products were exported. In fact, exports are of vital importance for the chemicals subsector of Jordan in order to achieve reasonable "economies of scale" because of the smallness of Jordan's domestic market. Jordanian manufacturers must address a market larger than the home market. Also, the type of intermediate and basic chemicals industry is generally technologically complex and capital-intensive at most stages of production which in turn place great demands on achieving high capacity utilisation. It seems that Jordan's success in overall competitiveness in this section combined with a loss in import competitiveness may be ascribed to the relatively high success achieved in export competitiveness. Between 1987 and 1992, for example, exports of basic chemicals grew by 13.0% annually, penetrating new markets such as India, Iran and North Africa<sup>(30)</sup>. This industry is expanding more as two new firms in 1992 (out of 12) were established.

Soft drinks acquired gains in both the home and export markets. This industry as well as some other industries in the food subsector benefited from protection through quotas. It also benefited from the nature of the demand for such products which is less vulnerable to the swings in domestic and regional performance.

Non-metallic mineral products achieved high gains in overall competitiveness, but the gains in import competitiveness were small. Local products supply a high percentage of Jordan's needs, particularly the construction activity as it

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(30) See UN, *Commodity Trade Statistics, Series D*, 1992.

provides the market with cement, glass, bricks, tiles and ceramics. The vulnerable nature of this activity in general, and in Jordan in particular, affects the production of these goods. Export markets are becoming more important. Bilateral trade agreements that Jordan has made with a number of countries are important in this regard but are an unstable factor in exporting these products. For example, exports from this group to Egypt in 1987 reached \$27 million but declined to less than a one million in 1992. Recently new export markets are opened in North Africa and the Far East which absorbed 60% of the 1992 total exports from this group.

Basic metals industry is one of the engineering subgroup. This subgroup has a high import content and low production runs which is reflected in high costs compared to internationally available products. However, it seems that the basic metals producers are good performers in exporting this group. These producers are also gaining a larger share of the domestic market and the IPR declined from about three quarters in the beginning of the 1980s to about 60% in the last years.

- ② Moderate gains in overall competitiveness were achieved in soap, fabricated metal products, non-electrical machinery, plastic, clothing and alcoholic drinks. These industries (except alcoholic drinks and non-electrical machinery) performed well in the domestic market.

Soaps, detergents, cosmetics, plastic utensils enjoy a steady growing internal demand with a well established distribution channels. As these industries are not, in general, protected, competition with imports created strong incentives for development of products with proper quality and design. Also prices are affected by the relatively high internal competition due to the large number of firms operating in this industry. External demand for such products, as well as internal demand, is growing in line with the increase in population and income,

hence good market prospects are anticipated for such products. The clothing industry in Jordan faces strong competition from imports of the Far East. These imports have the benefits of low wages and large scale of operation which result in low prices. These in turn are the decisive factors in purchasing decisions by lower income groups. Also Syrian clothing are competing strongly. They benefited from the bilateral trade arrangements that enable the Syrian producers to compete in Jordan's market without paying any duties.

- ③ Weak performance was recorded in the overall competitiveness of leather & leather products, furniture, textiles, footwear, printing and paper. This subsector depends on trade (exports and imports) more than other subsectors and depends on imported inputs to a large extent. Most of these groups have grown depending earlier on the Saudi-Arabian market, and then on the Iraqi market. Export markets, such as the Saudi-Arabian market, have become increasingly competitive and protection provided to Saudi-Arabian products has increased to encourage the growth of total manufacturing. New export markets are opened particularly in North Africa and other Arab countries. Some products could find their way to some of the EEC countries and the USA.

Pharmaceuticals are of special importance in Jordan's manufacturing. Exports of medicines reached JD34.5 million in 1991 and rose further to JD70.5 million in 1993, and accounted for 36% of Jordan's exports of chemicals in 1993. Imports are also important and cover a large part of Jordan's market. The growth in these products in the second-half of the 1970s depended largely on export markets, but substituting imports also increased and the IPR declined. In fact, competition in the local and export markets with international companies is strong as no protection has been given to Jordanian companies either in Jordan or abroad. Active and effective marketing policies pursued by Jordanian producers to gain export markets such as establishing several scientific and sales

offices in several countries. Thus, this industry could maintain high capacity usage and introduced new projects for expanding new product lines. Although still important, the markets of Iraq and Saudi-Arabia declined to less than two-thirds in 1992 against around three-quarters in 1987. New markets in North Africa, the Far East and some European countries have been developed.

- ④ The overall competitiveness of paints, tobacco, petroleum industries indicated a loss of competitiveness. Import competitiveness of paints recorded a loss while that of tobacco registered low gains. These industries have a low IPR, covering most of the domestic market needs.

As for the major subgroups competitiveness calculated using X/M indicator built on export unit volume and import unit volume emphasises the previous results as shown in *Table 8-8*.

**Table 8-8** Export/Import Ratio of Major Subgroups of Manufactures  
(Based on Unit Volumes)

Subgroup	Average X/M (1980, 1981 and 1982)	Average X/M (1989, 1990 and 1991)	Change in X/M (Indicator)
Tobacco	1.707	1.337	78.3
Chemicals	0.481	1.340	278.6
Manufactured goods	0.923	1.444	156.0
Other goods	1.217	1.930	158.6

Source: Computed from: Jordan, CBJ, *Monthly Statistical Bulletin*, Several Issues.

### Overall Performance of the First Period

Overall competitiveness indicator for the period 1979-1982 is presented in *Table 8-7*. It shows that a loss in competitiveness for total manufacturing has been recorded as this indicator was less than 100. Comparison with the price competitiveness of this period shows also a deterioration in competitiveness. As for subgroups, 16 out of 28

sections lost their competitiveness. The poorest performance was in the engineering & construction materials subsector and the best was in the chemicals subsector.

### Export Competitiveness of Major Subgroups

Jordan's export competitiveness between 1975 and 1988 for total manufacturing and major groups calculated using the CMS approach has improved and competitiveness contributed to the increase in all commodity groups. The proportion of the increase in exports of each group accounted for by the increase in competitiveness varied from group to group. This proportion for the same group also varied from one subsector to another (see *Chapter 7, Table 7-5*). The Export/Output ratio may be used as an indicator of the performance in exports. The proportion of output exported varied from group to group and over time. Relatively high proportions (more than two-thirds) were registered at the late 1980s and the beginning of the 1990s for textiles, footwear, fertilisers, pharmaceuticals, fabricated metals and professional & scientific equipment. Small proportions (less than 20.0%)<sup>(31)</sup> were recorded for beverages (soft), tobacco, leather and leather products, petroleum refiners and basic metals. The ratios for the remaining subgroups lay in between these two proportions.

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(31) These ratios are computed from *Tables D-3 and D-4* in Statistical Appendix D.

### **Conclusion**

Results obtained from the assessment of the capacity of Jordanian manufacturing industry to compete successfully in foreign markets and with imports in Jordan's market are presented in this *Chapter*. This assessment has been carried out to investigate the problem of Jordan's international competitiveness (IC) as has been raised by officials especially since the late-1980s, and to analyse the relative position of Jordan's price competitiveness in its export, import and overall dimensions for a period from the mid-1970s to early 1990s. This study has also aimed to examine the impact of the various government policies and measures, particularly those introduced recently, on the price and short-run aspects of the competitiveness process and on its outcome as reflected in market shares. Although total manufacturing has been the focus, major industrial groups and subgroups have not been neglected.

The assessment and analysis of the IC of manufacturing in this study are built on the results of measuring IC for manufacturing and are not based on general information on manufacturing or on calculation of IC for the overall economy as in previous studies. Variables used such as producer, import and export prices are all for manufactures, and the trade double weights which incorporate in a relatively detailed way third country effects are also for manufactures. The OECD model employed enabled us to calculate not only overall competitiveness but also export and import competitiveness separately. Relatively large samples for export markets and competitors were chosen



covering 19 markets and 30 competitors. Moreover, the results of the effect of competitiveness process on export expansion calculated on the basis of the constant-market-share (CMS) approach, which isolate this effect from market and commodity effects, are distinguished from other results obtained merely from computing the growth in exports.

The general results of the measurement of the price aspect of the overall competitiveness process for Jordan's manufacturing showed that Jordan's competitiveness from approximately the mid-1970s until the mid-1980s was in a relatively disadvantageous position in comparison with the base year 1980. Subsequently, competitiveness improved with the most pronounced gains being achieved in the late 1980s and early 1990s. The improvement achieved in import competitiveness was continuous, while the gains attained in export competitiveness were unsteady.

A more detailed presentation and analysis of the results showed that the changes in Jordan's export competitiveness process measured by relative export prices (Jordan's export prices compared with the weighted average export prices of Jordan's competitions in its export markets) were, in general, reflected in consistent changes in Jordan's export market shares. ESCWA countries (the Arab Countries of Western Asia and Egypt) represented Jordan's "world" when the CMS technique was employed, because this region absorbed most of Jordan's manufactured exports.

During the second half of the 1970s, although relatively unfavourable compared with the base year 1980, export competitiveness was improving. A decline in the price indicator of the competitiveness process over the previous year was registered in most years in this period. These gains were the outcomes of the combined drop in Jordan's export prices and increases in competitors' export prices. This improvement in price

competitiveness was reflected in Jordan's export markets. Exports during this period witnessed unprecedented increases due to several factors including the improvement in competitiveness. The gains achieved in the competitiveness process accounted for one-third of the total increase in exports in this period, and the proportion of the increase in exports attributable to the improvement in competitiveness for the major SITC groups was 51.0% in "chemicals" 10.0%, 22.0% and 64.0% in "basic manufactures", machinery & transport equipment and "other manufactures" respectively.

However, this improvement did not continue into the early 1980s and price competitiveness deteriorated in consecutive years. The loss of competitiveness was the result of both internal and external factors. Jordan's economy was largely affected by the economic situation prevailing in the adjacent oil-rich Gulf States. At the end of the 1970s and in the early 1980s these countries witnessed an economic boom following the rise in oil prices, and Jordan experienced a period of high economic growth, expansion of exports of goods and services and increases in Arab aid and workers' remittances. The Jordanian dinar (JD), which was linked with the SDRs with a margin determined with reference to Jordan's trade basket, had become strong due to capital inflows and the accumulation of foreign currency. This resulted in a relatively high export price in terms of foreign currency. From 1982 these conditions changed due to the weakening of the economies of the Gulf States following the decline in oil prices after 1981. But Jordan's authorities maintained the high price of the JD. The association of this with other unfavourable factors influencing Jordan's export price, and with lower increases in Jordan's competitors' prices owing to the recessionary conditions in world economy and sluggishness in world trade, resulted in a loss in price competitiveness in most years of the 1980-1985 period when measured as a percentage change over previous year. However, comparison between competitiveness indicator in 1980 and 1985 showed an improvement which was reflected in increases in exports and

according to the CMS analysis competitiveness contributed to the increases in exports of each of the major commodity groups, particularly "Basic Manufactures" (see Chapter 7, Table 7-5).

Later, examination of the results of the two methods showed that the gains acquired in price competitiveness did not result in export expansion or increased market shares. Exports in 1986, for example, declined and (according to the CMS approach) around one-fourth of this decline was ascribed to the deterioration in competitiveness. In 1988 although exports expanded, this was not attributable to the improvement in competitiveness but rather due to the favourable commodity effect. Since relative competitiveness based on the CMS approach is computed as a residual, it includes some non-price competitive elements and also factors that have effects on exports other than those of commodity, market and "price" competitiveness. Most probably, Jordan's non-price competitiveness did not deteriorate in these two years as Jordan could successfully re-orientate its exports to new export markets, and the cause of the decline in exports and the unfavourable effect of competitiveness may be ascribed to non-market factors such as the changes in Jordan's trade relationships with its trading partners. The establishment of the Co-operation Council for the Arab States of the Gulf (GCC) resulted in full liberalisation of the intra-GCC movement of goods and led to a large increase in their intra-regional trade at the expense of the shares of Jordan and other countries in the region such as Syria and Egypt. We can conclude from this that the improvement in price competitiveness may have been a potential stimulus to increases in exports but that other factors (included in the competitiveness effect in its wide coverage of elements) which had stronger opposite effects led to the decline in exports. Examination of competitiveness for a longer period of time, 1975-1988, suggests that the improvement in the competitiveness process was reflected in increases in exports and in market shares. The average annual rate of real growth of

Jordan's manufactured exports over this period was 22.6% and Jordan's export market shares (in ESCWA region) increased from 4.1% in 1975 to 9.2% in 1988. These considerable increases were attributable not only to the expansion in ESCWA countries' exports and to some other effects but were also ascribed to the improvement in competitiveness which explained one-third of the increase in exports.

By the end of the 1980s Jordan's exports and export prices were affected by the economic crisis that faced Jordan. The severe imbalances in the fiscal and balance of payments positions associated with other developments resulted in stagnation in real GDP, increasing unemployment, increasing foreign indebtedness, monetary instability, depletion of foreign reserves and large declines in the dinar exchange rate after it was placed under the managed floating system. However, the depreciation of the JD did not result in sustained declines -or stabilisation- in Jordan's export price in dollar terms due to several factors (see *Chapter 8*, subsection "Export Competitiveness"). This combined with fluctuations in competitors' export prices resulted in an improvement in export competitiveness in 1988 and 1990 and in a deterioration in this competitiveness in 1989 and 1991. Despite this loss in competitiveness during these two years, Jordan's relative export price (competitiveness indicator) was lower than that prevailing in the mid-1980s. The relatively high annual increase of 8.3% on average in Jordan's real manufactured exports during 1985-1991 despite the crisis that faced the economy and the disruption of export markets following the Gulf War in 1990 may reflect in part this general improvement in price competitiveness. Non-price competitiveness may also explain another part. Supporting evidence on the importance of such improvements is the diversification trend that has taken place recently in both commodity groups and export markets (see *Chapter 5*, section 5.6). Although the countries of the Middle Eastern region (mainly the ESCWA countries) are still Jordan's major export destinations for manufactures, the share of this region in total

exports has fallen from almost 100.0% in 1980 to around three-quarters of the total in 1985 and further to less than two-thirds in 1988. Although exported fertilisers affected these changes considerably, other new export commodities -albeit sometimes small in magnitude- have been directed to the traditional markets and to new export markets particularly in North Africa. Another indicator of this improvement may be the increase in the export/output ratio. This ratio was about 15.0% in the mid-1980s and from the end of the 1980s until the early 1990s it ranged between one-fifth and one-fourth of the total. Some industries had a large ratio exceeding two-thirds of the total such as "basic chemicals", fertilisers, synthetics, pharmaceuticals in the chemical industry. Some other groups also export a large proportion of their output such as furniture, textiles and professional & scientific equipment.

With respect to import competitiveness, there was in most years consistency between the results of the measurement of the price aspect of the competitiveness process and that of the outcome of this process as reflected in market shares of the home-market. During the second half of the 1970s, although import competitiveness was in a relatively disadvantageous position in comparison with 1980, gains were registered in this aspect of competitiveness as a change over a year earlier. This improvement had been indicated by the declines in Jordan's relative import price (Jordan's producer price compared with Jordan's import price). Such improvement was the outcome of the combined decline in Jordan's producer price and the increase in import price. These gains attained in the competitiveness process were reflected in declines in the import penetration ratio (IPR). This resulted from a much higher increase in output than in imports. Jordan's import competitiveness, as with export competitiveness, was affected during the first half of the 1980s by the maintenance of a high-priced JD. This coupled with slow increases (and sometimes declines) in import prices in the countries exporting to Jordan led to declines in Jordan's dollar import

price. Jordan's producers' price increased reflecting increases in costs of production owing to the widespread capacity under-utilisation of industries. Thus, Jordan's relative import price increased and a loss in import competitiveness was registered. Such deterioration in competitiveness was not, however, translated into increases in IPRs as might be expected. The reason for this in 1983, for example, was the high drop in the growth of import demand owing to the severe recessionary conditions. During 1984 and 1985 the gains achieved in the price competitiveness were mainly due to the measures undertaken by the Government banning the importation of a large number of competing imports and increasing tariff rates on others which enhanced domestic production and led to a reduction in costs and prices. These gains resulted in declining IPRs from 68.0% in 1983 to 62.0% in 1984 and to 59.0% in 1985.

During the late 1980s and early 1990s Jordan's import competitiveness improved owing to several internal and external conditions such as the depreciation of the JD in the first case, and the recovery in world economy and trade in 1988 and changes in world circumstances in 1990 in the other. The improvement in import competitiveness in 1990 was the highest recorded and Jordan's relative import price declined by 23.0%. This resulted from the continued drop in producers' price and the rise in import price. In fact, the dinar producers' price rose as a result of the interaction of the forces of demand and supply. Domestic demand for Jordan's products increased basically because of the abnormal population growth resulting from the forced return of Jordanian expatriates from the Gulf States. Also demand increased because of the increases in the prices of imported substitutes for Jordan's domestic products. Such an increase is due to the fall of the dinar and to the increases in import price in Jordan's partner countries. On the supply side, costs of production rose in part as a consequence of the fall in the JD because of the relatively high dependence of Jordan's industry on imported inputs (see *Chapter 8*, section 8.4). In dollar terms,

Jordan's producer price declined. This, associated with the increase in Jordan's dollar import price owing to the increases in prices in the countries exporting to Jordan and to the depreciation of the JD, resulted in an improvement in competitiveness. This improvement was consistent with the improvement in market shares as the IPR declined from 59.1% in 1989 to 53.6% in 1990.

Overall competitiveness is a combination of export and import competitiveness with weights reflecting the pattern of demand. At the end of the 1970s overall competitiveness was improving since both export and import competitiveness were improving. This was caused by the decline in Jordan's prices associated with increases in competitors' prices. Such an improvement was reflected in increases in the E/M ratio as a measure of the outcome of the overall competitiveness, but the trade deficit, as another measure, did not fall. On the contrary, continuous increases were registered in this deficit during this period. The availability of the large resources needed to finance these imports (Arab financial aid, workers' remittances and exports of goods and services) resulted in a considerable expansion in imports and high balance of trade deficits. During the first third of the 1980s competitiveness deteriorated. The loss of competitiveness was ascribed to the relatively low import price and high export price owing to the strong dinar, associated with unfavourable developments in such prices and in the weighted average prices of competitors. The change in the E/M ratio was not consistent with these results in every year. While the trade deficit was increasing due to the increase in imports in most years and to the fluctuations in exports, overall competitiveness started to improve in 1985-1987 as an outcome of the gains achieved in both export and import competitiveness. Competitors' prices, which were affected by, among other factors, the fall in the US dollar, increased; while Jordan's prices increased by lower percentages in the case of import competitiveness and declined in

the case of export competitiveness, and, hence, Jordan's overall competitiveness improved.

At the end of 1980s and the beginning of the 1990s overall competitiveness witnessed continuous and accelerated improvement. Such gains were outcomes of the high and continuous gains achieved in import competitiveness and the improvement in some years in export competitiveness. Jordan's producers' prices and export prices in terms of the dinar witnessed continuous increases as a result of the interaction of various factors including the depreciation of the dinar. This depreciation led to continuous reductions in the dollar producer price; and reduced the dollar export price in 1989, stabilised it in 1990, and reduced its increase in 1988. Since these developments were associated with increases in competitors' prices in 1988 and 1990, with declines in these prices in 1989 and stabilisation in 1991 the final result was an improvement in the weighted import competitiveness indicator in each year, and an improvement in the weighted export competitiveness indicator in 1990. Because of the high relative importance of import competitiveness in overall competitiveness, an improvement in overall competitiveness was registered in each year. These favourable results in overall price competitiveness were translated into increases in the E/M indicator in some years. In 1990, for example, this indicator signalled a slight deterioration compared with an improvement in price competitiveness. A key factor influencing this result is the cost of freight. As exports are registered f.o.b. and imports c.i.f., the rise in the freight and insurance rates during 1990 resulting from the embargo imposed on Aqaba port caused the fall in the indicator.

In summary, the improvement of competitiveness based on the measurement of the competitiveness process supported by the measurement of its outcome provides the analyst with a strong base for assessment and analysis of this competitiveness. It is the



case that market shares and the trade balance have some shortcomings, especially because they may capture the effects of factors other than those of competitiveness, but the indicative power of these measures improves considerably if the results obtained are carefully interpreted and if more detailed calculations are made for industry groups and subgroups. For example, in 1989 import price competitiveness improved and the IPR declined. However, this decline might not be a reflection of the gains obtained in competitiveness and might not reflect the replacement of domestic production (which grew by only 1.3%) for imports (which declined by 12.2%). Examination of imports suggested that a substantial portion of the decline was made up of non-competing high-value luxury goods. Such imports were banned in order to control public expenditure and to rationalise the use of foreign exchange. Another example is the improvement of the trade deficit in 1990. In this year price competitiveness improved and the trade deficit registered its lowest level since 1977. The improvement was exclusively attributed to the drop in imports as exports declined. Such a decline in imports and improvement in the trade deficit might reflect only in part the gains attained in the competitiveness process. The explanation is that external trade measures introduced in this year had different impacts on imports. The lifting of the ban on luxury imports led to an increase in imports of these goods while the raising of custom duties on some other luxury goods led to a decline in imports. Other factors led to an increase in imports from certain goods such as the commodity group "manufactured goods", not because its competitiveness deteriorated but because of the increase in demand resulting from the sudden rise in population. The depreciation of the dinar coupled with some of the above measures resulted in a high drop in imports. Exports were expected to continue their rise in 1990 but the Gulf War disrupted export markets and exports declined. As the value of imports is very much higher than exports, the trade deficit widened. A final example is related to the IPR in 1981. In this year import

competitiveness deteriorated and the IPR declined instead of increasing. Examination of major groups and subgroups of the manufacturing industry showed that this ratio did not decline in each industry and some of them witnessed increases such as beverages, tobacco, footwear, furniture, printing & publishing, paints, and soap, among others.

In conclusion, these findings will help policymakers in taking the correct and appropriate decisions with respect to the measures affecting import and export prices, and the preferred distribution of exports that are concentrated in commodities and markets for which demand is growing relatively quickly. Also these conclusions will help in suggesting measures to maintain and improve IC. The continuous gains attained in import competitiveness may be maintained through the pursuit of the adoption of the relatively liberalised external trade policy. Exposing domestic production to continuous import competition stimulates domestic producers to reduce their costs of production through the efficient use of resources. This also improves the quality and other non-price aspects of competitiveness, which in the long-run will attract more demand which will result in a more utilisation of capacity and reductions in costs and prices. However, protection, which has recently been reduced, is still important, particularly in recessionary conditions and for certain promising commodities which should be selected through careful investigation. Indeed, there are "strategic sectors" worthy of protection and promotion. It might be possible to consider import protection and export incentives in a mutually may, i.e., the import protection in selected strategic industries actually serve to promote IC and export expansion.

With respect to export competitiveness, competitors' export prices are outside the control of Jordan and their favourable (to Jordan) trend of either increases or

stabilisation in recent years may not continue in the future. Hence, Jordan may have to intervene in its own prices through reducing the relatively high structure of costs of productions. For years some support was offered in this regard for the consumption of fuel. As this proved to be inadequate, the Government introduced in 1992 and 1993 other measures to reduce interest rates and to exempt profits from income tax for certain exports. More support is required for export goods that have relatively fast growing demand, and for exports that are not concentrated in the Middle Eastern markets which showed -according to the CMS analysis applied in this study- unfavourable market effects. Other factors which do not have a direct effect on prices but may improve the quality of exports and hence expand them may result in the long-run in reducing these prices owing to the benefits of economies of scale. These include some industrial measures and incentives in the fields of specification and measurement, information on external markets, and the use of communication and information technology.

Jordan has concentrated in its recent economic strategy on the principle of "self-reliance" in order to achieve sustained economic growth and its future growth will depend to a large extent on growth in the productive commodity sectors, and particularly manufacturing which is the largest sector in this group and has potential for growth. This growth in turn depends on the ability of Jordan's manufacturing to be competitive in both home and export markets. The provision of a sound economic environment and the introduction of the appropriate macro-economic policies that pursuit a flexible exchange rate policy and the liberalising of the trade regime, in addition to some industrial policies and incentives supported by a national program for promoting exports are important to improving and maintaining Jordan's competitiveness.

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### **Sources and Data**

In constructing the indicators to assess international competitiveness and export performance for Jordan data constitute a great challenge for the researcher. This is basically due to the nature of the variables used which should be compiled in a specific form, to the nature of the indicators which require comparative data, and to the samples chosen which cover certain developing countries which suffer from a lack of data on some variables or do not produce enough reliable data.

As this study focuses on manufacturing industry, variables such as output, exports, imports, export prices and import prices, all for manufacturing are not readily available or easily obtained. In particular, no data are available for Jordan on the direction of manufactured exports and manufactured imports. Therefore, the researcher has to dedicate much effort to compiling these data by adding the components of the corresponding sections in the trade classification for each year in the time-series under study and for each partner in the samples.

The circumstances prevailing in the Middle East, as one of the centres of international struggle, have imposed constraints on the availability of data. Lebanon has suffered from wars since the mid-1970s, Iraq since the early 1980s and Kuwait in 1990. Also, underdevelopment and the absence of developed institutions for data collection and preparation are other reasons, especially in some countries such as Yemen. Indeed, in this study data on some variables for some countries in both samples of countries chosen as competitors and export markets were not available at all or were available only from national sources. Thus, the researcher was forced to use



the most suitable alternative in the first case, and to use data that might not be entirely comparable in the second.

In spite of these difficulties, we think that the data compiled and used in this study are acceptable, and that the results obtained may be considered relatively accurate in the light of these points:

- ① Jordan's data on almost all variables were available in the required form (or could be compiled consistently with the international classifications) and are obtainable from national and international sources on a regular and current basis.
- ② Advanced industrial countries, whose data are relatively more reliable and regular, constituted half the number of Jordan's competitors in the sample with a high relative importance in import value. In the sample chosen, their share in total manufactured imports of Jordan in 1985 (the reference year) was 85.8%. This means that the effect of the estimated (and not actual) and sometimes the unreliable data of the rest of the countries in the sample on the results obtained may not be significant.
- ③ Even in the case of the remainder of the countries in the sample data might also be acceptable since concepts and definitions regarding the variables used in the study were almost in accordance with international recommendations. National sources were sometimes used with emphasis on international sources such as the publications of the United Nations (*the Statistical Yearbook, the Industrial Statistical Yearbook, International Trade Statistics Yearbook, Commodity Trade Statistics*) and the publications of the IMF, the World Bank, among others. When the data on a particular country were not sufficient for the purpose of this study, such as the case of Lebanon, it was omitted from the sample.

International sources were not used only to obtain the required data but also to estimate the missing ones. The values of the missing variables could not be estimated by building economic and statistical models that relate their values to other economic

variables, as enough data on these other economic variables are not available for all the countries in the sample. The time-series approach could be a suitable alternative as it relates the current value of an economic variable only to its own past values and to the values of current and past random disturbances. This method, however, is useful in short-run forecasts, as in our case. But it also could not be applied, since it generally requires sufficient large amount of data on the variable to be forecasted which we also lack in our case<sup>(1)</sup>.

Taking the previous points into consideration, the sources used and methods applied to compile the different variables and to assess international competitiveness and export performance were the following:

### **(1) Exchange Rates**

International Financial Statistics (IFS) published by the International Monetary Fund (IMF) was the reference for exchange rates for all the countries in the sample. Series "rf" (national currency per US dollar, period average) was the source for all the countries in the sample except Sudan, Libya, Democratic Yemen, Bahrain, Egypt, Iraq, Kuwait and Jordan where "rh" series (US dollar per national currency, period average) were the source. The "rh" series, however, has been converted to the "rf" series and thus the same basis for conversion factors was applied to all countries.

Conversion factors to US dollars for Jordan's imports and exports that were in certain cases expressed in Jordanian dinars were obtained from the United Nations (UN), *Commodity Trade Statistics* published by the UN for each year of the period 1976-1992 except 1989, 1990 and 1991. Data for 1989 and 1990 were obtained from the UN, *International Trade Statistics Yearbook*, and for 1991 from the Central Bank of Jordan (CBJ), *Monthly Statistical Bulletin*.

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(1) G.S. Maddala, *Introduction to Econometrics* (New York: Macmillan, 1988), Ch.10: "Models of Expectations"; William E. Griffiths, R. Carter Hill, and George g. Judge, *Learning and Practicing Econometrics*, (New York: John Wiley & Sons, 1993), part VII: Time-Series and Dynamic Econometric Models.

Nominal effective exchange rates for Jordan were obtained from an unpublished study conducted by the CBJ in 1992.

### (2) *Gross Output*

Values of gross production of manufactured goods in 1985 for Egypt, Kuwait, Jordan, Syria, Ethiopia, India, France, Italy, and the USA were obtained from the UN, *Industrial Statistical Yearbook, Vol.1*. Outputs for Libya and Sudan were estimated using value added data published in the UN, *National Accounts*, while outputs for Tunisia and Yemen were estimated using the UN, *Industrial Statistical Yearbook*<sup>(2)</sup>. For Saudi-Arabia we used the UN, *National Accounts* in addition to the *Industrial Survey of 1988* published by the Ministry of Industry and Electricity of Saudi-Arabia.

All outputs were valued at producers' prices (except those of Iraq, Syria, the USA and India) which were at factor prices. As outputs were reported in national currency, the conversion factors were used to express these outputs in a common currency which is the US dollar.

### (3) *Imports and Exports*

The definition of manufactured goods according to the Standard International Trade Classification (SITC) could be found in many international sources such as "Methods Used in Compiling the UN Prices and Indices for External Trade"<sup>(3)</sup>. Manufactured goods are defined to comprise all products included in section 5, 6 less 68, 7 and 8 where:

- SITC 5 = chemicals;
- SITC 6 = basic manufactures;
- SITC 68 = non-ferrous metals;
- SITC 7 = machines and transport equipment;
- SITC 8 = miscellaneous manufactures.

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(2) For method of calculation, see: UNCTAD, *Handbook of International Trade and Development Statistics* (New York: UNCTAD, 1992), p.543.

(3) See also United Nations, *United Nations Statistical Papers, Series 4, No.82, Vol. 11, 1991*.

As such, manufactured goods do not include processed foods, processed fats and oils and petroleum products.

Imports and exports of manufactured goods for each country (market) in the sample were compiled according to the SITC by subtracting subsection 68 from section 6, then (6-68) was added to subsections 5, 7, and 8.

Imports and exports by commodity needed to compile manufactured imports and exports were obtained from the UN, *Commodity Trade Statistics, Series D*. Data for 1985 for most countries in the sample were obtained from this source. However, for the remainder of the countries in the sample these data were estimated.

Simple unified methods of estimation were applied in the light of lack of sufficient data and the need to obtain some degree of similarity. The most relevant data reported for imports by commodity were those of 1982 for Saudi-Arabia, Qatar and the UAE; 1984 for Kuwait, and 1986 for Syria. The values for 1985 were estimated by assuming in both years (where data were available and missing) a fixed ratio of manufactured imports coming from a particular country to total manufactured imports coming from all countries. As no data were reported in the previous source, or in any other source, for Iraq and Bahrain, the UN, Economic and Social Commission for Western Asia (ESCWA), *External Trade Bulletin of the ESCWA Region, 1992*, was used to estimate the required data. Fixed ratios were also assumed in this case but for manufactured imports to total imports. It should be borne in mind that the assumption of fixed ratios may be acceptable since the two years used in each case were relatively near to each other and thus no structural or salient changes are likely to have occurred.

Imports of other markets classified as "Other Developing Countries", "Other Developed Countries", and "Centrally Planned Economies" were computed as exports of each of the 30 competitors in the sample to each of these markets. Export data from each of these countries to the above three groups of markets were obtained also from the UN, *Commodity Trade Statistics Series D, data for 1985*.

### *Exports to Assess Export Performance*

Manufactured exports for the years 1975, 1980, 1985, 1987, and 1988 based on intraregional bases to assess export performance were obtained from the UN, ESCWA, *External Trade Bulletin of the ESCWA Region*, 1992. ESCWA countries are: Bahrain, Democratic Yemen (former)<sup>(4)</sup>, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi-Arabia, Syria, UAE, and Yemen Arab Republic (former). All ESCWA countries were chosen to constitute the sample of export markets of Jordan for the purpose of assessing export performance except Lebanon which was excluded for lack of sufficient data owing to continuous wars.

However, other countries in the sample lack some data in one year or another. For Jordan, Egypt, Syria, Iraq and Yemen Republic data were available for each year. But data were reported for Saudi-Arabia only for 1975, 1980. No data were reported for Kuwait, Democratic Yemen, Bahrain in 1985 and for Oman in 1975. For the UAE and Qatar data were not available for any year. Therefore, the missing data for Oman, Kuwait and Bahrain were estimated using the same method of fixed ratios applied in the case of imports since data on other relevant years were available. But in the case of Saudi-Arabia, UAE and Qatar, exports were estimated for each of them as imports of other countries in this region.

Exports were reported in ESCWA, *The External Bulletin of the ESCWA Region*, 1992 by SITC sections (0-8). No data were reported for the subsection 68. It was estimated for each country using total exports of 68 reported in the UN, *International Trade Statistics Yearbook*. Other sources such as ESCWA, *Developments in the External Sector of the ESCWA Region in 1980s* and the IMF, *Direction of Trade Statistics Yearbook* were useful in this regard.

All the figures of exports and imports were presented in terms of US dollars except in some cases where disaggregated data on Jordan's trade were available only in

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(4) In 1990, the two Yemens were unified constituting "Yemen".

national sources and were expressed in Jordanian dinars. These figures were converted to US Dollars using the conversion factors reported for each of imports and exports in the UN, *Commodity Trade Statistics, Series D*. Export data were reported f.o.b., while import data were reported c.i.f.

#### (4) Prices

Several sets of prices were needed and all of them were expressed as indices where the base year for all of them was 1980. Some indices, however, were rebased where necessary so that 1980 = 100.

Export price indices for manufactures for the years 1976 through 1988 in terms of US dollars for each competitor in the sample were obtained from the World Bank, *World Tables, 1989/1990*. For the years 1989, 1990 and 1991, and only for the developed countries, data were reported on this variable in the UN, *International Trade Statistics Yearbook, Vol.1*, Special Table G, 1993. In the case of Iraq and Qatar, no data were published on this index in *World Tables* or in any other source. Therefore, we used the index of export price for manufactures of "Developing Countries" as an alternative. This was also published in the UN, *International Trade Statistics*.

Producers' price indices for manufactures for most countries in the sample of export markets were obtained from the World Bank, *World Tables* on the country pages reported as "Domestic Price for Manufactures". No data on this index were reported for Bahrain, Qatar, Iraq and Democratic Yemen. Data on Libya stopped in 1984. Therefore, the most appropriate alternative that was available for each of these countries was used. Thus, we used the overall GDP deflator for Libya and Democratic Yemen published also in *World Tables*. The consumer price index was the only general domestic price available for Iraq, Bahrain and Qatar. The source in this case was the ESCWA, *Studies on Prices and Index Numbers in the ESCWA Region, 1975-1984* and the ESCWA, *Statistical Abstract of the Region of the Economic and Social Commission for Western Asia, 1981-1990*.

Prices for the markets classified as "Other Developing Countries", "Other Developed Countries" and "Centrally Planned Economies Countries" were wholesale prices reported in the IMF, *IFS Yearbook of 1992* as wholesale prices for "Developing countries", "Industrialised Countries", and "Developing Europe: Czechoslovakia, Yugoslavia, Poland, Turkey and Hungary". They were used in the same order as proxies for wholesale prices for the previous markets.

With respect to Jordan's producers' price index for manufactures our source was unpublished data prepared by the Ministry of Planning in co-operation with the Department of Statistics. Export price and import price indices for manufactures were computed by averaging the trade weighted prices of the SITC categories 5, 6, 7 and 8. Prices are weighted by the contribution of exports and imports of each category in the corresponding totals. Original price indices were obtained from Jordan, Central Bank of Jordan, *Monthly Statistical Bulletin*. Since these indices were based on values in Jordanian dinars they were converted to US dollars using the conversion factors of exchange rates published in Commodity Trade Statistics for each of imports and exports. Exchange rates to convert producers' price index are obtained from the (IMF).

***Choice of the Samples of Jordan's Export Markets  
and Competitors***

The countries included in the sample of Jordan's competitors are those who have significant market shares in Jordan's manufactured imports. The sample of export markets is consisted of those countries who have large market shares in Jordan's manufactured exports.

***EXPORT MARKETS***

Jordan's major export markets for manufactures are the following 19 countries: Bahrain, Democratic Yemen, Egypt, Iraq, Kuwait, Oman, Qatar, Saudi-Arabia, United Arab Emirate (UAE), Yemen Republic, Libya, Sudan, Tunisia, Ethiopia, India, France, Italy and the USA. The shares of these countries in total manufactured exports of Jordan were 95.8%, 98.6%, 98%, 90.1% and 55.6% in 1976, 1980, 1985, 1988 and 1992 respectively.

Arab Common Market (ACM) countries and Arab countries not members of ACM have been Jordan's traditional and main export markets for manufactures. More than 95% of these exports were directed to these markets during the 1970s. This ratio ranged between 64% and 98% during the 1980s with an average of about 80%.

***COMPETITORS***

As for competitors, Jordan's main competitors in its home market, also with regard to manufacturing are 30 countries: Bahrain, Egypt, Iraq, Kuwait, Qatar, Saudi-Arabia, Syria, the UAE, Turkey, Belgium, Denmark, France, Germany, Greece, Italy,



Netherlands, Spain, the UK, Austria, Sweden, Switzerland, Yugoslavia, the USA, Brazil, Japan, China, Hong Kong, Indonesia, Republic of Korea and Thailand. The shares of these countries in Jordan's manufactured imports were 84.6%, 86.9%, 89.0%, 85.0% and 81.0% in the years 1976, 1980, 1985, 1988 and 1992 respectively.

Western industrial countries, which constitute half the number of the sample, are Jordan's main competitors. In 1985 e.g., their combined share in total manufactured imports of the sample chosen reached 86%. But we should note that slightly more than half of the manufactured imports from these countries (an average of 52.6% during the 1980s) were machines & transport equipment which have, in general, no local substitutes to compete with.

Although the criterion applied to choosing Jordan's competitors is related to Jordan's home market only, in practice, most of these countries are also Jordan's competitors on its export markets; especially the Arab countries' markets<sup>(1)</sup>.

Some of the Arab countries chosen (Bahrain, Egypt, Iraq, Qatar, Syria, and the UAE) are not sharing significantly in Jordan's manufactured imports but were chosen because as traditional neighbouring partners, they used to export to Jordan certain manufactured goods which are somewhat comparable to Jordan's products in terms of quality and price.

Finally, it should be noted that some countries who are relatively large trading partners of Jordan were not chosen in these samples due to the lack of data required for calculating IC. Indeed, some of these countries (Lebanon, Taiwan, Romania, Czechoslovakia and recently Russia) are more important partners of Jordan than many of the countries chosen (Denmark, Greece, Indonesia, Hong Kong, Thailand, in addition to some Arab countries).

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(1) In 1985, for example, ESCWA region countries (the main export markets of Jordan) imported more than 90% of chemicals, machinery and transport equipments and 80% of "other manufactures" from Western countries (the main competitors on Jordan's home market).

*Appendix III*

**Statistical Appendix A**

***Jordan's External Merchandise Trade  
(Total and Manufactures)***

Table A-1. Jordan's External Trade (Total and Manufactures)

	1975	1976	1977	1978	1979	1980	1981	1982	1983
<b>A<sub>1</sub>. All Commodities</b>	730831	1022111	1381052	1498762	1948556	2394425	3149089	3241185	3030030
1. General Imports	153185	209104	249300	296684	402304	561407	731758	753095	578651
2. General Exports*	125641	149205	183071	209285	274704	401549	509778	528341	439868
3. Domestic Exports	27544	59899	66229	87399	127600	159858	221980	224754	138783
4. Re-exports	915828	1500897	1967311	2039132	2435695	2394425	2865413	3095688	3261604
5. General Imports	169640	268426	317176	364029	481801	561407	707013	709797	615586
6. General Exports*	139137	191534	232915	256791	328987	401549	492539	497965	467945
7. Domestic Exports	30503	76892	84261	107238	152814	159858	214473	211832	147641
8. Re-exports	459845	607629	949668	961413	1237339	1470727	1954008	1861545	1650657
9. General Imports	48111	71510	101159	134088	157316	200831	302753	366901	265495
10. General Exports*	25069	31368	57027	79662	97450	135745	195799	229127	180881
11. Domestic Exports	23042	40142	44132	54426	59866	65086	106954	137774	94614
12. Re-exports	564920	853411	1299135	1265017	1516347	1470727	1857422	1895667	1895129
13. General Imports	48548	95093	113534	144026	184427	200831	288611	324117	258515
14. General Exports*	25297	41713	64003	85566	114244	135745	186653	202409	176126
15. Domestic Exports	23251	53380	49531	58460	70183	65086	101958	121708	92127
16. Re-exports									
<b>B<sub>2</sub>. Values in Real Terms**</b>									
1. General Imports	153185	209104	249300	296684	402304	561407	731758	753095	578651
2. General Exports*	125641	149205	183071	209285	274704	401549	509778	528341	439868
3. Domestic Exports	27544	59899	66229	87399	127600	159858	221980	224754	138783
4. Re-exports	915828	1500897	1967311	2039132	2435695	2394425	2865413	3095688	3261604
5. General Imports	169640	268426	317176	364029	481801	561407	707013	709797	615586
6. General Exports*	139137	191534	232915	256791	328987	401549	492539	497965	467945
7. Domestic Exports	30503	76892	84261	107238	152814	159858	214473	211832	147641
8. Re-exports	459845	607629	949668	961413	1237339	1470727	1954008	1861545	1650657
9. General Imports	48111	71510	101159	134088	157316	200831	302753	366901	265495
10. General Exports*	25069	31368	57027	79662	97450	135745	195799	229127	180881
11. Domestic Exports	23042	40142	44132	54426	59866	65086	106954	137774	94614
12. Re-exports	564920	853411	1299135	1265017	1516347	1470727	1857422	1895667	1895129
13. General Imports	48548	95093	113534	144026	184427	200831	288611	324117	258515
14. General Exports*	25297	41713	64003	85566	114244	135745	186653	202409	176126
15. Domestic Exports	23251	53380	49531	58460	70183	65086	101958	121708	92127
16. Re-exports									

(Thousand US Dollars)

Table A-1. (Continued)

	1984	1985	1986	1987	1988	1989	1990	1991	1992
(Thousand US Dollars)									
<b>A<sub>1</sub>. All Commodities</b>									
1. General Imports	2785785	2732979	2445425	2705195	2786082	2132691	2602706	2512047	3256531
2. General Exports*	754667	789937	731598	927569	1035690	1089115	1063062	1113265	1220358
3. Domestic Exports	677806	648989	645133	730320	884786	920659	921788	880981	932600
4. Re-exports	76861	140948	86465	197249	150904	168456	141274	232284	287758
<b>A<sub>2</sub>. Values in Real Terms**</b>									
5. General Imports	3024739	3123405	3295721	3398486	3632441	2941643	3087433	3063472	4201975
6. General Exports*	778810	862377	823872	1089975	1145675	1185109	1129715	1090367	1238942
7. Domestic Exports	699490	708503	726501	858190	978746	1001805	979583	862861	946802
8. Re-exports	79320	153873	97370	231785	166929	183304	150132	227506	292140
<b>B<sub>1</sub>. Manufactured Goods</b>									
9. General Imports	1427967	1371958	1329640	1543576	1563869	1167007	1341767	1357275	2010298
10. General Exports*	394609	408224	297824	487277	473761	582873	592649	576043	659822
11. Domestic Exports	327805	281025	234989	349266	396188	440685	468233	400316	463928
12. Re-exports	66804	127199	62835	138011	77573	142188	124416	175727	195894
<b>B<sub>2</sub>. Values in Real Terms**</b>									
13. General Imports	1679961	1656954	1653781	1754064	1741502	1428405	1311600	1297586	2120568
14. General Exports*	340474	378335	280966	465848	426428	608427	614781	549659	643729
15. Domestic Exports	282834	260449	221688	333906	356605	460005	485719	381981	452613
16. Re-exports	57639	117886	59278	131941	69823	148422	129062	167678	191116

**Source:** For the years 1975-1988 and 1992 data were compiled from: United Nations, *Commodity Trade Statistics, Series D, Various Issues*. For the years 1989, 1990 and 1991, data for imports and for exports were compiled from: United Nations, *International Trade Statistics Yearbook, Vol. 1, 1991*.

Data for exports were revised to exclude re-exports as exports data were reported in the United Nations reference for "General Exports" and not "Domestic Exports".

**Notes:** \* General Exports = National (Domestic) Exports + Re - exports.

\*\* Exports and Imports in real terms were computed by deflating the values in current prices by the Central Bank of Jordan's export and import unit price indices. Dinar based indices were converted to US Dollar based indices.

Table A-2. Jordan's External Trade by Economic Functions\*

Commodity Group	(Thousand US Dollars)									
	1984	1985	1986	1987	1988	1989	1990	1991	1992	
<b>Total Domestic Exports</b>	<b>677889</b>	<b>648910</b>	<b>645167</b>	<b>734494</b>	<b>882336</b>	<b>926303</b>	<b>921789</b>	<b>880982</b>	<b>932541</b>	
Consumer Goods	282415	251619	223263	248308	217020	229492	261192	295070	376086	
Food Stuffs	90940	93438	84141	93888	64368	70836	93636	118185	122234	
Consumer Goods	129135	111944	116122	131538	114444	107218	140223	138339	203795	
Durable Goods	62340	46236	23000	22882	38207	51438	27334	38546	50057	
Raw Materials	386089	389479	416311	474807	649992	673231	636466	572252	534913	
Oil and Fuels		3	406	977	2108	1060	342	193	1079	
Construction Materials	18307	27985	24544	45323	28414	45945	52460	45843	47665	
Other	367782	361492	391361	428506	619470	626226	583665	526216	486170	
Capital Goods	9385	7812	5593	11379	15298	23562	24124	13660	21542	
Machinery & Trasp. Equip.	2306	1461	858	1491	5135	14941	1653	995	1470	
Other	7079	6351	4736	9888	10163	8621	22471	12665	20072	
Miscellaneous				27	17	6				
<b>Total Imports</b>	<b>2784148</b>	<b>2732566</b>	<b>2431919</b>	<b>2703115</b>	<b>2788298</b>	<b>2132472</b>	<b>2602666</b>	<b>2514278</b>	<b>3256364</b>	
Consumer Goods	1084002	978540	1024685	1068825	1013406	718377	994879	1070817	1324511	
Food Stuffs	418703	387973	384316	390003	417846	297670	491624	480584	450028	
Consumer Goods	331707	351844	329173	343198	274778	227502	307887	373163	532378	
Durable Goods	333592	238723	311196	335624	320783	193206	195367	217070	342105	
Raw Materials	1179174	1181821	885415	1095397	1073750	908102	1101066	999830	1161765	
Oil and Fuels	533080	492462	317726	440027	359239	353514	463096	363650	446408	
Construction Materials	89880	112630	72440	89474	83049	64183	44156	23842	56192	
Other	556214	576729	495249	565896	631462	490404	593814	612337	659165	
Capital Goods	443173	512032	404700	480700	598448	454345	481761	427817	749843	
Machinery & Trasp. Equip.	160878	206432	128976	164845	243294	206801	237275	178884	315080	
Other Machinery	8391	8744	9236	11107	5760	3681	5379	4132	8985	
Other	273903	296857	266487	304748	349395	243863	239107	244801	425777	
Miscellaneous	77799	60173	117120	58193	102694	51649	24960	15814	20246	

Source: Jordan, Central Bank of Jordan, *Monthly Statistical Bulletin*, Various Issues. Data were originally reported in Jordanian Dinars, then they were converted to US Dollars using the exchange rates for exports and for imports that are presented in Appendix C, Table C-3.1.

Notes: \* Figures for Jordan's total exports and total imports in this table may differ slightly from those in other tables because of differences in sources.

Table A-3. Jordan's Commodity Structure of Trade by Major SITC Categories

(Thousand US Dollars)

Commodity Group	SITC	1975	1976	1977	1978	1979	1980	1981	1982	1983
<b>DOMESTIC EXPORTS</b>										
Total Value	0 - 9	125641	149205	183071	209285	274704	401549	509778	528341	439868
Food Items	(0+1+22+4)	36361	55079	67607	61201	85212	100157	121622	129136	113485
Agricultural Raw Materials	2 less (22+27+28)	667	1067	1168	1457	2118	2112	2647	1389	1931
Fuel	3	882	1925				1000	16752		149
Ores and Metals	(27+28+68)	62648	59752	57240	66900	89865	162532	171681	168605	143336
Total Manufactured Goods	5 to 8 less 68	25069	31368	57027	79662	97450	135745	195799	229127	180881
of which:										
Chemicals	5	6090	10671	15854	20487	23767	36563	35402	67316	101094
Basic Manufactures	(6 - 68)	12513	11443	27864	38015	46722	62426	119199	85089	48583
Machinery & Transp. Equip.	7	1462	2173	2348	3482	5582	7980	11822	8912	5358
Other Manufactured Goods	8	5004	7081	10961	17678	21379	28776	29376	67810	25846
Unallocated*	9							1277		
<b>IMPORTS</b>										
Total Value	0 - 9	730831	1022111	1381052	1498762	1948556	2394425	3149089	3241185	3030030
Food Items	(0+1+22+4)	163709	263977	252271	319963	392922	434729	536209	586199	534067
Agricultural Raw Materials	2 less (22+27+28)	14544	21906	25685	29423	42049	36616	45394	43590	59177
Fuel	3	77755	111908	130857	152976	246678	408532	547886	682032	584196
Ores and Metals	(27+28+68)	4959	11320	14839	20491	24626	31792	55953	36532	48705
Total Manufactured Goods	5 to 8 less 68	459845	607629	949668	961413	1237339	1470727	1954008	1861545	1650657
of which:										
Chemicals	5	38095	49204	69952	70249	100925	131214	150090	153985	156519
Basic Manufactures	(6 - 68)	137965	192511	301040	308816	459019	475223	533507	562810	516728
Machinery & Transp. Equip	7	232101	305396	476672	451430	512262	668712	1023319	916206	719265
Other Manufactured Goods	8	51684	60518	102004	130918	165133	195578	247092	228544	258145
Unallocated	9	10019	5371	7732	14496	4942	12029	9639	31287	153228

Table A-3. (Continued)

		(Thousand US Dollars)									
Commodity Group		SITC	1984	1985	1986	1987	1988	1989	1990	1991	1992
<b>DOMESTIC EXPORTS</b>											
Total Value		0 - 9	677806	648989	645133	730320	884786	920659	921788	880981	932600
Food Items		(0+1+22+4)	122399	116075	128204	108163	87563	97593	102019	145682	145421
Agricultural Raw Materials		2 less (22+27+28)	4243	2969	3374	5348	4006	5593	4098	4197	6824
Fuel		3			413	1014	902	10	8	34	
Ores and Metals		(27+28+68)	223312	248895	278148	266523	396124	376738	347430	330752	316415
Total Manufactured Goods		5 to 8 less 68	327805	281025	234989	349266	396188	440685	468233	400316	463928
of which:											
Chemicals		5	175594	129510	155712	206263	250708	270492	284503	260552	289794
Basic Manufactures		(6 - 68)	85797	99198	54230	111405	98467	108425	115381	89626	96368
Machinery & Transp. Equip.		7	4856	5070	3977	7444	10046	18905	21518	10952	17420
Other Manufactured Goods		8	61558	47247	21070	24054	36967	42863	46831	39186	60346
Unallocated*		9						40			
<b>IMPORTS</b>											
Total Value		0 - 9	2785785	2732979	2445425	2705195	2786082	2132691	2602706	2512047	3256531
Food Items		(0+1+22+4)	530430	487707	525604	511113	528485	359600	671348	671642	691070
Agricultural Raw Materials		2 less (22+27+28)	48446	50055	48290	59287	54380	33693	41949	45316	40554
Fuel		3	556457	567759	346686	464513	430691	394373	470691	363419	446302
Ores and Metals		(27+28+68)	47368	54112	46540	53136	65455	32030	33259	53496	42100
Total Manufactured Goods		5 to 8 less 68	1427907	1371958	1329640	1543576	1563869	1167007	1341767	1357275	2010298
of which:											
Chemicals		5	206496	172352	214084	270305	276315	223977	287464	323151	361165
Basic Manufactures		(6 - 68)	407985	402549	382133	463984	458256	377395	427225	458465	628579
Machinery & Transp. Equip		7	560889	327075	504479	555576	628276	421953	493454	439246	798586
Other Manufactured Goods		8	252537	269982	228944	253711	201022	143682	133624	136413	221968
Unallocated		9	175177	201388	148665	73570	143202	145988	43691	20899	26207

Source: For the years 1975-1988 and 1992 data were compiled from: United Nations, *Commodity Trade Statistics, Series D*, the corresponding years. For the years 1989, 1990 and 1991 data for imports and for exports were compiled from: United Nations, *International Trade Statistics Yearbook, Vol. 1, 1991*. Data for exports were revised to exclude re-exports as exports were reported in the United Nations reference for "General Exports" and not "Domestic Exports".

Notes: \* "Unallocated" small values were not reported in the original reference; therefore, "Total values" in some years differ slightly from those obtained by adding segments.

Table A-4. Jordan's Domestic Exports by Geographical Distribution

	1975	1976	1977	1978	1979	1980	1981	1982	1983
World <sup>1/</sup>	125641	149205	183071	209285	274704	401549	509778	528341	439868
Developed Countries	14001	14008	11264	13766	17446	29959	26347	35745	46887
EEC	6192	7589	2792	4362	3787	7007	8327	10294	22271
EFTA					116				3867
USA					119				
Japan	5972	5767	7979	5900	9536	13208	11597	10753	9340
Other	1837	652	493	3504	3888	9744	6423	14698	11409
Developing Countries <sup>2/</sup>	93219	113808	159572	180496	246223	337738	433475	435884	350755
Africa	5888	6672	5294	7533	3320	3998	15390	12423	8783
Northern Africa	3512	3966	4475	6341	2520	1067	13637	12401	2247
Latin America									110
Asia	87331	107136	154263	172963	242903	333740	418085	423459	341852
Middle East <sup>3/</sup>	72077	91083	131511	147839	197454	261233	348818	342930	242662
Other Asia	15254	16053	22752	25124	45449	72507	69267	80529	99190
India	6179	5154	11816	11525	20416	26870	31131	47137	37775
Other			15					2	
Developing Countries of which:									
Arab Countries	53109	71975	109469	139077	185013	243761	345202	351005	239192
Iraq	7670	7008	13068	11244	42316	94783	191452	189553	71487
Saudi Arabia	14903	22482	45823	57728	64458	65920	62975	78648	96758
ACM <sup>4/</sup>	30138	30357	41364	53642	86278	141913	225420	229337	84054
Western Asia <sup>5/</sup>	52836	71582	108254	137906	183138	242707	331629	338744	236997
Eastern Europe & Former USSR <sup>6/</sup>	18421	21387	12234	15023	11035	33853	49954	56712	42225
Eastern Europe	18421	21387	12234	15023	11035	33853	49954	56712	42225
Miscellaneous									



Table A-4. (Continued)

	1984	1985	1986	1987	1988	1989	1990	1991	1992*
World <sup>1/</sup>	677806	648989	645133	730320	884786	920659	921788	880981	932600
Developed Countries	73667	49461	77716	77285	96901	96901	33276	27269	58244
EEC	27030	28954	53851	50613	70637	43442	33276	27269	28037
EFTA	4826	909	2164	672	4026	101	434	253	430
USA	14403	221	872	2766	3283	4884	5294	3342	6145
Japan	27408	14780	16271	21949	18023	31497	19524	15659	17732
Other		4597	4558	1285	932				5900
Developing Countries <sup>2/</sup>	557514	557879	528302	610849	749745				722220
Africa	12610	11386	29664	48438	58378				69038
Northern Africa	2448	10046	21422	48354	37833				37685
Latin America	2093	11416	10875	10642	2635				7071
Asia	542811	527278	465778	531330	662361				636824
Middle East <sup>3/</sup>	345194	334545	280906	347896	357381				340811
Other Asia	197617	192733	184872	183434	304980				296013
India	88560	115161	97583	65049	150560	164634	194343	161363	141815
Other		7799	21985	20439	26371				9287
Developing Countries of which:									
Arab Countries	340950	334258	291823	378910	370636	418383	389744	253550	327061
Iraq	175920	167366	121406	174385	175726	229793	198959	131943	71846
Saudi Arabia	100374	99335	79539	76410	85377	93736	75531	18089	103125
ACM <sup>4/</sup>	187062	188514	151055	241741	206074	251747	221135	120341	108853
Western Asia <sup>5/</sup>	339306	331941	281777	370349	352362	189577	357299	203379	295391
Eastern Europe & Former USSR <sup>6/</sup>	46613	41650	39115	42185	38130	57029	25501	33734	13655
Eastern Europe	46613	41650	39115	42185	38130	56825	10245	8861	11682
Miscellaneous									138478

Sources and Notes for Tables A-4 to A-7:

Sources: For the years 1975-1988 and 1992; United Nations, *Commodity Trade Statistics, Series D*, the corresponding years. For the years 1989, 1990 and 1991; United Nations, *International Trade Statistics Yearbook*, Vol. 1, 1991. Data of exports in the United Nations reference were revised to exclude re-exports, as exports were reported for "General Exports".

Notes: 1/ World exports and imports are the sum of exports and imports of "Developed Countries", "Developing Countries", "Eastern Europe and the Former USSR" and "Miscellaneous". In some years, miscellaneous data were very small and not reported. Therefore, world data in these years do not exactly equal total of segments.

2/ For the years 1975-1986 and 1988 data reported in the "Commodity Trade Statistics" were presented according to three main groupings: "Developed", "Developing" and "Centrally Planned" Economies. Fascicles for Jordan printed after August 1992, such as those of 1987 and 1992 presented data according to the recent classification which is "Developed", "Developing" and "Other = Eastern Europe and the Former USSR - European Part". Accordingly, in order to have comparable data we added the values of the grouping "Asia, Centrally Planned Economies" which were reported in the previous years, to the groupings "Asia, Developing" and "Other Asia" for the years 1975-1986 and 1988. As no "Commodity Trade Statistics" fascicles were published for Jordan for the years 1989, 1990, and 1991, data available from other sources were only for some groupings.

3/ Middle East: According to the UN, "Commodity Trade Statistics", "Middle Eastern Countries" trading with Jordan are: Bahrain, Cyprus, Iran, Iraq, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates and Yemen.

4/ ACM = Arab Common Market comprises Egypt, Libya, Mauritania, Iraq, Syria, Yemen and Jordan.

5/ Western Asia: Countries of Western Asia, known also as countries of "Economic and Social Commission for Western Asia (ESCWA) are: Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen in addition to Egypt.

6/ For 1992, data for the "Former USSR" include those of the "Former USSR - European Part" only (with exports = \$ 1973 thousand; imports = \$ 52673 thousand) and excludes those of the "Former USSR - Asian Part, (with exports = \$ 177 thousand and imports = 349 thousand) which were classified under "Developing Economies". No such distinction has been made in previous years.

Table A-5. Jordan's Imports by Geographical Distribution

	1975	1976	1977	1978	1979	1980	1981	1982	1983
World <sup>1/</sup>	730831	1022111	1381052	1498762	1948556	2394425	3149089	3241185	3030030
Developed Countries	454103	632065	890049	879052	1167935	1448722	1941850	1858324	1754987
EEC	240192	379244	480139	538748	701764	868505	1020725	934931	906520
EFTA	25202	35736	47217	49225	75337	63427	95124	139190	102122
USA	76354	93472	204704	109870	144888	205949	501069	409487	359897
Japan	53433	64766	87274	100670	124170	171724	215050	247878	282565
Other	58922	58847	70715	80539	121776	139117	109882	126838	103883
Developing Countries <sup>2/</sup>	221968	331291	387886	485835	660529	825754	1017584	1187775	1130424
Africa	24578	47931	38542	45328	75396	60418	63629	51460	51276
Northern Africa	20728	31475	33956	33009	34086	23997	16944	26131	24717
Latin America	2797	7991	21067	14757	30649	20951	32030	49332	50680
Asia	194582	275343	328219	425744	553934	744202	921864	1086973	1028354
Middle East <sup>3/</sup>	156619	194898	247558	336248	438616	595132	766851	901365	845547
Other Asia	37963	80445	80661	89496	115318	149070	155013	185618	182807
Other	11	26	58	6	550	183	61	10	114
Developing Countries of which:									
Arab Countries	159357	200594	255293	337323	431417	577646	721184	847947	775996
Iraq	1838	2413	2445	4120	6446	7968	3049	4177	17334
Saudi Arabia	72402	106253	118896	159357	254228	407760	559527	697879	620615
ACM <sup>4/</sup>	45139	56676	70119	77249	79364	63249	56181	45386	67319
Western Asia <sup>5/</sup>	158131	197958	250627	332400	428870	569781	714794	834892	763938
Eastern Europe & Former USSR <sup>6/</sup>	48894	56952	100078	133855	120084	119917	189652	195082	144620
Eastern Europe	43697	51839	92220	123664	108748	101656	153451	137022	106347
Miscellaneous	5866	1803	3039						

Table A-5. (Continued)

	1984	1985	1986	1987	1988	1989	1990	1991	1992
World <sup>1/</sup>	2785785	2732979	2445425	2705195	2786082	2116576	2602706	2506880	3256531
Developed Countries	1624079	1567303	1378361	1407249	1487324	620120	738565	751092	1682068
EEC	829691	807228	856675	849207	816306	93409	90263	85031	956202
EFTA	188598	219487	90253	98334	127506	294671	451643	261074	110357
USA	309956	325009	216040	274882	351242	79332	81919	89755	362060
Japan	205498	172446	190619	164260	147548				194440
Other	90336	43133	24774	19566	44722				59009
Developing Countries <sup>2/</sup>	1043873	1038503	940044	1154663	1135204	77192	77002	103079	1381010
Africa	41558	32850	71534	65421	66163				139382
Northern Africa	22744	20813	38748	39580	42630				85827
Latin America	37317	33183	33006	40626	45248	30944	38298	52154	58154
Asia	964898	944384	823499	1026012	1007450				1174277
Middle East <sup>3/</sup>	787313	781045	635113	820191	784719				749203
Other Asia	177585	163339	188386	205821	222731				425074
Other	100	28086	12005	22604	16343				9197
Developing Countries of which:									
Arab Countries	710430	721257	586209	746438	735742	584185	655493	469614	679490
Iraq	18352	186536	233366	297004	320653	369289	411946	275789	434552
Saudi Arabia	592253	431747	180300	241202	209058	59180	119922	40620	57836
ACM <sup>4/</sup>	51922	211474	285009	356225	380760	434544	462112	352165	534599
Western Asia <sup>5/</sup>	705006	711443	574029	737733	719765	580179	650557	464203	648848
Eastern Europe & Former USSR <sup>6/</sup>	117832	127173	127022	143280	163552	89137	115954	110612	181440
Eastern Europe	89002	111249	109730	133806	151998	80325	97451	83550	128767
Miscellaneous									12011

For Source and Notes see Statistical Appendix A, Table A-4.

**Table A-6. Structure of Jordan's Domestic Manufactured Exports by Region and by Commodity Class, Selected Years**  
(Thousand US Dollars)

	5					6 - 68					7					8					Total Manufactures					
	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	
World 1/	6090	36563	129510	250708	289794	12513	62426	98198	98467	96368	1462	7980	5070	10048	17420	5004	28776	47247	36967	60346	25069	135745	281025	396188	463928	
Developed Countries																										
EEC			4914	41737	1154				71	2349					151	103	120	128	6937	6219	103	120	5042	48745	9873	
EFTA			4844	40901	502				58	1131									1212	2249		114	4844	42171	3882	
USA				199	612					1184									2695					2695		
Japan				624																				3178	5889	
Other			70	13	40				19	34						6	51	77				6	70	83	151	
Developing Countries 2/	6090	36558	124596	208961	225124	12512	62336	99140	98407	63059	1463	7854	5069	10003	7577	4901	28654	47119	30024	23134	24966	135502	275924	347395	318884	
Africa	527	746	4136	35152	48793	1376	121	2868	11311	8746	194	1927	1777	1865	1865	846	867	255	3104	6393	2943	867	9186	51344	65787	
Northern Africa	373	734	3876	14775	20203	1376	121	2859	11292	7893	194	1927	1777	1847	1847	846	846	254	3100	6344	2789	855	8916	30944	36287	
Latin America				1515						273														1515	273	
Asia	5563	35812	120480	172207	176331	11136	62208	96272	87096	54040	1269	7873	3142	8228	5710	4055	28565	46864	26920	16738	22023	134458	266738	284449	252819	
Middle East 3/	5563	35812	61136	122934	123619	11136	62355	96272	87096	32958	1269	7873	3142	8228	5710	4055	28565	46864	26920	16568	22023	134605	207414	245178	178853	
Other Asia			59324	49273	52712					21082										172			59324	49273	73968	
India			48087	38714	45611																		48087	38714	45611	
Other				87							81				2		89			3		177		87	5	
Developing Countries of which:																										
Arab Countries	5799	38498	62555	137638	114987	12469	62314	98997	98205	40781	1364	7861	4968	8903	7267	4705	28485	46893	28710	22746	24337	135158	213413	275456	185781	
Iraq	1637	17885	18911	52624	26126	3275	25367	63875	73557		248	3528	940	5627		722	14478	41467	19136		5882	61278	125193	150944	26128	
Saudi Arabia	1212	8924	26291	48638	35743	5317	23562	25334	8093	10379	222	1129	1059	1512	2998	1190	8115	3846	2536	8029	7941	41730	56530	60779	57149	
ACM 4/	4071	24008	28984	68855	51164	6351	35752	69786	84492	21410	1142	5670	3188	6822	1224	3150	17986	41774	20639	5037	14714	83416	143732	180808	78835	
Western Asia 5/	5539	35765	60951	129263	98685	12469	62194	98819	96191	34403	1364	7861	4968	9322	5521	4705	28485	46893	27991	16527	24077	134305	211631	262767	155136	
Eastern Europe & Former USSR 6/										244					143										2495	
Eastern Europe										68															1331	
Miscellaneous					62513					30717					9548										132663	

For Source and Notes see Statistical Appendix A, Table A-4.

Table A-7. Structure of Jordan's Manufactured Imports by Region and by Commodity Class, Selected Years

	5					6 - 68					7					8					Total Manufactures					
	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	1975	1980	1985	1988	1992	
World 1/	3895	13124	172352	276315	361165	137965	475223	402549	458256	628579	232101	668712	527075	628276	798586	51684	195578	269882	201022	221968	459845	1470727	1371958	1563869	2010298	
Developed Countries	31390	115791	125825	179952	233208	96301	321676	273719	207597	219500	216321	603060	491786	550066	667438	24107	132034	181581	116283	123236	368119	1172561	1072911	1053898	1243382	
EEC	22970	89326	101160	140123	174007	54745	173165	183739	135315	141901	112738	363436	220077	239304	366702	14070	89748	98254	82787	81052	204523	715675	603230	597529	763662	
EFTA	2533	9960	12161	20439	26289	6553	18830	22794	24984	36745	8210	18112	24827	34684	26747	2511	5267	14490	7306	6744	19807	52169	74272	87413	96525	
USA	3373	9918	8776	14402	19044	2871	23878	9380	16432	18318	56181	108958	169385	170456	121862	2595	12721	27952	14766	16652	65020	155375	215493	216058	175876	
Japan	1317	1669	2995	3800	8361	23273	56212	49764	29722	21581	16198	93513	75458	98287	145902	3989	15457	40456	10737	17509	44778	166851	188671	142546	193353	
Other	1197	4918	733	1188	5507	8859	49591	8042	1144	955	22993	19141	2041	7335	6225	942	8841	429	687	1279	33991	82491	11245	10354	13966	
Developing Countries <sup>2/</sup>	5975	13962	36664	89967	107123	28690	105481	107116	203101	322132	13710	54722	31295	61511	109752	11624	58406	83559	77647	95814	59999	232571	259634	432226	634821	
Africa						2296	7181	10735	23086	64030			234	1236	3344	348	210	2693	4170	5095	2844	7391	14767	33825	84268	
Northern Africa						2287	368	4624	9888	18079			188	1236	3344	348	166	2654	4168	5095	2635	534	8523	20412	46208	
Latin America																										
Asia	5866	13838	35049	79955	80730	26356	94395	81883	161083	233663	13661	53717	28785	48599	100505	11225	58062	77803	72016	89436	57108	220012	223530	361653	504334	
Middle East <sup>3/</sup>	4787	9282	31262	72791	62798	17456	39308	39211	88623	94996	11381	38601	17583	13527	18537	6959	22325	26419	22467	31013	40583	109516	114475	197408	207344	
Other Asia	1079	4556	3787	7164	17932	8900	55087	42672	72460	138667	2280	15116	11212	35072	81968	4266	35737	51984	49549	58423	16525	110496	109055	164245	296990	
India																										
Other	109	124	510	4310	2483	38	2535	1936	2949		49	39	1621	7591	1687	51	4	2908	1090	517	247	167	7575	14927	7636	
Developing Countries of which:																										
Arab Countries	4550	8761	28854	73459	68232	18387	35758	20034	51500	52468	4209	36806	14420	9541	11899	7179	19391	23249	22051	26127	34305	100716	86557	156551	158527	
ACM <sup>4/</sup>	351	1377	3566	13265	19284	6485	8631	6754	14878	19693	573	4032	957	2140	3719	3924	7057	5997	6725	19300	11313	21097	17274	37008	61998	
Western Asia <sup>5/</sup>	4550	8761	28276	72809	63024	18367	35758	19045	48417	44538	4209	36806	14420	8906	9715	7179	19391	22268	20055	23768	34305	100716	84009	150187	141045	
Eastern Europe & Former USSR <sup>6/</sup>	687	1434	9863	6395	13609	12981	48096	21715	47589	86333	2038	10929	3994	16687	21023	15951	5040	4842	7090	1605	31857	85489	40414	77771	122570	
Eastern Europe	687	1434	6536	6152	7402	10881	39623	17712	42288	55680	1921	7600	3136	12917	7168	15822	5040	4468	6713	1369	29121	53827	31812	68050	71829	
Miscellaneous					7223				674					371						1310					9578	

For Source and Notes see Statistical Appendix A, Table A-4.

Table A-8. Jordan's Trading Partners (Manufactured Exports)<sup>1/</sup>

Country	(Thousand US Dollars)													
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992
World	31368	57027	79662	97450	135745	195799	229127	180881	327805	281025	234989	349266	396188	463928
Developed Countries				123	120	259	1999	11392	15547	5042	22762	38873	48751	9873
Developing Countries	31286	56976	79560	97315	135502	195555	227090	163452	298070	271630	205543	309144	341004	318893
Centrally Planned Economies								6020	14156	4351	6666	1637 <sup>2/</sup>	6393	2495 <sup>2/</sup>
Miscellaneous														132681
Libya		648	385	1266	308	12430	10523	1167	1199	1367	3039	2804	1831	11457
Sudan		163	556	382	545	145	1690	757	278	237	445	1232	6343	11593
Tunisia									117	178	1396	3008	3297	4029
Ethiopia								4184	8987	7132	5276		20189	28210
USA										103	809	2730	3178	5689
Japan												5361	624	
Bahrain					128			306	592	1898	3633	4192	3856	4255
Democratic Yemen				272			5013	1355	1412	2000	2006	1070	219	
Egypt	3196	1898	4370	565					654	7065	9949	39190	18192	5533
Iraq	4940	4272	8428	28487	61278	129612	140490	53304	138005	125193	73012	145066	150944	26126
Kuwait	1575	2375	4188	3382	4388	4004	4757	5594	4711	4510	4417	5680	9319	223
Lebanon	515	325	662	875	1654	2382	1507	1111	664	568	907	249	379	4062
Oman	148	202	1312	1131	983		518	460	560	851	504	943	510	1556
Qatar	380	263	636	704	946	107	686	745	1017	567	350	520	733	3068
Saudi Arabia	11951	33671	41028	40599	41730	33058	37879	48292	54013	56530	42922	39384	60779	57011
Syria	7089	10344	14700	16611	21073	10797	8028	4962	4048	6922	10287	10706	6295	18572
UAE*	531	722	992	1067	1668	2107	2234	2309	1846	2342	4162	4781	7995	18241
Yemen Republic	230	1155	1850	1424	757	333	774	1962	2722	3185	2356	5392	3546	16489
Turkey										2418	384	219	199	
China								5992	14156	4351	6666	11027		
India							12499	20851	48946	48087	32196	1615	38714	45611

Table A-8. (Continued)

Country	(Thousand US Dollars)													
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992
Indonesia												1691		
Pakistan					18485					5301		21605	146	298
Malaysia										644		1947	1373	2791
Singapore														2200
Thailand									8585				1959	10222
Belgium												2279	434	
France										1666	4518	7055	4074	
Germany					107								16716	1177
Greece							104							
Italy								934				623		332
Netherlands							1708	10282	10905	3178	15527	19330	16954	136
UK												177	350	1503
Austria											800			
Switzerland													2629	
Yugoslavia											469	2077		
Bulgaria														253
Czechoslovakia														256
Romania												1637		737
USSR														1010
Australia									4492		449			

Sources and Notes for Tables A-8 (Jordan's Trading Partners/Manufactured Exports) and A-9 (to be followed) (Jordan's Trading Partners/Manufactured Imports).

Source: Compiled from: UN, *Commodity Trade Statistics, Series D, Various Issues*.

Notes: 1/ Manufactured Exports and Manufactured Imports are consisted of the SITC sections: 5, (6-68), 7 and 8.  
 2/ Data published in the UN, *Commodity Trade Statistics* after August 1992 (such as those of 1987 and 1992 were presented for the formerly "Centrally Planned Economies" under the title "Other" which includes only Eastern European part.



Table A-9. Jordan's Trading Partners (Manufactured Imports)

Country	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992
World	607629	949668	961413	1237339	1470727	1954008	1861545	1650557	1427907	1371958	1329640	1543576	1563869	2010298
Developed Countries	489843	741082	692549	939092	1172561	1594135	1458804	1244164	1072744	1072911	939038	1048572	1053898	1243382
Developing Countries	73465	112155	163867	211637	204631	237190	255535	305257	270807	241589	314436	433125	400650	634821
Centrally Planned Economies	44341	96433	104977	86603	93503	122678	147204	101235	84356	57459	82742	61876 <sup>a</sup>	72606	122510 <sup>a</sup>
Miscellaneous														9578
Libya					174	1629		144	182	1559	1031	2437	1563	11410
Morocco														2248
Sudan														
Tunisia														3824
Canada	1364	3892	2174	1867	5177	2085	17183	7166	4054	7092	2765	3077	7738	7916
USA	55145	170825	63223	85191	155375	413651	316752	143425	152507	215493	119499	190276	216056	175876
Brazil			126	2153	4641	1876	10791	19238	7439	12195	18949	21776	20884	26536
Japan	59427	85231	97620	122246	166851	211752	244458	278802	201596	168671	186452	160183	142546	193353
Bahrain						873				1499	8246	4325	4459	1896
Egypt	2472	2938	4051	4569	305	141	130	1046	1395	5811	5564	8690	13889	28748
Iraq	998	1184	2178	3269	1657	1318	1451	13999	16403	5359	4928	6718	13733	
Kuwait	5680	13422	15483	21187	15744	26517	23601	27156	22436	19431	14797	20289	23724	1513
Lebanon	14241	24636	51228	47967	41602	41158	30041	16093	12654	15052	14362	18512	19045	31115
Oman												375		
Qatar														7304
Saudi Arabia	1558	5530	16093	18323	21990	22486	27823	33945	42113	21950	27764	57832	46077	42908
Syria	12725	13996	17303	17869	19095	14470	13214	9536	6848	6104	12111	9674	9386	21838
UAE		571	284	388	323	354	394	3107	3099	3099	4654	6064	3936	5723
Turkey	4116	3182	3167	3256	3618	15800	24355	29447	37206	33140	45111	76593	57267	88159
China	8876	19359	19646	23637	26862	31026	36313	24760	17113	16708	19611	25750	31232	65057
Hong Kong	3140	5104	6038	10681	11776	16802	16136	16312	12745	10806	11339	11764	8787	6727
India		8910	5311	7845	4294	4474	3326	1849	1646	1912	4334	2458	5422	15013

(Thousand US Dollars)

Table A-9. (Continued)

(Thousand US Dollars)

Country	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992
Indonesia	2544	7168	9208	13047	20867	22671	644	840	1034	2562	7988	11291	10708	22078
Korea Republic	508	329	718	557	990	1808	21641	29336	21676	19576	28923	39429	32374	68106
Pakistan	130	330	201	162	557	347	1379	2559	1379	1495	1456	708	1113	5874
Malaysia	107	295	1165	1775	2110	2768	690	52807	4636	2968	615	928	1607	6774
Singapore	17281	14668	17167	38891	32640	32890	5077	52807	4636	2968	2841	5230	5859	8996
Thailand	2942	5543	6440	7401	10469	17990	2810	1927	2413	2165	3886	8056	11051	19049
Belgium	21988	30631	38169	64126	148893	91254	72047	91653	89695	63363	55305	70990	85913	84669
Denmark	151342	185533	188970	214129	219754	314975	268771	224364	145610	148398	166372	184086	161234	250776
France	7146	11865	13057	18755	19529	30129	44668	40400	15571	13457	11996	11146	11122	10875
Germany	47343	71582	89010	116753	120385	155434	142622	140073	130771	161644	125396	115157	92173	141772
Greece	8349	12036	12263	12874	18285	25878	27333	31655	30719	25714	31625	32194	37763	38345
Italy	10451	8679	18990	55518	47693	68415	44842	41664	30644	36519	23420	24343	22625	34086
Netherlands	61739	84556	94501	130426	158397	145546	125390	125009	130642	114043	101420	121321	130869	146830
Spain	6425	9699	8883	12213	18868	21048	36661	17451	20760	21412	16204	22592	24771	30707
UK	11600	9008	9927	17159	12354	18863	17420	17146	18306	15632	15591	19007	20386	28624
Austria	6963	11366	15928	17182	14953	23120	39493	26159	26371	26339	22594	25468	31769	29872
Sweden	2760	2985	4541	8285	6519	6128	6248	12104	7420	7476	6990	14906	14940	6185
Switzerland	1172	1622	6093	5611	2901	3786	4948	2813	3765	1926	3284	3707	7910	12088
Yugoslavia	6159	6320	6684	9476	13503	12062	11140	9132	9242	9177	9393	10596	14245	16365
Bulgaria	2478	3938	4251	5265	4412	4347	7168	5810	5064	3484	5971	9719	12953	12063
Czechoslovakia	3168	5569	9839	14705	6855	8084	4999	6094	4600	4827	11621	7994	6081	7156
Hungary	18434	52500	51255	18386	23786	31189	23170	11789	14688	9335	11401	12517	16330	24292
Poland	2954	5391	5744	6506	11572	27124	53282	33063	25095	8802	16559	8680	9721	50641
Romania														41854
USSR														
Russia														
Australia		849	2752	932	677	653	517	809	481	3961	5614	3174	2494	5768

*Appendix III*

**Statistical Appendix B**

***Illustration of the Constant-Market-Share Analysis of  
Changes in Jordanian Manufactured Exports***

Table B-1. Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports (1975 - 1980)\*

Market	(Thousand US Dollars)							
	(1) Actual ESCWA** Exports	(2) Exports	(3) Actual Jordanian Exports	(4) 1980 Exports	(5) (2) / (1) - 1	(6) (5) × (3)	(7) 2.527 × (3)	(8)** $\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$
1. Bahrain	25389	32693	126	197	0.288	36	318	40
2. Democratic Yemen	2061	16668		25	7.087			
3. Egypt	23801	66072	1343		1.776	2385	3394	1876
4. Iraq	82614	431262	5679	59150	4.220	23965	14351	33170
5. Kuwait	13651	73442	893	4248	4.380	3911	2257	4263
6. Oman	82538	143073	78	959	0.733	57	197	71
7. Qatar	26983	73026	68	951	1.706	116	172	135
8. Saudi Arabia	208035	607774	7611	40286	1.921	14621	19233	20372
9. Syria	12552	28884	5842	20342	1.301	7600	14763	8655
10. United Arab Emirates	52815	181040	504	1675	2.428	1224	1274	561
11. Yemen Republic	10988	255631	223	773	22.265	4965	563	1785
Total	541427	1909565	22367	128606	2.527	58880	56523	70928
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA** Exports Actual Jordanian Exports							
Commodity	1975	1980	1975	1980	(2) / (1) - 1	(5) × (3)	2.527 × (3)	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$
1. SITC (5)	32124	89660	5676	34329	1.791	10166	14343	13978
2. SITC (6-68)	159297	696410	10455	59046	3.372	35254	26420	43974
3. SITC (7)	244218	853870	1438	7429	2.496	3589	3634	4656
4. SITC (8)	105788	269625	4798	27802	1.549	7432	12125	8320
Total	541427	1909565	22367	128606	2.527	56441	56522	70928
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA** Exports Actual Jordanian Exports							
	1975	1980	1975	1980	(2) / (1) - 1	(5) × (3)	2.527 × (3)	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$
			$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x_{ij} \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij} \right]$	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$

Sources and Notes for Tables B-1 to B-7:

Sources: See Appendix I on "Sources and Data", section on "Export Performance"

Notes:

- \* Jordanian Manufactured Exports = Jordanian Domestic Manufactured Exports to ESCWA countries.
- \*\* ESCWA countries = Countries of "Economic and Social Commission for Western Asia". They comprise, in addition to Egypt, the Arab Western Asian countries (Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen). Exports of ESCWA countries are intra-regional manufactured exports of all ESCWA countries except Lebanon, for lack of data.
- \*\*\*  $r_{ij}$  was first calculated from the cross classification of actual ESCWA countries' exports by commodity group and market destination and then multiplied by  $x_{ij}$ ; the cross classification of actual Jordanian exports by commodity group and market destination for the initial year. Subscript  $i$  ( $i = 1, 2, 3, 4$ ): each category of manufactures; subscript  $j$  ( $j = 1, 2, 3, \dots, 11$ ): each different market.

Table B-2. Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports (1980-1985)\*

Market	(Thousand US Dollars)							
	(1) Actual ESCWA** Exports	(2) Exports	(3) Actual Jordanian Exports	(4) 1985 Exports	(5) (2) / (1) - 1 [r <sub>j</sub> ]	(6) (5) × (3) [r <sub>j</sub> x <sub>j</sub> ]	(7) 0.029 × (3) [rx <sub>j</sub> ]	(8)** [ $\sum_{i=1}^4 r_{ij}x_{ij}$ ]
1. Bahrain	32693	52298	197	1898	0.600	118	6	529
2. Democratic Yemen	16668	25286	25	2000	0.517	13	1	39
3. Egypt	66072	101555		7065	0.537			2
4. Iraq	431262	298867	59150	125193	-0.307	-18159	1715	403
5. Kuwait	73442	125764	4248	4510	0.712	3025	123	9260
6. Oman	143073	530365	959	851	2.707	2596	28	3864
7. Qatar	73026	55534	951	567	-0.240	-228	28	4
8. Saudi Arabia	607774	469336	40296	56530	-0.228	-9185	1168	3643
9. Syria	28884	11088	20342	6922	-0.616	-12531	590	-11515
10. United Arab Emirates	181040	208067	1675	2342	0.149	250	49	3514
11. Yemen Republic	255631	87262	773	3185	-0.659	-509	22	-24
Total	1909565	1965422	128606	211063	0.029	-34610	3730	9719
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA** Exports Actual Jordanian Exports							
Commodity	1980	1985	1980	1985	(2) / (1) - 1	(5) × (3)	0.029 × (3)	[ $\sum_{i=1}^4 r_{ij}x_{ij}$ ]
1. SITC (5)	89660	202960	34329	60755	1.264	43392	996	20167
2. SITC (6-68)	696410	759372	59046	98600	0.090	5314	1712	-17277
3. SITC (7)	853870	639384	7429	4815	-0.251	-1865	216	-3973
4. SITC (8)	269625	363706	27802	46893	0.349	9703	806	10802
Total	1909565	1965422	128606	211063	0.029	56544	3730	9719
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA** Exports Actual Jordanian Exports							
	1980	1985	1980	1985	(2) / (1) - 1	(5) × (3)	0.029 × (3)	[ $\sum_{i=1}^4 r_{ij}x_{ij}$ ]
			[ $\sum_{i=1}^4 \sum_{j=1}^{11} x_{ij}$ ]	[ $\sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij}$ ]	[r]	[ $\sum_{j=1}^{11} r_j x_j$ ]	[ $\sum_{j=1}^{11} r x_j$ ]	[ $\sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij}$ ]

Table B-3. Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports (1975 - 1987)\*

(Thousand US Dollars)

Market	Actual ESCWA** Exports		Actual Jordanian Exports		(5)	(6)	(7)	(8)***
	1975	1987	1975	1987				
			$[x_j]$	$[x'_j]$	$(2) / (1) - 1$	$(5) \times (3)$	$1.660 \times (3)$	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
1. Bahrain	25389	65605	126	4282	1.584	200	209	318
2. Democratic Yemen	2061	21329		1139	9.349			
3. Egypt	23801	90093	1343	39192	2.785	3740	2229	5059
4. Iraq	82614	186761	5679	145066	1.261	7161	9427	21097
5. Kuwait	13651	112269	893	5683	7.224	6451	1482	15486
6. Oman	82538	206017	78	969	1.496	117	129	323
7. Qatar	26983	53177	68	539	0.971	66	113	169
8. Saudi Arabia	208035	359322	7611	39384	0.727	5533	12634	18339
9. Syria	12552	13941	5842	10753	0.111	648	9698	15211
10. United Arab Emirates	52815	286714	504	4784	4.429	2232	837	2540
11. Yemen Republic	10988	45265	223	5404	3.119	696	370	666
Total	541427	1440493	22367	257195	1.660	26844	37129	79208
			$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x_{ij} \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij} \right]$	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)***
Actual ESCWA** Exports Actual Jordanian Exports								
Commodity	1975	1987	1975	1987	$(2) / (1) - 1$	$(5) \times (3)$	$1.660 \times (3)$	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
			$[x_j]$	$[x'_j]$	$[r_j]$	$[r_j x_j]$	$[r x_j]$	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
1. SITC (5)	32124	289126	5676	120343	8.000	45408	9422	46299
2. SITC (6-68)	159297	595439	10455	109934	2.738	28626	17355	25775
3. SITC (7)	244218	351378	1438	6438	0.439	631	2387	381
4. SITC (8)	105788	204550	4798	20480	0.934	4481	7965	6753
Total	541427	1440493	22367	257195	1.660	79146	37129	79208
			$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x_{ij} \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij} \right]$	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$

Table B-4. Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports (1980 - 1987)\*

(Thousand US Dollars)

Market	(1) Actual ESCWA** Exports 1980	(2) Exports 1987	(3) Actual Jordanian Exports 1980	(4) Exports 1987	(5) (2) / (1) - 1 [r <sub>j</sub> ]	(6) (5) × (3) [r <sub>j</sub> x <sub>j</sub> ]	(7) (5) × (3) [r <sub>j</sub> x <sub>j</sub> ]	(8)** [ $\sum_{i=1}^4 r_{ij}x_{ij}$ ]
1. Bahrain	32693	65605	197	4282	1.007	198	-48	455
2. Democratic Yemen	16668	21329	25	1139	0.280	7	-6	12
3. Egypt	66072	90093		39192	0.363			
4. Iraq	431262	186761	59150	145066	-0.567	-33538	-14551	-11195
5. Kuwait	73442	112269	4248	5683	0.529	2247	-1045	8624
6. Oman	143073	206017	959	969	0.440	422	-236	1348
7. Qatar	73026	53177	951	539	-0.272	-259	-234	7
8. Saudi Arabia	607774	359322	40286	39384	-0.409	-16477	-9910	-1613
9. Syria	28884	13941	20342	10753	-0.517	-10517	-5004	5023
10. United Arab Emirates	181040	286714	1675	4784	0.584	978	-412	17064
11. Yemen Republic	255631	45265	773	5404	-0.823	-636	-190	-501
Total	1909565	1440493	128606	257195	-0.246	-57575	-31636	19224
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA** Exports		Actual Jordanian Exports					
Commodity	1980	1987	1980	1987	(2) / (1) - 1	(5) × (3)	(5) × (3)	[ $\sum_{i=1}^4 r_{ij}x_{ij}$ ]
	[x <sub>j</sub> ]	[x <sub>j</sub> ]	[x <sub>j</sub> ]	[x <sub>j</sub> ]	[r <sub>j</sub> ]	[r <sub>j</sub> x <sub>j</sub> ]	[r <sub>j</sub> x <sub>j</sub> ]	[r <sub>j</sub> x <sub>j</sub> ]
1. SITC (5)	89660	289126	34329	120343	2.225	76382	-8445	48565
2. SITC (6-68)	696410	595439	59046	109934	-0.145	-8562	-14525	-20483
3. SITC (7)	853870	351378	7429	6438	-0.588	-4368	-1827	-5662
4. SITC (8)	269625	204550	27802	20480	-0.241	-6700	-6839	-3196
Total	1909565	1440493	128606	257195	-0.246	56752	-31636	19224
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA** Exports		Actual Jordanian Exports					
	[ $\sum_{i=1}^4 \sum_{j=1}^{11} x_{ij}$ ]	[ $\sum_{i=1}^4 \sum_{j=1}^{11} x_{ij}$ ]	[ $\sum_{i=1}^4 \sum_{j=1}^{11} x_{ij}$ ]	[ $\sum_{i=1}^4 \sum_{j=1}^{11} x_{ij}$ ]	[r]	[ $\sum_{j=1}^{11} r_j x_j$ ]	[ $\sum_{j=1}^{11} r_j x_j$ ]	[ $\sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij}$ ]



Table B-5. Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports (1985 - 1986)\*

(Thousand US Dollars)

Market	(1) Actual ESCWA** 1985	(2) Exports 1986	(3) Actual Jordanian Exports 1985	(4) Actual Jordanian Exports 1986	(5) (2) / (1) - 1	(6) (5) × (3)	(7) - 0.242 × (3)	(8)** $\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
1. Bahrain	52298	44257	1898	3633	-0.154	-292	-459	-271
2. Democratic Yemen	25286	17474	2000	2006	-0.309	-618	-484	-1262
3. Egypt	101555	123542	7065	9949	0.216	1526	-1710	3410
4. Iraq	298867	199835	125193	73012	-0.331	-41439	-30297	-39398
5. Kuwait	125764	134384	4510	4417	0.069	311	-1091	195
6. Oman	530365	283433	851	504	-0.465	-396	-206	-209
7. Qatar	55534	48063	567	350	-0.134	-76	-137	3
8. Saudi Arabia	469336	390956	56530	42922	-0.167	-9441	13680	-5280
9. Syria	11088	8968	6922	10287	-0.191	-1322	-1675	-978
10. United Arab Emirates	208067	184445	2342	4162	-0.113	-265	-567	-141
11. Yemen Republic	87262	54344	3185	2356	-0.377	-1201	-771	-628
Total	1965422	1489701	211063	153598	-0.242	-53213	51077	-44559
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA**	Exports	Actual Jordanian Exports	Actual Jordanian Exports	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$
Commodity	1985	1986	1985	1986	(2) / (1) - 1	(5) × (3)	- 0.242 × (3)	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
1. SITC (5)	202960	195854	60755	78888	-0.035	-2126	-14703	-3430
2. SITC (6-68)	759372	587272	98600	51594	-0.227	-22382	-23861	-26317
3. SITC (7)	639384	455238	4815	3382	-0.288	-1387	-1165	-342
4. SITC (8)	363706	251337	46893	19734	-0.309	-14490	-11348	-14470
Total	1965422	1489701	211063	153598	-0.242	-40385	-51077	-44559
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
	Actual ESCWA**	Exports	Actual Jordanian Exports	Actual Jordanian Exports	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$

Table B-6. Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports (1986 - 1987)\*

		(Thousand US Dollars)						
Market	(1) Actual ESCWA** Exports	(2) Exports	(3) Actual Jordanian Exports	(4) Exports	(5)	(6)	(7)	(8)**
	1986	1987	1986	1987	(2) / (1) - 1	(5) × (3)	- 0.033 × (3)	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
			$[x_j]$	$[x'_j]$	$[r_j]$	$[r_j x_j]$	$[r x_j]$	
1. Bahrain	44257	65605	3633	4282	0.482	1751	-120	160
2. Democratic Yemen	17474	21329	2006	1139	0.221	443	-66	764
3. Egypt	123542	90083	9949	39192	-0.271	-2696	-328	-1281
4. Iraq	199835	186761	73012	145066	-0.065	-4746	-2409	11454
5. Kuwait	134384	112269	4417	5683	-0.165	-729	-146	-256
6. Oman	283433	206017	504	969	-0.273	-138	-17	-10
7. Qatar	48063	53177	350	539	0.106	37	-12	50
8. Saudi Arabia	390956	359322	42922	39384	-0.081	-3477	-1416	568
9. Syria	8968	13941	10287	10753	0.555	5709	-340	28967
10. United Arab Emirates	184445	286714	4162	4784	0.554	2306	-137	6215
11. Yemen Republic	54344	45265	2356	5404	-0.167	-393	-78	-971
Total	1489701	1440493	153598	257195	-0.033	-1933	-5069	45660
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)**
			$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x_{ij} \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij} \right]$	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$
Commodity	1986	1987	1986	1987	(2) / (1) - 1	(5) × (3)	- 0.033 × (3)	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
			$[x_j]$	$[x'_j]$	$[r_j]$	$[r_j x_j]$	$[r x_j]$	
1. SITC (5)	195854	289126	78888	120343	0.476	37551	-2603	42819
2. SITC (6-68)	587272	595439	51594	109934	0.014	722	-1703	5704
3. SITC (7)	455238	351378	3382	6438	-0.228	-771	-112	-652
4. SITC (8)	251337	204550	19734	20480	-0.186	-3670	-651	-2211
Total	1489701	1440493	153598	257195	-0.033	33832	-5069	45660
			$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x_{ij} \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij} \right]$	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$

Table B-7. Illustration of the Constant-Market-Share Analysis of Changes in Jordanian Manufactured Exports (1987 - 1988)\*

(Thousand US Dollars)

Market	Actual ESCWA** Exports		Actual Jordanian Exports		(5)	(6)	(7)	(8)***
	(1) 1987	(2) 1988	(3) 1987	(4) 1988				
			$[x_j]$	$[x'_j]$	$(2) / (1) - 1$	$(5) \times (3)$	$0.994 \times (3)$	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
1. Bahrain	65605	80460	4282	3913	0.226	968	4256	802
2. Democratic Yemen	21329	19333	1139	220	-0.094	-107	1132	-472
3. Egypt	90093	90543	39192	18192	0.005	196	38957	36841
4. Iraq	186761	324180	145066	151418	0.736	106769	144196	99665
5. Kuwait	112269	303537	5683	9320	1.704	9684	5649	9433
6. Oman	206017	350637	969	597	0.702	680	963	574
7. Qatar	53177	62752	539	784	0.180	97	536	120
8. Saudi Arabia	359322	315805	39384	60781	-0.121	-4765	39148	-6037
9. Syria	13941	32467	10753	6319	1.329	14291	10688	21471
10. United Arab Emirates	286714	340799	4784	7995	0.189	904	4755	744
11. Yemen Republic	45265	951507	5404	3565	20.021	108193	5371	100765
Total	1440493	2872020	257195	263104	0.994	236910	255651	263906
	(1)	(2)	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x_{ij} \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij} \right]$	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)***
	Actual ESCWA** Exports Actual Jordanian Exports							
Commodity	1987	1988	1987	1988	$(2) / (1) - 1$	$(5) \times (3)$	$0.994 \times (3)$	$\left[ \sum_{i=1}^4 r_{ij} x_{ij} \right]$
1. SITC (5)	289126	462888	120343	128889	0.601	72326	119621	151086
2. SITC (6-68)	595439	1512582	109934	96679	1.540	169298	109274	85816
3. SITC (7)	351378	625901	6438	9379	0.781	5028	6399	6847
4. SITC (8)	204550	270649	20480	28157	0.323	6615	20357	20157
Total	1440493	2872020	257195	263104	0.994	253267	255651	263906
			$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x_{ij} \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} x'_{ij} \right]$	$[r]$	$\left[ \sum_{j=1}^{11} r_j x_j \right]$	$\left[ \sum_{j=1}^{11} r x_j \right]$	$\left[ \sum_{i=1}^4 \sum_{j=1}^{11} r_{ij} x_{ij} \right]$

## *Appendix III*

### Statistical Appendix C

#### ***Construction of Jordan Competitors' Weighted Average Prices for Import and Export Competitiveness***

Table C-1.1. Jordan's Manufactured Exports\* by Geographic Destination

(Thousand US Dollars)

Export Market ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992
Bahrain						128			306	592	1898	3633	4192	3856	4255
Democratic Yemen**					272			5013	1355	1412	2000	2006	1070	219	
Egypt		3196	1898	4370	565					654	7065	9949	39190	18192	5533
Iraq		4940	4272	8428	28487	61278	129612	140490	53304	138005	125193	73012	145066	150944	26126
Kuwait		1575	2375	4188	3382	4388	4004	4757	5594	4711	4510	4417	5680	9319	223
Oman		148	202	1312	1131	983		518	460	560	851	504	943	510	1556
Qatar		380	263	636	704	946	107	686	745	1017	567	350	520	733	3068
Saudi Arabia		11951	33671	41028	40599	41730	33058	37879	48292	54013	56530	42922	39384	60779	57011
Syria		7089	10344	14700	16611	21073	10797	8028	4962	4048	6922	10287	10706	6295	18572
UAE***		531	722	992	1067	1668	2107	2234	2309	1846	2342	4162	4781	7995	18241
Yemen Republic**		230	1155	1850	1424	757	333	774	1962	2722	3185	2356	5392	3546	16489
Libya			648	385	1266	308	12430	10523	1167	1199	1367	3039	2804	1831	11457
Sudan			163	556	382	545	145	1690	757	278	237	445	1232	6343	11593
Tunisia										117	178	1396	3008	3297	4029
Ethiopia									4184	8987	7132	5276		20189	28210
India								12499	20851	48946	48087	32196	1615	38714	45611
France											1666	4518	7055	4074	
Italy								1708	10282	10905	3178	15527	19330	16954	136
USA											103	809	2730	3178	5689
Other Developing Countries		1246	1263	1115	1425	1698	2962	1999	17204	28963	3566	9593	32068	8242	66760
Other Developed Countries								291	1110	4642	95	1908	9758	24545	4048
Centrally Planned Economies**									6020	14156	4351	6666	12664	6393	2635
<b>Total of Above****</b>		<b>31286</b>	<b>56976</b>	<b>79560</b>	<b>97315</b>	<b>135502</b>	<b>195555</b>	<b>229089</b>	<b>180864</b>	<b>327773</b>	<b>281023</b>	<b>234971</b>	<b>349188</b>	<b>396148</b>	<b>331242</b>

**Sources and General Notes for Tables C-1 to C-15:**

Sources: See Appendix I on "Sources and Data".

Notes: \* Jordan's exports refer to Jordan's domestic exports and not general exports which include re-exports. Exports are valued at f.o.b. and imports are valued at c.i.f.

\*\* The names Democratic Yemen, Yemen Republic and Centrally Planned Economies are names for former states and grouping. Data on D. Yemen and Yemen R. in 1992 are not presented separately as before since these two countries have merged in 1990 to form a single state "Yemen". For data treatment of the grouping "Centrally Planned Economies" see footnote under Table A-4 in Statistical Appendix A.

\*\*\* UAE = United Arab Emirates

\*\*\*\* Total of Above, in Table C-1.1, almost equals "Total Manufactured Exports" in every year except in 1977 and 1992. In 1977, 1.8% of total manufactured exports was classified under the "Miscellaneous" category; while in 1992, this proportion was relatively large as it reached 28.6% of total manufactured exports (\$ 132686 thousand).

Table C-1.2. Shares of Different Export Markets in Jordan's Manufactured Exports

(Percentages)

Export Market ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992
Bahrain		0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.17	0.18	0.68	1.55	1.20	0.97	1.28
Democratic Yemen		0.00	0.00	0.00	0.28	0.00	0.00	2.19	0.75	0.43	0.71	0.85	0.31	0.06	0.00
Egypt		10.22	3.33	5.49	0.58	0.00	0.00	0.00	0.00	0.20	2.51	4.23	11.22	4.59	1.67
Iraq		15.79	7.50	10.59	29.27	45.22	66.28	61.33	29.47	42.10	44.55	31.07	41.54	38.10	7.89
Kuwait		5.03	4.17	5.26	3.48	3.24	2.05	2.08	3.09	1.44	1.60	1.88	1.63	2.35	0.07
Oman		0.47	0.35	1.65	1.16	0.73	0.00	0.23	0.25	0.17	0.30	0.21	0.27	0.13	0.47
Qatar		1.21	0.46	0.80	0.72	0.70	0.05	0.30	0.41	0.31	0.20	0.15	0.15	0.19	0.93
Saudi Arabia		38.20	59.10	51.57	41.72	30.80	16.90	16.53	26.70	16.48	20.12	18.27	11.28	15.34	17.21
Syria		22.66	18.16	18.48	17.07	15.55	5.52	3.50	2.74	1.24	2.46	4.38	3.07	1.59	5.61
UAE		1.70	1.27	1.25	1.10	1.23	1.08	0.98	1.28	0.56	0.83	1.77	1.37	2.02	5.51
Yemen Republic		0.74	2.03	2.33	1.46	0.56	0.17	0.34	1.08	0.83	1.13	1.00	1.54	0.90	4.98
Libya		0.00	1.14	0.48	1.30	0.23	6.36	4.59	0.65	0.37	0.49	1.29	0.80	0.46	3.46
Sudan		0.00	0.29	0.70	0.39	0.40	0.07	0.74	0.42	0.08	0.08	0.19	0.35	1.60	3.50
Tunisia		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.59	0.86	0.83	1.22
Ethiopia		0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.31	2.74	2.54	2.25	0.00	5.10	8.52
India		0.00	0.00	0.00	0.00	0.00	0.00	5.46	11.53	14.93	17.11	13.70	0.46	9.77	13.77
France		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	1.92	2.02	1.03	0.00
Italy		0.00	0.00	0.00	0.00	0.00	0.00	0.75	5.68	3.33	1.13	6.61	5.54	4.28	0.04
USA		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.34	0.78	0.80	1.72
Other Developing Countries		3.98	2.22	1.40	1.46	1.25	1.51	0.87	9.51	8.84	1.27	4.08	9.18	2.08	20.15
Other Developed Countries		0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.61	1.42	0.03	0.81	2.79	6.20	1.22
Centrally Planned Economies		0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	4.32	1.55	2.84	3.63	1.61	0.80
Total of Above		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table C-2.1. Jordan's Manufactured Imports from its Main Trading Partners

(Thousand US Dollars)

Country ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992
Bahrain							873					8246	4325	4459	1896
Egypt		3472	2938	4051	4569	305	141	130	1046	1395	5811	5564	8690	13889	28748
Iraq		998	1184	2178	3269	1657	1318	1451	13999	16403	5359	4928	6718	13733	
Kuwait		5680	13422	15483	21187	15744	26517	23601	27156	22436	19431	14797	20289	23724	1513
Qatar									3749	5225	5804	6239	11243	15938	7304
Saudi Arabia		1558	5530	16093	18323	21990	22486	27823	33945	42113	21950	27764	57832	46077	42908
Syria		12725	13996	17303	17869	19095	14470	13214	9536	6848	6104	12111	9674	9386	21838
UAE			571	284	388	323	354		394	3107	3099	4654	6064	3936	5723
Turkey		4116	3182	3167	3256	3618	15800	24355	29447	37206	33140	45111	76593	57267	88159
Belgium		17281	14668	17167	38891	32640	32890	29186	34344	31096	29980	29033	42236	26051	38615
Denmark		2942	5543	6440	7401	10469	17990	11566	8024	8558	6307	12429	7880	8124	11704
France		21988	30631	38169	64126	148893	91254	72047	91653	89695	63363	55305	70990	85913	84669
Germany		151342	185533	189970	214129	219754	314975	268771	224364	145610	148398	166372	184086	161234	250776
Greece		7146	11865	13057	18755	19529	30129	44668	40400	15571	13457	11996	11146	11122	10875
Italy		47343	71582	89010	116753	120385	155434	142622	140073	130771	161644	125396	115157	92173	141772
Netherlands		8349	12036	12263	12874	18285	25878	27333	31655	30719	25714	31625	32194	37763	38345
Spain		10451	8679	18990	55518	47693	68415	44842	41664	30644	36519	23420	24343	22625	34086
UK		61739	84556	94501	130426	158397	145546	125390	125009	130642	114043	101420	121321	130869	146830
Austria		6425	9699	8883	12213	18968	21048	36661	17451	20760	21412	16204	22592	24771	30707
Sweden		11600	9008	9927	17159	12354	18863	17420	17146	18306	15632	15591	19007	20396	28624
Switzerland		6963	11366	15928	17182	14953	23120	39493	26159	26371	26339	22594	25468	31769	29872
Yugoslavia		2760	2985	4541	8285	6519	6128	6248	12104	7420	7476	6990	14906	14940	6185
USA		55145	170825	63223	85191	155375	413651	316752	143425	152507	215493	119499	190276	216056	175876
Brazil				126	2153	4641	1876	10791	19238	7439	12195	18949	21776	20884	26536
Japan		59427	85231	97620	122246	166851	211752	244458	278802	201596	168671	186452	160183	142546	193353
China		8876	19359	19646	23637	26862	31026	36313	24760	17113	16708	19611	25750	31232	65057
Hong Kong		3140	5104	6038	10681	11776	16802	16136	16312	12745	10806	11339	11764	8787	6727
Indonesia								644	840	1034	2562	7988	11291	10708	22078
Korea Rep.		2544	7168	9208	13047	20867	22671	21641	29336	21676	19576	28923	39429	32374	68106
Thailand		107	295	1165	2182	706	1865	2810	1927	2413	2165	3886	8056	11051	19049
Total of above		514117	786956	773431	1041610	1278549	1733272	1606366	1443958	1237419	1220657	1144436	1361279	1329787	1627931



Table C-2.2. Shares in Jordan's Manufactured Imports

(Percentages)

Country ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1992	1985*
Bahrain		0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.12	0.72	0.32	0.34	0.12	
Egypt		0.68	0.37	0.52	0.44	0.02	0.00	0.01	0.07	0.11	0.48	0.49	0.64	1.04	1.77	
Iraq		0.19	0.15	0.28	0.31	0.13	0.08	0.09	0.97	1.33	0.44	0.43	0.49	1.03	0.00	
Kuwait		1.10	1.71	2.00	2.03	1.23	1.53	1.47	1.88	1.81	1.59	1.29	1.49	1.78	0.09	
Qatar		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.42	0.48	0.55	0.83	1.20	0.45	
Saudi Arabia		0.30	0.70	2.08	1.76	1.72	1.30	1.73	2.35	3.40	1.80	2.43	4.25	3.46	2.64	
Syria		2.48	1.78	2.24	1.72	1.49	0.83	0.82	0.66	0.55	0.50	1.06	0.71	0.71	1.34	
UAE		0.00	0.07	0.04	0.04	0.03	0.02	0.00	0.03	0.25	0.25	0.41	0.45	0.30	0.35	
Turkey		0.80	0.40	0.41	0.31	0.28	0.91	1.52	2.04	3.01	2.71	3.94	5.63	4.31	5.42	
Belgium		3.36	1.86	2.22	3.73	2.55	1.90	1.82	2.38	2.51	2.46	2.54	3.10	1.96	2.37	2.86
Denmark		0.57	0.70	0.83	0.71	0.82	1.04	0.72	0.56	0.69	0.52	1.09	0.58	0.61	0.72	0.59
France		4.28	3.89	4.94	6.16	11.65	5.26	4.49	6.35	7.25	5.19	4.83	5.21	6.46	5.20	6.05
Germany		29.44	23.58	24.43	20.56	17.19	18.17	16.73	15.54	11.77	12.16	14.54	13.52	12.12	15.40	14.17
Greece		1.39	1.51	1.69	1.80	1.53	1.74	2.78	2.80	1.26	1.10	1.05	0.82	0.84	0.67	1.28
Italy		9.21	9.10	11.51	11.21	9.42	8.97	8.88	9.70	10.57	13.24	10.96	8.46	6.93	8.71	15.44
Netherlands		1.62	1.53	1.59	1.24	1.43	1.49	1.70	2.19	2.48	2.11	2.76	2.36	2.84	2.36	2.46
Spain		2.03	1.10	2.46	5.33	3.73	3.95	2.79	2.89	2.48	2.99	2.05	1.79	1.70	2.09	3.49
UK		12.01	10.74	12.22	12.52	12.39	8.40	7.80	8.66	10.56	9.34	8.86	8.91	9.84	9.02	10.89
Austria		1.25	1.23	1.15	1.17	1.48	1.21	2.28	1.21	1.68	1.75	1.42	1.66	1.86	1.89	2.04
Sweden		2.26	1.14	1.28	1.65	0.97	1.09	1.08	1.19	1.48	1.28	1.36	1.40	1.53	1.76	1.49
Switzerland		1.35	1.44	2.06	1.65	1.17	1.33	2.46	1.81	2.13	2.16	1.97	1.87	2.39	1.83	2.53
Yugoslavia		0.54	0.38	0.59	0.80	0.51	0.35	0.39	0.84	0.60	0.61	0.61	1.09	1.12	0.38	
USA		10.73	21.71	8.17	8.18	12.15	23.87	19.72	9.93	12.32	17.65	10.44	13.98	16.25	10.80	20.58
Brazil		0.00	0.00	0.02	0.21	0.36	0.11	0.67	1.33	0.60	1.00	1.66	1.60	1.57	1.63	
Japan		11.56	10.83	12.62	11.74	13.05	12.22	15.22	19.31	16.29	13.82	16.29	11.77	10.72	11.88	16.12
China		1.73	2.46	2.54	2.26	2.10	1.79	2.26	1.71	1.38	1.37	1.71	1.89	2.35	4.00	
Hong Kong		0.61	0.65	0.78	1.03	0.92	0.97	1.00	1.13	1.03	0.89	0.99	0.86	0.66	0.41	
Indonesia		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.08	0.21	0.70	0.83	0.81	1.36	
Korea Rep.		0.49	0.91	1.19	1.25	1.63	1.31	1.35	2.03	1.75	1.60	2.53	2.90	2.43	4.18	
Thailand		0.02	0.04	0.15	0.21	0.06	0.11	0.17	0.13	0.20	0.18	0.34	0.59	0.83	1.17	
Total of above		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

\* Shares in Jordan's manufactured imports from industrial countries only.

Table C-3.1. Exchange Rates - Conversion Factors in National Currency per US Dollar

Country ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Bahrain		0.3956	0.3956	0.3875	0.3816	0.3770	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760	0.3760
D. Yemen		0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454
Egypt		0.3913	0.3913	0.3913	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	1.4194	3.3300	3.3303	3.3303
Iraq		0.2953	0.2953	0.2953	0.2953	0.2953	0.2953	0.2984	0.3109	0.3109	0.3109	0.3109	0.3109	0.3109	0.3109	0.3109	0.3109	0.3109	0.3109
Kuwait		0.2924	0.2865	0.2750	0.2762	0.2703	0.2787	0.2879	0.2915	0.2960	0.3006	0.2906	0.2786	0.2790	0.2937	0.2843	0.2843	0.2934	0.2934
Oman		0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3454	0.3820	0.3845	0.3845	0.3845	0.3845	0.3845	0.3845	0.3845
Qatar		3.9634	3.9590	3.8769	3.7733	3.6570	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400	3.6400
Saudi Arabia		3.5300	3.5251	3.3996	3.3608	3.3267	3.3825	3.4282	3.4548	3.5238	3.6221	3.7033	3.7450	3.7450	3.7450	3.7450	3.7450	3.7450	3.7450
Syria		3.8527	3.9250	3.9250	3.9250	3.9250	3.9250	3.9250	3.9250	3.9250	3.9250	3.9250	3.9250	11.2250	11.2250	11.2250	11.2250	11.2250	11.2250
UAE		3.9531	3.9032	3.8712	3.8157	3.7074	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710	3.6710
Yemen R.		4.5625	4.5625	4.5625	4.5625	4.5625	4.5625	4.5625	4.5787	5.3533	7.3633	9.6392	10.3417	9.7717	9.7600	11.7079			
Libya		0.2961	0.2961	0.2961	0.2961	0.2961	0.2961	0.2961	0.2961	0.2961	0.2961	0.3146	0.2942	0.2860	0.2991	0.2825	0.2684	0.3013	0.3013
Sudan		0.3482	0.3482	0.3757	0.4248	0.5000	0.5350	0.9380	1.3000	1.3000	2.2883	2.5000	2.8121	4.5004	4.5004	4.5004	5.4289	69.4444	69.4444
Tunisia		0.4288	0.4290	0.4162	0.4065	0.4050	0.4938	0.5907	0.6788	0.7768	0.8345	0.7940	0.8287	0.8578	0.9493	0.8783	0.9246	0.8844	0.8844
Ethiopia		2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700	2.0700
India		8.9600	8.7390	8.1930	8.1260	7.8630	8.6590	9.4550	10.0990	11.3630	12.3690	12.6110	12.9620	13.9170	16.2260	17.5040	22.7420	25.9180	25.9180
France		4.7790	4.9136	4.5131	4.2544	4.2256	5.4346	6.5721	7.6213	8.7391	8.9852	6.9261	6.0107	5.9569	6.3801	5.4453	5.6421	5.2938	5.2938
Italy		832.300	882.400	848.700	830.900	856.400	1136.80	1352.50	1518.80	1757.00	1909.40	1490.80	1296.10	1301.60	1372.10	1198.10	1240.60	1232.40	1232.40
USA		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Jordan		0.3320	0.3292	0.3055	0.3003	0.2981	0.3301	0.3523	0.3630	0.3841	0.3940	0.3499	0.3387	0.3715	0.5704	0.6636	0.6808	0.6797	0.6797
Memorandum Item:																			
Dinar per US \$ for:																			
Imports		0.33215	0.32904	0.30614	0.30049	0.29904	0.33264	0.35249	0.36413	0.38477	0.39325	0.34961	0.33873	0.36669	0.57680	0.66309	0.68025	0.67987	0.67987
Exports		0.33211	0.32932	0.30642	0.30053	0.29912	0.33159	0.35126	0.36385	0.38515	0.39345	0.34972	0.33873	0.36813	0.57663	0.66420	0.67950	0.67956	0.67956

Table C-3.2. Exchange Rate Indices

(1980 = 100)

Country ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Bahrain		104.9	104.9	102.8	101.2	100.0	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7
D. Yemen		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Egypt		55.9	55.9	55.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	116.4	202.8	475.7	475.8	475.8
Iraq		100.0	100.0	100.0	100.0	100.0	100.0	101.0	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3
Kuwait		108.2	106.0	101.7	102.2	100.0	103.1	106.5	107.8	109.5	111.2	107.5	103.1	103.2	108.7	105.2	105.2	108.5	108.5
Oman		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	110.6	111.3	111.3	111.3	111.3	111.3	111.3	111.3
Qatar		108.4	108.3	106.0	103.2	100.0	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5
Saudi Arabia		106.1	106.0	102.2	101.0	100.0	101.7	103.1	103.9	105.9	108.9	111.3	112.6	112.6	112.6	112.6	112.6	112.6	112.6
Syria		98.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	286.0	286.0	286.0	286.0	286.0	286.0
UAE		106.6	105.3	104.4	102.9	100.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
Yemen R.		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.4	117.3	161.4	211.3	226.7	214.2	213.9	256.6	256.6	256.6	256.6
Libya		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	106.2	99.4	96.6	101.0	95.4	90.6	101.8	101.8
Sudan		69.6	69.6	75.1	85.0	100.0	107.0	187.6	260.0	260.0	457.7	500.0	562.4	900.1	900.1	900.1	1085.8	13888.9	13888.9
Tunisia		105.9	105.9	102.8	100.4	100.0	121.9	145.9	167.6	191.8	206.0	196.0	204.6	211.8	234.4	216.9	228.3	218.4	218.4
Ethiopia		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
India		114.0	111.1	104.2	103.3	100.0	110.1	120.2	128.4	144.5	157.3	160.4	164.8	177.0	206.4	222.6	289.2	329.6	329.6
France		113.1	116.3	106.8	100.7	100.0	128.6	155.5	180.4	206.8	212.6	163.9	142.2	141.0	151.0	128.9	133.5	125.3	125.3
Italy		97.2	103.0	99.1	97.0	100.0	132.7	157.9	177.3	205.2	223.0	174.1	151.3	152.0	160.2	139.9	144.9	143.9	143.9
USA		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Jordan		111.4	110.4	102.5	100.7	100.0	110.7	118.2	121.8	128.8	132.2	117.4	113.6	124.6	191.3	222.6	228.4	228.0	228.0
Memorandum Item:																			
Jordan's NEER*		101.8	102.0	100.1	98.3	100.0	104.3	109.6	114.5	119.7	123.9	117.3	109.7	98.8	70.1	58.7	57.4	58.7	58.7

\* NEER = Nominal Effective Exchange Rate

Table C-4. Gross Production of Manufactured Goods in 1985

Country	Value in Million Units of National Currency	Value in Thousand US Dollars
Bahrain	1082.1	2877926
Democratic Yemen	34.6	100174
Egypt	11328.0	16182857
Iraq	2702.8	8693471
Kuwait	2237.1	7442116
Oman	30.2	87435
Qatar	3092.9	849698
Saudi Arabia	61496.8	16978217
Syria	31548.0	8037707
United Arab Emirates	18660.0	5083084
Yemen Republic	4609.3	625983
Libya	1063.4	3591354
Sudan	4870.7	2128523
Tunisia	3645.2	4368125
Ethiopia	2847.2	1375459
India	1092300.0	88309483
France	2924100.0	325435160
Italy	406536000.0	212912950
USA	2266900.0	2266900000
Jordan	786.8	1996954

Table C-5. Manufactured Output, Manufactured Imports, and Total Manufactured Supply\* in 1985

(Thousand US Dollars)

Export market ⇒ Competitor ↓	Bahrain	Democratic Yemen	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Republic
Bahrain	2877926		1148	7271	2561	2269	1146	90388	336	1888	45
Egypt	1349		16182857	18285	3486	385	284	11879		1515	1133
Iraq	79		5690	8693471	32107			77	222	90	718
Kuwait	5476	3384	5577	46362	7442116	6159	3318	84792	1910	11290	4911
Qatar	3651	3	1327	4463	30818	24428	849698	41542		22775	3
Saudi Arabia	13650	18360	61581	15333	19533	6547	3906	16978217	3801	13831	72694
Syria	159				2980		118	23974	8037707	641	522
UAE	27220	1554		12670	39796	493552	21201	44653	412	5083084	1671
Turkey	1319		70856	361545	13297	2259	416	49018	54533	5852	
Belgium	17539	3581	102984	70118	53071	26339	8902	277659	52037	78715	13551
Denmark	19919	10841	36528	16990	24488	15328	2674	68145	6920	17202	3761
France	42220	16759	438298	264995	492513	95264	96633	926519	136931	363423	37168
Germany	88169	11289	882370	507386	507289	238146	71380	2441917	284458	520513	40597
Greece	2698	646	163405	28364	10402	3650	3026	173257	26210	6071	12611
Italy	66107	10642	606250	308117	386348	89952	46728	1334147	196198	257374	44082
Netherlands	41267	18947	121330	92219	69192	59304	18745	418699	30514	87972	28872
Spain	11904	746	338547	63567	81675	13614	6753	302862	49077	38820	2046
UK	217923	24567	307381	277665	320730	412949	144699	1322435	93739	640923	68474
Austria	7619	1741	91577	124759	31004	9224	3159	125912	52863	52535	4314
Sweden	9364	696	54481	109497	76594	40187	9734	309185	20385	54119	6637
Switzerland	12618	696	141268	86316	54509	26173	13540	359173	38324	69899	6084
Yugoslavia	397	497	165615	165217	166515	1866	7507	21193	11556	11996	5144
USA	249905	696	489539	295015	500610	160537	84907	4286847	99601	783156	47732
Brazil	6746	497	29801	275866	20518	6259	1899	51079	5345	4485	332
Japan	204987	22577	490724	838972	1472645	631549	223206	4283191	140005	1159138	127655
China	9603	16461	31156	104170	78323	8560	5135	113078	36111	74126	19580
Hong Kong	10317	1542	24159	24477	50183	10488	7549	187150	5226	74706	6803
Indonesia			7431	2217	14389	8402	564	19506	1298	13687	
Korea Republic	21026		35646		143382	22031	9268	575956	4771	92600	
Thailand	11190	8404	192	45642	25673	10739	2242	34738	875	26243	830
Total Supply	3982347	175126	20887718	12860969	12166747	2426160	1648337	34957188	9391364	9568669	557970

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Table C-5. (continued)

Export Market ⇒ Competitor ↓	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Developing Countries	Other Developed Countries	Centrally Planned Economies
Bahrain		4590	2336		1081	2802	802	17218	25656	27086	9861
Egypt		18949	4504		437	37504	31696	21210	28677	152331	115871
Iraq					106	4032	11160	414	4203	330	125
Kuwait		3816			31833	505	44653	2121	119786	113317	44633
Qatar			974		52005	388	2054	16389			
Saudi Arabia		66799	969	8690	70464	27141	60648	70707	242408	294493	
Syria	2756	432		663	55791	450	2178	797	45509	54358	115318
UAE	76471	4474		673	5852	159	2773	11396			
Turkey		3510	2702		112071	147111	147111	224036	1654430	1968891	96657
Belgium	80130	19708	78705	4787	694651	6531878	2646846	2869995	2508539	20696682	914539
Denmark			5155	5508	42728	397659	215641	1010896	951730	6050792	288414
France	149337	16158	547243	11871	386021	325435160	6799924	8171805	13367008	36751754	2627297
Germany	512631	38083	270060	70218	1170861	15350972	11316656	17657312	13146088	84026116	8719030
Greece	40166	3124	3956	2118	4300	176066	181026	193025	95783	935722	126988
Italy	696062	14758	218862	70525	242085	9352072	212912950	8600180	6924177	32506306	1739510
Netherlands	149765	31880	41534	14753	167316	2851006	1866200	2526616	2622698	22363571	847559
Spain	96253	2865	103643	4273	106590	3139035	1205365	1844776	3164510	5309895	945804
UK	237158	52550	31921	45183	930622	4028914	2933155	9994568	9837091	32705866	1519511
Austria	67149	1614	14166	6631	33491	647885	942811	785569	1062608	8800096	1738469
Sweden	38601	2728	18433	23630	90266	1193365	729700	3998123	2167099	14521553	751976
Switzerland	67130	5133	20684	13666	128508	2072079	1783812	3057824	3513911	12671104	1068327
Yugoslavia	62937	3516	5365	15653	45374	249861	549441	487894	678668	1164394	4579373
USA	179785	34520	75091	25357	1264597	690542	3318181	226690000	36828871	87657331	3806656
Brazil	4716	465	4795	365	88488	163772	532795	4304094	3198910	1533575	833141
Japan	214070	22453	46825	51139	1376272	2955335	1452612	7032400	42393705	25783136	15181915
China	39807	12690	5592	2897	24658	289227	220439	2711378	8016163	2791243	690063
Hong Kong	5457	3125	931	734	49119	320815	195213	8704223	1158155	3192095	1757303
Indonesia			3		24229	39663	33431	577473	971314	286908	43258
Korea Republic	95055	9381	2220	24840	152211	444280	201009	10367617	6432129	8070232	
Thailand				8370		92872	68997	880430	782089	634085	53913
<b>Total Supply</b>	<b>2815436</b>	<b>377321</b>	<b>1506669</b>	<b>404174</b>	<b>7248326</b>	<b>376607510</b>	<b>250409279</b>	<b>2426340486</b>	<b>161941915</b>	<b>411063261</b>	<b>48618511</b>

\* Total Manufactured Supply = Manufactured Output + Manufactured Imports

**Table C-6. Matrix of Weights For Export Competitiveness Indicators\* (Shares in Total Supply of 1985)**  
(Percentages)

Export ⇒ Market	Bahrain	Dem Yemen	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel oping**	Other Devel oped**	Centrality Plan**	
Competitor ↓																							
Bahrain	72.27	0.00	0.01	0.06	0.02	0.09	0.07	0.26	0.00	0.02	0.01	0.00	1.22	0.16	0.00	0.01	0.00	0.00	0.00	0.02	0.01	0.02	
Egypt	0.03	0.00	77.48	0.14	0.03	0.02	0.02	0.03	0.00	0.02	0.20	0.00	5.02	0.30	0.00	0.01	0.01	0.01	0.00	0.02	0.04	0.24	
Iraq	0.00	0.00	0.03	67.60	0.26	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Kuwait	0.14	1.93	0.03	0.36	61.17	0.25	0.20	0.24	0.02	0.12	0.88	0.00	1.01	0.00	0.00	0.44	0.00	0.02	0.00	0.07	0.03	0.09	
Qatar	0.09	0.00	0.01	0.03	0.25	1.01	51.55	0.12	0.00	0.24	0.00	0.00	0.00	0.06	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	
Saudi A.	0.34	10.48	0.29	0.12	0.16	0.27	0.24	48.57	0.04	0.14	13.03	0.00	17.70	0.06	2.15	0.97	0.01	0.02	0.00	0.15	0.07	0.00	
Syria	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.07	85.59	0.01	0.09	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.24	
UAE	0.68	0.89	0.00	0.10	0.33	20.34	1.29	0.13	0.00	53.12	0.30	0.00	1.19	0.00	0.16	0.77	0.00	0.00	0.00	0.00	0.00	0.00	
Turkey	0.03	0.00	0.34	2.81	0.11	0.09	0.03	0.14	0.58	0.06	0.00	2.72	0.93	0.18	0.17	0.08	0.03	0.06	0.01	1.02	0.48	0.20	
Belgium	0.44	2.04	0.49	0.55	0.44	1.09	0.54	0.79	0.55	0.82	2.43	2.85	5.22	5.22	1.18	9.58	1.73	1.06	0.12	1.55	5.03	1.88	
Denmark	0.50	6.19	0.17	0.13	0.20	0.63	0.16	0.19	0.07	0.18	0.67	0.00	0.00	0.34	1.36	0.59	0.11	0.09	0.04	0.59	1.47	0.59	
France	1.06	9.57	2.10	2.06	4.05	3.93	5.86	2.65	1.46	3.80	6.66	5.30	4.28	36.32	2.94	5.33	86.41	2.72	0.34	8.25	8.94	5.40	
Germany	2.21	6.45	4.22	3.95	4.17	9.82	4.33	6.99	3.03	5.44	7.28	18.21	10.09	17.92	17.37	16.15	4.08	4.52	0.73	8.12	20.44	17.93	
Greece	0.07	0.37	0.78	0.22	0.09	0.15	0.18	0.50	0.28	0.06	2.26	1.43	0.83	0.26	0.52	0.06	0.05	0.07	0.01	0.06	0.23	0.26	
Italy	1.66	6.08	2.90	2.40	3.18	3.71	2.83	3.82	2.09	2.69	7.90	24.72	3.91	14.53	17.45	3.34	2.48	85.03	0.35	4.28	7.91	3.58	
Netherlands	1.04	10.82	0.58	0.72	0.57	2.44	1.14	1.20	0.32	0.92	5.17	5.32	8.45	2.76	3.65	2.31	0.76	0.75	0.10	1.62	5.44	1.74	
Spain	0.30	0.43	1.62	0.49	0.67	0.56	0.41	0.87	0.52	0.41	0.37	3.42	0.76	6.88	1.06	1.47	0.83	0.48	0.08	1.95	1.29	1.95	
UK	5.47	14.03	1.47	2.16	2.64	17.02	8.78	3.78	1.00	6.70	12.27	8.42	13.93	2.12	11.18	12.84	1.07	1.17	0.41	6.07	7.96	3.13	
Austria	0.19	0.99	0.44	0.97	0.25	0.38	0.19	0.36	0.56	0.55	0.77	2.39	0.43	0.94	1.64	0.46	0.17	0.38	0.03	0.66	2.14	3.58	
Sweden	0.24	0.40	0.26	0.85	0.63	1.66	0.59	0.88	0.22	0.57	1.19	1.37	0.72	1.22	5.85	1.25	0.32	0.29	0.16	1.34	3.53	1.55	
Switzerland	0.32	0.40	0.68	0.67	0.45	1.08	0.82	1.03	0.41	0.73	1.09	2.38	1.36	1.37	3.38	1.77	0.55	0.71	0.13	2.17	3.08	2.20	
Yugoslavia	0.01	0.28	0.79	1.28	1.37	0.08	0.46	0.06	0.12	0.13	0.92	2.24	0.93	0.36	3.87	0.63	0.07	0.22	0.02	0.42	0.28	9.42	
USA	6.28	0.40	2.34	2.29	4.11	6.62	5.15	12.26	1.06	8.18	8.55	6.39	9.15	4.98	6.27	17.45	0.18	1.33	93.43	22.74	21.32	7.83	
Brazil	0.17	0.28	0.14	2.14	0.17	0.26	0.12	0.15	0.06	0.05	0.06	0.17	0.12	0.32	0.09	1.22	0.04	0.21	0.18	1.98	0.37	1.71	
Japan	5.15	12.89	2.35	6.52	12.10	26.03	13.54	12.25	1.49	12.11	22.88	7.60	5.95	3.11	12.65	18.99	0.78	0.58	2.90	26.18	6.27	31.23	
China	0.24	9.40	0.15	0.81	0.64	0.35	0.31	0.32	0.38	0.77	3.51	1.41	3.36	0.37	0.72	0.34	0.08	0.09	0.11	4.95	0.68	1.43	
Hong Kong	0.26	0.88	0.12	0.19	0.41	0.43	0.46	0.54	0.06	0.78	1.22	0.19	0.83	0.06	0.18	0.68	0.09	0.08	0.36	0.72	0.78	3.61	
Indonesia	0.00	0.00	0.04	0.02	0.12	0.35	0.03	0.06	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.33	0.01	0.01	0.02	0.60	0.07	0.09	
Korea Rep.	0.53	0.00	0.17	0.00	1.18	0.91	0.56	1.65	0.05	0.97	0.00	3.38	2.49	0.15	6.15	2.10	0.12	0.08	0.43	3.97	1.96	0.00	
Thailand	0.28	4.80	0.00	0.35	0.21	0.44	0.14	0.10	0.01	0.27	0.15	0.00	0.00	0.00	0.00	0.12	0.02	0.03	0.04	0.48	0.15	0.11	
Total Supply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

\* The percentages in each column show the shares of supplies competing with Jordanian exports in each recipient country. The shares of domestic supplies can be seen in the diagonal.

\*\* Manufactured goods supplied by these countries are ignored both on their domestic markets and in the other countries.

Table C-7. Export Unit Price for Manufactures in U.S. Dollars

(1980 = 100)

Country	Year →	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Bahrain	↓	66.7	71.7	76.1	90.0	100.0	99.1	94.8	90.7	89.3	89.0	103.2	113.0	122.0			
Egypt		87.1	75.5	80.6	77.7	100.0	107.9	112.2	107.9	110.5	105.6	124.8	137.0	147.9			
Iraq		67.0	71.0	79.0	96.0	100.0	100.0	94.0	89.0	93.0	92.0	91.0	101.0	110.0			
Kuwait		94.3	95.9	91.0	99.2	100.0	105.0	106.0	87.0	94.0	99.0	117.1	152.5	136.6			
Qatar		67.0	71.0	79.0	96.0	100.0	100.0	94.0	89.0	93.0	92.0	91.0	101.0	110.0			
Saudi Arabia		74.3	79.9	111.8	95.8	100.0	113.0	118.0	109.0	129.0	117.0	138.4	135.1	147.1			
Syria		66.7	71.7	76.1	90.0	100.0	99.1	94.8	90.7	89.3	89.0	103.2	113.0	122.0			
UAE		66.7	71.7	76.1	90.0	100.0	99.1	94.8	90.7	89.3	89.0	103.2	113.0	122.0			
Turkey		66.9	76.0	75.3	85.1	100.0	97.4	85.1	82.5	81.0	79.5	93.9	103.1	111.3			
Belgium		63.3	68.4	78.5	90.5	100.0	85.0	79.0	76.0	71.0	73.0	93.0	106.0	113.0	112.0	126.0	122.0
Denmark		66.0	71.9	80.4	92.2	100.0	91.0	86.0	84.0	80.0	83.0	105.0	124.0	129.0	124.0	147.0	141.0
France		62.8	67.3	77.6	90.4	100.0	87.0	83.0	79.0	78.0	81.0	95.0	110.0	114.0	112.0	130.0	124.0
Germany		65.4	70.5	84.0	94.2	100.0	86.0	85.0	82.0	73.0	75.0	100.0	118.0	121.0	119.0	137.0	133.0
Greece		66.0	71.1	73.6	86.2	100.0	93.0	96.0	83.0	78.0	74.0	83.0	93.0	99.0	103.0	118.0	112.0
Italy		58.9	67.1	74.1	86.7	100.0	81.0	87.0	83.0	81.0	81.0	102.0	119.0	126.0	122.0	160.0	155.0
Netherlands		62.7	69.3	81.0	91.5	100.0	87.0	89.0	80.0	76.0	76.0	95.0	111.0	117.0	115.0	134.0	128.0
Spain		63.1	65.6	72.6	89.2	100.0	84.0	86.0	76.0	77.0	75.0	97.0	93.0	113.0	113.0	136.0	129.0
UK		48.3	55.7	68.2	82.1	100.0	93.0	86.0	81.0	77.0	79.0	93.0	107.0	120.0	116.0	132.0	132.0
Austria		63.9	71.4	83.7	94.6	100.0	87.0	87.0	81.0	76.0	78.0	99.0	117.0	123.0	110.0	136.0	122.0
Sweden		63.4	67.7	73.8	86.6	100.0	90.0	82.0	75.0	74.0	75.0	93.0	108.0	117.0	118.0	131.0	130.0
Switzerland		60.4	63.9	82.8	91.1	100.0	88.0	87.0	84.0	76.0	75.0	100.0	120.0	120.0	114.0	136.0	134.0
Yugoslavia		64.9	67.5	75.3	86.4	100.0	107.1	115.0	113.6	110.1	107.3	113.0	124.6	134.5			
USA		69.9	73.2	79.1	91.5	100.0	112.0	118.0	120.0	121.0	123.0	127.0	130.0	138.0	142.0	145.0	148.0
Brazil		79.8	85.3	89.9	93.8	100.0	110.0	95.0	84.0	87.0	80.0	94.6	111.0	119.8			
Japan		66.0	72.0	87.3	94.0	100.0	106.0	99.0	97.0	97.0	95.0	115.0	126.0	139.0	138.0	136.0	147.0
China		72.9	81.2	82.7	91.0	100.0	100.8	97.7	91.0	90.7	90.3	106.8	117.3	126.6			
Hong Kong		82.3	82.3	77.7	91.5	100.0	111.5	106.2	95.4	93.7	96.3	113.8	125.0	135.3			
Indonesia		52.0	61.1	74.2	93.4	100.0	94.4	86.9	70.7	69.5	67.3	79.6	87.4	94.3			
Korea Rep.		72.9	72.9	80.6	95.5	100.0	102.8	98.9	96.3	97.9	95.5	94.9	102.4	116.3			
Thailand		52.3	66.3	77.2	91.7	100.0	90.2	79.8	76.7	75.3	72.6	85.8	94.2	101.7			
Jordan		75.2	89.1	93.1	85.3	100.0	104.9	113.2	102.7	115.6	107.9	106.0	104.6	111.1	95.2	96.4	104.8



Table C-8.1. Producers' Prices for Manufactures in National Currency

(1980 = 100)

Country ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Bahrain		69.1	81.4	94.3	96.3	100.0	111.3	121.3	124.8	125.7	96.2	94.8	93.4	93.2	94.7	95.9
D. Yemen		59.6	64.6	61.6	75.0	100.0	109.4	105.0	104.4	100.7	118.1	105.7	112.6	98.9	106.5	
Egypt		68.3	72.2	80.5	93.5	100.0	107.0	122.0	131.0	144.0	161.0	173.2	205.0	260.3		
Iraq		68.2	74.4	77.8	85.5	100.0	111.4	136.0	152.4	164.3	171.3	173.5	197.8	240.0	254.6	
Kuwait		62.1	63.4	64.8	130.8	100.0	100.0	68.2	83.8	68.8	82.5	120.2	140.1	138.7	141.6	
Oman		78.5	87.5	93.3	85.3	100.0	108.7	107.4	131.0	127.6	92.1	118.8	123.4	198.3		
Qatar		60.9	62.6	61.9	71.2	100.0	124.6	98.4	97.3	94.3	75.1	60.3	64.7	60.7	64.4	72.3
Saudi Arabia		56.3	62.7	74.6	94.0	100.0	138.5	122.6	120.2	136.3	117.8	162.0	171.2	208.9	244.7	226.4
Syria		84.5	96.3	96.6	99.6	100.0	101.1	101.9	105.1	101.1	98.0	96.6	106.4	106.2		
UAE		63.5	69.8	78.3	88.7	100.0	105.0	111.0	118.2	130.8	151.3	176.2	215.4	240.6		
Yemen R.																
Libya		59.6	64.6	61.6	75.0	100.0	109.4	105.0	104.4	100.7	118.1	105.7	112.6	98.9	106.5	
Sudan		48.1	52.6	65.6	82.5	100.0	122.7	153.9	198.7	270.8	368.8	507.1	649.3	1042.8	1514.3	2466.9
Tunisia		69.1	75.9	84.2	93.6	100.0	105.4	110.8	118.1	131.8	140.1	150.2	164.2	177.8	192.1	204.7
Ethiopia		89.9	96.7	96.7	98.2	100.0	100.6	100.1	103.5	102.7	103.0	102.2	116.3	113.1	112.4	116.9
India		70.2	74.0	75.8	89.8	100.0	108.1	112.8	120.8	127.8	137.9	142.3	152.2	166.2	183.4	199.1
France		70.0	75.9	84.6	92.9	100.0	108.6	120.7	131.8	142.6	154.7	168.0	173.0	178.2	181.3	186.0
Italy		60.0	69.6	76.6	85.7	100.0	117.2	134.5	147.9	160.4	172.4	182.4	188.7	196.6	207.0	213.8
USA		77.9	82.5	86.9	92.5	100.0	108.8	114.6	116.5	117.1	115.5	117.1	116.3	125.3		
Other Developing Countries*		59.6	66.7	71.2	85.3	100.0	113.0	122.7	138.1	152.3	169.2	188.3	209.1	234.3	263.8	288.5
Other Developed Countries*		70.0	75.1	79.3	87.9	100.0	109.0	114.8	118.6	122.8	124.7	120.6	121.7	125.3	130.9	134.5
Centrally Planned Economies*		69.6	74.9	80.2	85.8	100.0	123.5	186.2	255.9	298.0	404.9	523.9	725.9	1304.5	4366.8	25157.9
Jordan		87.0	102.3	94.4	89.2	100.0	120.4	132.4	133.6	130.5	112.8	109.8	117.0	125.1	159.2	178.4

\* Prices of these groups are expressed in US Dollars.

Table C-8.2. Producers' Prices for Manufactures in US Dollars

(1980 = 100)

Country ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Bahrain		65.9	77.6	91.7	95.2	100.0	111.6	121.7	125.2	126.1	96.5	95.1	93.7	93.5	95.0	96.2
D. Yemen		59.6	64.6	61.6	75.0	100.0	109.4	105.0	104.4	100.7	118.1	105.7	112.6	98.9	106.5	
Egypt		122.2	129.2	144.0	93.5	100.0	107.0	122.0	131.0	144.0	161.0	173.2	205.0	260.3		
Iraq		68.2	74.4	77.8	85.5	100.0	111.4	134.7	144.7	156.0	162.7	164.8	187.8	227.9	241.8	
Kuwait		57.4	59.8	63.7	128.0	100.0	97.0	64.0	77.7	62.8	74.2	111.8	135.9	134.4	130.3	
Oman				93.3	85.3	100.0	108.7	107.4	131.0	127.6	92.1	107.4	110.9	178.2		
Qatar		72.4	80.8	85.2	90.8	100.0	109.0	115.3	118.5	119.7	122.0	124.0	128.4	123.9	127.9	131.9
Saudi Arabia		57.4	59.1	60.6	70.5	100.0	122.5	95.4	93.6	89.0	69.0	54.2	57.5	53.9	57.2	64.2
Syria		57.3	62.7	74.6	94.0	100.0	138.5	122.6	120.2	136.3	117.8	162.0	171.2	73.0	85.6	79.2
UAE		79.3	91.5	92.5	96.8	100.0	102.1	102.9	106.2	102.1	99.0	97.6	107.5	107.3		
Yemen R.		63.5	69.8	78.3	88.7	100.0	105.0	111.0	117.7	111.5	93.7	83.4	95.0	112.3		
Libya		59.6	64.6	61.6	75.0	100.0	109.4	105.0	104.4	100.7	118.1	99.5	113.3	102.4	105.4	
Sudan		69.1	75.6	87.4	97.1	100.0	114.7	82.0	76.4	104.2	80.6	101.4	115.5	115.9	168.2	274.1
Tunisia		65.3	71.7	81.9	93.2	100.0	86.5	75.9	70.5	68.7	68.0	76.6	80.3	83.9	82.0	94.4
Ethiopia		89.9	96.7	96.7	98.2	100.0	100.6	100.1	103.5	102.7	103.0	102.2	116.3	113.1	112.4	116.9
India		61.6	66.6	72.7	86.9	100.0	98.2	93.8	94.1	88.4	87.7	88.7	92.4	93.9	88.9	89.4
France		61.9	65.3	79.2	92.3	100.0	84.4	77.6	73.1	69.0	72.8	102.5	121.7	126.4	120.1	144.3
Italy		61.7	67.6	77.3	88.4	100.0	88.3	85.2	83.4	78.2	77.3	104.8	124.7	129.3	129.2	152.8
USA		77.9	82.5	86.9	92.5	100.0	108.8	114.6	116.5	117.1	115.5	117.1	116.3	125.3		
Other Developing Countries		59.6	66.7	71.2	85.3	100.0	113.0	122.7	138.1	152.3	169.2	188.3	209.1	234.3	263.8	288.5
Other Developed Countries		70.0	75.1	79.3	87.9	100.0	109.0	114.8	118.6	122.8	124.7	120.6	121.7	125.3	130.9	134.5
Centrally Planned Economies		69.6	74.9	80.2	85.8	100.0	123.5	186.2	255.9	298.0	404.9	523.9	725.9	1304.5	4366.8	25157.9
Jordan		78.1	92.7	92.1	88.6	100.0	108.8	112.0	109.7	101.3	85.3	93.5	103.0	100.4	83.2	80.1

Table C-9. Weighted Average Export Unit Price for Manufactures in 1976

Export Market Competitor ↓	Bahrain	Dem Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Developing	Other Developed	Centrally Planned
Bahrain	4762.4	0.0	0.4	3.8	1.4	6.2	4.6	17.2	0.2	1.3	0.5	0.0	81.1	10.3	0.0	1.0	0.0	0.0	0.0	1.1	0.4	1.4
Egypt	3.0	0.0	9467.5	12.4	2.5	1.4	1.5	3.0	0.0	1.4	17.7	0.0	437.4	26.0	0.0	0.5	0.9	1.1	0.1	1.5	3.2	20.8
Iraq	0.1	0.0	1.8	4610.0	17.7	0.0	0.0	0.0	0.2	0.1	8.6	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.2	0.0	0.0
Kuwait	13.0	182.2	2.5	34.0	3511.0	23.9	19.0	22.9	1.9	11.1	83.0	0.0	95.4	0.0	0.0	41.4	0.0	1.7	0.0	7.0	2.6	8.7
Qatar	6.1	0.1	0.4	2.3	17.0	67.5	3732.1	8.0	0.0	15.9	0.0	0.0	0.0	4.3	0.0	48.1	0.0	0.1	0.0	0.0	0.0	0.0
Saudi A.	25.5	779.0	21.9	8.9	11.9	20.1	17.6	2787.8	3.0	10.7	968.0	0.0	1315.4	4.8	159.8	72.2	0.5	1.8	0.2	11.1	5.3	0.0
Syria	0.3	0.0	0.0	0.0	1.6	0.0	0.5	4.6	4904.1	0.4	6.2	6.5	7.6	0.0	0.0	0.0	0.0	0.1	0.0	1.9	0.9	15.8
UAE	45.6	59.2	0.0	6.6	21.8	1356.9	85.8	8.5	0.3	4212.6	20.0	0.0	78.1	0.0	10.9	51.3	0.0	0.1	0.0	0.0	0.0	0.0
Turkey	2.2	0.0	22.7	188.1	7.3	6.2	1.7	9.4	38.8	4.1	0.0	181.7	62.2	12.0	11.1	5.4	2.0	3.9	0.6	68.3	32.0	13.3
Belgium	27.9	129.4	31.2	34.5	27.6	68.7	34.2	50.3	35.1	52.1	153.7	180.2	330.6	330.7	75.0	606.6	109.8	66.9	7.5	98.1	318.7	119.1
Denmark	33.0	408.6	11.5	8.7	13.3	41.7	10.7	12.9	4.9	11.9	44.5	0.0	0.0	22.6	89.9	38.9	7.0	5.7	2.8	38.8	97.2	39.2
France	66.6	601.0	131.8	129.4	254.2	246.6	388.2	166.4	91.6	238.5	418.3	333.1	268.9	2281.0	184.4	334.5	5348.9	170.5	21.2	518.4	561.5	339.4
Germany	144.8	421.6	276.3	258.0	272.7	642.0	283.2	456.9	198.1	355.8	475.8	1190.8	660.1	1172.2	1136.2	1056.4	266.6	235.6	47.6	530.9	1336.9	1172.9
Greece	4.5	24.3	51.6	14.6	5.6	9.9	12.1	32.7	18.4	4.2	149.2	94.2	54.6	17.3	34.6	3.9	3.1	4.8	0.5	3.9	15.0	17.2
Italy	97.8	357.9	171.0	141.1	187.0	218.4	167.0	224.8	123.0	158.4	465.3	1456.2	230.4	855.6	1027.8	196.7	146.3	5246.1	20.9	251.8	465.8	210.7
Netherlands	65.0	678.4	36.4	45.0	35.7	153.3	71.3	75.1	20.4	57.6	324.4	333.5	529.8	172.8	228.9	144.7	47.5	46.7	6.5	101.5	341.1	108.3
Spain	18.9	26.9	102.3	31.2	42.4	35.4	25.9	54.7	33.0	25.6	23.1	215.7	47.9	434.1	66.7	92.8	52.6	30.4	4.8	123.3	81.5	122.8
UK	264.3	677.6	71.1	104.3	127.3	822.1	424.0	182.7	48.2	323.5	582.7	406.9	672.7	102.3	540.0	620.1	51.7	56.6	19.9	293.4	384.3	151.0
Austria	12.2	63.5	28.0	62.0	16.3	24.3	12.2	23.0	36.0	35.1	49.4	152.4	27.3	60.1	104.8	29.5	11.0	24.1	2.1	41.9	136.8	228.5
Sweden	14.9	25.2	16.5	54.0	39.9	105.0	37.4	56.1	13.8	35.9	75.4	86.9	45.8	77.6	370.7	79.0	20.1	18.5	10.4	84.8	224.0	98.1
Switzer.	19.1	24.0	40.8	40.5	27.1	65.2	49.6	62.1	24.6	44.1	65.9	144.0	82.2	82.9	204.2	107.1	33.2	43.0	7.6	131.1	186.2	132.7
Yugoslavia	0.6	18.4	51.5	83.4	88.8	5.0	29.6	3.9	8.0	8.1	59.8	145.1	60.5	23.1	251.3	40.6	4.3	14.2	1.3	27.2	18.4	611.3
USA	438.6	27.8	163.8	160.3	287.6	462.5	360.1	857.2	74.1	572.1	598.0	446.4	639.5	348.4	438.5	1219.5	12.8	92.6	7278.1	1589.7	1490.6	547.3
Brazil	13.5	22.6	11.4	171.2	13.5	20.6	9.2	11.7	4.5	3.7	4.7	13.4	9.8	25.4	7.2	97.4	3.5	17.0	14.2	157.6	29.8	136.7
Japan	339.7	850.9	155.1	430.5	798.9	1718.0	893.7	808.7	98.4	799.5	1510.0	501.8	392.7	205.1	635.1	1253.2	51.8	38.3	191.3	1727.8	414.0	2061.0
China	17.6	685.2	10.9	59.0	46.9	25.7	22.7	23.6	28.0	56.5	255.8	103.1	245.2	27.1	52.3	24.8	5.6	6.4	8.1	360.9	49.5	103.9
Hong K.	21.3	72.5	9.5	15.7	33.9	35.6	37.7	44.1	4.6	64.3	100.3	15.9	68.2	5.1	14.9	55.8	7.0	6.4	29.5	58.9	63.9	297.5
Indonesia	0.0	0.0	1.9	0.9	6.2	18.0	1.8	2.9	0.7	7.4	0.0	0.0	0.0	0.0	0.0	17.4	0.5	0.7	1.2	31.2	3.6	4.6
Korea Rep	38.5	0.0	12.4	0.0	85.9	68.2	41.0	120.1	3.7	70.5	0.0	246.1	181.2	10.7	448.0	153.1	8.6	5.9	31.2	289.6	143.1	0.0
Thailand	14.7	251.0	0.0	18.6	11.0	23.1	7.1	5.2	0.5	18.3	7.8	0.0	0.0	0.0	0.0	6.0	1.3	1.4	1.9	25.3	8.1	5.8
PCX <sub>k</sub>	65.1	63.9	109.0	67.3	60.1	62.9	67.6	61.4	58.2	72.0	64.8	62.5	66.3	63.1	62.9	64.0	62.0	62.0	77.1	65.8	64.1	65.7
X <sub>k</sub>	0.68	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.08	0.06	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55
PCX <sub>k</sub> · X <sub>k</sub>	44.27	45.37	273.6	2988.2	96.16	18.87	13.52	1235.0	143.2	59.76	73.22	30.63	5.30	3.79	159.8	1095.0	36.58	70.06	3.08	83.57	1.92	101.84

Notes for Table C-9 in all years:

PCX<sub>k</sub> is the weighted average price of Jordan's competitors on market k. It is calculated (for export competitiveness) by aggregating and then averaging the weighted prices of Jordan's competitors on market k. The weighted prices are computed by multiplying the export unit price of each country exporting to market k (or the local producers' prices on market k), Tables C-7, C-8.2, into the share in total supply (Table C-6).

X<sub>k</sub> is the share of Jordan's exports to market k in Jordan's total manufactured exports in 1985 (Tables C-1.2).

Table C-9. Weighted Average Export Unit Price for Manufactures in 1977

Export Market	Bahrain	Dem Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Developing	Other Developed	Centrally Planned
Bahrain	5607.9	0.0	0.4	4.1	1.5	6.7	5.0	18.5	0.3	1.4	0.6	0.0	87.2	11.1	0.0	1.1	0.1	0.0	0.1	1.1	0.5	1.5
Egypt	2.6	0.0	10010	10.7	2.2	1.2	1.3	2.6	0.0	1.2	15.3	0.0	378.2	22.5	0.0	0.5	0.8	1.0	0.1	1.3	2.8	17.9
Iraq	0.1	0.0	1.9	5029.1	18.7	0.0	0.0	0.0	0.2	0.1	9.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.2	0.0	0.0
Kuwait	13.2	185.3	2.6	34.6	3657.8	24.3	19.3	23.3	1.9	11.3	84.4	0.0	97.0	0.0	0.0	42.1	0.0	1.7	0.0	7.1	2.6	8.8
Qatar	6.5	0.1	0.5	2.5	18.0	71.5	4165.1	8.4	0.0	16.9	0.0	0.0	0.0	4.6	0.0	50.9	0.0	0.1	0.0	0.0	0.0	0.0
Saudi A.	27.4	837.7	23.6	9.5	12.8	21.6	18.9	2870.4	3.2	11.5	1041.0	0.0	1414.5	5.1	171.8	77.7	0.6	1.9	0.2	12.0	5.7	0.0
Syria	0.3	0.0	0.0	0.0	1.8	0.0	0.5	4.9	5366.3	0.5	6.7	7.0	8.2	0.0	0.0	0.0	0.0	0.1	0.0	2.0	0.9	17.0
UAE	49.0	63.6	0.0	7.1	23.5	1458.6	92.2	9.2	0.3	4860.7	21.5	0.0	85.0	0.0	11.8	55.2	0.0	0.1	0.0	0.0	0.0	0.0
Turkey	2.5	0.0	25.8	213.7	8.3	7.1	1.9	10.7	44.1	4.7	0.0	206.4	70.7	13.6	12.7	6.1	2.3	4.5	0.7	77.6	36.4	15.1
Belgium	30.1	139.9	33.7	37.3	29.8	74.3	36.9	54.3	37.9	56.3	166.1	194.7	357.3	357.3	81.0	655.5	118.6	72.3	8.1	106.0	344.4	128.7
Denmark	36.0	445.1	12.6	9.5	14.5	45.4	11.7	14.0	5.3	12.9	48.5	0.0	0.0	24.6	98.0	42.4	7.6	6.2	3.0	42.3	105.8	42.7
France	71.4	644.0	141.2	138.7	272.4	264.3	394.5	178.4	98.1	255.6	448.3	357.0	288.2	2444.4	197.7	358.4	5642.7	182.8	22.7	555.5	601.7	363.7
Germany	156.1	454.5	297.8	278.1	293.9	692.0	305.3	492.5	213.5	383.5	512.9	1283.7	711.6	1263.7	1224.8	1138.8	287.4	318.6	51.3	572.3	1441.1	1264.3
Greece	4.8	26.2	55.6	15.7	6.1	10.7	13.1	35.2	19.8	4.5	160.7	101.4	58.9	18.7	37.3	4.2	3.3	5.1	0.6	4.2	16.2	18.6
Italy	111.4	407.8	194.8	160.8	213.1	248.8	190.2	256.1	140.2	180.5	530.1	1658.9	262.4	974.7	1170.8	224.1	166.6	5747.8	23.8	286.9	530.6	240.1
Netherlands	71.8	749.8	40.3	49.7	39.4	169.4	78.8	83.0	22.5	63.7	358.6	368.6	585.5	191.0	253.0	160.0	52.5	51.6	7.2	112.2	377.0	120.8
Spain	19.6	27.9	106.3	32.4	44.0	36.8	26.9	56.8	34.3	26.6	24.1	224.3	49.8	451.3	69.4	96.5	54.7	31.8	5.0	128.2	84.7	127.6
UK	304.8	781.4	82.0	120.3	146.6	948.1	489.0	210.7	55.6	373.1	683.6	469.2	775.7	118.0	622.7	715.1	59.6	65.2	22.9	338.3	443.2	174.1
Austria	13.7	71.0	31.3	69.3	18.2	27.1	13.7	25.7	40.2	39.2	55.2	170.3	30.5	67.1	117.1	33.0	12.3	26.9	2.3	46.9	152.9	255.3
Sweden	15.9	26.9	17.7	57.6	42.6	112.1	40.0	59.9	14.7	38.3	80.5	92.8	48.9	82.8	395.8	84.3	21.5	19.7	11.2	90.6	239.2	104.7
Switzer.	20.2	25.4	43.2	42.9	28.6	68.9	52.5	65.7	26.1	46.7	69.7	152.4	86.9	87.7	216.1	113.3	35.2	45.5	8.1	138.7	197.0	140.4
Yugoslavia	0.7	19.2	53.5	86.7	92.4	5.2	30.7	4.1	8.3	8.5	62.2	150.9	62.9	24.0	261.4	42.3	4.5	14.8	1.4	28.3	19.1	635.8
USA	459.4	29.1	171.6	167.9	301.2	484.4	377.1	897.7	77.6	599.1	626.2	467.4	669.7	364.8	459.2	1277.1	13.4	97.0	7707.9	1664.7	1561.0	573.1
Brazil	14.4	24.2	12.2	183.0	14.4	22.0	9.8	12.5	4.9	4.0	5.1	14.3	10.5	27.2	7.7	104.1	3.7	18.2	15.1	168.5	31.8	146.2
Japan	370.6	928.2	169.1	469.7	871.5	1674.2	975.0	862.2	107.3	872.2	1647.3	547.4	428.4	223.8	911.0	1367.1	56.5	41.8	208.7	1864.8	451.6	2248.3
China	19.6	763.2	12.1	65.8	52.3	28.6	25.3	26.3	31.2	62.9	284.9	114.8	273.1	30.1	58.2	27.6	6.2	7.1	9.1	401.9	55.1	115.8
Hong K.	21.3	72.5	9.5	15.7	33.9	35.6	37.7	44.1	4.6	64.3	100.3	15.9	68.2	5.1	14.9	55.8	7.0	6.4	29.5	58.9	63.9	297.5
Indonesia	0.0	0.0	2.2	1.1	7.2	21.2	2.1	3.4	0.8	8.7	0.0	0.0	0.0	0.0	0.0	20.4	0.6	0.8	1.5	36.6	4.3	5.4
Korea Rep	38.5	0.0	12.4	0.0	85.9	66.2	41.0	120.1	3.7	70.5	0.0	246.1	181.2	10.7	448.0	153.1	8.6	5.9	31.2	289.6	143.1	0.0
Thailand	18.6	318.2	0.1	23.5	14.0	29.3	9.0	6.6	0.6	19.7	9.9	0.0	0.0	0.0	0.0	7.7	1.6	1.8	2.4	32.0	10.2	7.4
PCX <sub>k</sub>	75.1	70.4	115.6	73.4	63.7	68.6	74.6	64.8	63.6	81.0	70.5	68.4	70.9	68.2	68.4	69.1	65.7	67.8	61.7	70.9	69.2	70.7
X <sub>k</sub>	0.68	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.08	0.06	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55
PCX <sub>k</sub> .X <sub>k</sub>	51.07	49.96	290.2	3270.0	101.9	20.58	14.92	1304.0	156.5	67.23	79.67	33.52	5.67	4.09	173.7	1182.0	36.76	76.61	3.27	90.04	2.08	109.6

Table C-9. Weighted Average Export Unit Price for Manufactures in 1978

Export ⇨ Miraket Competitor ↓	Bahrain	Dem Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel oping	Other Devel oped	Centr- ally Pland
Bahrain	6626.9	0.0	0.5	5.2	1.9	8.6	6.4	23.7	0.3	1.8	0.7	0.0	111.6	14.2	0.0	1.4	0.1	0.0	0.1	1.4	0.6	1.9
Egypt	2.7	0.0	11157	11.5	2.3	1.3	1.4	2.7	0.0	1.3	16.4	0.0	404.8	24.1	0.0	0.5	0.8	1.0	0.1	1.4	3.0	19.2
Iraq	0.2	0.0	2.1	5259.0	20.8	0.0	0.0	0.0	0.2	0.1	10.2	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.2	0.0	0.0
Kuwait	12.5	175.8	2.4	32.8	3896.4	23.1	18.3	22.1	1.8	10.7	80.1	0.0	92.0	0.0	0.0	40.0	0.0	1.6	0.0	6.7	2.5	8.4
Qatar	7.2	0.1	0.5	2.7	20.0	79.5	432.0	9.4	0.0	18.8	0.0	0.0	0.0	5.1	0.0	56.7	0.0	0.1	0.1	0.0	0.0	0.0
Saudi A.	38.3	1172.1	33.0	13.3	17.9	30.2	26.5	2943.3	4.5	16.2	1456.6	0.0	1979.3	7.2	240.4	108.7	0.8	2.7	0.3	16.7	8.0	0.0
Syria	0.3	0.0	0.0	0.0	1.9	0.0	0.5	5.2	6384.7	0.5	7.1	7.5	8.7	0.0	0.0	0.0	0.0	0.1	0.0	2.1	1.0	18.1
UAE	52.0	67.5	0.0	7.5	24.9	1548.1	97.9	9.7	0.3	4913.8	22.8	0.0	90.2	0.0	12.5	58.6	0.0	0.1	0.0	0.0	0.0	0.0
Turkey	2.5	0.0	25.5	211.7	8.2	7.0	1.9	10.6	43.7	4.6	0.0	204.5	70.0	13.5	12.5	6.1	2.2	4.4	0.7	76.9	36.1	15.0
Belgium	34.6	160.5	38.7	42.8	34.2	85.2	42.4	62.4	43.5	64.6	190.6	223.4	410.0	410.1	93.0	752.3	136.2	83.0	9.3	121.6	395.2	147.7
Denmark	40.2	497.7	14.1	10.6	16.2	50.8	13.0	15.7	5.9	14.5	54.2	0.0	0.0	27.5	108.6	47.4	8.5	6.9	3.4	47.3	118.3	47.7
France	82.3	742.6	162.8	159.9	314.1	304.7	454.9	205.7	113.1	294.7	516.9	411.6	332.3	2818.5	227.9	413.3	6843.9	210.7	26.1	640.5	633.8	419.3
Germany	186.0	541.5	354.8	331.4	350.2	824.5	363.8	586.8	254.4	456.9	611.2	1529.5	847.8	1505.6	1459.3	1356.9	342.4	379.6	61.1	681.9	1717.1	1506.4
Greece	5.0	27.2	57.6	16.2	6.3	11.1	13.5	36.5	20.5	4.7	166.4	105.0	60.9	19.3	38.6	4.4	3.4	5.3	0.6	4.3	16.8	19.2
Italy	123.0	450.3	215.1	177.5	235.3	274.7	210.1	282.8	154.8	199.3	585.4	1832.0	289.8	1076.4	1293.0	247.5	184.0	6572.5	26.3	316.8	586.0	265.1
Netherland	83.9	876.3	47.1	58.1	46.1	198.0	92.1	97.0	26.3	74.5	419.1	430.9	684.4	223.3	296.7	187.0	61.3	60.4	8.4	131.2	440.7	141.2
Spain	21.7	30.9	117.7	35.9	48.7	40.7	29.7	62.9	37.9	29.5	26.6	248.2	55.1	499.4	76.8	106.8	60.5	34.9	5.5	141.9	93.8	141.2
UK	373.2	958.7	100.4	147.2	179.8	1160.8	598.7	258.0	68.1	456.8	837.0	574.5	949.8	144.5	762.4	875.6	73.0	79.9	28.1	414.3	542.6	213.2
Austria	16.0	83.2	36.7	81.2	21.3	31.8	16.0	30.1	47.1	46.0	64.7	199.6	35.8	78.7	137.3	38.7	14.4	31.5	2.7	54.9	179.2	299.3
Sweden	17.4	29.3	19.2	62.8	46.5	122.2	43.6	65.3	16.0	41.7	87.8	101.2	53.4	90.3	431.5	91.9	23.4	21.5	12.2	98.8	260.7	114.1
Switzer.	26.2	32.9	56.0	55.6	37.1	89.3	68.0	85.1	33.8	60.5	90.3	197.4	112.6	113.7	280.0	146.8	45.6	59.0	10.4	179.7	255.2	181.9
Yugoslavia	0.8	21.4	59.7	96.7	103.1	5.8	34.3	4.6	9.3	9.4	69.4	168.3	70.2	26.8	291.6	47.1	5.0	16.5	1.5	31.6	21.3	709.3
USA	496.4	31.4	185.4	181.4	325.5	523.4	407.5	970.0	83.9	647.4	676.7	505.1	723.7	394.2	496.3	1380.0	14.5	104.8	8119.0	1798.9	1686.8	619.3
Brazil	15.2	25.5	12.8	192.8	15.2	23.2	10.4	13.1	5.1	4.2	5.3	15.1	11.1	28.6	8.1	109.7	3.9	19.1	15.9	177.6	33.5	154.1
Japan	449.4	1125.5	205.1	569.5	1056.7	2272.5	1182.2	1069.7	130.1	1057.5	1997.3	663.8	519.5	271.3	1104.6	1657.6	68.5	50.6	253.1	2285.4	547.6	2726.1
China	19.9	777.3	12.3	67.0	53.2	29.2	25.8	26.8	31.8	64.1	230.2	116.9	278.1	30.7	59.3	28.1	6.4	7.3	9.2	409.4	56.2	117.9
Hong K.	20.1	68.4	9.0	14.8	32.1	33.6	35.6	41.6	4.3	60.7	94.7	15.1	64.4	4.6	14.1	52.7	6.6	6.1	27.9	55.6	60.3	280.8
Indonesia	0.0	0.0	2.6	1.3	8.8	25.7	2.5	4.1	1.0	10.6	0.0	0.0	0.0	0.0	0.0	24.8	0.8	1.0	1.8	44.5	5.2	6.6
Korea Rep	42.6	0.0	13.8	0.0	85.0	73.2	45.3	132.8	4.1	78.0	0.0	272.1	200.4	11.9	486.4	169.3	9.5	6.5	34.4	320.1	158.2	0.0
Thailand	21.7	370.5	0.1	27.4	16.3	34.2	10.5	7.7	0.7	20.9	11.5	0.0	0.0	0.0	0.0	8.9	1.9	2.1	2.8	37.3	11.9	8.6
PCX <sub>k</sub>	88.2	82.6	128.4	78.7	70.4	79.1	82.4	70.9	75.3	86.6	83.9	78.2	84.6	78.4	79.4	80.2	79.2	77.7	86.6	81.0	79.3	81.8
X <sub>k</sub>	0.68	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.08	0.06	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55
PCX <sub>k</sub> · X <sub>k</sub>	60.0	58.65	324.8	3506.0	112.6	23.73	16.46	1427	185.2	71.88	94.8	38.3	6.77	4.70	201.7	1372	46.73	87.8	3.46	102.9	2.38	126.8

Table C-9. Weighted Average Export Unit Price for Manufactures in 1979

Export Market Competitor ↓	Bahrain	Dem Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Developing	Other Developed	Centrally Planned
Bahrain	6879.8	0.0	0.5	5.4	2.0	8.9	6.6	24.6	0.3	1.9	0.8	0.0	115.8	14.8	0.0	1.4	0.1	0.0	0.1	1.5	0.6	1.9
Egypt	2.6	0.0	7244.0	11.0	2.2	1.2	1.3	2.6	0.0	1.2	15.8	0.0	390.2	23.2	0.0	0.5	0.8	1.0	0.1	1.4	2.9	18.5
Iraq	0.2	0.0	2.6	5779.4	25.3	0.0	0.0	0.0	0.2	0.1	12.4	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.2	0.0	0.0
Kuwait	13.6	191.7	2.6	35.8	7829.5	25.2	20.0	24.1	2.0	11.7	87.3	0.0	100.3	0.0	0.0	43.6	0.0	1.8	0.0	7.3	2.7	9.1
Qatar	8.8	0.2	0.6	3.3	24.3	96.7	4880.6	11.4	0.0	22.8	0.0	0.0	0.0	6.2	0.0	68.9	0.0	0.1	0.1	0.0	0.0	0.0
Saudi A.	32.8	1004.4	28.2	11.4	15.4	25.9	22.7	3424.1	3.9	13.8	1248.1	0.0	1696.0	6.2	206.0	93.1	0.7	2.3	0.3	14.3	6.9	0.0
Syria	0.4	0.0	0.0	0.0	2.2	0.0	0.6	6.2	8045.1	0.6	8.4	8.8	10.3	0.0	0.0	0.0	0.0	0.1	0.0	2.5	1.2	21.3
UAE	61.5	79.9	0.0	8.9	29.4	1830.9	115.8	11.5	0.4	5142.2	27.0	0.0	106.7	0.0	14.8	69.3	0.0	0.1	0.0	0.0	0.0	0.0
Turkey	2.8	0.0	28.9	239.2	9.3	7.9	2.1	11.9	49.4	5.2	0.0	231.1	79.2	15.3	14.2	6.9	2.5	5.0	0.8	86.9	40.8	16.9
Belgium	39.9	185.1	44.6	49.3	39.5	98.2	48.9	71.9	50.1	74.4	219.8	257.6	472.7	472.8	107.2	867.3	157.0	95.7	10.7	140.2	455.7	170.2
Denmark	46.1	570.8	16.1	12.2	18.6	58.3	15.0	18.0	6.8	16.6	62.2	0.0	0.0	31.5	125.7	54.4	9.7	7.9	3.8	54.2	135.7	54.7
France	95.8	865.1	189.7	186.3	365.9	355.0	530.0	239.6	131.8	343.3	602.2	479.5	387.1	3283.5	265.5	481.4	7975.9	245.5	30.4	746.2	808.2	488.5
Germany	208.6	607.2	397.9	371.6	392.8	924.6	407.9	658.0	285.3	512.4	685.4	1715.2	950.8	1688.5	1636.6	1521.7	384.0	425.7	68.5	764.7	1925.6	1689.3
Greece	5.8	31.8	67.4	19.0	7.4	13.0	15.8	42.7	24.1	5.5	194.8	123.0	71.4	22.6	45.2	5.1	4.0	6.2	0.7	5.1	19.6	22.5
Italy	143.9	526.9	251.6	207.7	275.3	321.4	245.8	330.9	181.1	233.2	685.0	2143.5	339.1	1259.4	1512.8	289.6	215.3	7516.3	30.7	370.7	686.6	310.2
Netherlands	94.8	989.9	53.2	65.6	52.0	223.7	104.1	109.6	29.7	84.1	473.5	486.7	773.1	252.2	334.0	211.2	69.3	68.2	9.5	148.2	497.8	159.5
Spain	26.7	38.0	144.6	44.1	59.9	50.1	36.5	77.3	46.6	36.2	32.7	305.0	67.7	613.6	94.3	131.2	74.3	42.9	6.8	174.3	115.2	173.5
UK	449.3	1151.7	120.8	177.3	216.4	1397.4	720.7	310.6	81.9	549.9	1007.5	691.6	1143.4	173.9	917.8	1054.1	87.8	96.2	33.8	498.7	653.2	256.6
Austria	18.1	94.0	41.5	91.8	24.1	36.0	18.1	34.1	53.3	51.9	73.1	225.6	40.5	88.9	155.2	43.7	16.3	35.6	3.1	62.1	202.5	338.3
Sweden	20.4	34.4	22.6	73.7	54.5	143.4	51.1	76.6	18.8	49.0	103.0	118.7	62.6	105.9	508.3	107.8	27.4	25.2	14.3	115.9	306.9	133.9
Switzer.	28.9	36.2	61.6	61.1	40.8	98.3	74.8	93.6	37.2	66.5	99.3	217.2	123.9	125.1	308.0	161.5	50.1	64.9	11.5	197.7	280.8	200.2
Yugoslavia	0.9	24.5	68.5	111.0	118.2	6.6	39.3	5.2	10.6	10.8	79.7	193.1	80.5	30.8	334.6	54.1	5.7	19.0	1.7	36.2	24.5	813.8
USA	574.2	36.4	214.4	209.9	376.5	605.4	471.3	1122.1	97.0	748.9	782.7	584.3	837.1	456.0	574.1	1596.4	16.8	121.2	8642.2	2080.9	1851.2	718.4
Brazil	15.9	26.6	13.4	201.2	15.8	24.2	10.8	13.7	5.3	4.4	5.6	15.7	11.6	29.9	8.5	114.5	4.1	20.0	16.6	185.3	35.0	160.7
Japan	483.9	1211.8	220.8	613.2	1137.8	2446.9	1272.9	1151.8	140.1	1198.7	2150.6	714.7	559.4	292.1	1189.4	1784.8	73.8	54.5	272.5	2460.8	588.6	2935.3
China	21.9	855.4	13.6	73.7	58.6	32.1	28.3	29.4	35.0	70.5	319.3	128.7	306.1	33.8	65.2	31.0	7.0	8.0	10.2	450.5	61.8	129.7
Hong K.	23.7	80.6	10.6	17.4	37.7	39.6	41.9	49.0	5.1	71.4	111.6	17.7	75.8	5.7	16.6	62.0	7.8	7.1	32.8	65.4	71.0	330.7
Indonesia	0.0	0.0	3.3	1.6	11.0	32.3	3.2	5.2	1.3	13.4	0.0	0.0	0.0	0.0	0.0	31.2	1.0	1.3	2.2	56.0	6.5	8.3
Korea Rep	50.4	0.0	16.3	0.0	112.5	86.7	53.7	157.3	4.9	92.4	0.0	322.4	237.4	14.1	586.9	200.5	11.3	7.7	40.8	379.3	187.5	0.0
Thailand	25.8	440.0	0.1	32.5	19.3	40.6	12.5	9.1	0.9	24.7	13.6	0.0	0.0	0.0	0.0	10.6	2.3	2.5	3.3	44.3	14.1	10.2
PCXk	93.8	90.8	92.8	87.1	113.7	90.3	90.5	81.2	93.5	94.0	91.0	89.8	90.4	90.5	90.2	91.0	92.0	88.8	92.5	91.5	90.8	91.7
Xk	0.68	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.06	0.06	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55
PCXk .Xk	63.78	64.47	232.9	3880	181.9	27.09	18.1	1634	230.0	78.02	102.8	44.0	7.23	5.43	229.1	1557	54.28	100.3	3.7	116.2	2.72	142.1

Table C-9. Weighted Average Export Price Value for Manufacturers in 1980

Export = Market	Competitor ↓	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel	Centrally Pland	
Bahrain		7226.7	0.0	0.6	5.7	2.1	9.4	7.0	25.9	0.4	2.0	0.8	0.0	121.7	15.5	0.0	0.0	0.1	1.5	0.0	0.0	1.6	0.7	2.0
Egypt		3.4	0.0	7747.6	14.2	2.9	1.6	1.7	3.4	0.0	0.0	1.6	20.3	502.2	29.9	0.0	0.0	0.6	1.0	1.3	0.1	1.8	3.7	23.8
Iraq		0.2	0.0	2.7	6759.6	26.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.5	0.0	0.0	0.3	0.0	0.0
Kuwait		13.8	183.2	2.7	36.1	6116.8	25.4	20.1	24.3	2.0	11.8	88.0	0.0	0.0	101.1	0.0	43.9	0.0	1.8	0.0	0.0	7.4	2.8	8.2
Qatar		9.2	0.2	0.6	3.5	25.3	100.7	5154.9	11.9	0.0	23.8	0.1	0.0	0.0	0.0	0.0	71.8	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Saudi A.		34.3	1048.4	29.5	11.9	16.1	27.0	23.7	4856.9	4.1	14.5	1302.8	0.0	0.0	1770.4	6.4	97.2	0.7	2.4	0.3	0.3	15.0	7.2	0.0
Syria		0.4	0.0	0.0	2.5	0.0	0.7	0.7	8558.6	0.7	9.4	11.5	9.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.8	1.3	23.7
UAE		68.4	88.7	0.0	9.9	32.7	2034.3	128.6	12.8	0.4	5312.2	30.0	0.0	0.0	118.6	0.0	16.4	0.0	77.0	0.0	0.1	0.0	0.0	0.0
Turkey		3.3	0.0	33.9	281.1	10.9	9.3	2.5	14.0	58.1	6.1	83.0	17.9	271.6	83.0	16.7	8.1	3.0	5.9	0.9	102.2	47.9	19.9	
Belgium		44.0	204.5	49.3	54.5	43.6	108.6	54.0	79.4	82.3	242.9	284.6	522.3	522.4	118.4	958.4	173.4	105.7	11.8	154.9	503.5	188.1	59.3	188.1
Denmark		50.0	619.0	17.5	13.2	20.1	63.2	16.2	19.5	7.4	18.0	67.4	0.0	34.2	136.3	59.0	10.6	8.6	4.2	58.8	147.2	59.3	59.3	59.3
France		106.0	957.0	209.8	206.1	404.8	392.7	566.3	145.8	379.8	666.1	530.4	428.2	3632.1	293.7	532.6	8641.2	271.6	33.7	825.4	894.1	540.4	540.4	540.4
Germany		221.4	644.6	422.4	394.5	417.0	981.6	433.0	698.6	302.9	544.0	727.6	1820.8	1009.3	1792.4	1615.4	407.6	451.9	72.8	811.8	2044.1	1793.4	1793.4	1793.4
Greece		6.8	36.9	78.2	22.1	8.6	15.0	18.4	49.6	27.9	6.3	226.0	142.7	82.8	26.3	52.4	5.9	4.7	7.2	5.9	22.8	26.1	26.1	26.1
Italy		166.0	607.7	290.2	239.6	317.5	370.8	283.5	381.7	208.9	269.0	790.0	2472.3	391.1	1452.6	1744.9	334.0	249.3	8502.6	427.6	790.8	357.8	357.8	357.8
Netherlands		103.6	1081.9	58.1	71.7	56.9	244.4	113.7	119.8	32.5	91.9	517.5	531.9	844.9	275.7	365.0	230.8	75.7	74.5	162.0	544.0	174.3	174.3	174.3
Spain		29.9	42.6	162.1	49.4	67.1	56.1	41.0	86.6	52.3	40.6	36.7	341.9	75.9	687.9	105.7	147.1	83.4	48.1	195.4	129.2	194.5	194.5	194.5
UK		547.2	1402.8	147.2	215.9	263.6	1702.1	877.9	378.3	99.8	669.8	1227.2	842.4	1392.7	1117.9	1283.9	107.0	117.1	41.2	607.5	795.6	312.5	312.5	312.5
Austria		19.1	99.4	43.8	97.0	25.5	38.0	19.2	36.0	56.3	54.9	77.3	238.5	42.8	94.0	164.1	46.2	17.2	37.7	214.1	357.6	357.6	357.6	357.6
Sweden		23.5	39.7	26.1	85.1	63.0	165.6	59.1	88.5	21.7	56.6	119.0	137.1	72.3	122.3	584.7	124.5	31.7	29.1	133.8	353.3	154.7	154.7	154.7
Switzerland		31.7	39.7	67.6	67.1	44.8	107.9	82.1	102.8	40.8	73.1	109.0	238.4	136.0	137.3	338.1	177.3	55.0	71.2	217.0	308.3	219.7	219.7	219.7
Yugoslavia		1.0	28.4	79.3	128.5	138.9	7.7	45.5	6.1	12.3	92.2	223.5	93.2	35.6	387.3	62.6	6.6	21.9	2.0	41.9	28.3	941.9	941.9	941.9
USA		627.5	39.7	234.4	229.4	411.5	681.7	515.1	1226.3	106.1	818.5	855.5	638.6	914.9	496.4	627.4	1744.7	18.3	132.5	9942.9	2274.2	2132.5	783.0	783.0
Brazil		16.9	28.4	14.3	214.5	16.9	25.8	11.5	14.6	5.7	4.7	6.0	16.8	12.3	31.8	9.0	122.1	4.4	21.3	197.5	37.3	171.4	171.4	171.4
Japan		514.7	1289.2	234.9	652.3	1210.4	2603.1	1354.1	1225.3	149.1	1211.4	2287.9	760.3	595.1	310.8	1265.3	1898.7	78.5	58.0	289.9	2617.8	627.2	3122.7	3122.7
China		24.1	940.0	14.9	81.0	64.4	35.3	31.2	32.4	38.5	77.5	350.9	141.4	336.3	37.1	71.7	34.0	8.8	11.2	495.0	67.9	142.6	142.6	142.6
Hong K.		25.9	88.1	11.6	19.0	41.3	43.2	45.8	53.5	5.6	14.3	121.9	19.4	82.8	6.2	18.2	67.8	8.5	7.8	35.9	71.5	77.7	361.5	361.5
Indonesia		0.0	0.0	3.6	1.7	11.8	34.6	3.4	5.6	1.4	14.3	0.0	0.0	0.0	0.0	0.0	33.4	1.1	1.3	2.4	60.0	7.0	8.9	8.9
Korea Rep		52.8	0.0	17.1	0.0	117.9	90.8	56.2	164.8	5.1	96.8	0.0	337.6	248.6	14.7	614.6	210.0	11.8	8.0	42.7	397.2	196.3	0.0	0.0
Thailand		28.1	479.9	0.1	35.5	21.1	44.3	13.6	9.9	0.9	27.4	14.9	0.0	0.0	0.0	0.0	11.6	2.5	3.6	48.3	15.4	11.1	11.1	11.1

Table C-9. Weighted Average Export Unit Price for Manufacturers 1981

Export Market	Competitor ↓	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel	Centrally Pland	
Bahrain		8065.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.8	0.7	2.3	0.0
Egypt		3.7	0.0	8289.9	15.3	3.1	1.7	1.7	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.1	0.1	1.9	4.0	25.7	0.0
Iraq		0.2	0.0	2.7	7530.2	26.4	0.0	0.0	0.0	0.2	0.1	12.9	0.0	0.0	0.0	0.0	0.2	0.1	0.5	0.0	0.3	0.0	0.0	9.6
Kuwait		14.4	202.9	2.8	37.9	5933.3	26.7	21.1	25.5	12.4	92.4	0.0	0.0	106.2	0.0	0.0	46.1	1.9	0.0	0.0	7.8	2.9	0.0	9.6
Qatar		9.2	0.2	0.6	3.5	25.3	100.7	5618.8	11.9	0.0	23.8	0.1	0.0	0.0	6.5	0.0	71.8	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Saudi Arabia		38.7	1184.7	33.3	13.5	18.1	30.5	26.8	5949.7	4.6	16.3	1472.2	0.0	2000.5	7.3	243.0	109.8	0.8	2.7	0.3	16.9	8.1	0.0	0.0
Syria		0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7	9.3	9.7	11.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	2.8	1.3	23.5	0.0
UAE		67.7	87.9	0.0	0.0	9.8	32.4	2016.0	127.5	12.7	0.4	5423.8	29.7	0.0	117.5	16.3	76.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Turkey		3.2	0.0	0.0	33.0	273.8	10.6	9.1	2.5	13.7	56.6	6.0	0.0	264.5	90.6	17.5	7.9	2.9	5.7	0.9	46.7	19.4	19.4	0.0
Belgium		37.4	173.8	41.9	46.3	37.1	92.3	45.9	67.5	47.1	69.9	206.4	241.9	444.0	444.0	100.7	814.6	147.4	89.8	10.1	131.7	428.0	159.9	0.0
Denmark		45.5	563.3	15.9	12.0	18.3	57.5	14.8	17.7	6.7	16.4	61.3	0.0	31.1	0.0	124.0	53.6	9.6	7.8	3.8	53.5	134.0	54.0	0.0
France		92.2	832.6	182.6	179.3	352.2	341.6	510.0	230.6	126.9	330.4	579.5	461.5	372.6	3160.0	255.5	463.3	7293.2	236.2	29.3	718.1	777.8	470.1	0.0
Germany		190.4	554.4	363.3	339.3	358.6	844.2	372.4	600.8	260.5	467.8	625.7	1565.9	868.0	1541.5	1494.1	1389.2	350.5	388.7	62.6	698.1	1757.9	1542.3	0.0
Greece		6.3	34.3	72.8	20.5	8.0	14.0	17.1	46.1	26.0	5.9	210.2	132.7	77.0	24.4	48.7	5.5	4.4	6.7	0.7	5.5	21.2	24.3	0.0
Italy		134.5	492.2	235.1	194.1	257.2	300.3	229.6	309.1	169.2	217.9	639.9	2002.6	318.8	1176.6	1413.4	270.5	201.1	7507.8	28.7	346.3	640.5	289.8	0.0
Netherlands		90.1	941.3	50.5	62.4	49.5	212.7	98.9	104.2	28.3	80.0	450.2	462.8	735.1	239.8	317.6	200.8	65.9	64.8	9.1	140.9	473.3	151.7	0.0
Spain		25.1	35.8	136.1	41.5	56.4	47.1	34.4	72.8	43.9	34.1	30.8	287.2	63.8	577.8	123.5	40.4	6.4	164.1	108.5	163.4	108.5	163.4	0.0
UK		508.9	1304.6	136.9	200.8	245.2	1582.9	816.4	351.8	92.8	622.9	1141.3	783.4	1295.2	197.0	1039.7	1194.0	99.5	108.9	38.3	564.9	739.9	290.7	0.0
Austria		16.6	86.5	38.1	84.4	22.2	33.1	16.7	31.3	49.0	47.8	67.3	207.5	37.2	81.8	40.2	15.0	32.8	2.8	57.1	166.2	311.1	139.2	0.0
Sweden		21.2	35.8	23.5	78.6	56.7	149.1	53.1	79.6	19.5	50.9	107.1	123.4	65.1	110.1	526.2	112.1	28.5	26.2	14.8	120.4	317.9	139.2	0.0
Switzerland		27.9	35.0	59.5	59.1	39.4	94.9	72.3	90.4	35.9	64.3	96.0	209.8	119.7	120.8	297.5	156.0	48.4	62.7	11.1	191.0	271.3	183.4	0.0
Yugoslavia		1.1	30.4	84.9	137.6	146.6	8.2	48.8	6.5	13.2	13.4	88.7	239.4	99.8	38.1	414.8	67.0	23.5	2.2	44.9	30.3	1008.8	1008.8	0.0
USA		702.8	44.5	262.5	256.9	460.8	741.1	576.9	1373.5	118.8	916.7	968.1	715.2	1024.7	558.2	702.7	1954.0	20.5	148.4	1016.6	2547.1	2386.3	876.9	188.5
Brazil		18.6	31.2	15.7	236.0	18.5	28.4	12.7	18.1	6.3	5.2	6.5	18.4	13.6	35.0	9.9	134.3	4.8	23.4	19.5	217.3	41.0	188.5	
Japan		545.6	1366.5	249.0	691.5	1283.0	2759.3	1435.4	1298.8	158.0	1284.1	2425.1	806.0	630.8	329.4	1341.2	2012.7	83.2	61.5	307.3	2774.9	664.9	3310.0	0.0
China		24.3	947.5	15.0	81.6	64.9	35.6	31.4	32.6	38.8	78.1	353.7	142.5	339.0	37.4	72.3	34.3	8.9	7.7	11.3	499.0	68.4	143.7	0.0
Hong K.		28.9	98.2	12.9	21.2	46.0	48.2	51.1	59.7	6.2	87.0	135.9	21.6	92.3	6.9	20.2	75.6	8.7	40.0	79.7	86.6	403.0	8.4	0.0
Indonesia		0.0	0.0	3.4	1.6	11.2	32.7	3.2	5.3	1.3	13.5	0.0	0.0	0.0	0.0	0.0	31.6	1.3	2.2	56.6	6.6	8.4	0.0	0.0
Korea Rep		54.3	0.0	17.5	0.0	121.1	93.4	57.8	169.4	5.2	99.5	0.0	347.1	255.6	15.1	631.8	215.9	8.3	43.9	408.3	201.8	201.8	0.0	0.0
Thailand		25.3	432.9	0.1	32.0	19.0	39.9	12.3	9.0	0.8	27.2	13.4	0.0	0.0	0.0	0.0	10.4	2.5	3.3	43.6	13.9	10.0	10.0	
PCX <sub>t</sub>		106.0	95.2	103.8	106.6	97.3	97.5	103.2	110.3	131.7	100.2	96.5	90.4	88.1	93.2	96.7	84.9	88.7	106.1	99.9	94.2	98.2	98.2	155.5
X <sub>t</sub>		0.68	0.71	2.51	4.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.08	0.06	17.11	0.59	1.13	0.04	1.27	0.03	1.55	1.55	0.03
PCX <sub>t-1</sub>		106.0	95.2	103.8	106.6	97.3	97.5	103.2	110.3	131.7	100.2	96.5	90.4	88.1	93.2	96.7	84.9	88.7	106.1	99.9	94.2	98.2	98.2	152.2
X <sub>t-1</sub>		0.68	0.71	2.51	4.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.08	0.06	17.11	0.59	1.13	0.04	1.27	0.03	1.55	1.55	0.03



Table C-9. Weighted Average Export Unit Price for Manufactures in 1982

Export Market ⇨	Competitor ⇩	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel opting	Other Devel	Cent- ally Pland
0.8	1.9	0.0	0.0	2.6	2.8	2.6	2.9	2.1	11.2	2.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.0
2.5	4.2	0.0	9452.0	3.2	0.0	0.0	0.2	0.2	12.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1	0.0	0.0	2.0	0.1	26.7
148.6	397.8	161.5	38.9	43.1	34.5	85.8	42.7	62.7	43.8	65.0	191.9	224.8	412.7	412.7	93.6	757.1	137.0	83.5	9.3	122.4	397.8	148.6	148.6
43.0	532.4	15.0	11.4	17.3	54.3	13.9	16.8	8.3	15.5	58.0	0.0	29.4	117.2	50.7	8.1	7.4	3.6	3.6	50.5	126.6	51.0	48.5	51.0
88.0	794.3	174.2	335.3	354.4	834.3	368.1	486.6	220.0	315.2	552.9	440.2	355.4	3014.7	442.0	243.8	1476.7	1373.0	346.5	384.1	690.0	742.1	448.5	1524.4
188.2	547.9	359.1	335.3	21.2	8.2	17.6	47.6	26.8	6.1	217.0	1547.7	857.9	1523.6	79.5	25.2	50.3	5.7	4.5	61.9	1737.5	742.1	448.5	1524.4
6.5	35.4	75.1	35.4	75.1	14.4	101.2	74.5	44.9	31.5	294.0	31.5	591.6	126.5	71.7	41.4	6.5	9.3	144.1	484.2	155.2	167.3	111.1	167.3
92.2	962.9	51.7	63.8	42.5	57.7	48.3	35.2	74.5	44.9	81.8	460.5	473.4	752.0	245.3	324.9	205.4	67.4	66.3	144.1	484.2	155.2	167.3	111.1
144.4	528.7	252.5	208.4	276.3	322.6	246.6	332.0	181.8	234.0	687.3	2150.9	340.3	1263.8	1518.1	290.6	216.0	7244.2	30.8	372.0	688.0	311.3	311.3	311.3
6.5	35.4	75.1	35.4	75.1	14.4	101.2	74.5	44.9	31.5	294.0	31.5	591.6	126.5	71.7	41.4	6.5	9.3	144.1	484.2	155.2	167.3	111.1	167.3
470.6	1206.4	126.6	185.7	226.7	1463.8	755.0	325.3	85.8	576.0	1055.4	724.4	1197.7	182.2	961.4	1104.2	92.0	100.7	35.4	522.4	684.3	268.8	311.1	268.8
16.6	86.5	38.1	84.4	22.2	33.1	16.7	31.3	49.0	47.8	67.3	207.5	37.2	81.8	142.7	40.2	15.0	32.8	2.8	57.1	186.2	311.1	126.8	311.1
19.3	32.6	21.4	69.8	51.6	135.8	48.4	72.5	17.8	46.4	97.5	112.4	59.3	100.3	479.4	102.1	26.0	23.9	13.5	109.7	289.7	126.8	311.1	289.7
27.6	34.6	58.8	58.4	39.0	83.9	71.5	89.4	63.6	94.9	207.4	118.4	119.4	294.2	154.2	47.9	62.0	11.0	188.8	268.2	191.2	1083.2	191.2	1083.2
1.2	32.6	91.2	147.7	157.4	8.8	52.4	7.0	14.1	14.4	106.0	257.1	107.2	41.0	445.4	72.0	7.6	25.2	2.3	48.2	32.6	1083.2	191.2	1083.2
740.5	46.9	276.6	270.7	485.5	780.8	607.8	1447.0	125.2	965.8	1009.4	753.5	1079.5	588.1	740.3	2058.7	21.6	156.4	1070.7	2683.6	2516.3	923.9	162.8	923.9
16.1	27.0	13.6	203.8	16.0	24.5	10.9	13.9	5.4	4.5	15.9	11.7	30.2	8.6	116.0	4.1	20.2	16.9	187.7	35.4	162.8	923.9	162.8	923.9
509.6	1276.3	222.6	645.8	1198.3	2577.0	1340.6	1213.0	147.6	1199.3	2265.0	752.7	589.1	307.7	1252.6	1879.8	77.7	57.4	287.0	2591.7	621.0	3091.4	162.8	3091.4
23.6	818.3	14.6	79.1	62.9	34.5	30.4	31.6	37.6	75.7	342.8	138.1	328.6	36.3	70.0	33.2	7.5	8.6	10.9	483.6	66.3	139.3	162.8	139.3
27.5	93.5	12.3	20.2	43.8	45.9	48.6	56.9	5.9	82.9	129.5	20.6	88.0	6.6	19.3	72.0	9.0	8.3	38.1	76.0	82.5	383.9	162.8	383.9
0.0	0.0	0.0	3.1	1.5	3.0	4.8	1.2	12.4	0.0	0.0	0.0	0.0	0.0	0.0	29.1	0.9	2.1	52.1	6.1	7.7	7.7	162.8	7.7
52.2	0.0	16.9	0.0	116.6	55.6	162.9	5.0	95.7	0.0	333.9	245.9	14.6	607.8	207.7	7.9	11.7	42.3	392.8	194.2	0.0	0.0	162.8	0.0
22.4	382.9	0.1	28.3	16.8	10.9	7.9	0.7	26.0	11.9	0.0	0.0	0.0	0.0	9.2	2.0	2.2	2.9	38.5	12.3	8.8	162.8	8.8	
114.8	92.6	115.3	121.2	76.1	93.6	104.9	96.5	117.9	99.5	97.1	90.3	98.4	87.0	92.2	84.4	78.8	85.8	87.9	93.6	96.1	162.8	96.1	162.8
0.68	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.08	0.06	2.54	17.11	0.58	1.13	0.04	1.27	0.03	1.55	162.8	1.55
78.06	65.75	289.4	5398	121.8	28.08	20.86	194.2	290.0	82.59	109.7	44.25	7.87	5.22	234.2	1615	46.55	96.95	4.53	124.3	2.81	149.0	162.8	149.0

Table C-9. Weighted Average Export Unit Value for Manufactures in 1983

Export => Market //	Competitor //	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel	Centr-ally Pland
Bahrain		9047.8	0.0	0.7	7.1	2.6	11.7	8.7	32.4	0.5	2.5	1.0	0.0	152.3	19.4	0.0	1.9	0.0	0.1	2.0	0.8	2.5	0.0
Egypt		3.7	0.0	10149	152	3.1	1.7	1.8	3.6	0.0	1.7	21.7	0.0	537.4	32.0	0.0	0.6	1.1	1.4	0.1	1.9	4.0	25.5
Iraq		0.2	0.0	2.4	9781.1	23.5	0.0	0.0	0.0	0.2	11.5	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.4	0.0	0.2	0.0	0.0
Kuwait		12.0	169.1	2.3	31.4	4752.7	22.1	17.5	21.1	1.8	10.3	76.6	0.0	88.0	0.0	0.0	38.2	1.5	0.0	6.4	2.4	8.0	0.0
Qatar		8.2	0.2	0.6	3.1	22.5	89.6	6108.5	10.6	0.0	21.2	0.0	0.0	0.0	5.7	0.0	63.9	0.0	0.1	0.0	0.0	0.0	0.0
Saudi A.		37.4	1142.7	32.1	13.0	17.5	29.4	25.8	4.4	15.8	1420.1	0.0	0.0	1929.7	7.0	234.4	106.0	0.8	2.6	0.3	16.3	7.8	0.0
Syria		0.4	0.0	0.0	0.0	2.2	0.0	0.7	6.2	10288	0.6	8.5	8.9	10.4	0.0	0.0	0.0	0.1	0.1	0.0	2.5	1.2	21.5
UAE		62.0	80.5	0.0	0.0	29.7	1845.1	116.7	0.4	5641.6	27.2	0.0	0.0	107.5	0.0	14.9	69.8	0.0	0.1	0.0	0.0	0.0	0.0
Turkey		2.7	0.0	28.0	231.9	9.0	7.7	2.1	11.6	47.9	5.0	0.0	224.1	76.7	14.8	13.7	6.7	4.8	2.5	0.8	39.5	16.4	0.0
Belgium		33.5	155.4	37.5	41.4	33.2	82.5	41.0	60.4	42.1	62.5	184.6	216.3	397.0	397.0	80.0	728.4	131.8	80.3	9.0	117.7	382.7	143.0
Denmark		42.0	520.0	14.7	11.1	16.9	53.1	13.6	16.4	6.2	15.1	56.6	0.0	28.7	0.0	114.5	49.5	8.9	7.2	3.5	49.4	123.6	49.8
France		83.8	756.0	165.8	162.8	319.8	463.1	209.4	115.2	300.0	526.2	419.0	338.3	2869.4	232.0	420.7	6316.7	214.5	28.6	652.1	708.3	426.9	426.9
Germany		181.5	528.6	346.4	323.5	341.9	804.9	572.8	248.4	446.1	596.6	1493.0	827.6	1469.8	1424.6	1324.6	334.2	370.6	59.7	665.7	1676.2	1470.6	1470.6
Greece		5.6	30.6	64.9	18.3	7.1	12.5	15.2	41.1	23.2	5.3	187.6	118.4	68.7	21.8	43.5	4.9	3.9	6.0	0.7	4.9	18.9	21.7
Italy		137.8	504.4	240.9	198.9	263.6	307.7	235.3	173.4	223.3	655.7	2052.0	324.6	1205.7	1448.3	277.2	206.1	7091.2	29.4	354.9	656.4	297.0	297.0
Netherlands		82.9	865.5	46.5	57.4	45.5	196.6	91.0	26.0	73.6	414.0	425.6	675.9	220.5	292.0	184.7	60.6	59.6	8.3	129.6	435.2	139.5	139.5
Spain		22.7	32.4	123.2	37.6	51.0	42.6	31.1	65.8	39.7	30.8	27.9	259.8	57.7	522.8	111.8	63.3	36.8	5.8	148.5	98.2	147.9	147.9
UK		443.2	1136.3	119.2	174.9	213.5	1378.7	711.1	306.4	80.8	542.5	994.0	682.3	1128.1	171.6	905.5	1040.0	86.7	94.9	33.4	492.0	644.5	253.2
Austria		15.5	80.5	35.5	78.6	20.6	30.8	15.5	29.2	45.6	44.5	62.6	193.2	34.7	76.2	132.9	37.4	13.9	30.5	2.6	53.2	173.4	289.6
Sweden		17.6	29.8	19.6	63.9	47.2	124.2	44.3	66.3	16.3	42.4	89.2	102.8	54.2	91.8	438.5	93.4	23.8	21.9	12.4	100.4	265.0	116.0
Switzer.		26.6	33.4	56.8	56.4	37.6	90.6	69.0	86.3	34.3	61.4	91.6	200.3	114.3	115.3	284.0	148.9	46.2	59.8	10.6	162.3	258.9	184.6
Yugoslavia		1.1	32.2	80.1	145.9	155.5	8.7	51.7	6.9	14.0	14.2	104.7	253.9	105.9	40.5	440.0	71.1	7.5	24.9	2.3	47.6	32.2	1070.0
USA		753.0	47.7	281.2	275.3	493.8	794.0	618.1	1471.6	127.3	962.2	1026.6	766.3	1097.8	598.1	752.9	2083.6	22.0	159.0	1066.6	2729.0	2558.9	898.6
Brazil		14.2	23.8	12.0	180.2	14.2	21.7	9.7	12.3	4.8	3.9	5.0	14.1	10.3	26.7	7.6	102.5	3.7	17.9	14.9	165.9	31.3	143.8
Japan		499.3	1250.5	227.9	632.8	1174.1	2525.0	1313.5	1188.5	144.6	1175.0	2219.2	737.5	577.2	301.5	1227.3	1841.8	76.1	56.3	281.2	2539.3	608.4	3029.0
China		21.9	855.4	13.6	73.7	58.6	32.1	28.3	29.4	35.0	70.5	319.3	128.7	306.1	33.8	65.2	31.0	8.0	10.2	450.5	61.8	129.7	129.7
Hong K.		24.7	84.0	11.0	18.2	39.4	41.2	43.7	51.1	5.3	74.5	116.3	18.5	79.0	5.9	17.3	64.7	8.1	7.4	34.2	68.2	74.1	344.8
Indonesia		0.0	0.0	2.5	1.2	8.4	24.5	2.4	3.9	1.0	10.1	0.0	0.0	0.0	0.0	0.0	0.7	0.9	1.7	42.4	4.9	6.3	6.3
Korea Rep		50.8	0.0	16.4	0.0	113.5	67.5	54.1	158.7	4.9	93.2	0.0	325.1	239.4	14.2	591.9	202.2	11.4	7.7	41.1	382.5	189.1	0.0
Thailand		21.6	368.1	0.1	27.2	16.2	33.9	10.4	7.6	0.7	24.9	11.4	0.0	0.0	0.0	0.0	1.9	2.1	2.8	37.0	11.8	8.5	8.5

$PX_i \cdot X_i$   
 $X_i$   
 $PX_i$

Table C-9. Weighted Average Export Unit Price for Manufactures in 1984

Export = Market ↓	Competition ↓	Bahrain	Dem Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel Oppng	Other Devel Oppd	Centr- ally Pland	
Bahrain		91129	0.0	11157	15.7	3.2	1.8	1.9	3.8	1.9	0.0	1.7	2.4	2.4	3.0	33.0	0.0	0.7	1.1	1.4	0.1	2.0	0.8	2.6
Egypt		3.7	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.1	0.0	0.2	0.0	26.3
Iraq		0.2	0.0	10645	24.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.1	0.0	0.0	0.0	4.1
Kuwait		12.9	181.6	2.5	33.9	3841.3	23.9	18.9	22.8	1.9	82.7	11.1	95.1	0.0	0.0	0.0	41.3	1.7	1.7	0.0	0.0	7.0	2.6	8.6
Qatar		8.5	0.2	0.6	3.2	23.6	93.6	6170.4	11.0	0.0	22.1	0.0	6.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Saudi Arabia		44.2	1352.4	38.0	20.7	34.8	30.6	4322.6	5.2	18.6	1690.7	0.0	2283.8	0.0	0.0	0.0	277.4	125.4	3.1	0.4	0.4	19.3	9.2	0.0
Syria		0.4	0.0	0.0	2.2	0.0	0.6	11665	6.1	0.6	8.4	8.7	10.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.5	1.2	21.2
UAE		61.0	79.2	0.0	0.0	8.8	29.2	1816.6	114.9	11.4	0.4	5423.8	26.7	0.0	105.9	14.6	68.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turkey		2.7	0.0	27.5	227.7	8.9	7.5	2.0	11.4	47.0	5.0	0.0	220.0	75.3	14.5	13.5	13.5	2.4	4.8	0.7	82.7	38.8	16.1	
Belgium		31.3	145.2	35.0	38.7	31.0	77.1	38.3	56.4	39.3	58.4	172.4	202.1	370.8	370.9	84.1	680.4	123.1	75.0	8.4	110.0	357.5	133.6	
Denmark		40.0	495.2	14.0	16.1	50.5	13.0	15.6	5.9	14.4	53.9	0.0	27.4	109.0	0.0	0.0	47.2	8.4	6.9	3.3	47.0	117.8	47.5	
France		82.7	746.4	163.7	160.7	315.7	308.3	457.3	206.7	113.7	296.3	519.6	413.7	334.0	2833.1	229.1	415.4	5962.4	211.8	28.3	643.8	697.4	421.5	
Germany		161.6	470.6	308.4	288.0	304.4	716.6	316.1	509.9	221.1	397.1	531.1	1329.2	736.8	1308.5	1268.2	1179.2	297.6	329.9	53.1	592.6	1492.2	1309.2	
Greece		5.3	28.8	61.0	17.2	6.7	11.7	14.3	38.7	21.8	4.9	176.3	111.3	20.5	40.9	4.6	3.7	5.8	0.6	4.6	17.8	20.4		
Italy		134.5	492.2	235.1	194.1	257.2	300.3	229.6	309.1	169.2	217.9	639.9	2002.6	316.8	1176.6	1413.4	270.5	201.1	6649.0	28.7	346.3	640.5	289.8	
Netherlands		78.8	822.3	44.1	43.2	185.8	86.4	91.0	24.7	69.9	393.3	404.3	642.1	209.5	277.4	175.4	57.5	56.6	7.9	413.5	123.1	413.5	132.5	
Spain		23.0	32.8	124.8	38.1	51.7	43.2	66.7	40.2	31.2	28.2	263.2	58.5	529.7	81.4	113.2	64.2	37.1	5.9	150.5	99.5	149.8		
UK		421.4	1060.2	113.3	166.2	203.0	1310.6	675.9	291.3	76.9	515.8	944.9	1072.4	163.1	860.8	988.6	82.4	90.2	31.7	612.6	240.7	240.7		
Austria		14.5	75.6	33.3	73.7	19.4	28.9	14.6	27.4	42.8	41.7	58.8	181.3	71.5	124.7	35.1	13.1	28.6	2.5	271.8	162.7	271.8		
Sweden		17.4	29.4	19.3	46.6	122.6	43.7	65.5	16.1	41.9	88.0	101.5	53.5	90.5	432.6	92.2	23.5	21.6	12.2	261.4	114.5	114.5		
Switzerland		24.1	30.2	51.4	51.0	34.0	62.4	78.1	31.0	31.0	55.5	82.9	181.2	103.4	257.0	134.7	41.8	54.1	9.6	164.9	234.3	167.0		
Yugoslavia		1.1	31.2	87.3	141.4	150.7	8.5	50.1	6.7	13.5	13.8	101.5	246.1	102.6	426.4	68.9	7.3	24.2	2.2	46.1	31.2	1037.0		
USA		759.3	48.1	283.6	277.6	497.9	800.6	623.3	1483.8	128.3	990.3	1035.1	772.7	1107.0	759.1	2111.1	22.2	160.3	1094.1	2751.8	2580.3	947.4	149.1	
Brazil		14.7	24.7	12.4	186.6	14.7	22.4	10.0	12.7	5.0	4.1	5.2	14.6	10.7	7.9	106.2	3.8	18.5	15.4	171.9	32.5	149.1		
Japan		499.3	1250.5	227.9	632.8	1174.1	2525.0	1313.5	1188.5	144.6	1175.0	2219.2	737.5	577.2	1227.3	1841.8	76.1	56.3	281.2	2539.3	608.4	3029.0		
China		21.9	652.5	13.5	73.5	58.4	32.0	28.3	29.3	34.9	70.3	318.3	128.2	305.0	65.0	30.9	7.0	8.0	449.0	61.6	129.3	129.3		
Hong K.		24.3	82.5	10.8	17.8	38.7	40.5	42.9	50.2	5.2	73.2	114.2	18.2	77.6	17.0	63.5	8.0	7.3	33.6	67.0	72.8	338.7		
Indonesia		0.0	0.0	2.5	1.2	24.1	2.4	3.9	1.0	8.9	1.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9	1.7	41.7	4.9	6.2		
Korea Rep		51.7	0.0	16.7	115.4	88.9	55.0	161.3	94.7	5.0	94.7	0.0	330.5	243.4	601.7	205.6	11.6	7.9	41.8	388.8	182.2	0.0		
Thailand		21.2	361.3	0.1	26.7	15.9	33.3	10.2	7.5	0.7	24.5	11.2	0.0	0.0	0.0	0.0	1.9	2.1	2.7	36.4	11.6	8.4		

Table C-9. Weighted Average Export Unit Price for Manufactures in 1985

Export Market	Competitor #	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel opng	Centr-ally Pland	
Bahrain	69738	0.0	0.0	12474	0.0	0.0	150	3.0	1.7	1.8	3.6	0.0	1.7	21.4	0.0	0.0	0.0	0.0	0.6	1.1	1.3	0.1	1.9	25.2
Egypt	0.0	0.0	0.0	0.0	2.5	10998	24.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4	0.4	0.0	0.0	0.2	0.0	0.0
Iraq	0.2	0.0	0.0	0.0	191.3	2.6	35.7	4538.6	25.1	19.9	24.0	2.0	11.7	87.1	100.1	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.7	9.1
Kuwait	13.6	181.3	2.6	35.7	4538.6	25.1	19.9	24.0	11.7	87.1	100.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Qatar	8.4	0.2	0.6	3.2	23.3	92.6	6289.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	40.1	1226.6	34.5	13.9	18.8	31.6	27.7	3351.2	4.7	16.9	1524.3	0.0	2071.3	7.5	251.6	113.7	0.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0
Syria	0.4	0.0	0.0	0.0	0.0	2.2	0.0	0.6	6.1	1008.2	0.6	8.3	10.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.2	21.1
UAE	60.8	79.0	0.0	79.0	0.0	8.8	29.1	1810.5	114.5	11.4	5259.1	26.7	105.5	0.0	0.0	14.6	68.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turkey	2.6	0.0	27.0	223.5	8.7	7.4	2.0	11.1	46.2	0.0	74.0	14.3	13.2	6.4	2.4	4.7	0.7	81.2	38.1	15.8	137.3	367.5	137.3	49.2
Belgium	32.1	149.3	36.0	39.8	31.8	79.2	39.4	58.0	40.4	60.0	177.3	207.8	381.3	381.3	86.5	699.6	126.6	77.2	8.6	113.1	8.6	113.1	367.5	137.3
Denmark	41.5	513.8	14.5	11.0	16.7	52.4	13.5	16.2	6.1	14.9	56.0	0.0	28.4	0.0	0.0	113.1	48.9	8.8	7.1	3.5	49.8	122.2	49.2	437.7
France	85.9	775.1	170.0	166.9	327.9	318.0	474.9	214.7	118.1	307.6	539.6	429.6	346.9	294.2	0.0	0.0	113.1	48.9	8.8	7.1	3.5	49.8	122.2	437.7
Germany	166.1	483.5	316.8	295.9	312.7	736.2	324.8	523.9	227.2	408.0	545.7	1365.6	757.0	1344.3	1303.0	1211.5	305.7	338.9	54.8	608.8	1533.1	1345.0	437.7	1345.0
Greece	5.0	27.3	57.9	16.3	6.3	11.1	13.6	36.7	20.7	4.7	167.3	105.6	61.3	19.4	38.8	4.4	3.5	5.4	0.6	4.4	16.8	19.3	19.3	19.3
Italy	134.5	492.2	235.1	194.1	257.2	300.3	229.6	309.1	169.2	217.9	639.9	2002.6	316.8	1178.6	1413.4	270.5	201.1	6572.5	28.7	346.3	640.5	289.8	132.5	289.8
Netherlands	78.8	822.3	44.1	54.5	43.2	186.8	86.4	91.0	24.7	69.9	393.3	404.3	642.1	209.5	277.4	175.4	57.5	58.8	7.9	123.1	413.5	132.5	132.5	132.5
Spain	22.4	32.0	121.6	37.1	50.3	42.1	30.7	65.0	39.2	30.4	27.5	256.4	56.9	515.9	79.3	110.3	62.5	36.1	5.7	146.6	96.9	145.9	145.9	145.9
UK	432.3	1108.2	116.3	170.6	208.3	1344.6	693.5	298.9	78.8	529.1	969.5	665.5	1100.2	167.4	883.1	1014.3	84.5	92.5	32.5	479.9	628.6	246.8	246.8	246.8
Austria	14.9	77.5	34.2	75.7	19.9	29.7	14.9	28.1	43.9	42.8	60.3	186.0	33.4	73.3	128.0	36.0	13.4	29.4	2.5	157.0	278.9	278.9	278.9	278.9
Sweden	17.6	29.8	19.6	63.9	47.2	124.2	44.3	66.3	16.3	42.4	89.2	102.8	54.2	91.8	438.5	93.4	23.8	21.9	12.4	100.4	266.0	116.0	116.0	116.0
Switzerland	23.8	29.8	50.7	50.3	33.6	80.9	61.6	77.1	30.6	54.8	81.8	178.8	102.0	103.0	253.6	133.0	41.3	53.4	9.5	162.7	231.2	164.8	164.8	164.8
Yugoslavia	1.1	30.5	85.1	137.8	146.9	8.3	48.9	6.5	13.2	13.5	98.9	239.9	100.0	38.2	415.6	67.2	7.1	23.5	2.2	45.0	30.4	1010.7	1010.7	1010.7
USA	771.9	48.9	286.3	282.1	506.1	813.9	633.6	1508.4	130.5	1006.7	1062.2	785.4	1125.3	613.0	771.7	2145.9	22.8	163.0	1079.1	2797.3	2622.9	863.0	863.0	863.0
Brazil	13.6	22.7	11.4	171.6	13.5	20.6	9.2	11.7	4.6	3.8	4.8	13.4	9.9	25.5	7.2	97.7	3.5	17.0	14.2	158.0	29.8	137.1	137.1	137.1
Japan	489.0	1224.7	223.2	619.7	1149.9	2472.9	1286.4	1164.0	141.6	1150.8	2173.5	722.3	565.3	295.2	1202.0	1803.8	74.5	55.1	275.4	2468.9	595.9	2866.5	128.7	128.7
China	21.8	848.8	13.5	73.1	58.1	31.9	28.1	29.2	34.7	70.0	316.9	127.7	303.7	33.5	64.7	30.7	6.9	7.9	10.1	447.0	61.3	128.7	128.7	128.7
Hong K.	25.0	84.8	11.1	18.3	39.7	41.6	44.1	51.6	5.4	75.2	117.4	18.7	79.8	6.0	17.5	65.3	8.2	7.5	34.5	68.9	74.8	348.1	348.1	348.1
Indonesia	0.0	0.0	2.4	1.2	8.0	23.3	2.3	3.8	0.9	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9	1.6	40.4	4.7	6.0	6.0	6.0
Korea Rep	50.4	0.0	16.3	0.0	112.5	86.7	53.7	157.3	4.9	92.4	0.0	322.4	237.4	14.1	586.9	200.5	11.9	7.7	40.8	379.3	187.5	0.0	0.0	0.0
Thailand	20.4	348.4	0.1	25.8	15.3	32.1	9.9	7.2	0.7	24.4	10.8	0.0	0.0	0.0	0.0	8.4	1.8	2.0	2.6	35.1	11.2	8.1	8.1	8.1
PCK <sub>1</sub>	95.5	96.5	144.1	138.1	80.6	88.1	106.1	81.7	112.9	95.4	92.0	83.6	92.8	81.5	86.0	89.7	73.6	78.1	113.7	94.2	88.8	90.0	90.0	90.0
X <sub>1</sub>	0.69	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.08	0.08	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55	1.55	1.55
PCK <sub>1</sub> ·X <sub>1</sub>	64.94	61.42	361.7	6152	129.0	26.43	21.22	1644	277.7	79.18	104.0	41.0	7.42	4.89	218.4	1535	43.42	88.25	4.55	119.8	2.66	139.5	139.5	

Table C-9. Weighted Average Export Price Value for Manufacturers in 1986

Export = Market #	Competitor #	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel	Other Centr- ally Pland
Bahrain	8872.6	0.0	0.5	5.4	2.0	8.9	6.8	2.4	24.6	0.3	1.9	0.8	0.0	115.7	14.7	0.0	1.4	0.1	0.0	0.1	1.5	0.8	1.9
Egypt	4.2	0.0	13419	17.7	3.6	2.0	4.2	2.1	2.0	0.0	2.0	25.3	0.0	626.7	37.3	0.0	0.7	1.2	1.8	0.1	2.2	4.6	29.7
Iraq	0.2	0.0	2.5	11140	24.0	0.0	0.0	0.0	0.2	0.1	11.7	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.4	0.0	0.2	0.0	0.0
Kuwait	16.1	226.3	3.1	42.2	6838.5	29.7	23.6	28.4	2.4	13.8	103.1	0.0	0.0	118.4	0.0	0.0	51.4	0.0	2.1	0.0	8.7	3.2	10.7
Qatar	8.3	0.2	0.6	3.2	23.1	91.6	6392.1	10.8	21.7	0.0	0.0	0.0	0.0	0.0	5.9	0.0	65.3	0.0	0.1	0.0	0.0	0.0	0.0
Saudi A. Saudi A.	47.4	1451.0	40.8	22.2	37.4	32.8	2632.4	20.0	1803.1	0.0	2450.2	8.9	0.0	297.6	297.6	134.5	1.0	3.3	0.4	0.4	20.7	9.9	0.0
Syria	0.4	0.0	0.0	2.5	0.0	0.7	1386.5	0.7	9.7	10.1	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	2.9	1.4	24.5
UAE	70.5	91.6	0.0	10.2	33.8	2099.4	132.7	13.2	5184.7	30.9	0.0	30.9	0.0	122.4	16.9	79.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Turkey	3.1	0.0	31.9	264.0	10.3	8.7	13.2	54.5	5.7	0.0	255.0	87.3	16.8	15.6	7.6	2.8	5.5	0.9	45.0	18.7	0.0	0.0	0.0
Belgium	41.0	190.2	45.8	50.7	40.6	101.0	50.2	73.9	51.5	76.5	225.9	264.7	485.7	110.1	891.3	161.3	98.3	11.0	144.1	468.2	174.9	62.3	513.4
Denmark	52.5	650.0	18.4	13.9	21.1	66.3	17.0	20.5	7.7	18.9	70.8	0.0	0.0	143.1	61.9	11.1	9.0	4.4	61.7	154.6	62.3	154.6	62.3
France	100.7	909.1	199.3	195.7	384.6	373.0	556.9	251.8	138.5	360.8	632.8	406.8	3450.5	279.0	505.9	8857.3	258.0	32.0	784.1	849.4	513.4	1793.4	513.4
Germany	221.4	644.6	422.4	394.5	417.0	981.6	433.0	698.6	302.9	544.0	727.6	1820.8	1737.3	1615.4	407.6	451.9	72.8	811.8	2044.1	1793.4	1793.4	1793.4	1793.4
Greece	5.6	30.6	64.9	18.3	7.1	12.5	15.2	41.1	23.2	5.3	187.8	118.4	68.7	21.8	43.5	4.9	6.0	0.7	4.9	18.9	21.7	18.9	21.7
Italy	169.3	619.8	296.0	244.4	323.9	378.2	289.2	389.3	213.1	274.4	805.8	2521.8	1481.7	340.7	1779.8	250.3	8910.7	36.2	436.1	806.6	364.9	364.9	364.9
Netherlands	98.4	1027.8	55.2	68.1	54.0	232.2	108.0	113.8	30.9	87.3	491.6	505.3	802.7	219.3	346.8	71.9	70.8	9.9	153.9	516.8	165.8	165.8	165.8
Spain	29.0	41.3	157.2	47.9	65.1	54.4	39.7	84.0	50.7	39.4	35.6	331.6	73.7	102.5	142.6	80.8	46.7	7.4	189.5	125.3	189.7	189.7	189.7
UK	508.9	1304.8	136.9	200.8	245.2	1582.9	816.4	351.8	92.8	622.9	1141.3	783.4	1295.2	1194.0	1039.7	99.5	108.9	38.3	564.9	739.9	290.7	290.7	290.7
Austria	18.9	98.4	43.4	96.0	25.2	37.6	19.0	35.7	55.7	54.4	76.5	236.1	42.4	162.4	45.7	17.0	37.3	3.2	65.0	211.9	354.0	354.0	354.0
Sweden	21.9	37.0	24.3	79.2	58.5	154.0	54.9	82.3	20.2	52.6	110.6	127.5	67.2	113.8	543.7	115.8	29.5	27.1	124.5	326.5	143.8	143.8	143.8
Switzer.	31.7	39.7	67.6	67.1	44.8	107.8	82.1	102.8	40.8	73.1	109.0	238.4	136.0	137.3	338.1	177.3	55.0	71.2	217.0	308.3	219.7	219.7	219.7
Yugoslavia	1.1	32.1	89.6	145.2	154.7	8.7	51.5	6.8	13.9	14.2	104.2	252.6	105.3	437.6	70.7	7.5	24.8	2.3	47.4	32.0	1064.3	1064.3	1064.3
USA	797.0	50.5	297.6	291.3	522.6	840.3	654.2	1557.4	134.7	1039.4	1086.4	811.0	1161.9	633.0	796.8	2215.7	23.3	168.3	2888.2	2708.2	994.4	994.4	994.4
Brazil	16.0	26.8	13.5	202.9	15.9	24.4	10.9	13.8	5.4	4.4	5.6	11.7	30.1	8.5	115.5	4.1	20.1	16.8	186.9	35.3	162.1	162.1	162.1
Japan	592.0	1482.6	270.2	750.2	1391.9	2993.5	1557.2	1409.1	171.4	1393.1	2631.0	874.4	684.3	1455.1	2183.6	80.2	66.7	333.4	3010.5	721.3	3591.1	3591.1	3591.1
China	25.7	1003.9	15.9	86.5	68.7	37.7	33.3	34.5	41.1	82.7	374.8	151.0	359.2	76.6	36.3	8.2	9.4	11.9	528.7	72.5	152.2	152.2	152.2
Hong K.	29.5	100.2	13.2	21.7	46.9	49.2	52.1	60.9	6.3	88.8	138.7	22.1	94.2	7.0	20.7	9.7	8.9	40.8	81.4	88.4	411.3	411.3	411.3
Indonesia	0.0	0.0	2.8	1.4	9.4	27.6	2.7	4.4	1.1	11.4	0.0	0.0	0.0	0.0	0.0	0.8	1.1	1.9	47.7	5.6	7.1	7.1	7.1
Korea Rep	50.1	0.0	16.2	0.0	111.8	86.2	53.4	156.4	4.8	91.8	0.0	320.4	235.9	583.2	199.3	11.2	7.6	40.6	376.9	186.3	0.0	0.0	0.0
Thailand	24.1	411.7	0.1	30.5	18.1	38.0	11.7	8.5	0.8	28.3	12.8	0.0	0.0	0.0	8.9	2.1	2.4	3.1	41.4	132	9.5	9.5	9.5
PCX <sub>i</sub>	96.6	104.7	157.5	145.1	109.9	104.6	115.0	82.3	153.4	102.1	109.5	101.6	108.7	99.4	103.3	105.9	104.2	116.4	109.0	105.0	107.7	107.7	107.7
X <sub>i</sub>	0.88	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.48	0.06	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55	1.55	1.55
PCX <sub>i</sub> ·X <sub>i</sub>	67.05	74.34	395.3	6464	175.8	31.4	23.0	1656	377.4	84.74	123.7	49.78	8.78	5.96	262.4	181.2	60.24	4.66	138.4	3.15	166.9	166.9	166.9

Table C-9. Weighted Average Export Unit Price for manufactures in 1987

Export Market	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel opng	Centrally Planed
Bahrain	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5	0.6
Egypt	4.6	0.0	15883	19.5	3.9	2.2	2.4	4.7	0.0	2.2	27.8	0.0	688.0	40.9	0.0	0.8	1.4	1.7	0.1	2.4	5.1	32.6
Iraq	0.2	0.0	2.7	12895	26.7	0.0	0.0	0.0	0.2	13.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.5	0.0	0.0	0.0	0.0
Kuwait	21.0	294.7	4.1	55.0	8312.7	38.7	30.7	37.0	3.1	18.0	134.2	0.0	154.2	0.0	0.0	67.0	0.0	2.7	0.0	11.3	4.2	14.0
Qatar	9.3	0.2	0.6	3.5	101.7	6618.9	12.0	0.0	0.0	24.0	0.1	0.0	0.0	6.5	0.0	72.5	0.0	0.1	0.0	0.0	0.0	0.0
Saudi A.	46.3	1416.4	39.8	16.1	21.7	36.5	32.0	2792.7	5.5	1760.1	0.0	2391.7	8.7	290.5	131.3	1.0	3.3	0.4	20.2	9.7	0.0	0.0
Syria	0.5	0.0	0.0	0.0	2.8	0.0	0.8	1465.2	0.8	10.6	11.1	12.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	3.2	1.5	26.8
UAE	77.2	100.3	0.0	11.1	37.0	2298.7	145.3	14.4	0.5	5710.6	33.8	0.0	134.0	0.0	18.5	87.0	0.0	0.1	0.1	0.0	0.0	0.0
Turkey	3.4	0.0	35.0	289.8	11.3	9.8	2.6	14.5	59.9	0.0	280.0	95.9	18.5	17.2	8.3	3.1	6.1	0.9	105.3	49.4	20.5	0.0
Belgium	46.7	218.7	52.3	57.8	46.2	115.1	57.3	84.2	58.7	87.2	257.4	301.7	553.6	553.7	125.5	1015.9	183.8	112.0	12.5	164.2	533.7	199.4
Denmark	62.0	767.6	21.7	16.4	25.0	78.3	20.1	24.2	9.1	22.3	83.6	0.0	42.4	0.0	169.0	73.1	13.1	10.7	5.2	72.9	182.5	73.6
France	116.6	1052.7	230.8	226.7	445.3	431.9	644.9	291.5	160.4	417.8	732.7	583.5	471.1	3996.4	323.1	566.8	1051.6	298.7	37.0	908.0	963.5	594.4
Germany	261.3	760.7	498.5	466.5	492.0	1158.3	511.0	824.3	357.4	641.9	858.5	2148.5	1191.0	2115.1	2050.0	1908.1	481.0	533.3	85.9	957.9	2412.1	2116.2
Greece	6.3	34.3	72.8	20.5	8.0	14.0	17.1	48.1	26.0	5.9	210.2	132.7	77.0	24.4	48.7	5.5	4.4	6.7	0.7	5.5	21.2	24.3
Italy	197.5	723.1	345.4	285.1	377.9	441.2	337.4	454.2	248.6	320.1	940.1	2942.0	465.4	1728.6	2076.5	397.4	296.5	1080.3	42.2	508.8	941.0	425.8
Netherlands	115.0	1200.9	64.5	79.6	63.1	271.3	126.2	132.9	36.1	102.1	574.4	590.5	937.8	306.0	405.2	256.2	84.0	82.7	11.6	179.8	603.9	193.5
Spain	27.8	39.8	150.7	48.0	62.4	52.2	38.1	80.8	48.6	37.7	34.1	317.9	70.6	639.7	98.3	136.8	77.5	44.8	7.1	181.7	120.1	180.9
UK	585.5	1501.0	157.5	231.0	282.1	1821.2	899.3	404.8	108.8	716.7	1313.1	901.3	1490.2	226.7	1196.2	1373.8	114.5	125.3	44.1	650.0	851.3	334.4
Austria	22.4	116.3	51.3	113.5	29.8	44.5	22.4	42.1	65.9	64.2	279.0	50.1	110.0	54.1	192.0	20.1	44.1	3.8	76.8	250.5	418.4	167.0
Sweden	25.4	42.9	28.2	92.0	68.0	178.9	63.8	95.5	23.4	61.1	128.5	148.1	78.1	132.1	631.4	134.5	34.2	31.5	17.8	144.5	381.5	167.0
Switzerland	38.0	47.7	81.2	80.5	53.8	129.5	98.6	123.3	49.0	87.7	130.8	286.1	163.2	164.7	405.7	212.7	66.0	65.5	15.1	260.4	399.9	263.7
Yugoslavia	1.2	35.4	98.6	160.1	170.5	9.6	56.7	7.6	15.3	15.6	114.9	278.5	116.1	44.4	482.6	78.0	8.3	27.3	2.5	52.2	35.3	1173.6
USA	815.8	51.7	304.7	298.2	534.9	860.2	669.6	1594.2	137.9	1064.0	1112.1	830.1	1189.3	647.9	815.6	2268.1	23.8	172.3	1086.6	2956.5	2772.2	1017.8
Brazil	18.8	31.5	15.8	238.1	18.7	28.6	12.8	16.2	6.3	5.2	18.6	13.7	35.3	10.0	135.5	4.8	23.6	19.7	219.3	41.4	190.2	190.2
Japan	648.6	1624.4	296.0	821.9	1525.1	3279.9	1706.2	1543.8	187.8	1526.4	2882.7	958.0	749.8	391.6	1594.2	2392.4	98.9	73.1	365.2	3298.5	730.3	3934.6
China	28.3	1102.6	17.5	95.0	75.5	41.4	36.5	37.9	45.1	90.9	411.6	165.9	394.5	43.5	84.1	39.9	9.0	10.3	580.6	79.6	167.2	167.2
Hong K.	32.4	110.1	14.5	23.8	51.6	54.0	57.3	66.9	7.0	97.6	152.4	24.2	103.5	7.7	22.7	84.7	10.7	9.8	89.4	97.1	451.8	451.8
Indonesia	0.0	0.0	3.1	1.5	10.3	30.3	3.0	4.9	1.2	12.5	0.0	0.0	0.0	0.0	0.0	29.2	0.9	1.2	52.4	6.1	7.8	7.8
Korea Rep	54.1	0.0	17.5	0.0	120.7	93.0	57.6	168.7	5.2	99.1	0.0	345.7	254.6	15.1	629.3	215.0	12.1	8.2	43.8	406.7	201.0	0.0
Thailand	26.5	452.0	0.1	33.4	19.9	41.7	12.8	9.4	0.9	31.0	14.0	0.0	0.0	0.0	0.0	10.9	2.3	2.6	45.5	14.5	10.4	10.4

PCX<sub>t</sub>  
X<sub>t</sub>  
PCX<sub>t</sub>.X<sub>t</sub>

Table C-9. Weighted Average Export Unit Price for Manufactures 1988

Market	Export	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel	Centr-ally Pland	Competitor ↓
Bahrain	6757.0	0.0	0.5	2.0	8.7	6.5	24.2	0.3	1.8	0.8	0.0	113.7	14.5	0.0	0.0	0.0	1.4	0.1	0.0	0.1	1.5	0.6	1.9	0.6
Egypt	5.0	0.0	20167	21.0	4.2	2.4	2.5	5.0	0.0	2.3	30.0	44.2	0.0	0.0	0.0	0.9	1.5	1.9	0.1	0.1	2.6	5.5	35.2	5.0
Iraq	0.2	0.0	15405	29.0	0.0	0.0	0.0	0.0	0.1	14.2	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.5	0.0	0.3	0.0	0.0	0.0	0.2
Kuwait	18.8	264.0	8220.9	34.7	27.5	33.1	2.8	2.8	16.1	120.2	0.0	138.1	0.0	0.0	0.0	60.0	0.0	2.4	10.1	0.0	3.8	12.5	0.0	18.8
Qatar	10.1	0.2	3.8	27.9	110.8	6388.9	13.1	0.0	28.2	0.0	0.0	7.1	0.0	0.0	0.0	78.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	10.1
Saudi A.	50.4	1542.2	43.4	17.5	39.7	34.9	2617.8	6.0	21.3	1916.5	0.0	2604.2	0.0	0.0	9.5	143.0	1.1	3.6	22.0	0.4	10.5	0.0	0.0	50.4
Syria	0.5	0.0	0.0	0.0	0.9	8.4	6247.8	0.8	11.4	11.9	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.6	28.9	0.0	0.5
UAE	83.4	108.3	0.0	12.0	39.9	2481.8	15.6	0.5	5700.0	36.5	0.0	144.7	0.0	0.0	20.0	83.9	0.0	0.1	0.0	0.1	0.0	0.0	0.0	83.4
Turkey	3.7	0.0	37.8	312.9	12.2	10.4	2.8	15.6	64.6	8.8	0.0	302.3	103.5	20.0	18.5	9.0	3.3	6.5	113.7	1.0	53.3	22.1	0.0	3.7
Belgium	49.8	231.1	55.7	61.6	49.3	122.7	61.0	89.8	274.4	321.6	590.2	133.8	1082.9	196.0	119.4	13.4	175.0	568.9	212.6	76.5	189.9	76.5	212.6	64.5
Denmark	64.5	798.6	22.6	17.0	26.0	81.5	20.9	25.1	23.2	87.0	0.0	44.1	175.8	76.0	11.1	5.4	75.8	189.9	76.5	1019.2	616.0	616.0	76.5	64.5
France	120.9	1090.9	239.2	234.9	461.5	447.6	668.3	302.1	166.2	433.0	759.4	604.7	488.2	4140.6	334.8	607.1	1092.3	309.6	941.0	1019.2	616.0	616.0	120.9	120.9
Germany	267.8	780.0	511.1	477.4	504.5	1187.7	524.0	845.2	366.5	658.2	880.4	2203.2	1221.3	2168.8	1954.6	493.2	546.8	982.3	2473.4	2170.0	25.9	25.9	2170.0	267.8
Greece	6.7	36.5	77.4	21.8	8.5	14.9	18.2	49.1	27.6	8.3	223.8	141.2	82.0	26.0	51.9	4.6	7.2	0.8	22.5	450.8	25.9	25.9	450.8	6.7
Italy	209.2	765.7	366.7	301.9	400.1	467.2	357.2	480.9	263.2	338.9	995.5	3115.1	492.8	2198.6	420.8	312.9	1099.4	538.7	996.4	450.8	25.9	25.9	450.8	209.2
Netherlands	121.2	1265.8	68.0	63.9	66.5	286.0	133.1	140.1	38.0	107.6	605.4	622.4	988.5	322.5	427.1	270.1	88.6	87.2	636.5	204.0	204.0	204.0	204.0	121.2
Spain	33.8	48.1	183.2	55.9	75.9	63.4	46.3	97.9	59.1	45.8	41.4	386.3	85.8	777.3	119.5	166.2	94.2	54.4	146.0	219.8	204.0	204.0	219.8	33.8
UK	658.7	1683.4	176.6	259.1	316.3	2042.5	1053.4	454.0	119.8	803.8	1472.6	1671.3	254.2	1341.5	1540.7	128.4	140.6	49.4	954.8	375.0	375.0	375.0	375.0	658.7
Austria	23.5	122.3	53.9	119.3	31.3	46.8	23.6	44.3	69.2	67.5	293.4	52.6	115.6	201.8	56.8	21.2	46.3	4.0	439.8	375.0	375.0	375.0	375.0	23.5
Sweden	27.5	46.5	30.5	99.6	73.7	193.8	69.1	103.5	68.2	139.2	160.4	84.6	143.1	684.0	145.7	37.1	34.1	19.3	413.3	181.0	181.0	181.0	181.0	27.5
Switzerland	38.0	47.7	81.2	80.5	53.8	129.5	98.6	123.3	49.0	87.7	130.8	286.1	163.2	164.7	405.7	212.7	85.5	15.1	369.9	263.7	263.7	263.7	263.7	38.0
Yugoslavia	1.3	38.2	106.6	172.8	184.1	10.3	61.3	8.2	16.5	16.9	124.0	300.7	125.3	47.9	520.9	84.2	8.9	29.5	1266.9	1266.9	1266.9	1266.9	1266.9	1.3
USA	866.0	54.8	323.4	316.6	567.8	913.1	710.9	1692.3	146.4	1129.5	1180.5	681.2	1262.5	697.8	865.8	2407.6	25.3	182.9	2942.8	1080.5	1080.5	1080.5	1080.5	866.0
Brazil	20.3	34.0	17.1	257.0	20.2	30.9	13.8	17.5	6.8	5.6	7.1	20.1	14.8	38.1	10.8	146.3	5.2	25.5	44.7	205.3	205.3	205.3	205.3	20.3
Japan	715.5	1792.0	326.6	906.8	1682.4	3618.3	1882.2	1703.1	207.2	1683.8	3180.1	1056.9	827.1	432.0	1758.7	2639.2	109.1	402.9	871.8	4340.5	4340.5	4340.5	4340.5	715.5
China	30.5	1190.0	18.9	102.5	81.5	44.7	39.4	41.0	48.7	98.1	444.3	179.0	425.8	47.0	90.7	43.1	9.7	14.1	86.0	180.5	180.5	180.5	180.5	30.5
Hong K.	35.1	119.1	15.7	25.7	55.8	58.5	62.0	72.4	7.5	105.6	165.0	26.2	112.1	8.4	24.6	91.7	11.5	10.6	105.1	489.0	489.0	489.0	489.0	35.1
Indonesia	0.0	0.0	3.4	1.6	11.2	32.7	3.2	5.3	1.3	13.5	0.0	0.0	0.0	0.0	0.0	31.5	1.3	2.2	6.6	8.4	8.4	8.4	8.4	0.0
Korea Rep.	61.4	0.0	19.9	0.0	137.1	105.6	65.4	191.6	5.9	112.5	0.0	392.7	289.1	17.1	714.8	244.2	13.7	9.3	228.3	0.0	0.0	0.0	0.0	61.4
Thailand	28.6	488.0	0.1	36.1	21.5	45.0	13.8	10.1	0.9	33.5	15.1	0.0	0.0	0.0	0.0	11.7	2.5	3.7	15.7	11.3	11.3	11.3	11.3	28.6
PCX <sub>t</sub>	103.1	125.5	229.5	194.6	131.9	126.3	125.4	92.3	80.2	117.0	129.5	123.2	128.4	119.5	125.2	126.3	125.7	128.0	124.7	129.2	129.2	129.2	129.2	103.1
X <sub>t</sub>	0.68	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.06	0.06	2.54	17.11	0.59	1.13	1.27	1.55	1.55	1.55	1.55	0.68
PCX <sub>t</sub> · X <sub>t</sub>	70.11	89.11	576.0	8669	211.0	37.89	25.08	1857	197.3	97.11	146.3	60.37	10.27	7.17	318.0	2161	74.16	144.6	3.74	200.3	200.3	200.3	200.3	70.11

Table C-9. Weighted Average Export Unit Price for Manufactures in 1989

Export Market	Competitor #	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel	Other Devel	Centrally Pland
Export = Bahrain		198.0	322.3	270.5	254.6	145.6	161.9	135.8	187.0	474.9	213.5	342.1	355.0	898.8	597.1	153.3	1172.0	195.2	119.4	89.9	202.7	593.2	254.3
Denmark		248.9	1090.4	106.2	68.3	74.4	104.3	45.2	50.8	69.9	51.6	105.1	0.0	43.3	195.3	79.8	13.2	10.8	35.0	85.2	192.0	89.8	730.6
France		476.8	1508.6	1151.1	962.4	1351.6	585.5	1474.3	624.0	1249.8	985.6	938.4	661.6	736.9	4151.7	380.2	651.3	10428	306.7	255.8	1080.3	1053.3	730.6
Germany		1057.4	1079.7	2462.1	1957.8	1479.2	1555.2	1157.1	1747.4	2758.2	1499.8	1089.1	2412.9	1845.4	2176.9	2389.7	2098.9	487.4	542.4	587.4	1128.8	2558.8	2576.1
Greece		28.0	53.5	394.7	94.7	26.3	20.6	42.5	107.3	220.0	15.1	292.8	163.6	131.0	27.6	62.4	6.7	4.8	7.5	5.6	7.1	24.7	32.5
Italy		812.8	1043.5	1734.3	1218.9	1154.9	602.2	776.6	978.8	1950.4	760.3	1212.4	3358.8	733.2	1808.7	2460.7	444.9	304.4	1107.9	293.3	609.6	1014.8	526.9
Netherlands		478.3	1751.2	327.2	343.9	195.0	374.3	293.7	289.5	245.0	748.5	681.2	1492.9	323.5	485.2	289.9	87.5	88.4	81.2	217.6	658.1	242.0	242.0
Spain		135.6	67.8	897.0	232.9	226.1	84.4	103.9	205.8	451.9	108.2	52.1	430.2	131.8	793.3	138.1	181.4	94.6	54.9	58.3	258.0	153.5	265.4
UK		2547.7	2290.4	836.1	1044.4	911.6	2628.8	922.4	886.0	1800.2	1790.6	1088.1	2482.3	250.8	1499.0	1626.2	124.7	137.0	324.1	823.4	970.9	437.6	474.8
Austria		84.5	153.9	236.2	445.0	83.6	55.7	47.3	83.3	473.8	139.9	107.0	292.2	72.3	105.6	208.6	55.5	19.0	41.8	24.2	84.3	247.7	474.8
Sweden		111.4	66.0	150.7	419.0	221.5	260.2	156.5	219.4	196.0	154.6	176.6	180.2	131.1	147.3	797.4	160.5	37.6	34.7	131.9	184.5	438.5	220.3
Switzerland		145.0	63.8	377.6	318.1	152.3	163.7	210.3	248.2	356.0	192.9	156.4	302.7	238.3	159.7	445.6	220.7	63.0	81.9	97.4	289.1	369.6	302.4
Yugoslavia		3576.4	79.4	1630.0	1368.4	1741.9	1251.0	1642.4	3660.5	1152.4	2692.8	1528.0	1009.8	1996.1	722.3	1029.8	2705.1	26.2	189.8	0.0	3773.7	3185.3	1342.1
USA		3576.4	79.4	1630.0	1368.4	1741.9	1251.0	1642.4	3660.5	1152.4	2692.8	1528.0	1009.8	1996.1	722.3	1029.8	2705.1	26.2	189.8	0.0	3773.7	3185.3	1342.1
Brazil		2850.9	2504.0	1587.9	3754.2	4979.7	4782.8	4196.0	3554.3	1574.3	3873.3	3971.4	1168.5	1261.7	437.7	2018.3	2861.1	108.8	80.7	2713.2	4221.5	910.5	5201.9
Japan		2850.9	2504.0	1587.9	3754.2	4979.7	4782.8	4196.0	3554.3	1574.3	3873.3	3971.4	1168.5	1261.7	437.7	2018.3	2861.1	108.8	80.7	2713.2	4221.5	910.5	5201.9
China		127.5	120.6	121.6	124.7	127.4	126.3	125.7	128.8	121.0	127.3	125.1	121.0	121.5	117.5	122.6	125.5	119.9	127.7	47.0	129.7	123.7	127.0
PCX	X <sub>1</sub>	0.68	0.71	2.51	44.55	1.60	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.06	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55	1.55
PCX	X <sub>2</sub>	86.7	85.63	305.2	5555	203.8	37.89	25.14	2591	297.7	105.7	141.4	59.29	9.72	311.4	2147	70.74	144.3	1.88	164.7	3.71	196.9	196.9





Table C-9. Weighted Average Export Unit Price For Manufacturing in 1991

Competitor ⇓ Export ⇐ Market	Bahrain	Dem. Yem.	Egypt	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen Rep.	Libya	Sudan	Tunisia	Ethiopia	India	France	Italy	USA	Other Devel oped	Other ally Pland	
Belgium	215.9	351.4	294.0	276.9	158.6	176.9	147.6	203.7	517.3	233.0	372.1	386.7	979.7	650.3	167.1	1276.1	212.3	130.5	97.6	220.8	646.6	276.9
Denmark	283.4	1228.1	121.3	77.6	84.6	118.4	50.8	57.8	79.0	59.2	119.9	0.0	49.4	222.8	90.2	15.5	12.69	39.5	97.3	218.6	101.5	808.5
France	528.2	1670.3	1274.7	1065.2	1496.7	648.5	1631.8	690.7	1383.8	1091.2	732.8	815.9	4596.7	421.6	721.7	10765.7	339.8	282.7	1196.6	1165.6	808.5	2879.4
Germany	1182.4	1206.3	2751.8	2187.9	1653.2	1738.3	1292.8	1952.4	3082.9	1675.8	1217.0	2697.2	2062.8	2432.6	2670.6	2346.1	545.3	606.5	657.0	1262.2	2859.5	2879.4
Greece	30.2	58.2	429.0	103.0	28.0	22.4	45.9	116.5	239.7	16.8	318.1	178.1	142.2	30.2	68.3	6.7	5.6	7.8	5.6	7.8	26.9	35.8
Italy	1032.3	1325.3	2204.1	1548.5	1467.9	765.7	967.4	1243.1	2478.5	965.7	1540.7	4267.2	931.6	2298.7	3126.4	565.8	387.5	13291.3	372.0	775.0	1289.6	669.6
Netherlands	532.5	1949.4	363.5	382.7	217.6	416.0	326.4	322.6	318.7	272.6	833.3	757.8	1661.4	359.7	540.2	322.6	97.3	98.0	90.9	241.9	732.2	268.8
Spain	154.8	77.4	1024.3	265.7	258.0	96.8	118.7	234.8	516.0	121.3	59.3	491.5	150.9	905.6	157.4	207.7	108.4	63.2	67.1	294.1	175.4	300.2
UK	2898.7	2605.7	951.7	1188.0	1037.5	2991.1	2601.7	1049.4	2048.6	2038.1	1238.2	2824.8	285.1	1705.4	1850.6	141.2	155.8	368.3	937.2	1104.8	497.6	527.0
Austria	93.9	170.8	262.3	494.1	92.7	62.2	52.5	92.7	525.8	154.9	118.3	324.5	80.5	117.1	231.8	61.0	20.7	46.4	26.8	93.9	274.5	527.0
Sweden	122.2	72.8	166.4	461.5	244.4	287.3	172.9	241.8	215.8	170.3	195.0	198.9	144.3	162.5	878.8	176.8	41.6	37.7	145.6	202.8	483.6	243.1
Switzerland	170.2	75.0	443.5	375.2	179.6	193.0	246.6	289.4	418.1	226.5	183.6	356.4	280.1	187.6	523.9	260.0	73.7	96.5	113.9	340.4	434.2	355.1
USA	3728.1	82.9	1699.0	1416.4	1816.0	1303.9	1712.4	3815.4	1201.8	2806.1	1592.5	1052.3	2080.9	753.3	1073.0	2819.4	26.6	196.3	9378.8	3319.6	1398.6	1398.6
Japan	3037.0	2668.1	1692.0	3998.4	5303.8	5095.0	4470.7	3786.7	1677.3	4128.3	4230.7	1245.1	1343.6	466.0	2150.6	3047.3	116.1	86.7	2890.0	4496.7	970.2	5540.4
PCX <sub>t</sub> · X <sub>t</sub>	14008.8	13541.7	13677.6	13941.1	14008.6	13915.5	13857.8	14097.0	14703.3	13968.3	13857.7	13926.7	13498.7	13294.8	13937.9	12557.5	12557.5	15169.2	14535.6	14100.5	13701.3	13905.5
X <sub>t</sub>	0.68	0.71	1.60	4.55	2.51	0.30	0.20	20.12	2.46	0.83	1.13	0.49	0.06	0.06	2.54	17.11	0.59	1.13	0.04	1.27	0.03	1.55
PCX <sub>t</sub> · X <sub>t</sub>	95.27	96.1	343.3	6166.2	224.6	41.7	27.7	2836.3	361.7	115.9	156.6	68.2	10.8	8.0	354.0	2353.0	74.1	171.4	5.8	179.1	4.1	215.5

**Table C-10. Weighted Average Export Unit Price By Competitor and by Export Market (Fixed Weights) (Export Competitiveness)**

Year	$PCX_{xj}^*$
1976	65.9
1977	71.3
1978	78.7
1979	87.8
1980	100.0
1981	104.8
1982	107.6
1983	109.0
1984	111.2
1985	111.3
1986	121.0
1987	136.0
1988	151.2
1989	125.5
1990	138.3
1991	139.1

$$* PCX_{xj} = \sum^k [PCX_k \cdot X_k]$$

$PCX_{xj}$  is the weighted average price of Jordan's competitors on all export markets, computed for export competitiveness on the basis of fixed weights. It is calculated by aggregating and then averaging  $PCX_k$ , the weighted average export unit price of Jordan's competitors on each market, after weighting it by  $X_k$ , the share of each market in Jordan's manufactured exports in 1985 (Table C-9, the corresponding year).

**Table C-11. Weighted Average Price for Manufactures (Variable Weights) (Export Competitiveness)**

Country ↓	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Bahrain	0.00	0.00	0.00	0.00	9.00	0.00	0.00	21.28	22.70	65.62	147.41	112.44	90.70
D. Yemen	0.00	0.00	0.00	21.00	0.00	0.00	229.95	78.30	43.30	83.85	89.85	34.91	5.93
Egypt	1248.88	4302.24	790.56	54.23	0.00	0.00	0.00	0.00	28.80	404.11	732.64	2300.10	1194.78
Iraq	1076.88	558.00	823.90	2502.59	4522.00	7383.59	8261.15	4264.31	6567.60	7248.29	5120.34	7801.21	8682.99
Kuwait	288.72	249.37	335.06	445.44	324.00	198.85	133.12	240.09	90.43	118.72	210.18	221.52	315.84
Oman	0.00	0.00	153.95	98.95	73.00	0.00	24.70	32.75	21.69	27.63	22.55	29.94	23.17
Qatar	87.60	37.17	68.16	65.38	70.00	5.45	34.59	48.59	37.11	24.40	18.60	19.26	23.54
Saudi Arabia	2192.68	3492.81	3125.14	2941.26	3080.00	2070.25	1576.96	2499.12	1466.72	1388.28	990.23	648.60	826.83
Syria	1298.42	1138.63	1378.61	1604.58	1555.00	764.52	429.10	329.35	169.01	289.79	709.56	525.58	116.07
UAE	134.81	116.21	115.63	106.48	123.00	110.27	100.84	135.94	57.18	82.17	172.75	147.28	216.75
Yemen R.	46.99	141.69	182.44	129.50	56.00	17.85	37.74	127.12	92.55	105.88	83.40	146.30	101.07
Libya	0.00	73.64	29.57	97.50	23.00	695.78	481.95	67.86	37.26	57.87	128.36	90.64	47.10
Sudan	0.00	21.92	61.18	37.87	40.00	8.03	60.68	32.09	8.34	6.45	19.27	40.43	185.44
Tunisia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.75	4.08	45.19	69.06	69.64
Ethiopia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	239.09	281.40	261.62	229.95	0.00	576.81
India	0.00	0.00	0.00	0.00	0.00	0.00	512.15	1084.97	1319.81	1500.55	1215.19	42.50	917.40
France	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.95	196.80	245.83	130.19
Italy	0.00	0.00	0.00	0.00	0.00	0.00	63.90	473.71	260.41	87.35	692.73	690.84	553.40
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	39.81	90.71	100.24
Other Developing Countries	237.21	148.07	99.68	124.54	125.00	170.63	106.75	1313.33	1346.33	214.88	768.26	1919.54	487.34
Other Developed Countries	0.00	0.00	0.00	0.00	0.00	0.00	14.92	72.35	174.38	3.74	97.69	339.54	776.86
Centrally Planned Economies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	852.15	1287.36	627.60	1487.88	2635.02	2100.25
$PCD^{xy}$	66.12	64.08	71.64	82.29	100.00	114.25	120.69	119.12	133.15	126.50	132.19	181.51	175.42

$PCD^{xy}$  - is the weighted average price of local producers on Jordan's export markets. It is calculated by aggregating and then averaging the weighted prices of local producers on all export markets. The weighted prices are computed by multiplying the producers' prices for manufactures (Table C-8.2) on each export market in each year into the share of this market in Jordan's manufactured exports in the same year (Table C-1.2).

**Table C-12. Jordan's Export Unit Price, Import Unit Price and Producers' Price Indices For Manufacturers**

Year	Export Unit Price		Import Unit Price		Producers' Price	
	Jordanian Dinars	US Dollars	Jordanian Dinars	US Dollars	Jordanian Dinars	US Dollars
1976	83.7	75.2	79.3	71.2	87.0	78.1
1977	98.4	89.1	80.7	73.1	102.3	92.7
1978	95.4	93.1	77.9	76.0	94.4	92.1
1979	85.9	85.3	82.2	81.6	89.2	88.6
1980	100.0	100.0	100.0	100.0	100.0	100.0
1981	116.2	104.9	116.5	105.2	120.4	108.8
1982	133.8	113.2	116.0	98.2	132.4	112.0
1983	125.0	102.7	106.1	87.1	133.6	109.7
1984	149.3	115.9	109.5	85.0	130.5	101.3
1985	142.6	107.9	109.5	82.8	112.8	85.3
1986	124.4	106.0	94.3	80.4	109.8	93.5
1987	118.8	104.6	100.0	88.1	117.0	103.0
1988	138.3	111.1	111.9	89.8	125.1	100.4
1989	183.3	95.8	156.3	81.7	159.2	83.2
1990	214.5	96.4	227.7	102.3	178.4	80.1
1991	239.3	104.8	252.3	110.3	177.6	77.8
1992	233.6	102.5	216.1	94.8	184.2	80.8

(1980 = 100)

Table C-13. Weighted Average Export Unit Price for Import Competitiveness (Fixed Weights)

Year ↓	Country ↓	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Bahrain	8.00	8.60	9.13	10.80	12.00	11.89	11.38	10.88	10.72	10.68	12.38	13.56	14.64			
	Egypt	41.81	36.14	38.69	37.30	48.00	51.79	53.86	51.36	53.04	50.69	59.90	65.76	70.99			
	Iraq	29.48	31.24	34.76	42.24	44.00	44.00	41.36	39.16	40.92	40.48	40.04	44.44	48.40			
	Kuwait	149.94	152.48	144.69	157.73	159.00	166.95	168.54	138.33	149.46	157.41	186.19	242.95	217.19			
	Qatar	32.16	34.08	37.92	46.08	48.00	48.00	45.12	42.72	44.64	44.16	43.68	48.48	52.80			
	Saudi Arabia	133.74	143.82	201.24	172.44	180.00	203.40	212.40	196.20	232.20	210.60	249.12	243.18	264.78			
	Syria	33.35	35.85	38.05	45.00	50.00	49.55	47.40	45.35	44.65	44.50	51.60	56.50	61.00			
	UAE	16.68	17.93	19.03	22.50	25.00	24.78	23.70	22.68	22.33	22.25	25.80	28.25	30.50			
	Turkey	181.30	205.96	204.06	230.62	271.00	263.95	230.62	223.58	219.51	215.45	254.47	279.40	301.62			
	Belgium	155.72	168.26	193.11	222.63	246.00	209.10	194.34	186.96	174.66	179.53	228.78	260.76	277.98	320.70	360.80	348.92
	Denmark	34.32	37.39	41.81	47.94	52.00	47.32	44.72	43.68	41.60	43.16	54.60	64.48	67.08	74.70	88.55	831.90
	France	325.93	349.29	402.74	469.18	519.00	451.53	430.77	410.01	404.82	420.39	493.05	570.90	591.66	677.80	786.76	750.20
	Germany	795.26	857.28	1021.44	1145.47	1216.00	1045.76	1033.60	997.12	887.68	912.00	1-16.00	1434.99	1471.36	1686.70	1941.84	1884.61
	Greece	72.60	78.21	80.96	94.82	110.00	102.30	105.60	91.30	85.80	81.40	91.30	102.30	108.90	132.40	151.66	143.36
	Italy	779.84	888.40	981.08	1147.91	1324.00	1072.44	1151.88	1098.92	1072.44	1350.48	1575.56	1668.24	1883.60	2470.30	2393.20	2393.20
	Netherlands	132.30	146.22	170.91	193.07	211.00	183.57	187.79	168.80	160.36	160.36	200.45	234.21	246.87	282.40	329.10	314.89
	Spain	188.67	196.14	217.07	266.71	299.00	251.16	227.14	224.25	230.23	224.25	290.03	278.07	337.87	394.20	474.40	450.21
	UK	451.12	520.24	636.99	766.81	934.00	868.62	803.24	756.54	719.18	737.86	868.62	999.38	1120.80	1263.60	1437.80	1437.48
	Austria	111.83	124.95	146.48	165.55	175.00	152.25	152.25	141.75	133.00	136.50	173.25	204.75	215.25	225.00	278.10	248.88
	Sweden	81.15	86.66	94.46	110.85	128.00	115.20	104.96	96.00	94.72	96.00	119.04	138.24	149.76	176.20	195.60	193.70
	Switzerland	130.46	138.02	178.85	196.78	216.00	190.08	187.92	181.44	164.16	162.00	216.00	259.20	259.20	286.80	342.10	337.68
	Yugoslavia	39.59	41.18	45.93	52.70	61.00	65.33	70.15	69.30	67.16	65.45	68.93	76.01	82.05			
	USA	1233.74	1291.98	1356.12	1614.98	1765.00	1976.80	2082.70	2118.00	2135.65	2170.95	2241.55	2294.50	2435.70	2982.70	2984.50	3045.84
	Brazil	79.80	85.30	89.90	93.80	100.00	110.00	95.00	84.00	87.00	90.00	94.60	111.00	119.80			
	Japan	912.12	995.04	1206.49	1299.08	1382.00	1464.92	1368.18	1340.54	1340.54	1312.90	1589.30	1741.32	1920.98	2223.70	2191.00	2368.17
	China	99.87	111.24	113.30	124.67	137.00	138.10	133.85	124.67	124.26	123.71	146.32	160.70	173.44			
	Hong Kong	73.25	73.25	69.15	81.44	89.00	99.24	94.52	84.91	83.39	85.71	101.23	111.25	120.42			
	Indonesia	10.92	12.83	15.58	19.61	21.00	19.82	18.25	14.85	14.60	14.13	16.72	18.35	19.80			
	Korea Rep.	116.64	116.64	128.96	152.80	160.00	164.48	158.24	154.08	152.80	151.84	151.84	163.84	186.08			
	Thailand	9.41	11.93	13.90	16.51	18.00	16.24	14.36	13.81	13.55	13.07	15.44	16.96	18.31			
	PCX <sub>mf</sub>	64.61	69.87	79.73	90.48	100.00	96.09	95.24	91.74	90.09	90.41	106.51	118.39	126.53	126.11	140.33	140.00

PCX<sub>mf</sub> is the weighted average price of Jordan's competitors on Jordan's home market (computed for import competitiveness on the basis of fixed weights). It is calculated by aggregating and then averaging the weighted prices of all competitors. The weighted prices are calculated by multiplying the export unit price of each competitor in each year (Table C-7) into its share in Jordan's manufactured imports in 1985 (Table C-2).

Table C-14. Weighted Average Export Unit Price for Import Competitiveness (Variable Weights)

Country ↓	Year ⇒	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Bahrain		0.00	0.00	0.00	0.00	0.00	4.96	0.00	0.00	0.00	10.68	74.30	36.16	41.48
Egypt		59.23	27.86	41.91	34.19	2.00	1.08	1.12	7.49	12.16	50.69	61.15	87.68	153.82
Iraq		12.73	10.65	22.12	29.76	13.00	8.00	8.46	86.33	123.69	40.48	39.13	49.49	113.30
Kuwait		103.73	163.99	182.00	201.38	123.00	160.65	155.82	163.56	170.14	157.41	151.06	227.67	243.15
Qatar		0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.14	39.06	44.16	50.05	83.83	132.00
Saudi Arabia		22.29	55.93	232.54	168.61	172.00	146.90	204.14	256.15	438.60	210.60	336.31	574.18	508.97
Syria		165.42	127.63	170.46	154.80	149.00	82.25	77.74	59.86	49.12	44.50	109.39	80.23	86.62
UAE		0.00	5.02	3.04	3.60	3.00	1.98	0.00	2.72	22.33	22.25	42.31	50.85	36.60
Turkey		53.52	30.40	30.87	26.38	28.00	88.63	129.35	168.30	243.81	215.45	369.97	580.45	479.70
Belgium		212.69	127.22	174.27	337.57	255.00	161.50	143.78	180.88	178.21	179.58	236.22	328.60	221.48
Denmark		37.62	50.33	66.73	65.46	82.00	94.64	61.92	47.04	55.20	43.16	114.45	71.92	78.69
France		268.78	261.80	383.34	556.86	1165.00	457.62	372.67	501.65	565.50	420.39	458.85	573.10	736.44
Germany		1925.38	1662.39	2052.12	1936.75	1719.00	1562.62	1422.05	1274.28	859.21	912.00	1454.00	1595.36	1466.52
Greece		91.74	107.36	124.38	155.16	153.00	161.82	266.88	232.40	98.28	81.40	87.15	76.26	83.16
Italy		542.47	610.61	852.89	971.91	942.00	726.57	772.56	805.10	856.17	1072.44	1117.92	1006.74	873.18
Netherlands		101.57	106.03	128.79	113.46	143.00	129.63	151.30	175.20	188.48	160.36	262.20	261.96	332.28
Spain		128.09	72.16	178.60	475.44	373.00	331.80	239.94	219.64	190.96	224.25	198.85	166.47	192.10
UK		580.08	598.22	833.40	1027.89	1239.00	781.20	671.66	701.46	813.12	737.86	823.98	953.37	1180.80
Austria		79.88	87.82	96.26	110.68	148.00	105.27	198.36	98.01	127.68	136.50	140.58	194.22	228.78
Sweden		143.28	77.18	94.46	142.89	97.00	98.10	88.56	89.25	109.52	96.00	126.48	151.20	179.01
Switzerland		81.54	92.02	170.57	150.32	117.00	117.04	214.02	152.04	161.88	162.00	197.00	224.40	286.80
Yugoslavia		35.05	25.65	44.43	69.12	51.00	37.49	44.85	95.42	66.06	65.45	68.93	135.81	150.64
USA		750.03	1589.17	646.25	748.47	1215.00	2673.44	2326.96	1191.60	1490.72	2170.95	1325.88	1817.40	2242.50
Brazil		0.00	0.00	1.80	19.70	36.00	12.10	63.65	111.72	52.20	80.00	157.04	177.60	188.09
Japan		762.96	779.76	1101.73	1103.56	1305.00	1295.32	1506.78	1873.07	1580.13	1312.90	1873.35	1483.02	1490.08
China		126.12	199.75	210.06	205.66	210.00	180.43	220.80	155.61	125.17	123.71	182.63	221.70	297.51
Hong Kong		50.20	53.50	60.61	94.25	92.00	108.16	106.20	107.80	96.51	85.71	112.66	107.50	89.30
Indonesia		0.00	0.00	0.00	0.00	0.00	0.00	3.48	4.24	5.56	14.13	55.72	72.54	76.38
Korea Rep.		35.72	66.34	95.91	119.38	163.00	134.67	133.52	195.49	171.33	152.80	240.10	296.96	282.61
Thailand		1.05	2.65	11.58	19.26	6.00	9.92	13.57	9.97	15.06	13.07	29.17	55.58	84.41
PCX <sub>my</sub>		63.71	69.91	80.11	90.42	100.01	96.74	96.00	89.89	89.06	90.41	104.97	117.42	125.56

PCX<sub>my</sub> is the weighted average price of Jordan's competitors on Jordan's home market (computed for import competitiveness on the basis of variable weights). It is calculated by aggregating and then averaging the weighted prices of all competitors. The weighted prices are calculated by multiplying the export unit price of each competitor in each year (Table C-7) into its share in Jordan's manufactured imports in the same year (Table C-2.2).

**Table C-15. Jordan's Manufactured Output, Exports, Imports and Total Demand**

Years	Manufactured Output (Thousand JD)	Manufactured Output (Thousand US Dollars)	Manufactured Imports (Thousand US Dollars)*	Manufactured Exports (Thousand US Dollars)*	Total Demand For Manufactures (Thousand US Dollars)**	Domestic Demand For Manufactures (Thousand US Dollars)***
1976	100601	303015	843535	106411	1146550	1040139
1977	121831	370082	1138105	125896	1508187	1382291
1978	144328	472432	1238825	159973	1711257	1551284
1979	210539	701096	1569247	207320	2270343	2063023
1980	285233	956837	1895733	284401	2852570	2568169
1981	553755	1677537	2552125	259049	4229662	3970613
1982	658520	1869202	2406474	289922	4275676	3985754
1983	652581	1797744	2181987	225739	3979731	3753992
1984	837461	2180320	2135616	405395	4315936	3910541
1985	786813	1996987	2169541	342348	4166528	3824180
1986	728726	2082669	2176980	337647	4259649	3922002
1987	808082	2385834	2347306	402536	4733140	4330604
1988	888775	2392396	2350792	474832	4743188	4268356
1989	1093571	1917249	1832091	534981	3749340	3214359
1990	1203203	1813107	1925698	470804	3738805	3268001
1991	1319509	1938227	2280703	535570	4218930	3683360

**Notes:**

\* Values of manufactured exports and manufactured imports may differ from those compiled in previous tables because these are compiled in accordance with the International Standard Industrial Classification (ISIC), to obtain consistency in calculations with manufactured output. Whereas the previous figures were compiled according to the Standard International Trade Classification (SITC).

\*\* Total Demand for Manufactures = Manufactured Output + Manufactured Imports

\*\*\* Domestic Demand for Manufactures = Total Demand for Manufactures - Manufactured Exports



*Appendix III*

Statistical Appendix D

***Jordan's Manufacturing: Production and  
External Trade by Subsector***

Table D-1. Gross Value Added by Kind of Industrial Activity

(Thousand JD)

Group	ISIC	Industry	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991		
A.	290	Mining & Quarrying	16477	16578	15400	23000	19485	38967	43344	45462	37966	51562	53229	63208	64120	76587	191417	190638	156243		
		Food Process. & Related Industr.	6922	9623	15347	16771	24820	27961	33885	33885	40062	50447	58780	65546	66113	72805	79242	91736	107544	112361	
	311+312	Food Manufacturing	4497	6617	8667	11439	6222	7175	11055	13047	13047	17053	20974	19006	20974	18678	24467	36744	36610	36671	
			Beverage Industries (Alcoholic)	908	903	1014	588	1376	1203	1714	1714	2813	2323	2686	2332	2571	2686	2582	3670	5747	5437
			Beverage Industries (Soft Drinks)	527	530	623	300	5755	4772	4134	4134	4378	5855	6496	8142	7056	11573	10254	10370	13107	14757
	313(1,2,3)	3134	Tobacco Manufactures	960	1443	5143	464	11467	14811	16982	29406	29406	32908	36068	36068	39669	41929	40862	50080	53186	
			Non-Food Consumer & Intermediate	11651	11964	12589	15802	14316	18253	23366	23366	24199	25376	27025	27875	30607	31331	38475	46240	57599	66778
	B.	321	Textiles	2718	2051	2452	6510	2143	3021	3701	2776	3096	4986	4986	5697	4325	4288	5967	9496	12369	14327
			Clothing (Wearing Apparel)	2303	3630	3870	2534	2052	2313	3128	3128	3894	4123	4302	3755	5265	4481	4962	6190	8571	9958
		323	Leather Goods	2298	2363	973	1364	593	601	406	655	506	655	579	431	837	834	1364	1067	746	2421
Footwear				1163	966	1115	806	1105	2360	3087	3087	3280	3182	2322	3102	1652	2073	2317	2925	2200	2205
331+332		341	Furniture & Wood	1418	1310	1938	2604	4327	5342	6459	4741	6478	5906	5906	3507	4200	8290	9874	11750	13308	
			Paper & Paper Products	453	638	866	806	2360	2570	4021	4021	4741	4122	3610	6109	4200	6360	8277	10449	13404	14959
342		342	Printing & Publishing	688	1106	1375	1178	1736	2046	2564	2459	3721	5320	4272	6109	5025	5025	6271	6239	7969	9600
			Chemicals	8087	6723	9778	13664	21083	26519	43432	49562	49608	49608	57662	55515	50209	136214	136909	119004	106471	118180
C.		351+352	Industrial Chemicals	2076	1986	2629	3534	6667	7074	11510	16023	17865	22107	16870	16327	16870	23836	39661	76096	57290	69445
				Basic Chemicals & others	457	439	579	778	1466	1558	2534	2534	3636	3964	4904	3630	672	3248	3688	5597	5762
	3512	Fertilizers	337	324	427	573	1080	1148	1868	2914	2606	2914	3615	2675	2738	1694	1838	2137	2220	1806	
			Synthetics	683	666	877	1180	2222	2361	3842	5993	5369	5993	7436	5503	6513	7241	11158	18520	17562	21001
	3521	Pharmaceuticals	589	566	746	1003	1889	2007	3266	5096	4556	5096	6321	4678	5093	4367	5119	7205	6907	11975	
			Soap	5026	3609	5686	9944	11274	15879	26690	26327	28215	26327	29552	34145	27403	104562	89240	34077	36213	36093
	3530	355	Petroleum Refiners	32	60	151	186	70	76	202	211	52	18	60	14	381	433	738	724	471	
			Rubber	963	1058	1312	3082	3082	3490	5130	5364	5113	5364	5986	5029	5876	6436	7575	8103	11244	13181
	356	356	Plastic (n.e.c.)	11100	15046	18829	13396	28693	43722	54543	62714	58330	64764	77158	65813	86236	86236	91346	103875	113636	116906
			Eng. & Construction Mater. Industry	5055	7173	8915	5146	15218	29647	34380	41972	38969	41972	46823	45991	50527	54038	58572	55405	60614	63645
361+362+369	371+372	Non-Metallic	3687	5653	7374	5952	5071	4817	5104	4536	5984	5686	4786	10448	14705	14563	20150	21999	21053		
		Basic Metal Industries	681	446	566	1178	400	672	738	738	623	562	840	990	1031	1447	2495	7288	7624	7389	
D.	381	Fabricated Products	1677	1774	1974	1119	103	110	647	374	374	204	268	348	404	662	660	463	183	183	
			Transport Equipment	883	960	1032	758	31	31	16654	13018	13779	16177	20366	30522	35074	39743	42098	42492	43563	52402
	382	Non-Electrical Machinery	1847	3019	3117	5531	5531	10657	10042	10669	12042	9983	10017	9239	10017	10724	13728	19733	16472	19997	
			Electrical Machinery	56967	63813	76092	83390	119124	183733	221630	242053	254330	290165	307739	332387	440172	478652	615085	638932	643282	
	383	384	Professional & Scientific Equipment	38643	44216	57575	60390	89943	118455	155226	172143	188145	208254	214749	224087	325586	346239	361443	385259	414640	
			Handicrafts & Miscellaneous	67.8%	69.3%	75.7%	72.4%	74.7%	63.4%	70.0%	71.1%	74.0%	71.8%	71.8%	69.8%	67.4%	74.0%	72.3%	58.8%	60.3%	64.5%
	385	390	Repairs & Maintenance	67.8%	69.3%	75.7%	72.4%	74.7%	63.4%	70.0%	71.1%	74.0%	71.8%	69.8%	67.4%	74.0%	72.3%	58.8%	60.3%	64.5%	
			Total Industry	67.8%	69.3%	75.7%	72.4%	74.7%	63.4%	70.0%	71.1%	74.0%	71.8%	71.8%	69.8%	67.4%	74.0%	72.3%	58.8%	60.3%	64.5%
	410	961	Manufacturing as % of total Industry	67.8%	69.3%	75.7%	72.4%	74.7%	63.4%	70.0%	71.1%	74.0%	71.8%	71.8%	69.8%	67.4%	74.0%	72.3%	58.8%	60.3%	64.5%
			Manufacturing	67.8%	69.3%	75.7%	72.4%	74.7%	63.4%	70.0%	71.1%	74.0%	71.8%	71.8%	69.8%	67.4%	74.0%	72.3%	58.8%	60.3%	64.5%

Source: Jordan, Department of Statistics, Industrial Surveys, 1975-1991.

Table D-2. Value of Gross Output by Kind of Industrial Activity (at Producers' Prices)

(Thousand JD)

Group	ISIC	Industry	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
A.	311+312 313(1,2,3) 3134 314	Food Process. & Related Industr.	26294	31430	39110	43494	54731	74374	84880	98559	104128	130430	150046	150038	153380	176832	206650	239507	264270	
		Food Manufacturing	19435	23628	26310	30956	25489	40504	46703	46703	51603	48542	69774	84533	89829	78298	100255	126108	145552	160996
		Beverage Industries (Alcoholic)	1919	1464	1695	1569	2198	1569	2348	3265	5766	4353	4529	4154	3508	3655	3512	5734	8735	8542
		Beverage Industries (Soft Drinks)	1405	1907	2827	3066	9194	3066	9318	7875	8974	11917	12668	14505	10855	19960	20181	22356	23838	28386
		Tobacco Manufactures	3635	4431	8278	7913	17950	7913	22204	27037	32216	39316	43459	46854	45836	51457	52884	51452	61382	66346
		Non-Food Consumer & Intermediate	19654	21127	22687	28089	30456	28089	38910	68426	62671	66163	86782	86409	75409	81643	100506	133603	155149	183222
		Textiles	4201	4773	5460	9762	6446	9762	7124	10173	10156	9924	13153	15087	11783	13647	18122	25300	30413	37057
		Clothing (Wearing Apparel)	4666	4742	5353	5102	3666	5102	4197	5946	7968	9960	11020	10811	10755	9486	11317	14330	17527	22368
		Leather Goods	3041	3098	1501	2347	1390	2347	1670	11295	1339	1893	1743	1513	1717	1866	2641	2422	5270	9784
		Footwear	1450	1905	2118	1870	2245	1870	4243	4839	5401	5434	4955	4955	5713	3974	4906	8135	5256	6041
B.	331+332 341 342	Furniture & Wood	3623	3114	4041	4884	7715	9930	12643	12643	13759	13746	28342	25795	18894	18619	22766	33734	31378	36147
		Paper & Paper Products	1207	1861	2190	2212	4742	7653	7653	16162	17551	17209	13911	15398	15688	21368	24673	32997	44026	48018
		Printing & Publishing	1566	1634	2024	1892	3982	4093	4093	5468	6497	7997	12658	11092	12598	11751	15399	16685	21279	24907
		Chemicals	15329	19072	22535	27443	55493	27443	64697	243240	328370	322587	406200	367346	320989	369952	397515	510859	559238	575928
		Industrial Chemicals	3701	3801	4951	6517	17951	6517	23546	34888	51322	69881	114667	89342	74170	106708	128130	214470	236671	250737
		Basic Chemicals & others	792	814	1061	1365	3822	1365	5041	15689	18561	30540	58228	34561	2866	14963	15507	20726	22363	17775
		Fertilizers									4518	12179	22203	21273	22899	38535	57019	95111	94150	100364
		Synthetics															3018	5135	13364	11965
		Paints	1039	1067	1389	1829	5010	1829	6608	7196	10584	10584	10735	10735	10031	8320	7582	13728	14500	14611
		Pharmaceuticals	1058	1086	1415	1863	5102	1863	6388	6388	9397	9928	12716	16372	17113	23523	25550	43019	48777	50615
C.	351+352 3511 3512 3513 3521 3522 3523 3529 3530 355 356	Soap	812	834	1086	1430	3917	5167	5616	8382	6158	10785	7105	14549	15356	13796	24959	38076	49652	
		Others												8423	8737	3539	11792	5421	5745	
		Petroleum Refiners	9631	13054	14182	19847	29603	19847	31050	206390	263198	239909	272126	280247	227749	238121	237282	254158	276482	274553
		Rubber	538	609	903	1079	119	1079	130	740	774	134	24	20	171	1572	2135	3839	3426	2261
		Plastic (n.e.c.)	1459	1608	2499	2499	7920	2499	9871	1222	13076	12763	19383	17737	18908	21553	29968	38292	42649	48277
		Eng. & Construction Mater. Industry	20482	28197	34756	32472	63547	32472	92482	144002	153825	145317	154657	170557	188252	188247	199055	265006	269298	322666
		Non-Metallic	8542	11887	14923	12491	23085	12491	48610	79732	90667	78965	88821	89758	87992	96658	95380	100025	117948	142652
		Basic Metal Industries															50408	79451	71407	88471
		Fabricated Products															30842	41282	38031	46488
		D.	361+362+369 371+372 381 382 383 384 385 390	Non-Electrical Machinery	8891	12802	15847	16051	16656	23440	35368	30632	31923	29846	42483	4009	5341	12583	15882	14628
Electrical Machinery	1116			1224	1398	2093	1042	1986	1352	1352	1347	1204	1783	2022	2196	4454	6507	19037	21149	19749
Transport Equipment	1833			2284	2588	1837	141	1837	763	2110	1302	763	353	500	491	1041	1842	2629	1552	1841
Professional & Scientific Equipment																	1493	26700	3265	2535
Handcrafts & Miscellaneous	1172			1290	1433	1230	48	1230	33								868	1725	2577	1061
Total Manufacturing	82801			101116	120521	132708	204275	132708	270463	538548	643425	638195	777102	773358	714698	793222	874776	1136843	1225789	1347047

Source: Jordan, Department of Statistics, Industrial Surveys, 1975-1991.

Table D-3. Jordan's Main Production of Manufacturing Industry by Subsector

Group	ISIC	Industry	(Thousand JD)																	
			1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
A.	311+312 313(1,2,3) 3134 314	Food Process. & Related Industr.	28003	31082	38707	43000	54260	73623	83688	97473	103100	128962	145105	149303	153778	173186	201725	234255	253049	
		Food Manufacturing	19180	23317	25964	30649	25154	36671	45742	50542	47544	68339	68339	79550	84646	75769	96642	122210	140320	156083
		Beverage Industries (Alcoholic)	1904	1453	1682	1557	2181	2347	3264	5766	4362	4600	4600	4155	3508	3643	3496	5717	8715	8642
		Beverage Industries (Soft Drinks)	1394	1892	2805	3033	9124	9316	7873	8972	11914	12593	12593	14461	10832	19351	20773	22366	23838	28378
		Tobacco Manufactures	3625	4419	8255	7891	17801	22189	27019	32196	39290	43430	43430	45336	45917	51415	52375	51442	61322	66346
		Non-Food Consumer & Intermediate	19260	20921	22427	27615	29925	34732	60487	56242	58732	75662	75662	76550	67091	73044	94215	125440	144127	169152
		Textiles	4136	4700	5376	9612	6347	6882	9827	9811	9587	12706	12706	1757	11525	13519	17858	25075	29445	36729
		Clothing (Wearing Apparel)	4192	4260	4809	4584	3554	3284	4574	6234	7793	8622	8622	7037	7943	6598	10901	12252	13319	18629
		Leather Goods	2980	3036	1471	2300	1362	1582	10688	1268	1793	1651	1651	1509	1712	1820	2620	2365	5360	9760
		Footwear	2055	2699	3001	2650	3181	3343	3813	4255	4281	3904	3904	4725	3287	4301	5169	7433	4523	5663
C.	331+332 341 342	Furniture & Wood	3318	2932	3805	4599	7266	9390	11955	13010	12998	26800	24300	17759	16801	20654	31755	28921	31218	
		Paper & Paper Products	1207	1861	2190	2212	4741	7636	16125	17511	17169	13979	15152	15437	21347	24631	32966	44011	47974	
		Printing & Publishing	1374	1433	1775	1659	3475	2616	3496	4152	5111	8090	8090	8351	9486	8658	12382	13594	18043	
		Chemicals	13745	16933	20196	24192	50884	68766	222154	304225	310105	406200	406200	963777	317910	364834	366838	501575	557818	572834
		Industrial Chemicals	3700	3800	4949	6514	17844	32563	48826	71825	97799	160477	160477	89153	74056	107930	128000	213910	236365	249061
		Basic Chemicals & others	792	814	1061	1394	3821	7055	21957	25976	42741	81490	81490	34417	3006	14930	15481	20661	22251	17736
		Fertilizers								6323	17045	31072	21273	22093	37894	56923	94723	5125	13363	11934
		Synthetics	1009	1067	1388	1828	5008	9248	10069	14812	15501	15024	15024	10031	5320	7572	9601	13718	14500	14611
		Paints	1058	1086	1414	1862	5100	9419	8940	13151	13894	17796	17796	16346	17066	23620	25550	42998	48777	50615
		Pharmaceuticals	812	834	1086	1429	3915	7231	7860	11563	8618	15084	15084	7035	14500	15327	13705	24909	30276	45651
D.	351+352 3511 3512 3513 3521 3522 3523 3529 3530 355 356	Others	8081	10963	11900	16663	24839	25838	171744	219016	199553	270445	256891	224812	234296	225931	245541	276492	272341	
		Petroleum Refiners	511	578	267	1025	113	65	370	387	67	12	18	156	1572	2126	3865	3372	2261	
		Rubber	1453	1602	2489	7888	7888	8911	1215	12997	12686	19266	19266	17715	18806	21037	29781	38259	42589	48271
		Plastic (n.e.c.)	19452	26855	33204	31116	63391	80825	139104	149231	141157	150705	150705	167503	165360	184201	194060	262908	264849	317525
		Eng. & Construction Mater. Industry	8904	12390	15555	13020	30629	47905	78576	89062	77820	87533	87533	83069	87611	96332	94486	105497	117560	142147
		Non-Metallic					16139	18123	25192	28613	32144	33522	33522	35205	39134	45058	49457	78867	71187	88314
		Basic Metal Industries					15500	21737	32797	31189	29604	27678	40504	4001	33370	5113	12106	98813	36076	42691
		Fabricated Products	8367	11913	14747	14837	15500	21737	32797	31189	29604	27678	40504	4001	33370	5113	12106	15588	14257	20336
		Non-Electrical Machinery	1115	1223	1387	2091	1041	1984	1344	1339	1197	1772	1772	2017	2191	4448	6480	19012	20961	19654
		Electrical Machinery	1066	1328	1505	1068	82	76	1195	738	432	200	200	407	400	880	1625	2531	1531	1750
E.	361+362+369 371+372 381 382 383 384 385 386	Transport Equipment																		
		Professional & Scientific Equipment																		
		Handicrafts & Miscellaneous					39					10								
		Total Manufacturing	78460	95790	114533	129653	182299	266846	505645	607171	613133	761529	753067	686164	772857	848008	1083261	1203022	1319495	

Source: Jordan, Department of Statistics, Industrial Surveys, 1975-1991.

Table D-4. Jordan's Manufactured Exports by Subsector

(Thousand JD)

Group	ISIC	Industry	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991		
A.	311+312	Food Process. & Related Industr.	3233	4271	4923	5760	7220	9469	13302	13252	9441	18737	18270	20939	10945	13654	21639	16587	37238		
		Food Manufacturing	2526	3126	3683	4420	5625	7415	6894	6894	6717	5371	14041	15942	19275	7397	8375	18189	11125	28703	
	313(1,2,3)	Beverage Industries (Alcoholic)	247	309	357	410	534	764	991	991	1166	246	443	491	370	429	3798	1039	1440	3668	
		Beverage Industries (Soft Drinks)	119	145	173	202	255	353	353	261	465	235	249	121	56	2	103	1939	2431	650	
	B.	314	Tobacco Manufactures	402	691	710	728	806	927	5356	4904	4904	3628	4004	1716	1297	3017	1379	503	1592	4127
			Non-Food Consumer & Intermediate	6737	8673	10027	11569	14773	19632	26515	31726	31726	13012	33815	36208	16306	29185	36254	51331	64432	57192
		321	Textiles	2853	3583	4181	4988	6391	8287	9514	9514	9054	4552	17977	20738	4457	12885	16884	17281	26960	22784
			Clothing (Wearing Apparel)	344	429	502	593	732	1024	1071	1207	1207	767	1399	1300	1111	1338	1576	2391	3212	3544
		322	Leather Goods	40	74	83	55	71	98	315	1433	1433	56	102	111	76	116	155	306	363	314
			Footwear	122	164	189	224	280	311	532	398	398	396	1551	662	515	549	580	965	782	507
324		Furniture & Wood	2319	3061	3612	3927	4981	6797	10362	14742	14742	5146	9044	7921	7288	8692	11260	20059	23870	20697	
		Paper & Paper Products	913	1171	1339	1547	1972	2740	4119	4167	4167	1810	2856	3672	2972	4774	4286	6338	7844	1219	
341		Printing & Publishing	148	192	222	255	325	424	602	724	724	286	866	604	568	631	514	1391	1402	1127	
		Chemicals	10171	12256	14599	17547	22327	30986	21694	30786	24143	42103	76742	56868	56390	70049	91714	161485	196387	182958	
342	Chemicals	8697	10677	12755	15446	19796	27772	17563	24143	24143	36446	69644	51472	54668	65709	86070	153444	186401	172919		
	Industrial Chemicals	2064	2384	2882	3528	4589	6502	1759	2486	2486	2134	4794	3173	4130	6883	11422	24865	26505	18876		
351+352	Basic Chemicals & others	241	283	325	403	533	789	61	5190	5190	20669	44010	30533	23072	30143	48943	69047	79350	86471		
	Fertilizers	1059	1556	1419	1776	2349	3472	488	452	452	240	323	238	1105	4030	2283	16679	16521	10175		
3511	Synthetics	341	510	554	615	701	894	2854	2457	2457	2552	2182	1484	421	1645	664	827	4660	3477		
	Paints	3796	4503	5434	6567	8306	11621	5416	8564	8564	8476	11482	14298	15403	18633	18534	30007	36648	34539		
3512	Pharmaceuticals	1249	1603	1808	2130	2749	3705	6569	4180	4180	2006	5680	1500	4172	3969	1670	9187	16974	17048		
	Soap	249	294	353	418	538	788	416	815	815	369	194	76	325	675	2564	2732	2863	2339		
3523	Petroleum Refiners	10	12	13	17	22	28	60	9	9	18	18	4	127	5	228	28	1	22		
	Rubber	1150	1150	1812	2061	2482	3145	4029	6687	6687	5609	8043	5339	3561	4283	5356	7996	9669	9678		
355	Plastic (n.e.c.)	13	17	20	23	30	40	42	42	47	30	55	51	44	52	62	117	128	139		
	Eng. & Construction Mater. Industry	7678	9523	11159	13206	16750	23127	23638	25707	25707	17353	26396	23957	20998	25137	30968	67958	90200	81020		
356	Non-Metallic	2839	3528	4169	4916	6169	8482	7460	10135	10135	7887	10102	9170	7325	7068	9165	17630	35874	38689		
	Basic Metal Industries	624	750	886	1059	1376	1927	1628	1720	1720	667	1775	1061	1073	2303	2498	8864	6677	5781		
361+362+369	Fabricated Products	2536	3210	3732	4382	5541	7488	9059	9696	9696	6113	11131	10321	8426	9745	11687	23769	24537	21680		
	Non-Electrical Machinery	900	1114	1283	1521	1959	2769	3682	2861	2861	1349	2155	2484	3054	3881	4361	7229	9289	10424		
371+372	Electrical Machinery	504	589	683	844	1110	1634	821	541	541	246	257	257	728	1268	1700	7958	9804	2193		
	Transport Equipment	127	188	205	232	282	331	1014	782	782	1005	869	575	291	477	566	1282	1028	677		
381	Professional & Scientific Equipment	150	165	202	253	331	486	74	83	83	96	96	89	102	386	971	1146	2862	1586		
	Handicrafts & Miscellaneous	557	617	752	937	1235	1806	449	367	367	227	449	388	759	1135	3221	6013	9635	5512		
385	Total Manufacturing	28436	35340	41460	49019	62306	85070	85698	101838	82135	156138	134697	118092	136351	174900	309486	312708	363920			

Source: Based on data in: Jordan, Department of Statistics, *External Trade Statistics, Issues of 1975-1991*. Data were compiled in accordance with the (International Standard Industrial Classification, "ISIC").

Table D-5. Jordan's Manufactured Imports by Subsector

(Thousand JD)

Group	ISIC	Industry	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991		
A.	311+312	Food Process. & Related Industr.	29349	44238	60415	62283	78969	96302	147438	131015	98031	111856	119652	118046	113122	125366	131323	254648	313091		
		Food Manufacturing	28566	43068	58903	60733	77005	93619	93619	144079	127272	93528	108895	116660	114108	109594	121920	126381	249684	307777	
	313(1,2,3)	Beverage Industries (Alcoholic)	338	579	745	754	966	1104	1634	1634	2425	2258	1633	1324	2123	1653	1906	2506	2967	1727	
		Beverage Industries (Soft Drinks)	38	50	61	60	71	77	100	100	388	256	171	178	198	193	107	80	206	165	
	B.	314	Tobacco Manufactures	348	544	706	736	927	1102	1626	1626	930	1989	1158	1490	1619	1682	1423	2356	1891	3422
			Non-Food Consumer & Intermediate	25156	38115	50381	50693	63301	76728	114920	114920	106121	120065	118671	108515	98049	107509	110116	141271	182338	208287
		321	Textiles	12668	19255	25497	25830	32307	39225	58537	58537	50684	60009	55759	55540	48366	50660	55143	77678	93273	106824
			Clothing (Wearing Apparel)	70	105	139	139	171	200	302	302	323	327	337	334	324	264	342	394	471	485
		322	Leather Goods	95	142	188	174	224	239	368	368	430	452	719	296	650	282	520	620	454	465
			Footwear	702	1020	1235	1079	1174	1275	1765	1765	4364	5608	5961	4660	3234	2590	1786	2935	2511	2641
324		Furniture & Wood	5729	8403	10681	10464	12675	14933	21118	21118	32836	35557	30091	28027	23437	27904	23823	23494	35554	36215	
		Paper & Paper Products	4605	7163	9895	10318	13419	16847	25881	25881	13620	13489	16095	15332	14676	19977	21914	27944	41616	53248	
C.		341	Printing & Publishing	1297	2017	2747	2589	3332	4009	5948	5948	3874	4623	9669	4326	5342	5932	6589	8206	9059	9409
			Chemicals	31983	50253	68908	73119	94421	117247	178452	110714	78768	84094	109611	117593	115912	148376	144520	217499	298724	337132
	342	Industrial Chemicals	19167	30067	41764	43309	56878	71310	110714	110714	48768	51655	72516	56866	63137	78061	75110	126174	191158	226661	
		Basic Chemicals & others	5869	9345	13257	13519	18051	22692	36006	36006	10072	10163	27330	13814	19447	20608	20649	33317	61536	85936	
	3511	Fertilizers	987	1530	2070	2045	2594	3083	4554	4554	3101	3796	5512	3922	4536	4672	4026	5734	6705	8998	
		Synthetics	4743	7402	10180	10696	14146	18130	28003	28003	13291	14870	15066	12720	11857	20652	9666	33170	57023	56931	
	3521	Paints	293	437	571	566	708	860	1320	1320	1429	1526	1864	1029	765	1323	907	1387	2325	2763	
		Pharmaceuticals	4370	6820	9480	9972	12863	15754	24071	24071	12208	11574	13807	16223	17926	19418	23844	35974	37062	37720	
	3523	Soap	729	1086	1434	1448	1810	2181	3160	3160	3664	3451	3220	3131	2869	3651	4177	3377	5470	4646	
		Others	2186	3447	4772	5074	6705	8580	13600	13600	5001	6276	5916	6118	5738	7838	12040	13214	21037	29756	
3530	Petroleum Refiners	7791	12558	17938	19447	24454	30042	44157	44157	9279	11028	15206	40074	33183	46786	42632	57272	75320	71692		
	Rubber	4729	7184	9618	9775	12367	15047	22301	22301	19347	20017	20452	19138	18212	22403	25323	32375	30282	36725		
366	Plastic (n.e.c.)	296	445	588	588	723	848	1281	1281	1376	1394	1437	1424	1381	1125	1456	1678	1964	2064		
	Eng. & Construction Mater. Industry	95048	140421	184147	183899	224212	265008	390961	390961	513452	473539	453024	473012	406332	404625	457698	541936	525396	661159		
D.	361+362+369	Non-Metallic	8360	12137	15502	14671	17275	19607	27401	27401	51316	49769	53408	45928	39234	39467	40224	37828	17687	57482	
		Basic Metal Industries	13971	21420	29003	29256	34666	41305	60723	60723	51064	52788	63823	88673	59678	64262	52283	78018	86685	113557	
	371+372	Fabricated Products	10066	14632	18997	18650	21742	25774	37388	37388	61873	53415	52814	61277	38661	42910	49184	57501	48108	54273	
		Non-Electrical Machinery	14693	21465	27230	27359	34532	42228	63662	63662	86337	91952	63861	54665	48768	55171	73206	84756	93519	106181	
	381	Electrical Machinery	18879	28528	36983	36199	44652	49212	70912	70912	82041	111735	99444	86201	115761	84569	105524	125115	53945	111943	
		Transport Equipment	23960	34302	46099	46831	57811	70800	107602	107602	163737	92121	98221	110909	80620	90476	112801	127859	176760	184271	
	382	Professional & Scientific Equipment	5129	7936	10643	10832	13635	16081	22974	22974	16484	21759	20453	25369	23709	28750	24476	30858	39682	30452	
		Handicrafts & Miscellaneous	4702	7153	9631	9360	10640	12016	17168	17168	18902	18797	28558	34399	24756	21472	24292	24723	15205	31779	
	E.	Total Manufacturing		186238	280180	374482	379254	471543	566900	849839	848258	794527	821721	863172	761094	795103	862012	1056750	1276911	1551448	

Source: Based on data in: Jordan, Department of Statistics, *External Trade Statistics, Issues of 1975-1991*. Data were compiled in accordance with the (International Standard Industrial Classification, "ISIC").

Table D-6. Jordan's Manufactured Re-exports by Subsector

(Thousand JD)

Group	ISIC	Industry	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
A.	311+312 313(1,2,3) 3134 314	Food Process. & Related Industry	814	1917	1820	2119	3110	4542	7297	15381	6993	1235	910	1217	2460	1964	3019	4618	32056	
		Food Manufacturing	752	1813	1694	1962	2868	4166	6738	15320	6944	1230	888	1112	2359	1902	2909	4460	29226	
		Beverage Industries (Alcoholic)	17	30	35	46	69	101	159	199	48	14	1	21	104	2	7	61	147	697
		Beverage Industries (Soft Drinks)	5	10	13	16	21	27	347	52	1	24	4	1	1	4	1	1	11	221
		Tobacco Manufactures	39	64	78	105	162	248	2632	4225	1324	1213	1541	1810	946	1425	3655	2860	3599	13727
		Non-Food Consumer & Intermediate	469	865	1032	1322	1888	2632	4225	6633	1224	426	888	1254	434	692	2043	1419	1653	11201
		Textiles	310	565	664	867	1245	1730	2853	662	6	5	3	6	3	7	3	9	10	18
		Clothing (Wearing Apparel)		2	2	3	4	5	7	7	6	2	3	3	6	3	7	3	9	10
		Leather Goods	13	20	24	32	49	72	125	125	1	2	3	3	1	1	11	12	119	379
		Footwear	5	10	12	15	21	24	39	39	21	13	37	68	10	9	105	32	39	46
B.	331+332 341 342	Furniture & Wood	73	165	183	220	304	415	586	546	541	407	375	370	465	519	612	1221	1000	
		Paper & Paper Products	43	77	91	115	167	245	402	402	52	144	104	32	56	114	907	414	173	777
		Printing & Publishing	24	46	55	70	99	140	212	212	36	82	89	75	73	128	142	381	385	306
		Chemicals	690	1190	1405	1808	2573	3919	6633	5419	1224	1463	744	617	619	957	2396	2959	4021	28563
		Industrial Chemicals	557	929	1113	1445	2151	3172	5419	473	473	867	388	310	318	689	1995	1527	3128	24341
		Basic Chemicals & others	115	187	224	297	446	663	1114	1114	88	51	21	10	17	297	998	286	1226	3660
		Fertilizers	30	55	66	82	119	171	286	286	41	140	63	58	60	27	66	42	13	1515
		Synthetics	89	144	174	229	339	504	883	883	22	72	94	8	20	14	377	197	346	4130
		Paints	11	22	26	27	40	59	100	100	36	163	12	2	6	16	17	45	87	421
		Pharmaceuticals	179	297	367	468	695	1021	1745	1745	107	198	147	136	145	168	126	384	832	8640
C.	351+352 3611 3612 3613 3621 3622 3623 3629 3630 365 366	Soap	16	33	37	41	61	90	149	99	186	12	1	14	45	14	167	242	429	
		Others	117	190	228	302	452	664	1142	1142	80	58	39	95	56	104	399	406	380	5346
		Petroleum Refiners	8	16	19	24	35	48	69	69	30	30	20	32	33	57	14	61	134	188
		Flubber	124	243	272	337	486	686	1141	1141	717	563	334	272	265	226	363	1365	755	4022
		Plastic (n.e.c.)	1	1	1	2	2	3	5	5	4	3	2	4	2	4	2	6	6	12
		Eng. & Construction Mater. Industry	6377	14412	15908	19461	27629	36315	48232	47231	40417	25271	48608	24588	59890	25186	80753	80865	80753	94756
		Non-Metallic	90	182	202	252	353	501	800	800	575	384	410	246	205	269	308	767	550	2949
		Basic Metal Industries	664	1508	1820	2056	3084	4190	4314	384	8368	197	629	4049	2973	14596	893	7829	2089	13883
		Fabricated Products	186	382	437	545	780	1084	1517	1189	1189	840	629	773	931	1323	925	1586	2107	4060
		Non-Electrical Machinery	1105	2612	2936	3428	4740	6312	8222	7134	10998	6358	7511	8073	8647	4989	11866	14702	11866	15453
D.	371+372 381 382 383 384 386 380	Electrical Machinery	557	1177	1327	1644	2356	3278	4459	3086	2820	1802	2318	3055	4487	3483	6155	4651	4651	11015
		Transport Equipment	3467	7669	8348	10578	15051	19289	27665	29150	12472	4536	13237	31453	6700	28561	11480	48166	56658	43715
		Professional & Scientific Equipment	308	871	889	957	1266	1661	2254	5704	2638	2638	165	2258	2650	1207	3088	3661	2453	3681
		Handicrafts & Miscellaneous	450	887	961	1268	1889	2525	3972	3627	230	230	165	3045	1863	859	17675	3636	487	710
		Total Manufacturing	8800	19291	21155	25978	37199	49833	71359	69687	50371	28956	54990	29253	66691	51176	93558	93488	169812	

Source: Based on data in: Jordan, Department of Statistics, *External Trade Statistics, Issues of 1975-1991*. Data were compiled in accordance with the (International Standard Industrial Classification, "ISIC").