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**THE IMPACT OF THE
DECLINE IN OIL PRICES ON
THE CONFRONTATION STATES**

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Preface

The purpose of this study is to determine the impact of the decline in oil prices in the 1980s on the economies of the confrontation states— Syria, Egypt, and Jordan. This study regards Egypt as a potential confrontation state, although it is certainly the hope and belief of this writer that the era of belligerency between Egypt and Israel is a closed chapter in history.

To gain a proper perspective on its impact, the price decline should be viewed within the context of the results of oil-price increases in the 1970s. Consequently, a concise review of this period will precede the analysis of the price decline in the 1980s.

Concerning the analysis of the 1980s, it must be stressed that reliable data on the aftermath of the 1986 oil-price crash have been fragmentary at the time of preparation of this study, referring mostly to 1986, which in hindsight should be regarded as a transitional period. Additionally, the processes unleashed by the price decline remain mostly in an embryonic stage, and the dynamics generated by it cannot yet be fathomed, their course and intensity open to many "guess-timates."

Wherever possible, we based our analysis on solid data, but we did not shy away from making projections, assuming different scenarios, and assessing their validity. Basically the study uses an interdisciplinary approach, though by its nature the economic element prevails.

It must also be stressed that most data published on Middle East countries are unreliable and sometimes contradictory. Wherever possible, we tried to reconcile such conflicts, which may result from different definitions or treatment of the original data.

Executive Summary and Conclusions

THE ERA OF THE OIL-PRICE RISE

At the beginning of the 1970s, increased U.S. demand for imported oil appreciably boosted the world oil trade and its prospects.

Consequently, the oil prices in 1973–74 increased about fourfold, to \$11.3/b. Until 1979, nominal prices remained stable but real prices deteriorated slowly. Total world production stagnated until 1976–77, thereafter climbing to a peak of 24 billion barrels in 1979 (in comparison to 21 billion in 1973). The additional quantity was supplied by non-OPEC countries, while OPEC production remained stagnant.

The unrest in Iran and the eventual fall of the Shah and the outbreak of the Iraq-Iran war caused an increase in oil prices which reached \$34.5/b. in 1981. By the end of 1985 oil prices had sunk gradually to \$27/b., and total world production had dipped below its 1973 level; OPEC production was reduced to half its 1973 mark, while that of the non-OPEC countries increased by 50 percent. The production of Saudi Arabia, Kuwait, and the UAE dropped from 4.4 billion barrels in 1973, and from its peak of 5.1 billion in 1979, to 1.9 billion by the end of 1985. A steeper decline in prices was prevented only by the main three Gulf oil producers' preparedness to cut production by 45 percent and lose 67 percent in oil revenues. For Saudi Arabia—the main loser—this created an untenable situation, which it rectified in 1986 by approximately doubling its production and world market share. As a result oil prices fell in 1986 from \$27/b. in some instances to less than \$10/b. prompting a further drop in Saudi oil revenues, from \$27 billion in 1985 to \$20 billion in 1986. In light of this fiasco, Saudi Arabia changed its oil policies and OPEC set a target price of \$18/b. Total production levels and OPEC members' quotas were set accordingly. This arrangement worked quite satisfactorily in 1987 though prices fluctuated mainly between \$16.6/b. and \$19/b. It should, however, be noted that due to the steep devaluation of the U.S. dollar, \$18/b. in 1987 was equivalent to approximately \$12/b. in 1984.

The large oil-price increases during the 1970s and the beginning of the 1980s touched off many economic, social, and political processes the world over. But in this study, we focus on the impact on the confrontation states—Syria, Egypt, and Jordan—and we also deal with other major developments in the Middle East that had a direct bearing on these countries.

The economic impact of the oil-price increases reached the confrontation states through their oil trade, through the large-scale migration of workers to the oil-rich Arab countries and the transfer of their remittances, and through the aid extended by these states.

The importance of each of these elements to each confrontation state has been very different. Abundant aid made it possible for the countries like Syria to strengthen their armies and initiate important development projects. Egypt, however, preferred to turn to improving its economy. It eventually abstained to a large degree from the arms race in the 1970s, and signed two agreements with Israel, which culminated in the Camp David accords. All three confrontation states became dependent on the continuous flow of resources generated by the two oil-price revolutions during the 1970s, though the Arab countries discontinued their aid to Egypt in 1970.

In the wake of the oil-price hike in the 1970s, it was widely believed that the huge increase in the incomes of the Arab oil countries could have a decisive influence on the Arab-Israeli conflict.

However, in summary, it can be said that although the years of high oil prices and incomes were characterized by an unprecedented arms race in the Middle East, the confrontation states did not succeed in narrowing the military gap with Israel, excepting Syria; the Arab countries became more disunited than ever.

Politically, Israel's position weakened and that of the PLO was enhanced. Terrorist activities were greatly intensified.

But in the final analysis the confrontation states did not achieve a breakthrough against Israel in the 1970s, although during this period the Arab world was at the zenith of its economic might.

THE ERA OF THE OIL-PRICE DECLINE

In 1981, oil prices peaked at \$34.5/b.,¹ and so did the oil revenues of OAPEC;² the revenues of the three main Arab oil exporters—Saudi Arabia, Kuwait, and the UAE—amounted to \$147 billion. Prices began declining in 1982, reaching \$27/b. in 1985 and crashing to \$15.4/b.³ in 1986. They seemed to stabilize in 1987 at around \$18/b., the OPEC target price.

The impact on the economies of the three main Arab oil-producing countries was profound. Their oil revenues declined to \$33 billion in 1986, and Saudi Arabia's current account and budgetary balance turned from large surpluses into large deficits in 1983. These, of course, had to be offset by drawing on reserves, which dwindled quickly, which was equivalent to about \$12/b. in constant 1984 dollar prices.

These developments forced Saudi Arabia, and to a lesser extent Kuwait, the UAE, and the other Gulf oil countries, to change their economies and development plans. Many projects were discontinued, new investments were canceled, civil servants' wages were severely cut, as were subsidies, and civilian and military imports were curbed. In consequence, large numbers of expatriate workers were sent home, and for those who remained, wages were reduced and ceilings were set on the transfer of remittances. Aid to most countries was also curtailed. Total OAPEC official assistance diminished from its peak of \$9.5 billion in 1981 to only \$3.6 billion in 1985, and grants to Syria and Jordan decreased from the 1979 peak of \$3 billion to a mere \$1.1 billion in 1985.⁴ Total aid extended probably increased, though, because of the huge support given Iraq in its war with Iran. This, however, has been an additional reason for cutting back on assistance to other aid recipients, including the confrontation states.

These economic difficulties which befell the rich Gulf oil countries in the wake of the decline in oil prices and revenues have had a profound impact on the confrontation states. The following section summarizes the impact on each state.

COUNTRY SUMMARIES

SYRIA

The direct and indirect impact on Syria of the decline in oil prices after 1981 had already been discernible before the price crash in 1986, but it probably climaxed in 1986-87. The major effect has been felt in the curtailment of aid by the oil-rich Arab countries. Official aid to Syria was cut from \$1.7 billion in 1980 to \$640 million in 1985. This, however, cannot be attributed solely to the oil-price decline, because other factors—the Iraqi war expenses and Syria's objectionable policies—apparently also played an important role.

Syria's real aid is certainly much higher and is estimated to have reached \$5 billion in 1984. Average annual aid during 1978-84 is estimated to have been \$4.4 billion. It, too, has probably diminished, though the Soviets may have increased their share of military support.

The decline in aid is likely to last at least until a sizable reversal in oil-price trends, and/or the termination of the Iraq-Iran war.

Officially, remittances of expatriate workers are calculated at about \$0.3 billion annually which is certainly a gross underestimate. They have apparently been curtailed, which has mainly meant a reduction in the standard of living of part of the population. But as remittances are mostly unrecorded, there will be no appreciable change in the current account.

The direct impact of the decline in oil prices on the oil sector of the Syrian economy is more complex. The Syrian current account was mainly unaffected by the price decline because Syria has been a small net importer of oil. However, the impact of the decreased financial flow because of the oil-price decrease may have made it more difficult to repay debts and more costly to secure short-term loans. Consequently, the low oil prices have left Syria's balance of trade only marginally worse than it was prior to the oil-price crash. But even this slight effect is only a transitional one; the development of the new oil field at Thayyem will by 1988-89 improve the balance of payments by several hundred million dollars and, because of the high quality of this oil, Syria will become entirely independent of oil imports. If oil prices in 1988-89 return to their pre-1986 level, the gain in the balance of payments could reach \$1 billion.

The oil-extracting and processing industries' profitability has been drastically cut by the decline in oil prices, which has greatly diminished their contribution to the Syrian budget. The combined effect of the decreased transfer of funds from oil-sector enterprises and from foreign aid may have increased the deficit in the Syrian budget from 28 percent to about 42 percent of total expenditures. This development must be grave consequence for the Syrian economy: inflation has accelerated, as evidenced by the widening gap between the official exchange rate of Syrian currency—\$1=SL3.952—and the rate for workers' remittances and imports, which reached \$1=SL23 in 1986; a cut of 26 percent in budget expenditures in real terms was announced by the government, and within the budget even defense expenditures were to be reduced nominally by 5 percent. (The real cutback is estimated at above 25 percent.) There have also been reports of shortages of both food and imported goods. Import of spare parts and raw materials for industry had already been curtailed prior to 1986, and this policy intensified subsequently, contributing to a decline in GDP every year since 1983. The cumulative decline in GDP between 1983 and 1986 was 10–13 percent and in GDP per capita, 18–20 percent. In 1988–89 a recovery is expected with the full exploitation of the Thayyem oil field which, however, will soon level off, unless aid increases.

The developments in the economic sphere have political and military repercussions. It is still too early to evaluate the full extent of these consequences, but certain trends can already be pointed out. The shortage of financial means for acquiring arms from the Soviet Union has made Syria's quest for strategic parity, and its drive to be the most formidable Arab military power, almost totally dependent on the will of the USSR, which in addition to being the main supplier of arms for Syria is now being called upon to finance a much larger part of the country's arms bill. The decline in oil prices has greatly harmed the Soviet balance of trade, which may be reason enough to forgo long-range arms deals at concessionary terms, or even without payment. Soviet interest in continuing to supply large quantities of arms and the most advanced weapon systems may be influenced to some degree by such economic and financial considerations, which at least in the last decade were a powerful incentive for Russia to supply arms to Middle Eastern countries.

Therefore, Syria is facing a new reality of larger dependence on Soviet readiness to supply arms, while Russia's incentive to supply them is diminishing. Considering this from the Russian point of view, it can be said that the USSR may have gained additional leverage on Syria's political and military behavior. The new Soviet global and internal policies, which have been unfolding during the first years of the Gorbachev era, seem to indicate that the USSR will not be interested in arming Syria to such an extent that it would spur a new Syrian-Israeli or even Arab-Israeli imbroglio. As long as Syria continues its militant strategy, the consequences of the decline in oil prices will make it more dependent on the Soviets, but it is questionable whether the Soviets will be willing to continue supporting Syria's aspirations as much as before. Syria may therefore find itself in a cul-de-sac, having reached a somewhat low peak in its military power. In view of the domestic difficulties, a slackening in Syria's military posture may be dangerous for Assad's regime. The fear of an internal breakdown may lead Syria to search for ways to break out of this blind alley. It can do this in two opposite directions.

- a. Undertake military action using the considerable power it has amassed, most probably by seizing in a surprise attack as much of the Golan Heights as possible. From such an enhanced position—if achieved—Syria may try through international intervention to bring Israel to negotiations on the Golan and the South Lebanon issues.
- b. Change strategy—at least in the short and medium run—by joining some kind of peace negotiations.

Of course, inertia may after all prevail and Syria may decide to sit out the Iraq-Iran war, the end of which may open new opportunities for it.

As already mentioned, in 1988–89 Syria's economic position may be eased to some extent with the full development of the Thayyem high-quality oil field. This improvement will not change Syria's basic problems. It will, however, make the country independent of sources of high-quality oil. This is likely to terminate Syria's special relations with Iran, which have been tense since 1985, not only for economic reasons but because of Iran's undercutting of Syria's stance in Lebanon through the activities of the Shi'ite radical Hezbollah movement.

Syria's disengagement from the Iranian connection may ease its improvement of relations with the Arab moderates, in particular the oil-rich Gulf states. Even such a development is not very likely to restore the aid to Syria to its peak because as long as the oil incomes of the Gulf states remain low, their internal economic needs will take precedence, as will aid to Iraq, at least while the war with Iran continues. In addition, after the curtailment of aid to Syria for several years without serious Syrian reaction, its threats of revenge may have turned somewhat hollow and much less frightening.

But even if prices and incomes from oil would recover to the height they reached at the end of the 1970s and the beginning of the 1980s, it is questionable whether the rich Gulf oil states would revert to squandering their revenues, as they may have learned how quickly seemingly bottomless wealth can dwindle.

Therefore, Syria may eventually be forced to choose between a militant political strategy and the saving of its economy, while giving up its pretentious political and military aspirations, at least for a long time.

However, Syria may after all decide to make a desperate, violent attempt to break out of the blind alley. This possibility should not be dismissed

EGYPT

The main impact of oil prices on the economy of Egypt (in contrast to Syria) lies in the relatively large oil sector, which provided in 1984-85 about 30 percent of all the receipts in the current account, and in workers' remittances which provided about 35 percent. An additional 10 percent was contributed by the Suez Canal. The aid Egypt has received in the 1980s is largely independent of oil-price influences, as it is extended mainly by the U.S. and other OECD countries and not by the Arab oil states.

Because of the oil-price decline in the early 1980s, and the leveling off of Suez Canal transits, the receipts in Egypt's current account have stagnated since 1980-81, except for workers' remittances, which continued to grow until 1983-84. Simultaneously, imports of goods and services continued to increase. As a result, Egypt's deficit in the current account reached \$3.5 billion in 1983-84 and 1984-85, while its foreign debt increased steadily to \$40 billion in 1987 (including military

obligations). Debt service was estimated in 1987 at \$4 billion annually (taking into consideration that Egypt is avoiding servicing its debts to Arab countries and to the USSR).

After 1985, with oil prices in the range of \$15–20/b., Egypt's current deficit is likely to increase from \$3.6 billion in 1984–85 to between \$5 billion and \$6.5 billion in 1984–85 dollars. Because of the devaluation of the dollar, this deficit could increase to between \$7.5 billion and \$8.5 billion in current dollar prices.

Taking into consideration civilian aid of \$2.5 billion and debt servicing of \$4 billion annually, the yearly obligations of Egypt would still amount to between \$9 billion and \$10 billion. This huge deficit would be about 15.5 percent–19.5 percent of Egypt's GNP in 1984–85, and 130 percent–230 percent of the forecasted value of annual exports (including predicted increases in oil exports but a further decline in remittances) during the late 1980s and the mid-1990s. If oil prices revert to their 1984–85 price of \$27/b., the annual deficit in the current account would diminish to \$1.7 billion from \$3.5 billion in 1984–85 (all in 1984–85 prices).

In contrast to the large impact of the decline in oil prices on the balance of payments and Egypt's economy in general, the impact on the budget is rather modest: a contraction of 4–7 percent in budget revenues, which will increase the budget deficit by about 5 percent. However, this deficit is already large and is the main generator of inflationary processes in the economy.

The small rise in the budget deficit could be easily nullified by a hike in the very low domestic oil prices, which would immediately increase budgetary revenues.

As a result of these developments, Egypt's GNP is likely to decrease in the late 1980s by 6–10 percent, and until the mid-1990s by 3–7 percent in comparison to 1984–85, while the GDP during these periods is expected to decline by 7–3 percent, and by 0–2 percent, respectively. The per capita figures may drop by an additional 2.8 percent per annum.

During the bonanza of oil incomes, Suez toll receipts, remittances, and considerable U.S. aid, Egypt did not succeed in developing a viable export industry; the export of non-oil goods has remained at the nominal level of \$1.3 billion since the mid-1970s, and there are no signs of a breakthrough in this field in the foreseeable future. (There may have been unrecorded exports of arms, however.)

In the spring of 1987, Egypt virtually reached a state of economic insolvency, unable to service its debts; imports of consumer goods, raw materials, investment goods, and spare parts were already drastically restricted. In view of such an untenable situation, an agreement was reached between Egypt and the IMF whereby Egypt implemented far-reaching changes in its economic policies. In exchange, the IMF granted Egypt credit and paved the way for the "Paris Club" meeting, where Egypt's creditors negotiated the rescheduling of its debts. This also led to new grants and loans from OECD members and institutions. The main policy changes in Egypt were a large de facto devaluation of its currency, a simplification of the exchange-rate system, a reduction of some subsidies, and an increase in domestic energy prices. These changes fell far short of the IMF's original demands, but due to U.S. intervention the IMF agreed to compromise, taking into consideration Egypt's political constraints.

The main achievements for Egypt in the "Paris Club" negotiations are the granting of a five-year grace period followed by five years to repay \$12 billion of its \$40-billion debt. This agreement covers all official and government guaranteed debts—civilian as well as military—contracted before October 1986 and includes interest and principal payments due between January 1987 and June 1988.

In April 1987, Egypt also reached a rescheduling agreement for its \$3-billion debt to the USSR. The repayment period has been extended by 19 years at no interest and with a grace period of five years.

During 1975–85, Egypt failed to improve its agriculture or build up its industry in such a way that they could spearhead economic growth after the main contributions of the major growth factors in that decade—petroleum, Suez Canal, and remittances—level off or decline.

The resources in that period were available, but the economic policies were faulty. Moreover, Egypt has neither succeeded nor even seriously tried to defuse the demographic explosion.

Now, with the "Paris Club" decisions, Egypt has been given a chance to rectify the situation, although under much less favorable circumstances. After the five-year grace period, the debt Egypt will have to service in the five years thereafter will be staggering, but it is impossible to estimate the amount of annual debt

servicing until the bilateral rescheduling agreements are finalized. The value of the dollar and the price of oil at that time will also be important factors.

The economic policy adopted by Egypt in May 1987 is impressive but still far from adequate. If it will not be followed up with much more resolute measures, it is not likely to put Egypt on a reasonable path of growth, a path that should lead to development of industry and agriculture and to an annual per capita growth rate of at least 3 percent, which in Egypt implies a total annual growth rate of almost 6 percent.

The harsh impact of the decline in oil prices on the economy of Egypt has had, and may still have, political repercussions. There have already been several riots connected to economic problems—mainly protesting cutbacks in food subsidies and low wages. Radical religious groups or factions influenced by foreign powers like Libya may, in their quest to change the regime, take advantage of masses disgruntled by economic hardship.

Dissatisfied repatriated workers may also become a catalyst in such developments. As an end can hardly be seen to the dire economic situation in Egypt, and it is even likely to worsen, the government may be forced to impose even harsher economic measures, the cumulative impact of which could steadily increase the danger of a revolt or coup.

The present regime's very awareness of this danger has restrained it from taking decisive economic action, which in turn precludes an early recovery of the economy. Thus, a vicious cycle has been created.

The decline of oil prices, with its impact on the economy, has made Egypt more dependent on the U.S. and the West in general. This has also had some undesirable influences on their relationship, as the U.S. has sometimes refused Egypt's financial requests. Renewing aid is, therefore, probably one more reason for Egypt to seek better relations with the Arab Gulf states. A beginning in this direction has been achieved in the wake of the 1987 Amman conference of Arab countries.

JORDAN

Jordan has large structural deficits in its balance of trade and in its budget. The trade deficit in 1984–85 was about \$2 billion but it decreased in 1986 to \$1.7 billion as a result of the oil-price decline. This deficit has been covered to a large extent by remittances and aid.

The deficit (JD 500 million) in the official government budget was also covered partially by a portion of the aid received, while the rest—we assume—has been used for financing the unpublished military budget.

With the decline in oil prices, aid—especially grants—has also been gradually reduced; by 1986 it had declined to half (\$650 million) of its nominal value in 1980. As most of the aid has been extended by Arab Gulf countries, at least part of the explanation for the aid reduction lies in the diminished oil incomes and prices, and in the support for Iraq in its war with Iran, which is given top priority by those countries.

The decline in oil prices has had a favorable impact on Jordan's trade balance, as the kingdom is importing almost all the oil it consumes. This was the main reason for the trade deficit's 1986 plunge to its lowest level of the 1980s.

Worker remittances do not reveal a clear trend; in 1986, in spite of the drastic decline in oil prices, they increased. This could be a temporary phenomenon created by the savings the repatriated workers brought with them. We estimate that gradually annual remittances will be diminished by about half, or by \$400 million to \$500 million. As a considerable portion of remittances is spent on imports, the actual deficit in the current account may grow by much less. Still, this may make a serious dent in the balance of payments if exports or aid do not increase. Exports have a slim chance of increasing; they may have an even better chance of decreasing because of the limited means of Jordan's potential customers—Iraq and even the Gulf oil countries. In addition, the prospects for two of its three main exports—phosphate and fertilizers—are bleak. Discovery of oil fields could change this pessimistic assessment of Jordan's export potential.

Jordan could probably rely on receiving increased aid if the state of its economy would endanger its regime, because Saudi Arabia is interested in the existence of Jordan as a moderate buffer state between itself and Syria and as a

aid may continue its decline from \$1.4 billion in 1980 to \$0.7 billion in 1986.

A further contraction in aid would harm not only the current account but the Jordanian budget, as even the diminished aid still covers over 30 percent of total budgetary expenditure and comprises 37 percent of all revenues. Any additional decrease in aid would mean reduced capital expenditure, or an increased deficit leading to intensified inflation. Jordan could, of course, reduce military expenditures but it is unlikely to do so, for as long as the Iran-Iraq war continues, Syria remains a strong military power, the Palestinian issue goes unresolved, and Israel might elect another radical hawkish government.

This situation is likely to impose restrictions on the growth and development of the economy; the high unemployment (about nine percent) will probably increase with large-scale repatriation of Jordan's expatriate workers. It should, however, be pointed out that some of these workers may be able to establish with their accumulated savings small firms in industry, trade, tourism, etc., which may compensate partially for reduced government investment. This is more likely to happen in the relatively liberal economic atmosphere of Jordan than in Egypt and Syria. Jordan may also eventually take a harder line against the massive employment of foreign workers, thereby reducing payment of remittances, and/or restrict the amounts to be transferred to their home countries.

However, the net result of the decline in oil prices is likely to remain: reduced standards of living, reduced development, and increased domestic unemployment.

So far, there have been no serious internal political repercussions concerning the decline in aid and the possible future decline in remittances following the reduction in oil prices. But if unemployment deepens, labor-force entrants expecting profitable careers in the Gulf states will be thwarted, and repatriates and their families will be frustrated to return to greatly diminished standards of living. An atmosphere of unrest may develop, especially among the Palestinian element in Jordan.

The same developments of unemployment, frustration, and unrest may also occur in the West Bank, especially among intellectuals, students, and youth. They, too, may have influence on Jordan's internal politics, but even more so on Jordan-Israel relations: on the de facto cooperation between Jordan and Israel in

Jordan-Israel relations: on the de facto cooperation between Jordan and Israel in the West Bank, and on the ability and willingness of Jordan to enter into peace talks or temporary arrangements with Israel regarding the future of the occupied territories.

The reduction in emigration from the West Bank has had severe repercussions vis-à-vis the demographic balance between Jews and Arabs within the mandatory borders of Palestine, which may have far-reaching consequences for the policies of Israel, the Palestinians, and the Arabs in general.

Jordan's need for additional aid will make it more dependent on potential donors. As the U.S. is facing increasing economic problems itself, and military aid to Jordan is constantly fought against by the the pro-Israeli lobby in the American legislative branch, Jordan is turning more toward Western Europe. It is also ostensibly inquiring about the possibility of acquiring advanced Russian weaponry, and it has already purchased Soviet anti-aircraft systems. It is not yet clear whether additional requests are being made in all earnest or as a way of putting pressure on the U.S., Europe, and the Arab donors. If the Soviet Union eventually becomes a major supplier of weapons, technicians, and specialized military personnel to Jordan, this could endanger negotiations with Israel and perhaps even facilitate the establishment of an Eastern Front alignment of Arab countries.

But despite various maneuvers, the Hashemite Kingdom of Jordan is likely to retain its Western orientation.

CONCLUSIONS

The impact of the decline in oil prices on the political and military scene in the Middle East and on the confrontation states in particular is still only at the beginning of working itself through the system. Not even all the economic consequences have run their course.

Up-to-date, reliable data are also not readily available. Another factor that makes it difficult to assess the political-military impact of the decline in oil prices is that simultaneously, other momentous processes are at work within the Middle East and outside it, the impact of which may be at least as pervasive as

war. The main exogenous process is the rapprochement between the superpowers, which may also result in a growing consensus concerning the Middle East and its conflicts.

The aid received by Iraq from GCC members for its war with Iran amounted at the end of 1985 to between \$50 billion and \$60 billion. (IISS estimate in the 1986–87 Military Balance. This may even be an underestimate since Egypt's minister of defense has claimed that in seven years Iraq spent \$180 billion on the war.) This expenditure may be compared with the 1978 Baghdad Resolution, in which about \$3.2 billion annually was pledged for the confrontation states—Syria and Jordan, and for the PLO. (In fact this pledge has never been honored fully, though on special occasions—for example, in the wake of the 1982 war in Lebanon—larger sums were extended to these countries.) Since 1982, official aid to the confrontation states has been drastically cut back.

The economies of all three confrontation states have suffered considerably following the decline in oil prices. For several years, these countries have experienced major shrinkages in their GDP and GNP, increased deficits in their current accounts, and a chronic shortage of foreign currency and budgetary resources. Accordingly, they also suffer from deteriorating standards of living, shortages of imported consumer goods, raw materials and spare parts, delays or cancellations of development and welfare projects, and therefore rising inefficiency in their economic systems. For all three countries chances of an early economic recovery are slim. In a way, worst off is Egypt because the core of its export economy—the oil sector itself—has been hit directly, and no sector can take its place as a major exporter. Furthermore, Egypt has the largest problem of integrating repatriated workers, and of absorbing considerably more manpower yearly, than it did before the oil-price decline, as the employment outlet in the Gulf states has been almost closed.

For the coming five years Egypt's economy has been saved from extreme hardships by the rescheduling of its debts, engineered by the U.S. and the IMF. But, fearing possible internal political repercussions, Egypt has changed its economic policies much less than necessary in order to achieve a recovery of its economy. Many of the most basic problems have hardly been tackled. The price farmers receive for their produce is still kept artificially well below international rates,

which encourages them to migrate to the already overpopulated urban centers and discourages them from growing essential foods, which are imported instead. Consumer subsidies remain very high, and although some have been reduced, they are likely to increase with inflation. Egypt has barely done anything to curb the population explosion, which for the last 100 years has been consuming most of the fruits of economic growth.

Though Egypt has a good chance of increasing its extraction of oil and gas, if oil prices do not rise considerably, it is almost certain that it will have severe difficulties even within the five-year grace period for servicing its debt. Its economic situation after that period will be even worse than before the debt rescheduling.

Syria's acute economic condition is probably worse than Egypt's in that more of the hardship is being borne by the population in the form of food shortages and even harsher restrictions on imports, etc. The reason for this is that Syria has forfeited, through the decline in oil prices, a much larger percentage of its budget revenues because its loss was mainly in aid from Arab countries, while Egypt did not lose contributions to the budget (mainly Western aid), but only revenues from its oil transactions, which contribute relatively little to its budget.

In addition, Syria is spending a high proportion of its resources on building up its armed forces, despite the loss of much of the aid which it had received in the past for this purpose. It is in a better position than Egypt to do so because it is not restricted in the use of its aid as Egypt is. Moreover, President Hafez el-Assad's regime is more authoritarian than President Mubarak's, and is therefore not recoiling from extreme measures against its adversaries. Syria also has to worry much less about debt servicing since its debts are mainly to Arab countries, Iran, and the USSR. It does not even bother to repay these debts and the Soviets are much more lenient toward Third World debtors than the U.S.

Syria's economy is likely to recover quickly and considerably from the shock of the oil-price decline because of the development of the Thayyem oil field. In the long run, both Egypt and Syria have the structural problem of not having been able to develop an efficient agriculture or an export-oriented manufacturing sector.

Jordan is the only one of the three confrontation states whose losses from the decline in oil prices are balanced to some extent by its gains as an importer of oil. Its payments in the trade account have been reduced. This makes it easier for Jordan to absorb the loss of remittances and aid. For Jordan, one of the biggest problems created by the fall in oil prices may be the expected increase in unemployment with the repatriation of its expatriate workers. The problem for Jordan is potentially larger than for any other Arab country because about 40 percent of the total Jordanian labor force (340,000 workers) is employed outside of Jordan (80 percent in Arab countries). The repatriation of even 25 percent of these workers could more than double the already high unemployment, and the country would need very large resources to initiate a major development program. The problem is especially pressing because many of Jordan's workers abroad are well-educated and skilled.

The same problem is also facing the West Bank, which has already experienced a considerable increase in its labor force because of repatriation and because net emigration has declined in comparison to previous years. Most of the additional workers have found employment in Israel, but among the academicians and the young, unemployment in the West Bank has increased substantially. The demographic equation between Jews and Arabs within the mandatory boundaries of Palestine has thereby been changed and may have a profound impact on Arab-Israeli relations. These developments may have contributed to the Palestinian revolt in the occupied territories since the end of 1987.

For Jordan the net economic result of the decline in oil prices is likely to remain: a reduced standard of living, reduced development, and a large increase in domestic unemployment, especially among academicians. This assessment may change if the intensive oil exploration in Jordan succeeds.

On the whole, Arab aid was not curtailed, despite declines in oil prices and revenues; it was just diverted from the Arab-Israeli conflict to the Iraq-Iran conflict. The combined aid to both causes has apparently increased despite oil-price decreases. This fact vividly demonstrates the preferences of the Arab donor countries: the Gulf War is much more important to them than the Palestinian issue.

Thus the decline in oil prices has apparently made the Arab Gulf countries perceive the Arab-Israeli conflict with a more realistic perspective on its importance to the Arab world. Once such a view has been crystallized, it is not likely to be clouded easily. It is probably also one factor in the much more lenient attitudes of the Arab Gulf states, as well as of Iraq and Jordan, toward Egypt and its peace accords with Israel.

Eventually such changes in perspectives and attitudes may make it easier to reach a peaceful resolution of the Arab-Israeli conflict. The many contacts made in preparation for peace talks between Jordan and other Arab countries and Israel in the last two years and the results of the Amman conference seem to confirm such a change in attitudes.

The exogenous process of rapprochement between the superpowers may eventually also make them more open to relaxing the arms race in the Middle East, and seeking a peaceful resolution of the Arab-Israeli conflict. The Soviet Union has considerable difficulties in its foreign-exchange position, which has been severely aggravated by the decline in oil prices and by its desire to accelerate economic and technological development. Many arms transfers by the USSR to the Middle East are no longer paid for in foreign currency because the Arabs have curtailed their aid, especially to Syria. Under these circumstances, the Soviets may be losing some of their interest in arming Syria, and may restrain themselves if the U.S. takes the same attitude toward its client states, Israel and Egypt. The U.S. may indeed do so because of its troubles with its federal budget and balance of payments, and because of the relentless pressure from its legislative bodies to cut the budget, in particular the foreign-aid items.

Therefore, some tacit agreement on this issue may be reached between the superpowers following a meaningful agreement on partial nuclear disarmament.

It may be more difficult to coax the respective client states into a peaceful resolution to their conflict. But a considerable cutback in arms supplies may at least prevent Syria from sabotaging negotiations between Jordan and Israel.

Thus, the decline in oil prices may have an effective role in decelerating the arms race in the Middle East and promoting negotiations, since the Arab countries cannot pay the USSR for arms and the Soviets have difficulties with their balance of payments.

The decline in oil prices and the resulting reduction in Arab aid, remittances, and oil revenues have made the confrontation states more dependent on their patrons: Syria has become much more dependent on the USSR, which is now not only its main supplier of arms but its provider of financing; Egypt's foreign-exchange position has deteriorated to such a degree that it relies on the U.S. not only for arms and their financing, but for convincing various international institutions and states to reschedule Egypt's huge debts; Jordan, too, is slightly more dependent on the U.S. and the European countries to finance its arms acquisitions. All three countries are turning more toward Europe for finance and arms transfers.

Israel adjusted itself to dependence on its patron a long time ago.

So far none of the patron states has made decisive use of this leverage. However, the delivery of MIG-29 aircraft to Syria might not have been postponed, and the supply of SS-23 missiles might have gone into effect, had Syria been able to pay in cash.

Nevertheless, should the superpowers come to a decision to decelerate the arms race in the Middle East, they should be able to enforce it.

One further element of concern that may be generated by the oil-price decline is a process of destabilization in Middle Eastern regimes. This process could take place within the oil-rich countries, which have to curtail their expenditures on welfare services, investment, subsidies, etc. Consequently, standards of living will be reduced and unemployment may increase. This could eventually lead to frustration, unrest, riots, and attempted overthrows of present regimes. The same is true for countries like Egypt, Jordan, and Syria, where standards of living will also have to fall and where unrest may be further instigated by repatriated workers who remain unemployed and have to forgo the higher standards they had become accustomed to. Generally speaking, any migrant group includes a large number of young and enterprising people who may, perhaps together with other elements like radical religious groups or certain segments of the army, try to change established regimes.

Almost all over the Middle East, the rule by established elites is to be considered less stable than it was before the changes generated by the decline in oil prices.

In the military sphere Syria has borne the brunt of the changes in oil prices. Since 1981–82, only a slow increase in its arsenal of weapon systems has been discernible, especially in the realm of expensive tanks and combat aircraft. In 1986 there was almost no expansion in any major weapon systems or in personnel. In 1987 the military budget has been cut back, which apparently is causing a decline in personnel and an acceleration in the phasing out of almost obsolete arms.

For most of the Arab countries, during 1981–85, despite the decline in oil prices, the main indicators of military strength increased: regular and total army personnel, the number of high-quality tanks and combat aircraft, as well as the value of “military gross capital stock.” The same is true—to a lesser extent—of Jordan. In all these cases the economic factors were neutralized by political ones. Iraq received the necessary financial aid for acquiring arms from the oil-rich Gulf states because of their vital interest in precluding a dangerous Iranian victory. Egypt was able to build up its military forces with U.S. assistance because of its strategic importance to America and the latter’s desire to encourage Egypt’s adherence to the Camp David accords with Israel. Jordan is also perceived by the U.S. as a strategic asset, a stabilizing force in the Middle East and, in particular, a potential backup for the Arab Gulf states. However, Jordan’s potential threat to Israel has caused the U.S. to withhold much of the requested weaponry.

The result of all these various influences and effects was, paradoxically, that at the end of the oil-price increases in approximately 1981–82, Israel was at the peak of its strength compared with any constellation of Arab alliances, be it with the three confrontation states (Syria, Jordan, Egypt), with Syria alone, with the Eastern Front states (Syria, Jordan, Iraq, Saudi Arabia), or with an “all Arab” alliance (Eastern Front states, Egypt, and Libya). In contrast, during the period of gradual decline in oil prices and aid from the Gulf states, the relative strength of any Arab alliance in comparison to Israel changed greatly in favor of the Arab parties, according to most of the important military indicators (see Tables 3, 4).

In 1985–86 the situation stabilized, that is, the relative strength of possible Arab alliances—and especially Syria alone—did not increase further. This also seems to be true for 1987, judging from fragmentary reports about military-budget cuts in Arab countries and slow deliveries of military equipment.

As a result of these developments during 1974–85, Syria has gained quantitative superiority over Israel in most major weapon systems and in personnel, except in high-quality combat aircraft (see Tables 3, 4). The change has been much less pronounced in comparison to the ratio of the three confrontation states and Israel, which has remained at about 3:1–2:1 (except in high-quality combat aircraft, where in 1986 it was still 1:1, and in regular personnel, where it increased from 3:1 to 6:1). In comparison to the Eastern Front countries, the ratio in 1986 was by most indicators about 4:1–2.5:1 (again excepting high-quality combat aircraft, where Israel still has 79 percent of the Eastern Front's quantitative aircraft capability, and in regular personnel, where the figure is 8:1 in favor of the Front). This powerful advantage of the Eastern Front over Israel is mainly due to the expansion of the Iraqi army during its war against Iran, combined with the dramatic strengthening of the Syrian army. It should also be noted that in 1987, Iraq received MIG-29 aircraft, which are supposed to match America's F-15 and F-16 qualitatively.

An "all Arab" coalition would outweigh Israel in most of the important weapon systems by 6:1–4:1, but in regular personnel by 11:1, and in high-quality aircraft by "only" 2.7:1. In such a coalition the superior quality of Israel's Western airplanes would also be challenged by the Egyptian and Saudi airforces, which now feature similar planes.

In comparison to Syria, Israel's position has worsened considerably in most major weapon systems except high-quality combat aircraft; otherwise Syria has achieved quantitative parity or even superiority. There has also been a vast improvement in the qualitative composition of weapon systems in favor of Syria. In view of these developments, it must be concluded that despite the decline in oil prices and incomes in the 1980s, quantitatively and qualitatively the arsenals of Syria and other Arab countries (except Egypt) have grown much more since 1974–75—and including in the early 1980s—than that of Israel. The ratio of Israel's arsenal to that of Arab countries has declined considerably.

Israel's most populated areas with its newly acquired SS missiles, for which it is also producing chemical trajectories. In addition, Egypt is purchasing advanced Western weapons systems, particularly F-16 aircrafts, and Syria is to acquire Soviet MIG-29 planes. These developments are dulling Israel's qualitative edge. In addition, Syria—not Egypt—is now by far the most important military force among the confrontation states, which is dangerous to Israel because of Syria's bellicose tradition and proximity to important Israeli population centers. But, of course, as long as the peace between Egypt and Israel holds, it far outweighs these disadvantages.

Summing up the impact of the decline in oil prices and incomes on the military balance in the Arab-Israeli conflict, it can be said that until 1985 the decline had no major adverse impact on the build-up of the Arab countries' military strength; since then, there are signs that the large and sudden decrease in oil incomes and prices has considerably curbed any major strengthening of the Arab countries' might, with the exception of Egypt. Other important factors in this development were the politically motivated stance of the U.S., which refused to respond to many of the requests by Saudi Arabia and Jordan for procurement of additional weaponry, and somewhat similar behavior by the Soviets, particularly toward Syria.

However, the result of the build-up of the Arab armies in the 1970s and the early 1980s is that their military might relative to Israel has been greatly enhanced, and this has not been given a test in the battlefield mainly due to the Iraq-Iran war and to Arab disunity. Israel's deterrent capability has most likely been severely impaired, in particular vis-à-vis Syria, as has been revealed by Syria's instigation of many terrorist acts and by its active support of the resistance in Southern Lebanon.

CHAPTER 1

INTRODUCTION

1.1. BACKGROUND: OIL PRICES AND PRODUCTION

At the beginning of the 1970s, increased U.S. demand for imported oil appreciably boosted the world oil trade and its prospects. This development provided the economic base for the rise in oil prices. It was reinforced by the cartel power of OPEC,⁵ which dominated more than 50 percent of world oil production and about 75 percent of international oil trade, and engaged in psychological warfare by threatening production cutbacks and selective embargoes on countries friendly to Israel.

Consequently, oil prices in 1973–74 increased about fourfold, to \$11.3/b. Until 1979, nominal prices remained stable but real prices deteriorated slowly. Total world production stagnated until 1976–77, thereafter climbing to a peak of 24 billion barrels (in comparison to 21 billion in 1973). The additional quantity was supplied by non-OPEC countries, while OPEC production remained stagnant.

The unrest in Iran, the eventual fall of the Shah, and the outbreak of the Iraq-Iran war sent a wave of fear through the oil-consuming countries, and prices reached a new nominal peak of \$34.5/b. in 1981. By the end of 1985 oil prices had sunk gradually to \$27/b., and total world production had dropped below its 1973 level; OPEC production was reduced to half its 1973 mark, while that of other non-OPEC⁶ countries increased by 50 percent. The production of the three main Arab Gulf oil countries—Saudi Arabia, Kuwait, and the UAE⁷—dropped from 4.4 billion barrels in 1973, and from its peak of 5.1 billion in 1979, to 1.9 billion by the end of 1985. A steeper price decline was prevented only by the three main Gulf oil producers' preparedness to cut production by 45 percent and lose 67 percent of their oil revenues. For Saudi Arabia—the main loser—this created an untenable situation, which it rectified in 1986 by approximately doubling its production and world market share. The result was a free fall in the price of oil from \$27/b. to even less than \$10/b., prompting a further drop in Saudi oil revenues from \$27 billion in 1985 to \$20 billion in 1986. In light of this fiasco Saudi Arabia

changed its oil policies, and in agreement with the other OPEC members including Iran but excluding Iraq, and with the tacit approval of the non-OPEC oil producers, set a target price of \$18/b. Total production levels and OPEC members' quotas were set accordingly. This arrangement worked quite satisfactorily in 1987, though the tanker war in the Persian Gulf boosted prices sometimes even above \$20/b. Mostly, however, prices in 1987 fluctuated between \$16.5 and \$19/b. But it should be noted that due to the steep devaluation of the U.S. dollar, \$18/b. in 1987 was equivalent to approximately \$12/b. in 1984.

1.2. THE LEGACY OF THE 1970s

The large oil-price increases during the 1970s and the beginning of the 1980s touched off many economic, social, and political processes the world over. But in this study, we shall focus on those that had an impact on the confrontation states—Syria, Egypt, and Jordan. We shall also mention other major developments in the Middle East that had a direct bearing on these countries.

The oil-price increases had an impact on the confrontation states through their oil trade, through the large-scale migration of workers to the oil-rich Arab countries and the transfer of their remittances, and through the aid extended by these states.

The importance of each of these elements to each confrontation state is very different. The common features, however, are that the massive development and projects in the oil-rich countries attracted several million workers from the confrontation states (mainly from Egypt), thereby easing the chronic unemployment in these countries, and that large segments of the population increased their living standards considerably through the remittances received. The drawback to this process was that these countries also lost highly skilled and important manpower. In addition, two social strata were virtually created—those who received remittances and those who did not. Those with remittances set new consumption standards, which most likely influenced the aspirations of those who could not afford them.

Abundant aid made it possible for countries like Syria to strengthen their armies and initiate important development projects. Egypt, which did not enjoy the

development programs. All three confrontation states became dependent on the continuous flow of resources generated by the two oil-price revolutions during the 1970s.

In the wake of the oil-price hike in the 1970s, it was widely believed, hoped, or feared that the huge increase in the incomes of the Arab oil countries could have a decisive influence on the Arab-Israeli conflict, strengthening the confrontation states and weakening Israel. Such results did not materialize, but the impact was profound in many expected, as well as unexpected, ways.

With the growth in oil prices and incomes, the Middle East, and particularly the oil-rich countries, enhanced its impact on the industrial nations and acquired greater economic importance for them as a vast potential market of considerable financial means. Its importance in the eyes of the superpowers, and of Western Europe and Japan, increased accordingly. Simultaneously, oil-rich countries felt the need for a better defense against greedy potential enemies. The oil-price rise also brought a considerable economic plight to the developed countries in the form of large deficits in their current accounts and widespread unemployment, while the oil-rich nations in the Middle East accumulated huge surpluses in their accounts.

Israel, shocked by the 1973 Yom Kippur (October) War, and anticipating a further fortification of the confrontation states, embarked on enlarging and strengthening its army with increased U.S. assistance.

All these factors combined in unleashing a Middle East arms race of unprecedented proportions. This race swept the Gulf oil countries and—with the direct help of the Arab Gulf states—it spread to the confrontation states. In particular, Syria was now able to acquire large quantities of arms from the Soviet Union, which had been eager to make these deals in exchange for hard currency.

Egypt, however, preferred to turn to improving its economy. It eventually refrained to a large degree from taking part in the arms race in the 1970s, and signed two agreements with Israel, which culminated in the Camp David accords. Egypt also felt patronized by the nouveau-riche Arab oil states, whose sheer riches thwarted its leadership among the Arab countries. The peace treaty with Israel enabled Egypt to increase its development considerably, in particular by advancing oil-related projects; e.g.: developing oil and gas fields and exploiting

the Sinai oil fields Israel had returned; earning incomes from the transport of oil and other goods through the reopened and widened Suez Canal; completing the SUMED (Suez—Mediterranean) pipeline; and reconstructing and establishing of oil refineries and oil-based industries. U.S. financing replaced that of the Gulf oil states.

The overall result at the peak of the bountiful oil era—until the beginning of the 1980s—was a military weakening of the three confrontation states vis-à-vis Israel. Syria became the main military power among these states and succeeded in narrowing its own arms gap with Israel.

During those years, Syria enjoyed a certain growth due to the increased oil prices and incomes.

Meanwhile, Israel's economy was considerably enfeebled; after almost continuously high growth rates for more than two decades, Israel's economy almost stagnated in the decade following the Yom Kippur War. This was due partly to the intensification of the arms race, the increase in oil prices, and the return of the oil fields to Egypt, and to the expenditures connected with the development of Jewish settlements in the occupied territories and later to the 1982 Lebanon War. In Israel, as in Syria, ill-conceived government economic policies exacerbated the economic damage caused by external factors and political decisions.

However, there was a major difference in the impact of the debilitating factors on the economies of Syria and Israel. Israel, in spite of stagnation and high inflation rates, developed in those years a large and diversified high-tech industry oriented mainly toward military applications and exports. Thus a broader basis for the future development of the Israeli economy was established. In contrast, Syria developed a very narrow-based oil sector, limited in its capacity by its modest oil reserves; the rest of the economy remained on the whole based on traditional, low-productivity industry. In contrast to Israel, the Syrian army remained almost totally dependent on imported weapon systems.

Egypt's economy, which greatly profited from the increase in oil prices, had a spurt of intensive development based on the oil sectors—including the Suez Canal—and on remittances. It succeeded only slightly in strengthening other sectors, and failed to develop export-oriented branches.

Jordan, the third confrontation state, received considerable aid from the Arab oil countries and remittances from workers employed there. With this influx of resources and additional assistance from the U.S., Jordan, too, was able to increase and modernize its army as well as develop and strengthen its economy, which was helped by the civil war in Lebanon. But because the country is a net importer of oil, the increased oil prices stepped up its trade deficit significantly.

The oil bounty did not contribute to the unity of the confrontation states or to the unity of the Arabs in general; on the contrary, their disunity increased to overt animosity between the "rejectionist front" (including Syria and Libya) and the others, and between Syria and Egypt in particular, Syria seeking obviously to snatch the scepter of leadership from Egypt. Jordan preferred to disengage itself from both countries, lean much more on the Gulf states, and align itself with Iraq.

Iraq, which since the establishment of the State of Israel could be regarded as a peripheral confrontation state, has turned its attention to the Gulf. There, it apparently expected to reap much greater (and presumably more easily attainable) rewards, and assume Iran's vacated leadership role in the Gulf after the toppling of the Shah. As is well-known, Iraq's attempt failed. But the drawn-out war between Iraq and Iran has sapped a considerable portion of the oil incomes of the Arab Gulf states, which have been interested in supporting Iraq as a bulwark against the spread of Shi'ite radicalism. This interest has brought about a shifting of Arab aid from the confrontation states—mainly Syria—to Iraq.

Some of the main political results of the increase in oil prices were enhanced Israeli dependence on U.S. arms and financial aid, and greater Syrian reliance on Soviet arms and, to a lesser extent, financial aid. The PLO gained recognition all over the world and observer status at the UN. Many Third World countries, especially in Africa, severed their diplomatic ties with Israel. And terrorism against Israel greatly intensified.

In summary, it may be said that the years of high oil prices and incomes were characterized by an unprecedented arms race in the Middle East. The confrontation states did not succeed in narrowing their military gap with Israel, but Syria did. And the Arab countries became more disunited than ever.

Politically, Israel's position weakened and the PLO's was enhanced.

But in the final analysis the confrontation states did not achieve a breakthrough against Israel in the 1970s, although during this period the Arab world was at the zenith of its economic might.

From the perspective of these developments during the 1970s, this study will concentrate on the impact of the decline in oil prices throughout the 1980s on each of the confrontation states, directly or indirectly. The findings will then be integrated into an overall evaluation of the economic impact of the oil-price decline and its political and military repercussions.

CHAPTER 2

SYRIA

2.1. INTRODUCTION

The impact of changes in oil prices on the Syrian economy derives from three sources:

Syria is a small producer of oil as well as an importer of crude oil and its products. But in its small economy, oil plays a major role. Therefore, a change in oil prices may have a direct, important influence on the Syrian economy. Syria is also a large recipient of aid, mainly from oil-rich Middle Eastern countries. A change in oil prices has an impact on these donor states, and may thus have an impact on the level of aid extended to Syria, independent of political considerations, which, too, may exert influence on the extent of aid. The amount of aid is an important factor in the Syrian economy.

The total resources at the disposal of Syria—including aid for acquisition of arms—amounted in 1984 to approximately \$24.5 billion. Thereof, about 78 percent emanated from the GDP, 19 percent from aid, and about 3 percent from workers' remittances.⁸

That year, Syria's domestic security expenditures and acquisition of arms totaled \$4.4 billion; thereof only \$1.4 billion was spent on acquisition of arms, mainly from the USSR. (The average annual total security expenditure for 1978–84—the main period of increasing and strengthening the army—was about the same, but the share of imported arms was much higher, amounting to about \$2 billion per annum.)

Out of total aid of \$5.1 billion in 1984, Syria spent 86 percent on security and \$0.7 billion (14 percent) on its civilian economy. From another angle, \$3.7 billion in aid was spent domestically for military and civilian purposes, and \$1.4 billion on arms imports.

Syria exports about \$1.1 billion in petroleum. The fuel's contribution to the economy as measured by its share in the GDP, prior to the 1986 crash in oil prices, was less than \$2 billion.

Militarily, Syria is dependent to a large extent on the supply of arms by the USSR. A considerable proportion of this supply has been paid for by the aid received from the Middle East donor states. Curtailment of this aid has diminished Syria's ability to pay Soviet Russia for its arms. This may have influence on the Soviet readiness to supply weapon systems to Syria, particularly in view of the negative impact the decline in oil prices has on the Soviets' economy.

Another factor influenced by the decline in oil prices is the worker remittances, as many laborers have been repatriated from the Gulf states because of the curtailment of economic activity there and the income of those who have remained has been cut severely, with transfers limited. If we take into account the workers' remittances, close to \$8 billion (or 33 percent) of total resources are threatened, directly or indirectly, partly by the decline in oil prices.

All these developments may, of course, have political repercussions of considerable importance.

2.2. THE DEVELOPMENT OF THE PETROLEUM SECTOR IN SYRIA⁹

The development of the oil sector in Syria began with the discovery of the Karatchuk-Hamzah field in 1956 and of the Suwaidiyah fields in 1959. In 1976, oil extraction peaked at 10 million tons per annum. It then declined to about 8.5 million tons in the late 1970s and stayed approximately at this level until 1985. In 1986 it apparently reapproached the peak of 10 million tons (see Table S1).

The two main oil fields were, until 1986, Suwaidiyah, which produced about 66 percent of Syrian oil, and Karatchuk, with a contribution of 16 percent; the rest of the production was scattered among a dozen smaller fields. The principal oil fields were located in the extreme northeast corner of the country.

In 1984, a field at Deir al-Zor (the Thayyem field) was discovered. This is a discovery of major productive capacity, the estimates of which have been varying considerably. In October 1986 the field reached a production level of 50,000 b/d (or 2.5 million tons per annum) and is anticipated to reach 100,000–150,000 b/d in 1988.¹⁰ The highest estimates put the maximum capacity of the Thayyem field at 300,000 b/d (or 15 million barrels per annum). At the 1986 rate of production, the new field will mainly substitute quantitatively the gradual decline in production in the old fields.

In 1983, Syria's proven oil reserves were estimated at about 1.5 billion tons, of which 40 percent were considered recoverable. Syria is therefore considered a small producer of oil in the Middle East, with very limited potential.

The oil extracted from the old Syrian fields is of very poor quality (about 250 API with a 3.5–4.5-percent sulfur content). The main exception is the Jbaisse field, which produces a much higher-quality oil but in the mid-1980s supplied only about 5 percent of Syria's oil production. Syria has erected two refineries: one at Homs, established in 1959 and expanded in 1974–78 to an annual capacity of 5.2 million tons, and the other at Baniyas in 1981, with an annual capacity of 6 million tons.

Because of the low quality of most of its oil, Syria has to import large quantities of high-quality oil in order to reach a reasonably suitable oil blend for refining. In 1984, the import of oil reached 10.5 million tons, exceeding Syria's own extraction by 2 million tons.

The Thayyem field's oil is—in contrast to the oil from the old fields—of high quality (36 API; 0.5 percent sulfur) and will by 1988–89 eliminate Syria's need for importing high-quality crude; its importance, therefore, goes far beyond the mere quantitative aspect, as can be seen from the following calculation. The demand for oil in Syria is about 150,000 b/d, which was met until the exploitation of the Thayyem field by 30,000 b/d of local crude and 120,000 b/d of light, high-quality oil, imported mainly from Iran.¹¹ If by 1988–89 the Thayyem field's production reaches the realistically expected 120,000 b/d, Syria's need for oil will be met—except perhaps for some special kinds of refined products. Syria will then still be left with some 90,000–120,000 b/d (depending on the pace of depletion of the old oil fields) for export and increased local demand. Syria could export this oil mainly as crude, or augment its refining capacity and continue to import high-quality oil in order to export refined products produced from a blend of local and imported crude. From a purely economic point of view it certainly would be worthwhile to make full use of the existing refining capacity, which is about 220,000 b/d. The surplus capacity of the refineries—over the present local consumption—is therefore approximately 70,000 b/d. Accordingly, to reach optimal use of its oil production, Syria would still be interested in importing roughly 50,000 b/d, to be blended with about 13,000 b/d of local crude. The remaining local oil (75,000–105,000 b/d) would have to be exported or used locally as crude.

In addition to oil, Syria has an expanding gas industry and considerable gas reserves. The total gas reserves probably exceed 100 billion cubic meters. Thereof about 35 billion cubic meters are associated gas (not including the quantity associated with the new Thayyem field). Until the early 1980s, associated gas was flared, but in 1984 a gas-gathering project in three oil fields—then producing over 70 percent of Syria's petroleum—was completed, and an LPG plant with an annual capacity of 45,000 tons was erected. In 1982 a large field of nonassociated gas was discovered. It is believed that there are still large quantities of undiscovered gas reserves. Syria's intention is to substitute energy produced by gas for petroleum, in order to increase petroleum exports.

2.3. THE DECLINE IN OIL PRICES AND THE SYRIAN ECONOMY

2.3.1. OIL AND ECONOMIC GROWTH

Petroleum extraction in 1984 constituted seven to nine percent of the Syrian GDP.¹² To this should be added the contribution of the refineries to the GDP, which puts petroleum's share in the GDP at 9–10 percent.

Between 1968 and 1984, petroleum extraction was the fastest-growing activity in Syria. It increased by 723 percent (in constant prices) in comparison with a growth rate from 1968 to 1984 of 313 percent throughout the economy (see Tables S2 and S3) and contributed about 11 percent to the overall growth of the economy during these years. (In fact the contribution should be regarded as much higher because the bulk of the growth in this period—63 percent—was due to the service sector, a large part of which includes the arbitrarily set wages of public servants, etc., which are not really relevant sources of growth.)

As can be seen from Table S4, the oil-extraction sector reached the peak of its contribution in 1976, when production was highest (see Table S1). Since then, the contribution of this sector to the GDP has declined steadily, because of the fall in production and the gradual erosion of prices during 1981–85. In the wake of the drastic decline in prices in 1986, preliminary estimates point to a steep reduction in the sector's contribution to the GDP, from 8.6 percent in 1984 to 5 percent in 1986. The decline would have been even steeper—to about 4.5 percent of the GDP—if the new Thayyem field had not become operational in 1986. Since in

1987 the Thayyem field will produce throughout the year, a further increase in oil extraction may be expected. In 1988–89, when the Thayyem field will be producing at full capacity, the oil sector may again contribute 7.5–8.5 percent of the GDP.

2.3.2. OIL AND THE BALANCE OF PAYMENTS

Syria exports and imports crude petroleum and petroleum products. In 1980 Syria was still a net exporting country. During 1981–83, its trade in oil was almost balanced; but in 1984 and 1985 Syria became a net oil-importing country. It is likely that in the wake of the development of the Thayyem field, Syria will again become a net oil exporter (see Table S5).

In any case, oil's direct net contribution to the balance of payments in 1981–86 was close to nil. Yet oil dominated goods exports, generating \$1.1 billion to \$1.6 billion compared to a mere \$0.5 billion to \$0.8 billion for other exports (see Table S5). Oil therefore constituted 58–77 percent of all exports of goods.

As Syria's exports and imports of oil were for most of the 1980s almost even, and in 1984–85 the country was even a net importer of oil, Syria's trade balance and current account have not been directly adversely affected by the decline in oil prices. Because of the development of the Thayyem oil field, exports even improved slightly in 1986, and may increase by \$0.4 billion to \$0.5 billion by 1988–89.

The deficit in the trade and current-account balances would thereby be reduced from \$1.9 billion or \$2 billion to \$1.4 billion or \$1.5 billion, approximately. However, had the drastic decline in oil prices not occurred after 1985, the development of the Thayyem field could have boosted the current account balance to close to \$1 billion. The decline in oil prices has therefore dealt a very heavy blow to the potential recovery of the Syrian balance of payments and of the economy in general. There are also some subtler, indirect influences of the decline in oil prices on Syria's balance of payments. Syria is repaying some of its debts to the Soviet bloc with oil exports. At the reduced prices it will take a much larger quantity of oil to repay the debt and it may also take much longer, which would increase the cost of servicing the debt. In addition, the smaller influx of foreign exchange because

of reduced oil-export incomes narrows Syria's financial maneuverability. In view of the minuscule foreign-exchange reserves (\$100 billion to \$150 billion), this may be a costly impact.

Another influence on the current-account balance is the anticipated further decline in workers' remittances (private official transfers) following the large repatriation of workers from the Gulf states. In the official balance of payments their sum is small—about \$0.3 billion—but they are certainly much higher. (Some sources put them at \$1.5 billion per annum.)

There is one further remark to be made in connection with the balance of payments and oil prices. Since 1982 Iran has been providing Syria with high-quality oil at concessionary terms. Generally, the agreement was that Iran would supply Syria each year with six million tons of oil: one million free of charge, and five million at discount prices (\$2.5/b. off the official price). This agreement at 1982–84 prices was worth approximately \$0.3 billion, but turned out to be much more valuable as Syria consistently refused to pay some of the rest of the cost, the accumulated value of which was estimated at \$1.5 billion by the end of 1986. For this and other reasons, the agreement has had many ups and downs. After the decline of oil prices in 1986 the value of this agreement diminished considerably. The \$2.5/b. discount became meaningless as market prices were much lower than the official prices and the value of the one million tons of free oil shrank to about \$100 million.¹³

Probably the most important item to be influenced by the decline of oil prices is the aid to Syria from various countries. However, since the impact of this item permeates all the elements in the economy, it will be dealt with as the last economic item, after the main factors in the economy have been discussed.

2.3.3. OIL AND THE BUDGET

The importance of petroleum for the Syrian budget lies in its contribution to government revenues. The government has a monopoly over the extracting, refining, and sale of crude petroleum and its derivatives. This monopoly is managed by two public-sector enterprises, which have to transfer their surpluses to the central government budget. These surpluses consist of a "budget surplus," which

is equivalent to accounting profits, and a “cash surplus,” which includes depreciation allowances and increases in cash balances due to other capital-account operations.

The contribution of all public enterprises to the budget in 1980–84 fluctuated between 48 percent and 58 percent of all revenues, and petroleum enterprises were responsible for about half of this share, or over 25 percent of all budget revenues (for data and sources, see Table 6). For 1984 it can be calculated indirectly that the share of the petroleum enterprises in the active budget revenue was approximately SL 4.4 billion. However, since the exact accounting practices that determine the amounts transferred from enterprises to the budget are not generally known, it is very difficult to measure the impact of the decline in oil prices on the contribution of the public-sector oil enterprises to the budget. Very rough calculations indicate that those contributions should have shrunk from SL 4.4 billion in 1984 to about SL 1.5 billion or SL 2.5 billion in 1986 (in 1984 prices), or from about 25 percent of all revenues to about 8–14 percent of 1984 budget revenues. Therefore, the deficit in the 1986 budget (excluding grants) would have increased from SL 16.7 billion to SL 19 billion or 20 billion. But in 1988–89 the Thayyem oil field is likely to restore much of this lost revenue.

Again, as in the case of the balance of payments, had the decline in prices not occurred, the Thayyem field would have been likely to increase the contribution of the oil enterprises to budget revenues, from 1988–89 on, by probably as much as SL 3 billion to SL 3.5 billion (in 1984 prices). This would make for about a 20-percent reduction in the budget deficit (excluding grants) in comparison with the estimated deficit in 1986, if there were no expenditure cutbacks in comparison with 1984.

Another important budget item that has apparently been influenced by the decline in oil prices is the aid—that is, grants and medium- and long-term loans—mainly from the oil-rich Gulf states. This item has deteriorated since 1981 (see Tables S5 and G6) and is likely to diminish further in the coming years.

However, as far as the adverse direct impact of the decline in oil prices on the budget and, through it, on the Syrian economy is concerned, this should have been felt mainly in 1986–87. By 1988–89, the development of the Thayyem field should fully restore the contribution of oil revenues to the budget.

But if the prices of oil had not been diminished, Syria's budgetary and general economic position in 1988–89 could have been expected to improve considerably in comparison to the pre-1986 situation.

2.3.4. AID AND THE SYRIAN ECONOMY

So far only the direct impact of oil on the Syrian economy has been taken into consideration. In this section the indirect impact through the influence of oil on the aid extended to Syria will be discussed.

2.3.4.1. The donors and the amount of aid

Syria has been receiving grants and loans—medium- and long-term—from several main donors: the oil-rich Gulf states, especially Saudi Arabia, Kuwait, and the UAE; the USSR; and Iran and Libya.

The amount of aid extended by these countries is one of the best-kept secrets, and therefore this section is based on fragmentary and not always reliable data. It has been calculated by us that to meet its international obligations evolving from its civilian balance of payments and from its acquisition of arms, Syria had to receive in 1978–84 about \$29 billion (see Table S7) in aid (grants and loans). This sum may be an underestimate because it may not include all the arms deals between Syria and the Soviet-bloc countries for which the USSR extended aid to Syria (see Table S8 and remarks).

During this period (1978–84) about \$16 billion to \$17 billion in aid was extended to Syria by the oil-rich Arab Gulf states, and about \$2 billion by Libya. The aid from the Gulf states was given, to a large extent, in accordance with the pledges made at the 1978 Baghdad conference to provide Syria with annual grants of \$1.85 billion. However, most of the time these pledges were not honored in full, but considerable sums of aid were extended without any relation to these pledges. For example, large contributions were made to Syria in the wake of the war in Lebanon, and in November 1987, according to various sources, \$2 billion was pledged by the Gulf states.

Iran provided Syria with aid in kind by supplying \$0.9 billion in oil at concessionary terms, and an additional \$1 billion in “involuntary aid,” meaning that

Syria simply refused to make full payments to Iran for the oil delivered. (This was the sum until the end of 1984; by the end of 1986, the amount Syria refused to pay had increased to \$1.5 billion).¹⁴

Of the \$29.4 billion Syria needed to cover its foreign-exchange obligations, \$6.6 billion could not be traced to a specific donor (see remark to Table 8). It is our assumption that the main part of this sum was grants and loans by the Soviets. Various sources “guesstimate” Soviet aid to Syria—until the end of 1984—at up to \$15 billion, in which case the total aid Syria received would have to be estimated at \$38 billion. In our opinion, the upper limit of \$15 billion in assistance from the USSR is exaggerated; rather, although no reliable figures are available, Soviet aid is likely to have amounted to between \$6.5 billion and \$15 billion.

The officially acknowledged amount of aid extended to Syria has declined throughout the 1980s. This development can be traced from Syria’s balance of payments and budget and apparently represents the trend in donation by Arab countries, within the framework of the Baghdad agreement and medium- and long-term loans from official Arab institutions and Western countries. But the official amount probably does not reflect the whole picture because it excludes aid from Soviet-bloc countries, much of which is apparently provided for acquisition of arms from this bloc, without being published in any official records of aid or arms transfers. This aid, however, is likely to have had little effect on the Syrian economy because it was spent directly on imports of arms.

It may be assumed that the main impact on the Syrian economy has been created by the aid recorded in the official figures summarized in Tables S9 and G6.

As can be observed from these tables, aid was declining steadily even before the 1986 crash in oil prices. This decline had several causes:

- a. The decline in the oil income of some Gulf states set in in the early 1980s because of the fall in the quantities of oil sold by these countries and the deterioration of oil prices, even though it was still slow.
- b. Because of the Iraq-Iran war, the Arab Gulf states extended an estimated \$30 billion in aid to Iraq in that period in order to prevent an Iranian Shi’ite fundamentalist victory, which has been of much more immediate and vital concern to these countries than the Israeli-Arab conflict and Syria’s self-imposed posture as defender of the Arab cause in that conflict.

Therefore, precedence was given to aid to Iraq. Syria sided with Iran and caused severe economic damage to Iraq by cutting off the flow of Iraqi oil through the pipeline intersecting its territory. Eventually the burden of this damage fell on the Arab Gulf states. Syria enraged the donor states by its policies toward this conflict.

Nor are these countries happy with Syria's pro-Soviet policies, which are providing the USSR with an important foothold in the Middle East. Syria was also suspected of encouraging terrorist activities in the Gulf area and in particular in Kuwait. And it was accused of severe mismanagement of aid. All these factors apparently converged in the decision to curtail aid to Syria even prior to 1986.

It is estimated that aid to Syria extended in accordance with the Baghdad conference decision, declined further to 0.7 billion¹⁵ in 1985 and to even less in 1986. Kuwait cut its aid almost completely, so that funds were coming almost exclusively from Saudi Arabia. The Saudis may have extended aid unrecorded in official publications, in addition to their Baghdad conference pledges.

2.3.4.2. Aid and the civilian balance of payments

The decline in aid as recorded in the civilian balance of payments in Table S9 does not show a visible effect on the balance of trade or on the balance of current accounts. The slippage in the goods trade is a result of the decline in the value of imports and exports of oil because of lower oil prices, and does not indicate a reduction in the nominal civilian non-oil imports. However, the real value of these imports was certainly reduced. Despite the figures in Table S5, even the nominal value of civilian non-oil imports should probably be estimated to have decreased in 1986, but this has not been taken into account in the projections. The impact of reduced aid apparently also does show up in the import of arms (see Table S7), though this may be a result of Soviet support being substituted—at least partially—for Arab aid without being recorded either in arms imports to Syria or in grants and loans.

2.3.4.3. Aid and the budget

Syria used a large proportion of aid to cover the deficit in its budget, as can be observed in Table S10. It is apparent that in 1980–84 there has been a considerable drop in grants included in the revenues of the Syrian budget. The decline in grants has been only partially compensated for by increased loans. The real reduction is in fact much larger than expressed in the table because of inflation and the deterioration in the exchange rates of Syrian currency during the period shown in the table.

As a result, grants and loans covered 41 percent of the budget deficit in 1984, versus 75 percent in 1980. Similarly, in 1980 grants and loans covered 33 percent of the total expenditure in the budget, while in 1984 they covered a mere 20 percent.

Thus, the decline in aid to Syria set in even before the extreme deterioration in oil prices in 1986 (except for 1983 because of the extraordinary help extended to Syria in the wake of the Lebanon war).

As noted before, this decline continued in 1986. Its extent is difficult to establish, but an effort has been made to evaluate, on the basis of fragmentary and preliminary estimates of aid for 1986, the effect of such a development on the budget (see Table S6). The combined effect of decreased incomes from petroleum and diminished aid increased the deficit in the Syrian budget—in comparison to 1984—by about 50 percent, and the part of expenditure covered by actual revenues was reduced from 72 percent to 55 percent.¹⁶

The combined decline in the contributions of the oil sector and aid to budget revenues—and, in its wake, the increase in the budget deficit—necessarily calls for government action in one or more of the following forms:

- a. Increase revenues from other sources.
- b. Curtail budget expenditures.
- c. Print money.

As far as other sources of revenues are concerned, the outlook is rather bleak; taxes on imports are likely to decline because civilian imports will probably drop with diminished workers' remittances and the expected further curtailment in foreign aid, both of which will reduce earnings and purchasing power in general

in the economy. This will make it increasingly difficult to raise tax revenues—direct as well as indirect.

Curtailment of budget expenditures is to be expected. This can be divided into three main categories:

- i. Curtailment of expenditures that will diminish the purchasing power of the population and thereby standards of living, e.g., cutbacks in subsidies.
- ii. Cutbacks in investment, which will cause a further deterioration in present and future economic growth.
- iii. Curtailment of military expenditures, which may set back Syria in its goal of strategic parity with Israel, and in its political and military ambitions in the Middle East in general. However, such a development could be counteracted by an increase in military aid from the USSR.

Intensification of the inflationary process by “printing money” is in fact another way of taxation, which diverts purchasing power from the public to the government, thereby changing in a rather haphazard way the income distribution within the population.

The adverse effects of inflation on private investment, economic growth, etc. are well known.

In view of the huge deficit, whichever mix of means the Syrian government applies will put strong pressure on the regime and make it very difficult to achieve or make progress in any of its political, military, or economic aims.

It should, however, be stressed that in 1988–89, when the Thayyem oil field reaches full production, the contribution of the oil sector to the budget and the economy will return to its 1984 dimensions and only the influence of the reduced aid on budgetary revenues may still be felt.

2.3.5. THE EFFECT OF THE PRICE DECLINE ON THE SYRIAN ECONOMY: SUMMARY

The direct and indirect impact of the decline in oil prices after 1981 was already discernible before the price crash in 1986, but it probably climaxed in 1986–87. The major effect has been felt in the curtailment of aid by the oil-rich Arab countries. Official aid to Syria was cut from \$1.7 billion in 1980 to \$640 million in

1985. This, however, cannot be attributed solely to the oil-price decline because other factors—the Iraqi war expenses and Syria's objectionable policies—apparently also played an important role.

The real aid is certainly much higher and is estimated to have reached \$5 billion in 1984. Average annual aid during 1978–84 is estimated to have been \$4.4 billion. It is most likely to have diminished, too, though the Soviets have probably increased their share of the military aid.

The decline in aid is likely to last at least until a sizable reversal in oil-price trends, and/or until the termination of the Iraq-Iran war. Officially, remittances of expatriate workers are estimated at about \$0.3 billion, which is certainly a gross underestimate. They have certainly been curtailed, which mainly means a reduction in the standards of living of part of the population. But as they are mostly unrecorded, there would be no appreciable change in the current-account balance. The direct impact of the decline in oil prices through the oil sector of the Syrian economy is more complex. The Syrian current-account balance was mainly unaffected by the price decline because Syria has been a net importer of oil. However, the impact of the decreased financial flow because of the oil-price drop may have made it more difficult to repay debts and more costly to raise short-term loans. Consequently, Syria's balance of trade has been made only marginally worse by the low oil prices than it was prior to the oil-price crash. But even this slight effect is only a transitional one; the development of the oil field at Thayyem will by 1988–89 improve the balance of payments by several hundred million dollars and, because of the high quality of this oil, Syria will become entirely independent of oil imports. If oil prices in 1988–89 recover to their pre-1986 level, the gain in the balance of payments could reach \$1 billion.

The oil-extracting and -processing industries' profitability has been drastically cut by the decline in oil prices, which has greatly diminished their contribution to the Syrian budget. The combined effect of the decreased transfer of funds from the oil sector and from foreign aid should have increased the deficit in the Syrian budget from 28 percent to about 42 percent of total expenditures (see Table S6). This development is of grave consequence for the Syrian economy: inflation has accelerated, which, for example, was evident in the widening gap between the official exchange rate for Syrian currency—\$1=SL 3.952—and the rate for work-

ers' remittances and imports, which reached \$1=SL 23 in 1986; a cut of 26 percent in budget expenditures in real terms was announced by the government (*MEED* 21.3.87, p. 22), and even defense expenditures were to be cut back by 5 percent. There have also been reports of severe food and imported-goods shortages. Import of spare parts and raw materials for industry had already been curtailed prior to 1986, and this policy intensified subsequently, causing a decline in GDP every year since 1983.

The cumulative decline in GDP between 1983 and 1986 was 10–13 percent and in GDP per capita, 18–20 percent. In 1988–89 a recovery is to be expected with the full exploitation of the Thayyem oil field, but it will soon level off unless aid is increased.

2.4. POLITICAL AND MILITARY REPERCUSSIONS

The developments in the economic sphere have political and military repercussions. It is still too early to evaluate fully the extent of these consequences, but certain possible trends can already be pointed out. The shortage of financial means for acquiring arms from the Soviet Union has made Syria's quest for strategic parity largely dependent on the will of the USSR, which in addition to being the main supplier of arms for Syria is now called upon to finance much more of its arms bill. The decline in oil prices has greatly harmed the Soviets' balance of trade, which may be reason enough for them to forgo arms deals at long-range concessionary terms or even those involving no payment. Soviet interest in continuing to supply large quantities of arms and the most advanced weapon systems may be influenced to some degree by such economic and financial considerations, which at least in the last decade were a powerful incentive for the Russians to supply arms to Middle Eastern countries.

Therefore, Syria is facing a new reality of larger dependence on Soviet arms, while Russia's incentive to supply these arms is diminishing.

Considering this aspect from the Russian point of view, it can be said that the USSR has gained potential additional influence on Syria's political and military behavior. The new Soviet global and internal policies, which have been unfolding during the first years of the Gorbachev era, seem to indicate that the USSR will

not be interested in arming Syria to such an extent that it could unleash a new Syrian-Israeli or even Arab-Israeli imbroglio. As long as Syria continues its militant strategy the consequences of the decline in oil prices will make the country more dependent on the Soviets, but it is questionable whether they will be willing to continue supporting Syria's aspirations as much as before. Syria may therefore find itself in a cul-de-sac with its strategy, having reached a somewhat low point in its desired military power. In view of the domestic difficulties, a slackening in Syria's military posture may be dangerous for Assad's regime. The fear of an internal breakdown may lead Syria to search for ways to break out of this blind alley. This breakout can be done in two opposite directions.

- a. Undertake military action using the considerable power it has amassed, most probably seizing as much as possible of the Golan Heights in a surprise attack. From such an enhanced position, Syria may try through international intervention to bring Israel to negotiations on the Golan and the Southern Lebanon issues.

- b. Change strategy—at least in the short and medium run—by joining some kind of peace negotiations.

Of course, inertia may after all prevail and Syria may decide to sit out the Iraq-Iran war, the end of which may open new opportunities for it.

In 1988–89 Syria's economic position may be eased to some extent with the full development of the Thayyem high-quality oil field. This improvement will not change Syria's basic problems. It will, however, make Syria independent of sources of high-quality oil. This is likely to terminate Syria's special relations with Iran, which have been tense since 1986 not only for economic reasons, but because Iran has been undercut by Syria's standing in Lebanon through the activities of the Shi'ite radical Hezbollah movement.

Syria's disengagement from the Iranian connection may ease its improvement of relations with the Arab moderates and in particular with the oil-rich Gulf states. But even such a development is not very likely to restore the aid to Syria to its peak because as long as the oil incomes of the Gulf states remain low, their internal economic needs will take precedence, as will aid to Iraq, at least while the war there continues. In addition, after the curtailment of aid to Syria for several years without serious Syrian reaction, its threats of revenge have turned somewhat hollow and much less frightening.

But even if oil prices and incomes recover to their height at the end of the 1970s and the beginning of the 1980s, it is questionable whether the rich Gulf oil states would revert to squandering their revenues, as they may have learned how quickly seemingly bottomless wealth can disappear.

Therefore, Syria may eventually be forced to choose between a militant political strategy and saving its economy, while giving up its pretentious political and military aspirations, at least for an extended period. Still, the possibility of a Syrian attempt at a violent solution should not be dismissed.

How has the decline in oil prices affected Syria's military capability? There is an apparent positive correlation between the change in oil price, oil income, and aid from the Gulf states, and the rise in the strength of the Syrian military forces (see Tables 3, 4). During the period of high and increasing oil prices—1974–82—there was a sizable improvement in most of the main factors of military strength: regular army personnel, number and quality of tanks, and number of combat aircraft. There was apparently no increase in total army personnel. Subsequently, during the gradual decrease in oil prices, the expensive arms systems, the tank forces, and combat aircraft did not increase appreciably, and only the regular army and the number of SSM launchers and helicopters continued to expand until 1986. In 1986, the year of the oil-price crash, there were almost no increases in the main military equipment of Syria's army. In 1987 a cutback in the military budget was announced, which probably had its main impact on the size of army manpower, and the early retirement of almost obsolete equipment.

Nonetheless Syria did continue its major fortification efforts on the Golan and Lebanese borders, relentlessly improving its defenses.

It should, however, be remembered that the acquisitions of military equipment were certainly much larger than indicated by Tables 3 and 4, since Syria had to reequip its army (especially its airforce) because of heavy losses in the Lebanon War and because of wear and tear and obsolescence. This reequipment process has considerably improved the qualitative composition of the Syrian arsenal. The acquisition of improved SSM launchers, and the development of chemical trajectories, have enabled Syria to strike deep into Israeli territory, causing substantial human loss and damage to military and civilian installations. The in-

troducton of long-range SAM batteries has potentially improved Syria's defenses against Israeli air strikes.

By 1986 Syria had achieved equality with Israel in almost every major arms system and in military personnel, in addition to the number of tanks—especially high-quality tanks—and in troop numbers it is better off than Israel. The most notable exception has been high-quality combat aircraft, in which Israel still leads by 2:1 and still has the qualitative edge. This does not mean that Syria has achieved a military balance with Israel, but it certainly has established a kind of uneasy military deterrent capability.

APPENDIX

CALCULATION OF VALUE OF OIL EXPORTS IN 1988–89

Assumptions:

1. Thayyem field reaches production of 120,000 b/d.
2. Old fields reduce production to 150,000 b/d.
3. Maximum capacity of refineries remains approx. 220,000 b/d.
4. No change in domestic consumption of oil—crude and products.
5. Proportion of light to heavy oil in blend for refineries remains 1:4.
6. Prices (annual average) for imports of high crude will be \$15b/d—\$20b/d; for exports (crude and products) 70% of import price.

Uses of domestic market:

35,000 b/d – crude.

150,000 b/d – products.

Exports (limited by refinery capacity and domestic uses):

70,000 b/d of products.

70,000 b/d of crude.

Imports:

55,000 b/d of light in order to reach maximum productive capacity of refineries.

CHAPTER 3

EGYPT

3.1. INTRODUCTION

The impact of changes in oil prices on the Egyptian economy derives mainly from the direct influence on the petroleum sector (including natural gas), and the indirect influence through workers' remittances. An additional factor is the Suez Canal tolls, which depend considerably on the passage of oil tankers. The indirect impact through aid—which is the prominent influence in the case of Syria—has so far been of almost no consequence to Egypt, as aid from the oil-rich Arab countries was virtually terminated following the Egyptian-Israeli peace accords. With gradual reacceptance of Egypt into the fold of Arab countries, this attitude may be changing and if their oil incomes increase, these countries may renew their financial aid, investment, and tourism to Egypt.

The influence of changes in oil prices on each of the three items—petroleum, Suez tolls, and remittances—and the consequent impact on various parameters of the economy and on Egypt in general will be discussed in this chapter.

After 1973 a drastic change occurred in the economy of Egypt. The change was generated by several factors, which worked simultaneously and were closely connected with the Yom Kippur War and its aftermath. The dramatic rise in oil prices made it profitable to explore and exploit new oil fields in Egypt. This development was also encouraged by the postwar peace process with Israel throughout the 1970s, culminating in the Camp David accords. The economic climate created thereby also fostered investment in oil exploration in areas previously regarded as high-risk. In addition, Israel returned to Egypt the Sinai oil fields.

For the same reasons, it became possible to reopen, widen, and improve the Suez Canal so that even big tankers could use it. The increase in oil prices also accelerated economic development in the oil-rich Gulf states, which in turn increased the demand for foreign workers and especially Egyptians, who were able to fill high-skill positions. Their numbers in the Gulf grew quickly and with them the remittances they sent home to their families.

These three elements increased the receipts in the current account in 1974–85 from \$0.5 billion to \$9.4 billion. While the main groundwork for this development was laid between 1974 and 1977, it reached full expression between 1977 and 1980–81 with the completion of many programs initiated earlier, and with the second huge oil-price hike in the wake of the Iranian revolution. During this period \$6 billion of the \$9-billion increase in foreign-currency receipts occurred. It should be mentioned, though, that the net increase—after deducting the transfers and imports of the foreign oil companies—amounted to \$5 billion in 1980–81 (see Tables E8, E8a).

Between 1980–81 and 1984–85 the net yearly foreign-exchange influx leveled off (in current prices), as oil prices deteriorated slowly; the receipts from the Suez Canal had peaked, the oil-export shipments from the Gulf area declined, while recorded remittances continued to increase only until 1983–84.

If the calculations had been made in constant prices, 1980–85 would reveal a slight reduction in the net income of foreign exchange from oil activities.

The three items—oil, Suez tolls, and remittances—were also the main factors generating the growth of the Egyptian economy; during 1974–85 the oil sector contributed 24 percent to the total growth in the GDP, and the Suez Canal dues about 7 percent. The recorded remittances contributed about 24 percent to the increase in GNP. The total direct participation of the three items in the growth of the economy can therefore be estimated at about 50 percent over the decade. The contribution in toto and per annum was much higher during the beginning of the period (1974–81). It should be stressed that the rest of the contribution to economic growth was made by all the other sectors of the economy, which initially constituted about 97 percent of the GNP.

The growth of the two sectors, oil and Suez tolls, contributed much to the growth of the economy but very little—in a direct way—to the increase in employment. Thus, a kind of dual economy developed in Egypt, along the lines of Arthur Lewis's theory. The modern sector, however, was in the hands of the government.

The remittances contributed directly to a much broader rise in standards of living.

3.2. THE DEVELOPMENT OF THE PETROLEUM SECTOR (INCLUDING NATURAL GAS) IN EGYPT

Oil was discovered in Egypt in 1908, but sizable production began only during World War II. Development intensified in the 1960s, but only the explorations and developments in the 1970s and 1980s made oil a mainstay of the Egyptian economy (see Table E8) with a production of over 40 million tons. About 73 percent of the oil comes from the Gulf of Suez area and about 19 percent from the Sinai; the rest is pumped in from the Eastern and Western deserts.

The organization of Egypt's petroleum industry is based on production-sharing agreements between the EGPC (Egyptian General Petroleum Corporation) and foreign oil companies. The foreign partners finance exploration and development, recovering their investment through the resulting oil. If the value of this "cost-recovery oil" exceeds the amount required to cover costs, the difference is returned to the EGPC. The two sides—the EGPC and the foreign companies—share the remaining "profit oil" according to a predetermined formula.

The EGPC is responsible for the overall management of the petroleum sector, including refining, transportation, and distribution, while the oil extraction by its wholly owned subsidiary accounted in 1984–85 for only four percent of Egypt's crude-oil production. All the rest of production is carried out by foreign companies. Under the existing agreements Egypt's share of total production in 1984–85 was 76 percent (see Table E8a).

Exports of total production amounted to 54 percent; the domestic market consumed about 44 percent (see Table E8a). Over 20 million tons of oil (62 percent of total production) were refined in Egypt. In addition, a negligible amount of imported crude oil was also refined.

Gas is another product of increasing importance in the energy sector and in the Egyptian economy in general. The proven recoverable natural-gas reserves are estimated at about 134 million metric tons, which are equivalent to 160 million metric tons of fuel oil (see Table E3).

Total production of gas in 1984–85 amounted to 3.1 million tons, which was about seven percent of petroleum production. In 1978 annual production is still

less than 0.6 million tons (see Table 3). Explorations and the development of gas are still increasing fast and are encouraged greatly by the government as gas is an excellent substitute for oil in some major uses and can make available additional quantities of oil for export. Natural gas is not easily exported, and in the case of Egypt probably the only possible export destination would be Israel.

It is believed that actual reserves of gas are much larger than has been proven so far. As the development of these reserves is of potentially great importance, the government has offered to compensate foreign oil companies for any gas they find and exploit, on the basis of international oil prices.

3.3. THE DECLINE IN OIL PRICES AND THE EGYPTIAN ECONOMY

3.3.1. OIL AND ECONOMIC GROWTH

In 1984–85 the petroleum sector was the third largest in the Egyptian economy, producing about 11 percent (see Table E4) of the GDP, which amounted to \$31 billion (at factor cost); only agriculture and industry were larger, with shares of 20 percent and 15 percent of the GDP, respectively. But the oil sector had the fastest rate of growth in constant 1981–82 prices between 1974 and 1984–85; while the entire economy grew during this period by about 130 percent, the oil sector increased by almost 700 percent (see Table E5), contributing 24 percent to economic growth. This contribution would have been even greater had the GDP of the oil-related industries, especially the refineries (included in industry), been included. The main development, though, occurred between 1974 and 1980–81, while relative and absolute growth was much smaller per annum between 1980–81 and 1984–85 (see Table E5).

It should also be taken into account—as with Syria—that many of the other sectors are services, which set arbitrary wages and are not really a relevant source of growth, or at least their importance is likely to be strongly exaggerated. Additionally, the extreme distortion of prices in the Egyptian economy certainly causes misrepresentation of the sectoral distribution. The growth of the oil sector was due to the steady increase in the production of oil (and to a lesser extent, natural gas) during the entire period and to the rise in the price of oil until 1980–81. Thereafter, prices began to fall; in 1980–81 the annual average price for Egyptian oil peaked at \$33.6/b., eroding to \$27/b. in 1984–85.

This is also the major reason that oil reached the height of its share in GDP—19 percent—in 1980–81 and declined to 11 percent until 1984–85 (see Table E4).

In early 1986, oil prices tumbled, which of course also influenced Egyptian oil prices. During a transitional period prices fell to as low as \$10/b., but in the first half of 1987 they stabilized at approximately \$18/b. Tables E6 and E7 illustrate the impact of the fall in prices on the contribution of the oil sector to the GDP at various levels of production and on the total GDP. These tables show that given 1984–85 quantities of production and the 25-percent decline in oil prices (roughly corresponding to \$20/b.), the drop in Egypt's total GDP would be about 2.7 percent, and at a price reduction of 55 percent (roughly corresponding to \$15/b.), the decline in GDP would be close to five percent.

If we take into consideration the projected increases in oil and gas production, the value of the oil sector's GDP at 1984–85 prices should rise until about 1988–89 by 17 percent, and until 1993–94 by about 39 percent. But if oil prices decline to 75 percent of the 1984–85 price, or about \$20/b., the GDP would decline by 12 percent until the end of the 1980s, and increase by four percent until the mid-1990s. At 55 percent of 1984–85 prices or approximately \$15/b., the decline in the oil sector's GDP should be 35 percent at the end of the 1980s, despite the projected increase in production volume, and 24 percent by the mid-1990s assuming *cet. par.* about the rest of the economy.

3.3.1.1. The Suez Canal tolls and the GDP

In the wake of the gradual restoration and expansion of the Suez Canal after 1973, the receipts from Canal transition tolls increased until they peaked at just above \$1 billion annually. The contribution to the GDP reached about \$0.9 billion. But since the end of the 1970s, the physical dimensions of the Canal have no longer constituted an obstacle to the increase in transit and the demand side, trade between East and West using this waterway, has become the determining factor in the volume of transits. The peak of the Suez Canal share in the GDP was reached in 1979 with 3.4 percent; it retreated to about 2.7 percent (see Table E4) in 1983–85 because the growth of the other sectors of the economy was quick-

er. The main factor in the increase of the Suez Canal income between 1980–81 and 1983–84 was a 27-percent hike in tolls. The relative decline in the importance of the Suez Canal to the GDP was apparently due principally to the decreased share of Arab Gulf oil in international trade, partly because of the Iran-Iraq war and partly because the West turned to other sources of supply in order to deny the Gulf states the power and potential political influence of setting oil prices. The future of Suez Canal receipts will be determined by several factors:

1. *The volume of oil exports from the Gulf.* This in turn will depend on the following elements:
 - a. Whether the global demand for oil will increase.
 - b. Whether the Arab Gulf countries' share of this demand will increase.
 - c. Whether the Gulf and the Strait of Hormuz will be kept open for free transportation.
 - d. When the Iran-Iraq war ends, to what extent the two countries will increase production and export of oil.
 - e. To what extent pipelines to the Mediterranean, the Red Sea, and Turkey will take over the transportation of oil.
2. *To what extent the general trade between countries east and west of Suez will increase.* This in turn will depend on the following elements:
 - a. The size of the revenues of the oil-rich Gulf states.
 - b. The demand for imports generated by Iraq and Iran in wartime or peacetime.
 - c. The trend in trade between Europe and Asia, in particular in the Far East.

It is most unlikely that in the foreseeable future the receipts from Suez Canal tolls will increase appreciably in real terms. However, if Egypt's GDP should decline in the near future, the share of the Suez Canal GDP may increase by up to four percent. Its contribution to the growth in GDP in the future can only be very modest, if any.

3.3.1.2. Worker's remittances and the GNP

All statistics concerning the number of Egyptian workers abroad and their incomes, savings, or remittances are extremely unreliable or simple "guesstimates." The Egyptian government has estimated that the number of workers temporarily abroad reached at its peak at about three million; however, after the drastic decline in oil prices, it is estimated that one million returned to their homeland. In addition, the incomes of the rest were considerably curtailed in the wake of the general budget cuts and reductions in wages in the oil-rich Gulf states because of their diminished revenues and limitations imposed on transfers. But even if the oil prices and incomes of the Gulf states should recover, the decline in workers and remittances is likely to be irreversible. Before the fall in oil prices, the Egyptian government estimated that the annual saving per worker was about \$3,000, or \$9 billion per annum for all the expatriate workers. The accumulated savings not transferred to Egypt are estimated at \$50 billion to \$70 billion.

These figures indicate that the yearly savings of workers abroad amount to 23 percent of Egypt's GNP and that the accumulated savings are about 13 to 30 percent higher than the total annual GNP.

Our "guesstimate" is that the recorded remittances will decrease from \$3.5 billion in 1984–85 to \$2.8 billion or \$1.8 billion toward the end of the 1980s, and to \$2.2 billion or \$1.2 billion by the mid-1990s (see Table E8). Their contribution to Egypt's GNP could thereby shrink—in comparison to 1984–85—by about five to seven percent toward the end of the 1980s and by about 3–5.5 percent by the mid-1990s.

It should, however, be stressed that wise economic policies could attract a much larger share of remittances and possibly even some of the huge accumulated savings, which could be invested in Egypt.

3.3.1.3. Summary of the impact of oil-price changes on Egypt's economic growth

The impact of the decline in oil prices, through its direct influence on the oil sector and its indirect influence through remittances (the Suez Canal factor is negligible), is likely to cause the following changes in the total GNP:

- (a) In the late 1980s, a decline in the range of 6–10 percent.

(b) Until the mid-1990s, a decline in the range of 3–7 percent (not additional to the decline in (a)).

These projections are based on oil prices of \$15–20/b. and on a score of other assumptions detailed in previous paragraphs and in the relevant tables (E8, E8a).

(c) The total loss of potential GNP will be larger than the decline forecasted in (a) and (b), because there we did not take into account the loss due to the decline in the price of additional oil exports expected after 1984–85.

This total loss of GNP is estimated at 7.5–12 percent until the mid-1990s. The decline will be even more pronounced because of the 2.8 percent-annual increase in Egypt's population, which means a 2.8 percent drop in per-capita measures, in addition to the fall in total growth rates.

All the above calculations are to be seen not as forecasts of certain economic variables, but as measures of the main impact of the decline in oil prices on indicators of economic growth. Many more factors are likely to influence these indicators and economic growth in general. Among them we should mention in particular the constraints imposed by the balance of payments and budgetary problems. These will be discussed in this paper in some detail. But additional factors such as secondary effects—the decline in purchasing power, inflationary processes, etc.—will only be discussed in a general manner because of the difficulty in measuring them.

3.3.2. OIL AND THE BALANCE OF PAYMENTS¹⁷

The three most important items influencing Egypt's GNP are, of course, also the items with the strongest impact on the balance of payments: exports of petroleum (crude and product,) remittances of workers abroad, and Suez Canal tolls. We shall discuss their effect on the balance of payments. Less attention will be paid to aid—grants and loans—in this chapter than in the chapters on Syria and Jordan.

For Egypt, aid is not dependent on oil prices, as it is for Syria, because it has not received economic aid from the Arab oil states since 1979. But in a roundabout way there is a connection between loans extended to Egypt by the West and Egypt's oil income. When Egypt's economic situation deteriorates because of re-

duced oil incomes and it becomes questionable whether it will be able to repay loans, aid becomes less available.

In addition, the impact of the dollar devaluation after 1984–85 should also be taken into consideration. The impact generated by the dollar devaluation is discussed in the Appendix to this chapter.

3.3.2.1. The oil sector and the balance of payments

Oil and its products are by far Egypt's most important export. In 1984–85 the export of oil amounted to \$5 billion; thereof, the Egyptian share was \$2.9 billion and the rest was the share of foreign oil companies exploring and developing the extraction of oil in Egypt. The export of all other goods totaled only \$1.3 billion.

Egypt's oil exports have increased steadily since 1977, after the oil fields in the Sinai were returned and after the peace accords with Israel enabled the country and foreign oil concerns to undertake an intensive program of exploration and development of oil fields. From 1977 until 1984–85 the value of oil exports increased from \$1 billion to \$5 billion (in current prices). Between 1977 and 1980–81 the growth per annum was 43 percent, and between 1980–81 and 1984–85 only 19 percent because of the erosion of prices, and despite the much greater expansion in the volume of exports during this period.

Although oil-export incomes increased fast, the deficit in the balance of trade and the current-account balance increased even faster. In 1984–85 the trade deficit reached \$5 billion, and the current-account deficit amounted to \$3.6 billion. (These figures relate only to the civilian balance of payments and do not include the acquisition of military equipment.)

In 1984–85 the export of oil constituted almost 80 percent of all exports of goods; the other exported goods amounted only to \$1.3 billion, which was nominally somewhat less than in 1974. In constant prices this means a large reduction in non-oil exports. In the current account the three oil-connected exports accounted for 72 percent of all receipts.

Despite the huge increase in the influx of foreign exchange, the trade deficit worsened continuously (in current prices) from \$1.8 billion in the trade balance in 1974 to \$5 billion in 1984–85; while the current-account deficit vaulted from \$1.6

billion to \$3.6 billion. But in 1974 the latter was over 60 percent of the annual receipts, while in 1980–81 it was 22 percent and in 1984–85 it amounted to 27 percent.

The absolute deficit accumulated between 1980–81 and 1984–85 to approximately \$20 billion. This, of course, placed a growing burden on the capital account, and thereby on the balance of payments in general. This very precarious Egyptian economic position was bound to worsen with the steep decline in oil prices since 1986.

We have made alternative calculations of the impact of the change in oil prices on the balance of payments. The main results are as follows:

(1) If there is no change in Egypt's 1984–85 absolute share in its oil exports (crude and products) and the price of crude oil declines from the 1984–85 price of \$27/b., the receipts from Egypt's oil will shrink:

- (a) at the price of \$20/b., from \$3 billion to \$2.2 billion.
- (b) at the price of \$15/b., from \$3 billion to \$1.7 billion.

The result will be an increase in the current-account deficit from \$3.6 billion in 1984–85 to:

- (a) \$4.9 billion at the price of \$20/b.
- (b) \$5.8 billion at the price of \$15/b.

This increase in the current account deficit of \$1.3 billion to \$2.2 billion can be seen as the direct influence of the price decrease of oil.

One of the main assumptions in this projection is that the quantities of oil extraction in Egypt will remain unchanged. This is an unrealistic assumption as it is expected that Egypt's extraction of oil from proven reserves will climb gradually to 50 million tons toward the mid-1990s, and natural gas production will reach 15 million tons. The combined impact of an increase in export quantities and a price decline is projected in the two following alternatives. (Additional assumptions were made about domestic consumption of energy and petroleum substitution. These are detailed in Tables E8 and E8a.)

(2) This projection assumes that the production of oil and natural gas will increase to 55 million tons (thereof, 50 million tons of oil) toward the end of the 1980s. In this case, the receipts from Egypt's share of oil exports should change as follows:

- (a) at the price of \$27/b.—to \$3.9 billion.
- (b) at the price of \$20/b.—to \$2.5 billion.
- (c) at the price of \$15/b.—to \$1.6 billion.

The deficit in the current-account balance would change respectively from \$3.6 billion to \$2.7 billion, \$4.7 billion, and \$5.6 billion.

(3) This projection is based on the maximum expected production toward the mid-1990s: 65 million tons of oil and gas (thereof, 50 million tons of oil). In this case, the receipts from Egypt's share of oil exports should change as follows:

- (a) at the price of \$27/b.—to \$4.9 billion.
- (b) at the price of \$20/b.—to \$3.2 billion.
- (c) at the price of \$15/b.—to \$2.0 billion.

The result of these calculations is that if the prices of oil fluctuate between \$15 and \$20/b. (in constant 1984–85 dollars), the deficit in the current account will change from \$3.6 billion in 1984–85 to \$3.4 to 4.6 billion per annum until the mid-1990s, despite increased production.

If prices revert to \$27/b., as they were in 1984–85, the deficit in the current account would decrease to \$1.7 billion.

The total loss to Egypt's current account from the decrease in oil prices to \$15–20/b. would range between \$2.3 billion and \$2.9 billion per annum. It would be near the lower end of the range in the early part of the period and close to the upper part of the range in the 1990s. (All these results, of course, hinge on the assumptions on which the projections are based.) These projections do not yet take into consideration the indirect influence of the decline in oil prices, in particular through worker remittances.)

The receipts from oil exports as projected depend—in addition to price—on several factors. Assumptions had to be made about the most important ones. We shall now appraise their plausibility.

(1) We accepted the EGPC-World Bank assumption that the extraction of oil will reach 50 million tons by the end of the 1980s and will not increase during the first years of the 1990s. As Egypt's production of oil already totaled 43.7 million tons in 1984–85 (in 1985–86 there was a slight decline), and in general Egyptian forecasts of oil production have a good record, there can be little doubt that the forecasted production will be achieved. It is even likely that in the early 1990s

production will further expand, despite forecasts to the contrary, as more explorations are undertaken. If additional oil fields should be discovered and developed, our projections of the deficit in the current account, which are relevant up to the mid-1990s, may be overestimated.

(2) We also adopted the forecast that the exploitation of natural gas will reach 15 million tons toward the mid-1990s. This forecast, too, is likely to materialize. The proven exploitable reserves are much larger, and therefore even after this goal is reached further exploitation may be expected if there will be demand for the gas. This indeed is the main problem with the gas forecasts: to what extent will Egypt succeed in substituting natural gas for oil? There are two aspects to this query: in which applications will it be possible to use natural gas instead of oil; and whether the Egyptian government will introduce economic and administrative policies that will induce the Egyptian energy consumer or producer to switch from oil to natural gas.

(3) The third main imponderable is to what extent the Egyptian government will change its domestic pricing policy on oil.

In 1985 (July-December) the average domestic price of the main petroleum products in Egypt was only 15 percent of the spot price (f.o.b.) in Italian refineries. Between 1976 and 1984 the real prices of petroleum and products in Egypt decreased by 45 percent and consumption increased by about 125 percent.

This price policy was to a large extent responsible for the relatively slow increase of oil exports stemming from Egypt's share in production (i.e., not including the exports of the foreign oil companies); while Egypt's production share grew by 75 percent, its exports increased by only 34 percent. (Not all of this was due to the price effect; partly responsible for it was certainly the income effect resulting from the very fast rate of growth during this period.)

In the meantime, since 1984 the general decrease in world oil prices and the 30 percent increase in electricity tariffs in April 1987 raised energy prices to 25 percent of the international prices (*MEED*, May 2, 1987, pp. 4, 9). Taking into consideration the difficulty Egyptian authorities have in reducing any subsidy, however, it is questionable whether they will increase domestic oil prices enough to curtail domestic oil consumption, and thereby secure more oil for exports.

In addition, it can be argued that the demand elasticity of price as well as of income is likely to be smaller when these variables increase than when they decrease. The reason is that after economic units—factories, farms, households—have acquired energy-using equipment, they are not likely to discard it entirely because of energy-price rises; they will only make an effort to use less energy more efficiently. The main savings can be expected from potential users of various equipment, who may refrain from buying it or be induced to buy energy-saving models. Therefore, it is likely that an increase in energy prices and a decrease in incomes will not have the dramatic effect on oil consumption that they had when domestic prices in Egypt fell, and this effect will be evident mainly in the long run.

Consequently, to increase the amount of oil available for export, a considerable price differential should be created between natural gas and oil, in addition to the rise in domestic prices of oil. Our projections are for these reasons especially vulnerable to Egypt's economic policies; without a large increase in real domestic oil prices and without an appreciable price differential between oil and gas, the extra quantities of oil for export envisaged in our projection will not be forthcoming. This is the main reason why our projections on oil-export receipts may turn out not to be pessimistic enough.

3.3.2.2. The Suez Canal receipts and the balance of payments

The Suez Canal receipts naturally increased fastest immediately following the canal's reopening in the wake of the Yom Kippur War, and after it was improved to accommodate all sizes of tankers. The receipts virtually ceased growing in 1982–83, when they reached almost \$1 billion. Until 1985–86, the growth in current receipts was very slow, and in constant prices even negative. This reflects the real activities measured by the number of transits and by tonnage, which basically stagnated and partly declined. This decline was mainly due to diminished oil transport as oil exports from the Gulf decreased (see Table E9 and E8.)

As to the future, the factors that will determine the receipts from this source have already been analyzed. As stated, it is most unlikely that in the foreseeable future the receipts from the Suez Canal will change appreciably.

3.3.2.3. Workers' remittances and the balance of payments

The recorded influx of workers' remittances amounted in 1984–85 to \$3.5 billion. The true inflow of remittances, however, is not known; the only data included in the balance of payments are those available from official records. These are:

(a) Records of private-sector imports financed through the free foreign-exchange market. They include the counterpart to imports of raw materials and intermediate goods imported by Investment Authority companies established under Law No. 43.

(b) Remittances in cash exchanged through official channels.

(c) Net deposits in foreign-currency accounts. These are accounts in which workers' families and domestic residents who have purchased foreign exchange on the free market are permitted to hold foreign currency, and they are not subject to exchange controls. Data on these accounts do not present a true picture of remittance transactions for two reasons: they do not reflect the total influx of foreign currency into these accounts and they include tourist transactions and others unrelated to remittances.

In spring 1987 certain changes were made in Egypt's economic policy, but it is difficult to estimate to what extent they altered the situation.

The remittances recorded in these three sources are a function not only of the true influx of remittances but of changes in government policies. These may deter or encourage recipients of remittances to conduct or not conduct their transactions through the three official channels. For example, a narrowing in the gap between the premium exchange rate of the Egyptian pound and the free-market rate may promote the channeling of remittances into foreign-exchange accounts, while a widening of the gap will lead recipients to channel them into the free foreign-exchange market. Important new restrictions may also cause remittances to be sold on the free market.

For these reasons it is very difficult to predict how the item of remittances in the balance of payments may change and what the real meaning of the change will be. However, there can be little doubt that the reduced prices and incomes of the oil-rich Arab countries will have a profound influence on the real as well as on the recorded amount of remittances.

The rich Arab Gulf countries have had to curtail their activities because of severely slashed incomes. Therefore, they first repatriated a large number of foreign workers, including those from Egypt. There are no reliable estimates of the number of Egyptian workers employed in these countries. The World Bank calculates that in 1985 there were about three million Egyptian workers abroad, and that one million were repatriated by the end of 1986. It is expected that many more will have to leave. In addition, the wages of those who remained were considerably reduced and some countries limited the amount of money each earner was allowed to transfer. It is also likely that fear of being repatriated soon may cause some of the workers to increase their savings abroad and send less to their families.

On the other hand, those who are repatriated are likely to take all or part of their savings with them, thereby temporarily increasing the receipts in the balance of payments. Early estimates put the recorded remittances for 1985–86 at \$2.8 billion, a considerable decline from \$3.5 billion in 1984–85 and from the peak of \$3.9 billion in 1983–84.

Taking the existing information into account, it may be expected that remittances could plummet to about \$2.3 billion to 1.8 billion toward the end of the 1980s and then diminish slowly to about \$1.7 billion to \$1.2 billion. These figures do not allow for the possibility of drawing on the huge savings of these workers, which are estimated at \$50 billion to \$70 billion by the Egyptian authorities, according to the World Bank.

If our “guesstimates” prove accurate the deficit in the current account will increase with the diminishing remittances by \$1.7 billion by the end of the 1980s and by \$2.3 billion toward the mid-1990s, in comparison to 1984–85.

The estimate of this total loss of GNP between 1984–85 and the mid-1990s is 7.5 percent to 12 percent. The decline will be even more pronounced because of the 2.8 percent annual increase in Egypt’s population, which means a shrinkage of 2.8 percent in per capita measures, in addition to the slide in total growth rates.

All the above calculations are to be seen not as forecasts of certain economic variables, but as measures of the main impact of the decline in oil prices on indicators of economic growth. Many more factors are likely to influence these indi-

cators and economic growth in general. Among them we should mention in particular the constraints imposed by the balance of payments and budgetary problems. These will be discussed in this paper in some detail. But additional factors such as secondary effects—the decline in purchasing power, inflationary processes, etc.—will only be discussed in a general manner, and we do not entertain any illusions that it will be possible to measure them.

3.3.2.4. Aid¹⁸ and the balance of payments

Prior to 1979 Egypt received aid in the form of grants and loans from Arab countries, and from the USSR before 1974. In 1974 grants from Arab states amounted to \$1.3 billion and medium- and long-term loans totaled only \$140 million, but rose to the peak of \$2.2 billion in 1977. Thereafter, grants and loans from Arab countries deteriorated steadily until they were virtually cut off after the Camp David accords with Israel in 1979. On the other hand, Egypt ceased servicing its debts to the Arabs and to the USSR.

Subsequently, Egypt received aid mainly from OECD countries, and in particular from the U.S. In 1984–85 U.S. grants amounted to over \$1 billion and OECD countries' loans to about \$1.5 billion. In 1985–86 grants were expected to increase to \$1.5 billion due to a \$0.5-billion supplementary cash grant from the U.S. Therefore, at least \$2.5 billion to \$3 billion in aid on an annual basis is reducing Egypt's deficit.

For 1987 the U.S. military-assistance allocation is \$1.3 billion, while economic aid is put at \$850 million. The EEC contributions pledged following the Paris Club conference amount to approximately \$1 billion in grants and various medium- and long-term loans. In addition, Saudi Arabia had promised \$0.5 billion in December 1986. This is the first time since 1979 that Saudi Arabia is extending aid to Egypt (though there are opinions that at least partly this is in fact payment for military equipment sent by Egypt to Iraq). Thereby, total aid from the OECD countries and Saudi Arabia may in 1987 amount to \$3.7 billion, of which \$1.9 billion to \$2.4 billion would be available for improving the civilian balance of payments.

On the other hand, Egypt has to service \$4 billion in debts in 1987 (after deducting \$1 billion to \$1.5 billion that Egypt does not intend to repay to various countries).

3.3.2.5. Conclusions on the impact of the decline in oil prices on the Egyptian balance of payments

In concluding our projections of the impact of oil, Suez Canal tolls, and remittances, our findings are that if:

- (a) oil prices fluctuate between \$15/b. and \$20/b.;
- (b) production of oil and natural gas will increase toward the end of the 1980s to 55 million tons and toward the mid-1990s to 65 million tons;
- (c) the number of Egyptian workers in the oil-rich states will decline by 50 percent to 67 percent in comparison to 1984/85,

then the deficit in the civilian current account is likely to grow to \$5 billion to \$6.5 billion per annum (in 1984–85 dollars). This should be compared with the deficit of \$3.6 billion in 1984/85.

The impact of the decline in oil prices on the Egyptian balance of payments has been calculated in 1984–85 dollars. However, since then a large devaluation of the dollar has taken place. Our calculations (see appendix to this chapter) show that the influence of this devaluation on Egypt's current account in 1987 (first quarter) dollar values must have been of grave consequence to the balance.

This is demonstrated by calculating vis-à-vis the 1984–85 current account first the impact of the decline in oil prices from \$27/b. to \$20/b. (the price in the first quarter of 1987 was about \$17/b.), and thus the additional effect of the devaluation on all items (including oil) in the current account. The result is that the decline in oil prices would have increased the current-account deficit from \$3.6 billion in 1984–85 to \$4.3 billion; the devaluation of the dollar would have raised the deficit in the current account in current dollars (1987/first quarter) to \$7.5 billion to \$8.5 billion.

If we assume further that the dollar will remain devalued by 33 percent in the years of our projections (end of 1980s to mid-1990s), the deficit in the current account in current dollars will be \$8 billion to \$9 billion. The future rate of exchange of the dollar may, of course, turn out to be very different.

In addition, it must be taken into account that Egypt has to service its debt, which at mid-1987 was estimated by the IMF¹⁹ at \$40 billion, of which the civilian medium- and long-term debt was estimated at \$26 billion, and the short-term debt at \$5 billion; the military debt—mainly to the U.S. and France—was about \$9 billion partly at very high interest rates. The annual servicing of foreign-currency obligations was estimated by the IMF in 1985–86 at \$6 billion of which \$5.5 billion was debt servicing. According to the *EIU Country Profile—Egypt*, debt servicing in 1987 is projected at \$4 billion after discounting the debts on which Egypt is defaulting anyhow.

From these figures the conclusion is that the annual deficit in the current account and in foreign-currency obligations may amount in the coming years to about \$9 billion to \$11 billion per annum in 1984–85 dollars, or to \$13 billion or \$14 billion in 1987 (first quarter) dollars. The civilian aid in grants and medium- and long-term loans is estimated in 1984–85,²⁰ 1985–86,²⁰ and 1987 at approximately \$2.5 billion.²¹ The total deficit in current 1987 foreign-currency obligations can therefore be estimated at \$6.5 billion to \$8.5 billion annually.

Because of its precarious economic situation, Egypt fell increasingly into arrears, which increased from \$0.8 billion in 1982 to \$4.4 billion in mid-1986.²² This development endangered many of Egypt's credit sources. This bleak outlook, and in particular the acute insolvency of the Egyptian economy, led in May 1987 to the rescheduling of Egypt's debts at the meeting of the Paris Club and to several important changes in Egypt's economic policies. These developments will be discussed in detail in the concluding section of this chapter.

3.3.3. OIL AND THE BUDGET

The contribution of the oil sector to Egypt's budget revenues is composed of the transfer of the EGPC surplus and taxes on its profits. This contribution decreased steadily between 1981–82 and 1984–85 from 21 percent to 13 percent (see Table E10). This development was due mainly to the increase in budget revenues in current Egyptian pounds, while the contribution of the oil sector in current prices decreased slightly.

The income of the EGPC involves two main factors: income from exports and income from domestic sales of oil, its products, and natural gas. The prices of oil exports are determined mainly by prices on the world market; the prices of domestic sales are regulated by the government, and are very low in comparison to international prices. The differential in prices between the two markets also determines to a large extent the quantities sold in each market, and therefore has a major influence on the profits of EGPC and on the amount transferred to budget revenues.

At an export price of \$15/b. and at 1984–85 quantities—and with no change in the domestic price—the contribution of the oil sector to the budget would fall from LE 1.5 billion in 1984–85 to LE 0.7 billion, and at a price of \$20/b. would erode to LE 1 billion (see Table 10, cols. 5, 7). Thereby, the oil sector's contribution to the revenues would be diminished from 13 percent to 7 percent and 9 percent, respectively (see Table 10, cols. 5, 7).

If, however, domestic prices increase by only 50 percent of the 1984–85 constant prices, no major change would occur in the oil sector's contribution (see Table 10, col. 6, 8), despite the decline in export prices. Such an increase in domestic oil prices is likely to be achieved, and may be even larger. The expected expansions in quantities of oil and natural gas could also contribute 20–30 percent to the growth in revenues from oil.

The contribution of the Suez Canal Authority to the budget throughout the 1980s was between LE 0.4 billion and LE 0.5 billion and may be expected to remain in this range. The changes in remittances will probably have indirect effects on the budget through their overall impact on the economy, but their magnitude cannot be estimated.

The total direct influence of the oil sector and Suez Canal receipts on budget revenues—if there is no change in domestic oil prices and quantities of oil exported—is about LE 0.7 billion to LE 0.4 billion. The total budget deficit could therefore increase from LE 7.2 billion in 1984–85 to between LE 7.6 billion and LE 7.9 billion (see Table 10). With the projected rise in oil and natural-gas production by 17 percent by the late 1980s and by 39 percent by the mid-1990s, this loss should be regained. A change in domestic oil prices should even bring about a decline in the budget deficit.

3.3.4. THE EFFECT OF THE PRICE DECLINE ON THE EGYPTIAN ECONOMY—SUMMARY²³

In this section the main conclusions on the impact of the decline in oil prices on Egypt's economy are summarized and their economic implications for Egypt assessed. Some of these conclusions are outdated because of changes concerning Egypt's economy, which were undertaken in the spring of 1987; therefore, an epilogue has been added.

The deficit in the civilian current account, which from 1981–82 until 1984–85 had almost constantly been about \$3.6 billion, is likely to increase to about \$5 billion in 1984–85 dollars if the price of oil will be \$20/b. and to \$6.5 billion if the price will be \$15/b.

Because of the dollar devaluation these deficits could widen to \$7.5 billion or \$8.5 billion in first-quarter 1987 dollars if the exchange-rate devaluation of 33 percent in comparison to 1984–85 would still hold in the years of our projections—late 1980s through mid-1990s. These figures do not include the deficit in the balance of military trade, which is mainly covered by grants and loans from the U.S. and France.

Even under the much more favorable conditions in the pre-1986 era, when oil prices were considerably higher and the annual deficit in the current account was \$4 to \$5 billion lower, Egypt's civilian debt amounted to \$26 billion in 1985 (in current dollars). By mid-1987 this debt increased to \$31 billion, and including the military debt, the sum was estimated at \$40 billion and the annual servicing of the debt, in 1987, at \$4 billion. Egypt is expected to repay in the following years sums of similar magnitude.

If we take into account that Egypt will also receive civilian aid of \$2.5 billion in 1987, the annual current-account deficit—in addition to the rest of debt servicing—is likely to amount to \$9 billion to \$10 billion in 1987 (first quarter) current dollars, and \$6 billion or \$7.5 billion in 1984–85 prices. This huge deficit in the balance of payments would be about 15.5 percent to 19.5 percent of the GNP in 1984–85 and 130 percent to 230 percent of the forecasted value of annual exports during the late 1980s and mid-1990s in 1984–85 dollars. This precarious situation cannot be sustained for long.

Such an enormous annual deficit demands radical measures in a wide range of economic and other policies. These will be discussed after the summary of the impact of the decline on the other two economic parameters—the budget and economic growth—because the necessary measures relate to the economy as a whole.

The direct impact of the decline in oil prices on the Egyptian budget is much less drastic than that on the balance of payments; total budget revenues would diminish by 4 percent and 7 percent respectively, because of lower tax payments and the transfer of profits by the EGPC. The total budget deficit would thereby increase from LE 7.2 billion to LE 7.6 billion. The indirect impact on budget revenues, because of reduced purchasing power in general and owing to recipients of remittances in particular, will also have influence on various tax revenues, the extent of which, however, is difficult to predict. The loss of budget revenue through the direct impact of reduced oil prices will or can be rectified by production increases of oil and gas and by relatively simple measures, for example, by an increase of about 50 percent in the domestic prices of energy (which would still leave them considerably below the international level).

Changes in the Suez Canal Authority's transfers to the budget can have only a marginal impact on the general budget picture.

Though the oil-price changes may leave only a slight imprint on the budget deficit, the magnitude of the total budget deficit—about 18 percent of the GNP since 1984/85—is worrisome enough as it is bound to cause an inflationary spiral, which will create grave pressures on the current-account deficit.

The most direct impact of the decline in oil prices on economic growth can be demonstrated through two indicators of growth, the GNP and the GDP. In the late 1980s the GNP is likely to decline by 6–10 percent, and by the mid-1990s by 3–7 percent—in comparison to 1984–85. The GDP is expected to dwindle by 1–3 percent in the late 1980s, and by up to 2 percent until the mid-1990s. This decline in growth rates will be even more pronounced because the per-capita changes will contract annually by an additional 2.8 percent—the annual rate of population growth. It should also be remembered that before 1986 Egypt experienced a long period of high economic-growth rates. They have decreased since 1982–83, but in 1984–85 they were still higher than 5 percent. Therefore, the economic watershed

of 1986 meant a decline in the GDP and GNP after protracted increases in economic growth.

Our calculations of the expected changes in the balance of payments take into consideration only the very obvious impacts through the oil sector, workers' remittances, and Suez Canal receipts. But several secondary effects may have no less bearing on economic growth and on the economy in general.

The huge deficits anticipated in the current-account balance may force the Egyptian government to take radical economic measures to curtail them. These measures will have to include curbing the demand for foreign currency. This goal may be achieved by a number of means, the first of which is to establish and maintain a realistic exchange rate, meaning an effective devaluation and partial unification of the numerous exchange rates. Thereby imports should be reduced and the development of import substitutes and export industries would be encouraged.

As far as export industries are concerned, Egypt has a very poor record; in 1984–85 the export of goods (except petroleum and its products) was still at its 1979 level of \$1.3 billion in nominal dollars. The development of a large, non-oil export industry is likely to be a very slow process. The import-substitute industries may have a better chance, especially since one of the most important reasons for the failure to develop a larger industrial sector has been the unrealistic exchange rates. Realistic rates may encourage industrial development, remittance transfer and exchange through official channels, and investment of expatriate workers' savings. Another less desirable way to curtail imports is administrative restriction. This measure is used traditionally by Egypt, and to get fast results that country may be tempted to make wider use of it. However, such administrative maneuvers are bound to make the economy less efficient and establish vested interests, which are very difficult to get rid of no matter how ineffective they are.

Any measure that will reduce public and private purchasing power will also shrink the demand for imports. Therefore, it is important to curtail the large deficit in the government budget mainly by cutting expenditures rather than by increasing revenues. One exception to this rule should again be stressed, however. One of the most efficient ways of improving the balance of payments and nar-

rowing budgetary deficits in Egypt is to raise the extremely low energy prices. Thereby a larger quantity of oil can be made available for exports and budget revenues increase.

Reduction of the budget deficit will also curb the inflationary tendencies in the Egyptian economy. This is a major task in its recovery. Some of the measures recommended earlier contradict this goal of curbing inflation, for example, raising the exchange rate and petroleum and other prices, and reducing subsidies. Therefore, it is important to realize that one primary object of the above moves is to reduce purchasing power, which will not be achieved if incomes and government expenditures increase simultaneously.

Such policies, though, are bound to affect in particular the lower income classes, which may create hardship, stir unrest, and eventually increase the number of radical, especially religious, anti-government elements. In Egypt's case this already happened several times when attempts were made to cut food subsidies. Therefore, ways should be sought to compensate these social strata partially, but without gnawing away at the effectiveness of the measures, which are meant to achieve the intended economic goals. This is a difficult dilemma to solve, but there is no logic in using harsh economic tactics and eventually nullifying their results by decreeing contradictory measures. Egypt would benefit greatly from rescheduling its debts, which might make it easier to synchronize economic and social policies.

3.3.5. EPILOGUE TO THE ECONOMIC SUMMARY²⁴

In view of its inability to repay the debts and cover part of its current-account deficit, Egypt was forced to seek an agreement on economic measures with the IMF and its creditors.

On May 11, 1987, the following policies were launched by Egypt's Economy and Foreign Trade Ministry:

1. To create a freer foreign-exchange market, the commercial bank rate was pegged to the free-market rate, which meant an effective devaluation of 40 percent (from \$1=LE 1.36 to \$1=LE 2.17) on transactions concerning about 40 percent of imports as well as remittances and receipts from tourists. This rate was very

close to the unofficial free-market rate (\$1=LE 2.15). But the previous commercial bank rate was retained for numerous other transactions, and the official fixed rate—which is used for government accounts; exports of oil, cotton, and rice; imports of flour, sugar, edible oils, tea, insecticides and fertilizers, and wheat; and revenues from the Suez Canal and the SUMED pipeline—was maintained at its January 1, 1979, level: \$1=LE 0.70.

The free-market exchange rate will be fixed daily by a committee of bankers and observers from the Ministry of Economy and Foreign Trade and the Central Bank of Egypt.

However, letters of credit will have to be covered 100 percent with the opening of the letter, of which Egyptian residents will have to advance 50 percent on application and foreigners 35 percent.

Two additional stages in the exchange reform are envisaged. In the second stage the unofficial free-market rate is to be abolished; in the third stage the official exchange rate (\$1=LE 0.70) should be abolished, too.

The minimum lending rate for letters of credit was increased by 2 percent, which leaves the interest rate considerably below the inflation rate. For exports, the interest rate was fixed at 10 percent, while the inflation rate is still 25 percent.

2. The interest rates on loans for agriculture, industry, trade, and services were increased by 11–16 percent, but they remain negative, too.

3. Energy prices were raised: electricity by 30 percent, fuel oil by 273 percent, and others by about 70 percent. It is estimated that these changes hiked energy prices in Egypt from 10 percent of international prices to 25 percent.

These and other measures taken are far less than those initially requested by the IMF. However, in their wake the IMF approved standby credit of \$325 million of which \$148 million was drawn immediately and the rest will be made available over 18 months.

More important than this loan, the IMF's intervention paved the way for an agreement with the Paris Club about the rescheduling of Egypt's debts. At a meeting on May 21–22 with the main 18 creditor governments, it was agreed to reschedule \$12 billion in debt servicing (out of Egypt's \$40-billion debt). The agreement covers all official and government-guaranteed debts—civilian as well as military—incurred before October 1986 and including interest and principal

payments due between January 1987 and June 1988. These debts will be repaid within 10 years, of which the first five years will be a grace period. The exact terms—interest rate, payments after the grace period, etc.—will be discussed by Egypt and each creditor country.

In addition this agreement is supposed to prompt a rapid disbursement of \$500 million in loans by the World Bank. Western export-credit agencies may also renew coverage of transactions with Egypt. The Paris Club agreement will of course be of great help to Egypt, especially in the five-year grace period. But the question is whether this assistance will be adequate and whether Egypt's current and future economic measures will sufficiently prepare the Egyptian economy to cope with the problems it will have to face after the grace period. The calculations in our study, which also relate to the five-year grace period, demonstrate that in these years the deficit in the current account is likely to range from \$5 billion to \$6.5 billion (each year) in constant 1984–85 dollars or \$7.5 billion to \$8.5 billion in 1987 (first quarter) dollar prices.

The economic aid Egypt may expect for civilian purposes is about \$2.5 billion annually. Therefore even during the grace period, Egypt will still have to finance an annual deficit of at least \$5 billion to \$6 billion in 1987 dollar prices. Concurrently, it will have to service some of the remaining \$28-billion debts not included in the Paris Club agreement. On the other hand, additional aid may be renewed by Arab countries. A few hundred million dollars may also be made available by foreign investment.

This calculation assumes that military-equipment acquisitions will be covered by specific military aid from the U.S. and other countries. Egypt also reached an agreement with the USSR (on April 6, 1987) to repay its military debt of \$3 billion, over 19 years beginning in 1992, at no interest.

The problem that remains after the temporary solution of debt servicing, therefore, is whether Egypt will be able to increase exports and the flow of remittances, reduce imports, and receive additional aid to cover the annual deficit of at least \$5 billion to \$6 billion in its foreign-exchange obligations.

It should, however, be stressed that the attitude of the industrial countries toward Third World debtors is changing and recognition of the de-facto interdependence between these two worlds is growing and that therefore the problem cannot

be solved by the Victorian moral attitudes of bankers. This recognition is yielding new solutions like trading in Third World countries' debts or writing off or re-rescheduling debts. Even if Egypt cannot repay its debts after the five-year grace period, a new arrangement is likely to be found, but it may be costly to the country in terms of rates of development.

The new foreign-exchange regulations should in principle encourage exports and import-substitute industries and discourage imports. Such developments, however, take time. In the short run, the main impact may be the reduction in imports. Furthermore, the recorded remittances may increase, or rather decrease less with these new regulations. For a considerable range of imported goods, especially basic foods, the lowest official exchange rate has remained unchanged. As the gap between this rate and the new maximum official rate is now 1:3 (while prior to the new economic policies it was 1:1.3), the import of these goods may increase.

The increase in some domestic energy prices is a move in the right direction, but falls short of the price increases needed to make available for export the quantities of petroleum we took into consideration in our forecasts (see Table E8). If Egypt does not continue to raise the domestic energy prices, export receipts may be much lower than forecasted, and therefore the current-account deficit may be even larger than predicted.

In addition, a steeper rise in domestic oil prices is also desirable in order to reduce the budget deficit, and thereby curb the inflationary process and prevent the need for further large devaluations. The same holds for the subsidies and prices of basic foods; under the new policies subsidies have not been reduced and the price of basic agricultural products has not increased. As stated, as a result imports of such goods (wheat, sugar, etc.) may expand, while the high inflation rate steadily intensifies the subsidization. In addition, exports of goods in this category (cotton, rice, etc.) may decrease because farmers may refrain from producing them at the set price. Within the package of economic reforms, it was also promised to increase the price paid to farmers, but this increase will apparently hardly cover the inflation of the last year. This will also have a continuous impact on preventing higher agricultural production in general, render the whole agricultural sector less efficient, prevent a rise in the GDP, and increase the migration to the overcrowded urban centers.

A further problem is the interest rate which has not even been increased to the level of the prevailing inflationary rate; this is tantamount to a negative interest rate. Under these circumstances it is worthwhile to borrow money, thereby increasing purchasing power and fueling the inflation. It is doubtful whether the low interest rates will spur investment as in recent years—when real rates were even lower, and a rise in investment did not materialize.

These shortcomings in the economic measures are apparently a calculated risk in trading faster economic recovery for probably more acute dangers of socio-religious unrest. The soundness of this decision, however, rests on the reply to two queries: Do small, frequent doses of cumulative economic hardship produce less or more unrest than one heavy dose? And will the leadership of the country be courageous enough to introduce additional economic measures after the first small dose? In many countries the leadership did not demonstrate such courage.

Yet it must be recognized that Egypt has taken unprecedentedly serious steps this time and the line between the desirable and the acceptable is difficult to predict. The grace period given to Egypt is of crucial importance for the country. In these five years the economy is getting a chance to lay a solid basis for perpetual growth through the development of agriculture and industry.

In 1975–85, Egypt did not succeed in improving its agriculture and building up its industry in such a way that they will spearhead economic growth after the major contributions of the main growth factors in that decade—petroleum, Suez Canal tolls, and remittances—will level off or decline.

The resources were available, but the economic policies were faulty. Neither has Egypt even seriously tried to defuse the demographic explosion.

Now it has been given a chance to rectify the situation, although under much less favorable circumstances. After the five year period the debts Egypt will have to repay in five years will be staggering, but it is impossible to estimate the amount of the annual debt servicing until the bilateral rescheduling agreements have been finalized. Important additional factors will also be the value of the dollar and the price of oil at that time.

The economic policy adopted by Egypt in May 1987 is impressive but far from adequate. If it is not to be followed up with much more resolute measures, it is not likely to put Egypt on a reasonable path of development, a path that should

lead to the development of industry and agriculture and to an annual rate of growth per capita of at least three percent, which in Egypt implies a total annual growth rate of almost six percent per annum.

3.4. POLITICAL AND MILITARY REPERCUSSIONS

The economic and social impact of the decline in oil prices may have politico-military repercussions on Egypt's internal front, and on relations with other Arab countries, with the superpowers and Europe, and with Israel. In this section we will dwell on these aspects of the economic impact of oil prices.

Internally the Mubarak regime seems to be well-entrenched, especially after the successful elections for the People's Assembly, which were held on April 6, 1987, and President Mubarak's reelection. Nonetheless, under certain circumstances, masses of intellectuals and members of the ever-growing urban proletariat could rally round the foci of radical religious resistance.

Among the radical religious groups, the most institutionalized is the Muslim Brotherhood, which in 1987 won 56 of the People's Assembly's 448 seats in an alliance with the Labor Party and Arar (Liberals). Thirty seats were won by the Brotherhood itself, a relatively sizable increase over the eight seats it occupied in the previous Assembly.²⁵

Among the more active clandestine organizations is the "Islamic Societies," which was responsible for the Assiut disturbances in the wake of President Sadat's assassination in 1981, and which claimed responsibility for the shooting of Egypt's Minister of the Interior on May 5, 1987.

In mid-May 1987, dozens of Islamic fundamentalists funded by Iran were arrested for planning to assassinate Egyptian high officials. In the past several large-scale riots were also triggered ostensibly by economic factors, especially by the reduction in subsidies, which increased the price of staple foods. The first of these riots occurred in February 1977. At least some may have been instigated by underground organizations and foreign governments. In addition, there was the great riot among some of the police forces because of low salaries.

Thus, there is already a decade-old tradition of major disturbances under two presidents, Sadat and Mubarak, triggered by economic factors, or at least

economic factors were used to stage them. Recurrence of such events could eventually develop into something much more serious than a passing incident. The precarious economic situation of Egypt, which may prove long-lasting as the government takes ever-harsher economic measures, may draw the economically distressed to clandestine fanatic religious groups in an explosive mating of ideology and distress. The mass of repatriated workers could easily become a catalyst in this process because they have had to downgrade their standards of living, and they are probably, as migrants mostly are, a particularly virile segment of the population.

Another element that may be influenced by economic factors is the army. If it does not receive adequate resources—in the eyes of its officers—or if soldiers' real salaries will fall far behind in the inflationary process, there may again be a fusion of religious fanaticism and economic frustration. President Sadat's assassins came from the army, though the economic motive was apparently missing in this case, as it was also apparently missing in the shooting of the Minister of the Interior on May 5, 1987. For all these reasons, an attempted overthrow of the regime in Egypt, which may be accelerated by economic factors, cannot be dismissed.

In Egypt's relations with Arab countries, economics played a considerable role in the early 1970s, when President Sadat was repulsed by the stinginess of the rich Arab oil states. His outrage can be discerned in the excess of one of his speeches:

In October 1973 the economy of Egypt was immersed in deep distress. In 1974 even the promise of a slice of bread was not in sight. Before my eyes were the debts that had to be paid in December in accordance with international arrangements, but there was no possibility of honoring these obligations. We did not have a simple mil in foreign exchange.

This was one of my considerations in entering the war, because if we had entered 1974 in this difficult situation, Israel would not have needed to fire a single bullet.

You should also know that it was impossible to get even a single dollar of the Arab aid—\$500 million—before we inscribed with

our blood the epopee of fording the Suez. Within a week following the battle of October, our Arab brethren sent assistance.

Although during and after the Yom Kippur (October) war Egypt received large amounts of aid from Arab countries, it gave Sadat a feeling of enabling these countries' rulers to patronize him and his country. With the signing of the Camp David accords with Israel in 1979, aid to Egypt was completely discontinued and Sadat made no effort to have it renewed, preferring to receive aid from the U.S.

Under President Mubarak, Egypt's relations with Western-oriented Arab countries have improved steadily: diplomatic relations with Jordan were renewed; Egyptian-PLO relations were normalized; Egyptian-Iraqi relations are friendly; Egypt was invited in 1986 to the Islamic Conference in Kuwait; and Egyptian organizations were reaccepted into several Arab institutions such as the Arab Gulf Program of the UN Development Organization, the Arab Doctors' Union, the Federation of Arab Chambers of Commerce, Industry, and Agriculture, and the newly created Arab Council for Childhood and Development.

In December 1986, for the first time since the break between the two countries, Egypt received a grant of \$500 million from Saudi Arabia.²⁶ And in November 1987, in the wake of the decisions made at the Amman conference, diplomatic relations with Egypt were reestablished by nine Arab countries, including Saudi Arabia and Iraq.

With the gradual return of Egypt to the fold of Arab countries, it is conceivable that further aid may be extended to Egypt by Arab Gulf oil countries because of their interest in protecting the Mubarak government and preventing the establishment of a fanatic religious regime in Egypt, west of the Arab Middle East countries, in addition to the Shi'ite fundamentalist regime in Iran, east of the Arab countries.

Such financial assistance could go a long way in helping Egypt extricate itself in the next five years from its economic distress. But for the Arab Gulf countries the problem of whether to provide aid to Egypt, and to what extent, is nowadays much less of a political question than one of economic affordability and priorities. Their first priority, while the Iraq-Iran war is still going on, is to extend financial assistance to Iraq, which they perceive as the ultimate guarantor against Iranian hegemony in the Gulf area.

The incomes of the main Arab Gulf oil producers²⁷ diminished in current dollars from their peaks of \$113 billion²⁸ in 1981 to \$20 billion²⁹ in 1986, and are unlikely to recover much in 1987 and 1988.³⁰ The current accounts of the low absorbers among the oil producers have been negative since 1983,³¹ and are expected to remain so in 1987 and 1988. The reserves of these countries have dwindled fast and it is believed that, for example, Saudi Arabia's reserves plunged from their peak of about \$120 billion to less than \$50 billion in 1986. These countries have therefore been forced to curtail their development programs drastically, to send a large proportion of expatriate workers back to their countries of origin, and to slash the salaries of civil servants and aid to all recipients.

Because of Egypt's economic situation and outlook, the Arab countries certainly do not entertain any illusions that it will ever repay or service its debts to them. Still, as Egypt is an extremely important country for the Arab peoples, as well as for a peaceful Middle East, the Arab Gulf nations are most anxious to preserve Egypt as a moderate, Western-oriented and yet fairly religious Arab state. Therefore, it is likely that in the future they will extend to Egypt some financial assistance. However, it is also probable that Arab Gulf countries may finance Egypt's military aid to Iraq, Kuwait, and other Arab countries threatened by Iran, which will probably be sought more eagerly than before the Amman conference in 1987.

For the U.S., too, Egypt is of considerable strategic interest. Egypt is an important gateway to the large reserves of oil in the Arab Peninsula and to the maritime routes to the Indian Ocean and the Pacific. It is also a potential moderator in the Middle East and in the Islamic world, making efforts toward democratization and improvement of its economy and standard of living, while seeking a peaceful Middle East. After Israel, Egypt is the largest recipient of aid from the U.S. and is also high on the list of those receiving assistance from the EEC.

The economic plight that befell Egypt in the wake of the decline in oil prices made it even more dependent on U.S. and Western aid than before. This awkward situation also caused tension between President Mubarak and the U.S. administration. In particular, Egypt asked for a reduction in the high (13 percent) interest rates on U.S. military loans provided in the past, increases in the grant

element in aid, and an increase in aid in general. The U.S. refused to accede to most of these demands owing to conflicts between the executive and legislative branches, to problems in the budget and balance of payments, and to its wish to prevent an undesirable precedent. But the U.S. was helpful in influencing the IMF in spring 1987 to provide Egypt with a loan despite the country's agreeing to only a very partial implementation of the economic policy conditions demanded by the IMF.

The importance of the IMF's loan was that it paved the way to the rescheduling of Egypt's debt at the Paris Club meeting and to the bilateral agreements between Egypt and its various debtors, as well as to sizable increases in EEC loans and grants. But as Egypt will undoubtedly be in need of even more aid, tension with the U.S. on this issue will repeat itself in the foreseeable future. This is another reason for Egypt to seek further acceptance and aid from Arab countries. Despite such differences, Egypt's present regime is tied to its pro-U.S. and Western orientation. It is aware that the Soviets provide economic aid only very sparingly, and after 10 years of reorganizing its army with mainly U.S. weapon systems and adopting U.S. military doctrines and tactics, it cannot switch back to those of the USSR. Egypt has experienced how difficult it is to shift from one military system to another, and not even after a decade has the task been fully accomplished.

Therefore, it can be said that Egypt's economic plight in the wake of the oil-price decline has introduced certain tensions into the Egypt-U.S. relationship but has strengthened the dependence of the present regime on the U.S. If the economic situation and/or other reasons bring down the Mubarak government and radical religious elements seize power, the outlook for U.S.-Egypt relations may of course change completely despite Egypt's military and economic dependence on America.

The peace between Egypt and Israel has been achieved after 30 years of war at a time when Arab economic might was at its pinnacle. Before the signing of the Camp David accords, Egypt had been offered large sums of aid by Saudi Arabia and other Gulf states, but could not be lured away from peace.

Despite the many ups and downs in Egyptian-Israeli relations, peace itself has been strictly observed and maintained, although few normal relations—social,

cultural, or economic—have been established. The main economic link is the export of petroleum from Egypt to Israel, which in the first half of the 1980s reached \$350,000–\$450,000 annually; the value of these transactions has decreased considerably since 1986, following the fall in oil prices. Israel's exports to Egypt have remained in the range of a few million to less than \$25 million. After the decline in oil prices and the worsening of Egypt's economic situation, there are a few early signs that Egypt may be interested in expanding economic-technological cooperation with Israel, in particular in agriculture and solar energy.

Since the peace negotiations, throughout periods of economic success and now in times of failure, Egypt has not changed its peace policy toward Israel. Although direct economic relations between the countries are negligible, Egypt is most likely aware that a breakaway from the peace agreement and from diplomatic relations with Israel could have far-reaching consequences for its economy, and therefore for its national strategy of economic recovery and growth.

In contrast to Syria, there is an apparent negative correlation between the rise in the strength of the Egyptian army and the oil-price changes (see Tables 3 and 4).

During the period of high and increasing oil prices, that is, 1974–81, the strength of most of the important military factors declined: regular and total army personnel, total tank force, and number of combat aircraft. However, there was a moderate increase in the number of tanks.

During the price-decline period—between 1981–82 and 1986—the main factors indicating military strength increased, although the number of combat aircraft contracted slightly after 1984, probably because of the phasing out of almost obsolete multi-role aircraft.

The negative correlation between the oil-price changes and the strengthening of Egypt's military forces, despite the heavy impact of the changes on Egypt's economy, can be mainly explained by the overwhelming importance of political factors. During the oil-price increase period, Egypt disrupted its ties with the Soviet Union, its principal procurer of military equipment; while the improvement of relations with the U.S. was still in *status nascendi*, and until the Camp

David accords with Israel, the U.S. was unwilling to become Egypt's main supplier of arms. The ties between these two countries tightened after the signing of the accords, whereupon the U.S. also provided the necessary financial assistance. Naturally, there were also considerable delays in supply, and the absorption of this new equipment by the Egyptian army was gradual.

In 1986 Egypt had an advantage over Israel in troops (5:1) and high-quality tanks (1.3:1), and was about equal in total combat aircraft but inferior by approximately 1:2 in high-quality aircraft, and by 1:1.3 in total tanks. It should, however, be taken into consideration that Egypt's high-quality military equipment is now mainly of Western origin and, in contrast to part of the Soviet weaponry, is on a par with Israeli equipment. Despite Egypt's very serious economic problems, the equipment and modernization of its army will continue with American and European financial assistance.

APPENDIX

REMARKS ON THE DEVALUATION OF THE U.S. DOLLAR AND ITS IMPACT ON EGYPT'S BALANCE OF PAYMENTS

Our projections are calculated in 1984–85 constant dollars in order to measure the impact of the change in oil prices on various economic variables.

However, in addition to the decline in oil prices, which are quoted in dollars, the value of the dollar has also declined, which in itself is likely to affect the economy through its influence on Egypt's terms of trade, the value of the aid it receives, and its debt servicing.

Sufficient data are not available to carry out the relevant calculations rigorously, but we will attempt, at least in a superficial way, to evaluate the relevance of this factor in order to demonstrate its bearing on the issues of this study.

It is difficult to predict whether the devaluation of the dollar will continue or level off, or whether the dollar will be revalued and to what extent. Therefore, our calculations will concern the period between 1984–85 and the first quarter of 1987. During this interval the dollar was devalued in SDR terms by about 33 percent, and in ECU terms by 50 percent. In the following assessments we shall use these two indicators of devaluation to identify the impact of the dollar devaluation on oil prices and the balance of payments, though we are aware of the many shortcomings of this procedure.

If a barrel of oil cost \$20 during the first quarter of 1987 (the actual price was about \$17/b., but we are using the price of \$20, which is the median alternative in our projections), its value in 1984–85 dollars was \$13.3–15/b. This means that at a price of \$20/b., the “real” price of oil between 1984–85 and the first quarter of 1987 went from \$27/b. to \$15–13.3/b. This is due in about equal proportions to the devaluation of the dollar and the decline in oil prices.³²

Only at \$30–40/b. during the first quarter of 1987 would the \$20/b. price in 1984–85 dollars have been achieved.

The impact of the devaluation of the dollar is demonstrated in the following table (cols. 3 and 4). As can be seen from the table, the effect of the decline in the

oil price from \$27/b. in 1984-85 to \$20/b. would have caused a \$0.7-billion increase in the deficit of 1984-85 Egyptian current account; and the devaluation of the dollar by 33-50 percent, caused by a deficit growth of \$3.1 billion to \$4.4 billion.

We applied the lower devaluation rate of 33 percent also to our projections (see table below, based on Table E8). The results indicate that in the late 1980s, the current-account deficit may reach approximately \$8 billion and in the mid-1990s, \$9 billion in current dollars per annum, in comparison to \$5 billion or \$6 billion projected in 1984-85 dollars and the actual deficit in 1984-85 of \$3.6 billion.

These calculations indicate that the likely impact of the devaluation of the dollar on Egypt's current account is considerably greater than the influence of the nominal decline in oil prices. The explanation for this great impact of the devaluation is that in 1985 about 85 percent of all the receipts in the current account were in dollars, while only 33 percent of the payments were in this currency.

These figures may be exaggerated or underestimated for several reasons, part of which may be related to some of our assumptions (which are spelled out in the table) and to our choice of devaluation indicators. However, the general conclusion is that the devaluation of the dollar and the nominal decline in oil prices have changed Egypt's terms of trade considerably for the worse. But this change may be mitigated by varying the mix of import transactions made by Egypt in dollars and in other currencies. (This was not taken into account in our calculations.)

Two additional considerations concerning the impact of the devaluation of the dollar must be weighed:

1. *The military balance of trade is not included in the above calculations.* The bulk of Egypt's acquisitions of military equipment are made in the U.S. and in France. The French prices are likely to have increased in dollar terms; the prices of U.S. military equipment have apparently risen considerably in current dollars. Therefore, it is likely that the military balance of trade has worsened Egypt's foreign-exchange problems.

Part of the acquisition of arms is financed by grants and loans from the U.S. and by French loans, whose nominal value does not automatically change in accordance with devaluation or other price changes.

2. *Egypt's debt.* Approximately \$26 billion out of the \$40-billion debt is in dollars or in de-facto dollar-pegged currencies. After the Paris Club agreement on rescheduling Egypt's debts over 10 years, it is impossible to predict what the exchange rates will be at the time of debt servicing. However, an early repayment of debt when the dollar is low could be beneficial to Egypt; but Egypt is not likely to have the necessary means at its disposal.

CHAPTER 4

JORDAN

4.1. INTRODUCTION

Jordan has only a tiny oil-extracting industry of negligible consequence to its economy.

However, quite extensive oil-exploration activities by foreign companies are conducted, and taking into consideration the considerable investments being made, the chances of finding oil in the future should be regarded as fair.

The main potential impact of the decline in oil prices on Jordan's economy is through its repercussions on workers' remittances, on aid from Arab oil countries, on Jordan's exports to these Arab states, and through cheaper imports of oil.

4.2. THE REPERCUSSIONS OF THE OIL-PRICE DECLINE ON JORDAN'S ECONOMY

4.2.1. OIL AND ECONOMIC GROWTH

In 1986 Jordan's GDP at factor cost amounted to approximately \$4 billion and GNP at market prices to \$5.5 billion.

During 1980-86 the Jordanian economy grew at an average of four to five percent per annum³³ (4.2 percent using the GNP at market prices as the measure, and 5.2 percent according to GDP at factor cost.) The growth occurred mainly during 1980-84, but the economy stagnated and even declined in 1985-86. The main foci of growth during 1980-86 were mining and quarrying (12.1 percent per annum) and manufacturing (9.3 percent per annum) as well as utilities. In agriculture the major period of growth was in the second half of the 1970s, with the completion of the Rohr project.

During the 1980s there has been no discernible trend of increase in the value of agricultural production but annual changes are much less volatile. The main growth in construction occurred until 1982, thereafter stagnating and eventually declining in 1985-86. The construction boom and its leveling off have been considerably influenced by workers' remittances; apparently, so has the industrial sector's development.

The decline in Jordan's rate of development was evidently affected by the decline in the budgetary allocation for capital expenses; the increase in 1986 has apparently not yet borne fruit (see Tables J3 and J4). In reducing this allocation the government was obviously influenced by the reduction in aid and in development loans.

Therefore, it can be assumed that the main influence of the drop in oil prices prior to 1986 demonstrated itself in Jordan's leveling off and eventual decline in economic growth through the impact of shrinking remittances and aid.

4.2.2. OIL AND THE BALANCE OF PAYMENTS

4.2.2.1. *Introduction (see Table J1)*

The trade balance is the weak link in Jordan's balance of payments because the value of imports is constantly 3.5–4 times larger than exports. The deficit has been covered mainly by workers' remittances and by unrequited transfers, largely from Arab oil countries.

Until the end of 1986, the fall in oil prices had opposing impacts on various balance-of-payments items. Jordan's expenses on petroleum imports declined but unrequited transfers declined, too. Remittances increased in 1986 in comparison to 1985, but decreased in comparison to the peak year of 1984. The result of all these changes—which were directly or indirectly generated by the decline in oil prices—was a 30 percent narrowing of the current-account deficit, from \$1.054 million in 1985 to \$726 million in 1986. This was the lowest deficit of the 1980s, but the trend continued throughout this period.

However, it is not likely that 1986 will be typical for Jordan's balances of payments in the coming years. Nominal oil-import prices in 1986 were about the lowest that can be expected, while remittances—following the gradual decline in oil prices—began their downturn in 1982 (with a slight remission in 1986), as did aid (see Table J2).

To evaluate future developments, each factor involved will be probed further.

4.2.2.2. The trade balance

Approximately half of the \$750 million to \$800 million in annual exports consisted of three items in 1985:³⁴ phosphates (50 percent), fertilizer (based on phosphate) (25 percent), and potash (25 percent).

In all three items Jordan has a considerable potential to increase production, but the value of exports depends strongly on world demand. For example, in 1986 phosphate rock exports rose more than 13 percent in physical terms but this translated into only 3.8 percent in export revenue.³⁵

The world demand for fertilizer³⁶ is low; Jordan's fertilizer exports declined after 1984 and the world outlook is not encouraging. The prospects for potash are more promising, and Jordan is planning to double its production capacity from 1.1 million tons in 1986 to 2 million tons toward the end of the 1980s.

Most of the other Jordanian exports are miscellaneous manufactures and fruit and vegetables. These are exported mainly to Arab countries in the Gulf area and to Iraq. Both of these destinations are problematic. The Gulf states have canceled a large portion of their development programs, and with them many of their imports. For example, Jordan has exported considerable amounts of cement to these countries, but since 1986 this trade has been discontinued. Also, the prospects of exporting cement to Egypt have materialized only to a small extent because of Egypt's precarious economic situation. Fruits and vegetables are now grown by the Saudis themselves, and their imports have been curtailed.

Iraq is the largest single importer of Jordan's products: its imports peaked at \$175 million in 1984, or 25 percent of Jordan's total exports. Iraq could absorb many more Jordanian exports and re-exports. However, difficulties have been encountered in the settlement of outstanding credits to Iraq, which approached \$300 million at the end of 1984. As Iraq did not repay this credit, Jordanian-Iraqi trade was reorganized mainly on a barter basis. But after Iraq's outstanding credit rose at the end of 1985 to about \$400 million, transactions diminished considerably. This may, of course, change if Iraq's financial position improves or if the Gulf states would be willing to guarantee these Iraqi debts. The development of Jordan's non-mineral exports will be determined substantially by com-

mercial relations with Iraq, which will depend largely on Iraq's ability to pay in cash or barter for its imports.

The prospects of an increase in Jordan's exports are not promising.

Jordan's imports declined steadily from their peak of \$3.2 billion in 1982 to \$2.4 billion in 1986³⁷ (the decrease in constant dollars was considerably larger). About 60 percent of this reduction was due to the deteriorating oil prices during this period. This source of import reduction is not likely to contribute to a decline in imports. On the contrary, at least nominal dollar oil prices are expected to rise.

Other major contractions in imports were recorded in transport equipment and in machinery. This is a clear indication that in times of crisis, Jordan is trimming its infrastructure and development. The reduction in imports between 1982 and 1986 amounted to 25 percent of total imports (in nominal terms), of which about 10 percent were non-oil commodities.

To sum up the balance-of-trade prospects, there are slim chances of a sizable increase in exports or an appreciable decrease in imports. Therefore, a deficit of \$1.4 billion to \$1.8 billion in the trade balance will have to be covered in the foreseeable future mainly by remittances and aid.

4.2.2.3. Remittances

Net remittances covered 45–55 percent of the trade deficit during 1980–86 and their nominal value varied between \$860 million and \$1,250 million (see Table J1).

Between 1980 and 1985 about 340,000 Jordanians³⁸ were working abroad, 80 percent of them in the Arab oil countries. But Jordan was also employing some 140,000–190,000 foreign workers, mainly from Egypt. Jordanians working abroad are—as a group—more highly skilled than the foreign workers employed in Jordan, which is also reflected in the difference between per-capita remittances received and paid.

Remittances received peaked in Jordan in 1984 at \$1.23 billion, declined to \$1 billion in 1985, and recovered to \$1.19 billion in 1986.

The item of remittances (recorded)³⁹ depends not only on remittances received, but on those transferred from Jordan by the foreigners employed in the country. These amounted to \$200 million to \$250 million in 1983–86.

There is little doubt that considerable numbers of Jordanians employed in Arab countries have been repatriated; apparently net repatriation began in 1985, and is likely to continue through the late 1980s. The increase in remittances received in 1986 is probably a temporary phenomenon, caused perhaps by the influx of savings that repatriated workers brought with them.

This phenomenon could repeat itself for several years if repatriation continues. On the other hand, the host countries have tightened their regulations concerning the transfer of remittances and savings, and they have lowered wages and salaries by dozens of percentage points. For the next few years, the decrease in remittances may be expected to be gradual and moderate. But eventually they may settle at half their peak value. The remittances transferred from Jordan will also shrink, but only slightly since Jordan is only taking action against its few non-Arab foreign workers.

Toward the end of the 1980s, Jordan's net receipts from remittances could be \$400 million to \$500 million lower than in 1984-86.

4.2.2.4. Aid

The most important item that has enabled Jordan to cover its balance-of-trade deficit has been aid, mainly in grants and to a lesser degree in concessionary loans. This aid has been provided mostly by Arab governments (see Tables J1 and J2) and mainly in the wake of the pledges at the 1978 Baghdad Conference. The amount of aid, and in particular its grant element, deteriorated almost continuously between 1980 and 1986, from \$1.4 billion to \$0.7 billion (see Table J2). In current U.S. dollar terms it reached less than 50 percent of its peak value in 1980; in constant dollars, the value was considerably lower.

The portion of Jordan's trade deficit covered by grants declined from 76 percent in 1980 to 50-55 percent in 1981-85 (except for 1984) and to 41 percent in 1986, the year of the oil-price crash.

Despite the contraction in aid and the changes in net remittances, these two items covered during the whole period 1980-86 between 90-100 percent of the trade deficit throughout the period 1980-86; even in 1986, they covered 98 percent.

Considering the very low aid (\$693 million) Jordan received in 1986, the partial recovery of nominal oil prices in 1987, and the strategic importance of Jordan for the Gulf states and the generally good relations between them, it is unlikely that nominal aid will decline much more.

Apparently, not all the aid for military purposes is included in the above figures.

4.2.2.5. Summary of Jordan's balance of payments

Jordan has a structural deficit in its balance of trade. Due to the decline in oil prices, this deficit has shrunk somewhat, but neither exports nor imports can be expected to bring it below \$1.7 billion. Mainly, successful exploration for oil fields could markedly change this equation.

The current-account deficit is only about half the trade deficit, due principally to the large amount of net remittances. Despite apparently sizable repatriation from Arab countries, remittances did not decline in 1986, and they were even higher than in any previous year except 1984. This is probably because of the transfer of savings by the repatriating workers. This phenomenon could be helpful for a few more years, before the full impact of repatriation on remittances—and on the current-account balance—is felt. But eventually net remittances could decrease by \$400 million to \$500 million, which would make a large dent in Jordan's foreign-exchange receipts.

Aid to Jordan, mainly from Arab oil countries, has demonstrated a continuous declining trend during the 1980s. In 1986 it reached less than \$700 million, or approximately half its 1980 level. It is doubtful whether the decrease will continue to any large extent.

However, if and when remittances decline, Jordan's only source of balancing the current account would be increased aid or a very painful cut in imports.

4.2.3. OIL AND THE BUDGET

The only items on the receipt side of the budget that are influenced—indirectly—by the decline in oil prices are “foreign grants,” and to a lesser extent “foreign financing.”

It is not clear whether the budget expenditures include all military acquisitions and whether the revenue side includes all grants and loans received for this purpose.

The foreign grants in the Jordanian budget declined steadily from JD 209 million in 1980 to JD 144 million in 1986—a fall of 31 percent in nominal terms, and 52 percent in constant 1980 prices.⁴⁰ (In 1984 the grants item in the budget reached only JD 106 million.)

The foreign grants provided to the public sector are considerably smaller than those registered—as unrequited transfers—in the balance of payments. The only plausible explanation—in our opinion—of this phenomenon is that part of the unrequited transfers were allocated to the military budget. Therefore, we conclude that the balance-of-payments data are a more relevant guide to the analysis of what happened to grants than the budget data are. However, it may well be that some grants allocated to the military budget were not even recorded in the balance of payments.

As the absolute value of grants declined continuously, so did their relative importance in the budget and in the GDP at market prices, which dropped from 21 percent in 1980 to 9 percent in 1986 (see Table J3). This decline was partially offset by the increase in foreign development loans, especially in 1985 and 1986. This development will in the future place additional burden on the balance of payments, increasing debt-servicing outlays.

In 1980–86, Jordan's domestic revenues rose nominally as well as in percentage points of GDP. Between 1980–81 and 1984, total receipts (domestic and foreign) declined, but they recovered in 1985–86 to 51 percent of GDP.

The same pattern is recognizable in total expenditures, though in 1986 they increased way beyond total revenues to 62 percent of the GDP. This was due mainly to the growth in capital expenditure in 1986, to 26 percent of the GDP, after bearing the brunt of the decline in revenues between 1980 and 1985 (see Table J4). The military expenses recorded in the budget have been kept at approximately 12 percent of the GDP.

Domestic revenues stood at only 27 percent of GDP between 1981 and 1985; in 1986 they rose to 32 percent in the wake of tax reforms, which offset the fall in revenue from grants and foreign loans. As the tax system in Jordan is still rather

lax, a further increase should be possible in the future. Therefore, another cut in grants would not necessarily widen the budget deficit.

In 1986 a large increase in capital expenditures, and a lesser one in military expenditures, boosted the deficit. Excluding grants and loans, the deficit climbed from 25 percent to 30 percent of GDP (at market prices), and including grants and loans the increase was from around 5 percent of GDP in most of the first half of the 1980s to 11 percent in 1986. Such an increase in the nominal deficit may already signal a danger of escalating inflation, and a further increase in the deficit could destabilize the Jordanian economy.

Therefore, recent changes in the Jordanian budget—partly in the wake of the impact of oil-price declines—involve two dangerous developments: a rise in Jordanian foreign indebtedness, which will increase demand for foreign currency for debt servicing, and the risk of accelerating an inflationary process, with all its repercussions. It should be noted that there may be further military expenses and financing of them which are not recorded in this official budget.

4.2.4. THE EFFECT OF THE PRICE DECLINE ON THE JORDANIAN ECONOMY: SUMMARY

Jordan has large structural deficits in its balance of trade and in its budget. The trade deficit was in 1984–85 about \$2 billion but decreased in 1986 to \$1.7 billion as a result of the oil-price decline. The foreign-trade deficit has been covered to a large extent by remittances and aid.

The deficit (JD 500 million) in the official government budget was also covered partially by a portion of the aid received, while the rest—we assume—has been used for financing the unpublished military budget.

With the drop in oil prices, aid—especially grants—was gradually reduced until in 1986 it was half (\$650 million) its nominal value in 1980. As most of the aid has been extended by Arab Gulf countries, at least part of the explanation for the aid reduction is their diminished oil income and prices; an additional factor is their support for Iraq in its war with Iran, which is given highest priority.

The decline in oil prices has had a favorable impact on Jordan's trade balance as the kingdom is importing almost all the oil it consumes. This was the main reason for the decrease in the trade deficit in 1986 to its lowest level of the 1980s.

Worker remittances do not reveal a clear trend; in 1986, despite the drastic decline in oil prices, they increased. This could be a temporary phenomenon created by the savings that the repatriating workers bring with them. We estimate that gradually annual remittances will be diminished by about half, or by \$400 million to \$500 million. As a considerable portion of remittances is spent on imported goods, the actual deficit in the current account may grow by a much smaller sum. Still, this may make a serious dent in the balance of payments if exports or aid do not increase. Exports have a slim chance of increasing; they may have even a better chance of decreasing because of the limited means of Jordan's potential customers—Iraq and even the Gulf oil countries. In addition, the export prospects for two of its three potential products—phosphate and fertilizers—are bleak. Discovery of oil fields could change this pessimistic assessment of Jordan's export potential in the future.

Jordan could probably rely on receiving increased aid if economic problems would endanger its regime, because Saudi Arabia is interested in Jordan as a moderate buffer state between it and Syria. But short of such a danger, aid may continue dwindling, as it did from \$1.4 billion in 1980 to \$0.7 billion in 1986.

A further decline in aid would harm not only the current-account balance but the Jordanian budget, as even the diminished aid still covers over 30 percent of total budgetary expenditure and constitutes 37 percent of all revenues. Any additional decrease in aid would mean reduced capital expenditure or an increased deficit leading to intensified inflation. Jordan could, of course, also lower military expenditures, but it is unlikely to do so as long as: the Iran-Iraq war continues, Syria remains a strong military power, the Palestinian issue stays unresolved, and the possibility remains that a radical hawkish government in Israel may be elected again.

This situation is likely to impose restrictions on the growth and development of the economy; the high rate of unemployment (about 9 percent) will most probably increase with large-scale repatriation of Jordan's workers. It should, however, be pointed out that some of these repatriated workers may be able to establish, with their accumulated savings, small firms in industry, trade, tourism, etc., which may substitute partially for reduced government investment and in general increase purchasing power. This is more likely to happen in the relatively

liberal economic atmosphere of Jordan than in Egypt and Syria. Jordan may also eventually take a firmer line against employment of foreign workers in Jordan, reducing payment of remittances and/or restricting the amounts transferable to their home countries.

However, the net result of the decline in oil prices is likely to remain: reduced standards of living, curtailed development, and increased domestic unemployment.

4.3. POLITICAL AND MILITARY REPERCUSSIONS

So far, there have been no serious internal political repercussions concerning the decline in aid and the possible future decrease in remittances following the reduction in oil prices. But if unemployment should deepen, the expectations of profitable careers in the Gulf states will be thwarted, repatriates and their families will be frustrated to return to greatly diminished standards of living, and unrest may develop. This may be especially true for the Palestinian element in Jordan.

The same developments of unemployment, frustration, and unrest may occur in the West Bank, especially among intellectuals, students, and the young. They, too, may have influence on Jordan's internal politics, but even more on Jordanian-Israeli relations: on the de-facto cooperation between Jordan and Israel in the West Bank, and on the ability and willingness of Jordan to enter into peace talks or temporary arrangements with Israel concerning the future of the occupied territories.

The curtailment of emigration from the West Bank has had severe repercussions vis-à-vis the demographic balance between Jews and Arabs within the mandatory borders of Palestine. This may have far-reaching consequences for the policies of Israel, the Palestinians, and Arabs in general.

Jordan's need for additional aid will make it more dependent on potential donors. As the U.S. is facing increasing economic problems itself and military aid to Jordan is constantly encountering the resistance of the pro-Israel lobby in the American legislative branch, Jordan is turning more toward Western Europe. It is also ostensibly inquiring about the possibility of acquiring advanced Soviet

weapon systems. It is not yet clear whether this inquiring has been made in all earnest or as a way of putting pressure on the U.S., Europe, and the Arab donors. If the Soviet Union becomes a major supplier of weapons, technicians, and specialized military personnel to Jordan, this could endanger negotiations with Israel and perhaps even facilitate the establishment of an Eastern Front Alignment of Arab countries.

Chances are that despite various maneuvers, the Hashemite Kingdom of Jordan will remain basically Western-oriented, and the relatively small resources it needs will be forthcoming.

The decline in oil prices and in aid from the Gulf states did not have an obvious impact on the build-up of the Jordanian army. During both price increases and price declines, the army increased and modernized its equipment. The tank forces were strengthened during the price increases, and the airforce more so during the decline in prices. Jordan, in this respect, is very dependent on the good will of the U.S., which in turn is restricted by Israel's potential vulnerability to Jordanian military activity. Although the Jordanian army is very small in comparison to Israel's, its capability and Jordan's geographic position—its long border with Israel and its proximity to the heart of Israel—make Jordan a potentially very dangerous antagonist to Israel within a wider Arab alliance.

Therefore, in the case of Jordan too, the political parameter outweighs the impact of the oil-price changes on its military strength.

CHAPTER 5

THE ARAB GULF DONOR STATES AND THE DECLINE IN OIL PRICES: AN OVERVIEW

The main donors to two of the confrontation states—Syria and Jordan—are the oil-rich Arab Gulf states. Egypt may also be regarded as a potential receiver of Arab aid as its political ties with a large number of Arab countries and with the PLO improve. As stated in Chapter 3, apparently Egypt received a modest contribution from Saudi Arabia at the end of 1986, and at the Amman conference in November 1987, another giant step toward the return of Egypt to the Arab fold was achieved.

For Syria and Jordan this aid is vital, not only for the functioning of their civilian economies, but especially for the acquisition of military equipment. Furthermore, the purchase of arms by the donor states for themselves must be regarded as a potential arsenal for all three confrontation states. In addition, dozens of billions of dollars in aid have enabled Iraq to continue to wage its war with Iran for seven years, and is likely to determine the outcome of the war and the impact of the cessation of these hostilities on the Middle East in general, on the fate of the Persian Gulf area, and on the Arab-Israeli conflict in particular.

The huge increase in oil prices in 1980 resulted in a gradual reduction in world demand for oil in general, including for Saudi Arabia's oil (down 70 percent) and for OPEC's oil (down 42 percent). Non-OPEC oil producers expanded their supply by 12 percent, as the price increases made it profitable to explore and develop their own oil fields despite much higher production costs (see Chart 1).

As a result of the fall in demand for Gulf oil, prices began to decline, too (see Table 1). The combined impact of the drop in demand and prices caused the oil revenues of the Arab Gulf donors to tumble between 1980 and 1984 by over 50 percent, with the receipts of Saudi Arabia alone plunging by almost 60 percent; by 1987, the loss was about 80 percent (see Table G1).

As a result of this decline in oil incomes, the current-account balance of Saudi Arabia has been in deficit since 1983 (see Table G2), and the Saudis have had to withdraw from their reserves more than \$60 billion, reducing them to less than

\$50 billion. Similarly, the Saudi budget showed a deficit of \$10 billion to \$20 billion annually (see Table G3). Kuwait's current account has not changed appreciably, but the UAE's did in 1986–87. Moreover, the UAE's budget shows a steadily decreasing surplus and even Kuwait's went into the red in 1986 (see Table G3). (These data exclude to a large extent additional deficits due to military imports.)

These developments forced Saudi Arabia and, to a lesser extent, Kuwait and the UAE to forgo changes in their economies and development plans. Many projects had to be discontinued, and new investments canceled; expatriate workers were repatriated, civil servants' wages were severely cut as were subsidies, civilian imports were curbed accordingly (see Table G5) and so were military ones. Many banks and industrial and commercial enterprises went bankrupt. While industrial growth in the high-income oil-exporter countries increased in 1965–73 by 13.3 percent per annum and in 1973–80 by 4.1 percent per annum, it decreased in 1980–85 by 9.1 percent per annum (*World Bank Development Report 1987*; the high-income group includes the oil-rich Gulf states and Iraq).

OAPEC members began to reduce their officially recorded aid in 1980 and by 1985 it had declined from \$9.5 billion to \$3.6 billion (in current dollars); large additional reductions were made after 1985, in particular by Kuwait, leaving the Saudis as the only important donor (see Tables G6 and G7). While the annual average aid that OAPEC members extended in 1976–81 was \$7.2 billion, in 1982–85 it amounted to \$2 billion only (in current dollar prices). But it is likely that much more than the \$5-billion annual difference went toward financing the Iraqi war, which acquired top priority in the Gulf states' allocation of aid.

The actual reduction in aid to the confrontation states may vary as a large proportion of aid is not officially published, especially support for military purposes. The impact of the decline in aid as well as in workers' remittances from the Arab oil-rich countries is analyzed in the three chapters on the confrontation states. Therefore, we shall not dwell on it here. However, the drop in oil prices has had much wider repercussions. Though they are not the main theme of our study, they should at least be listed.

The decline in oil revenues makes it much more difficult for the Arab Gulf states, especially Saudi Arabia, in the recent past and in the foreseeable future, to amass arms. Considering the maintenance difficulties of these weapon systems,

it is likely that these weapons will slowly deteriorate. The most important goal of the Gulf states has been achieved by the massive financial support extended to Iraq, which has prevented a decisive Iranian victory.

If and when the Gulf War terminates without an Iranian victory, the Gulf states may again divert more of their resources to the confrontation states. Nonetheless, after learning how quickly even enormous accumulated reserves can dwindle, it is doubtful whether the Gulf states will ever again be so generous with their resources for causes that are not posing a direct danger to them.

In this respect the combination of oil-price declines and the Gulf war may have a lasting, important impact on the Gulf states' relation to their financial assets. Similarly, the Gulf countries, and in particular Saudi Arabia, may have realized the limits of oil power and grasped the economic truism that a cartel can either regulate prices or quantities, but not both simultaneously, and that therefore the influence of the suppliers of oil on their revenues is restricted and mainly a function of how long it takes to materialize.

The confrontation states, in particular Syria, must also have realized that there are severe economic constraints on the arms race, which restrain their ability to wage an effective war against Israel. This realization, a general deceleration of the arms race west of the Middle East, and the new kind of understanding apparently being forged between the superpowers may eventually lead to a peaceful resolution of the Arab-Israeli conflict.

Saudi Arabia has probably also realized that money alone cannot buy her the leadership of the Arab world. The stalemates in the Iraqi-Iranian and the Arab-Israeli conflicts, the endemic economic weakness of Egypt, and the obvious limits of Saudi Arabia's power have left an Arab leadership vacuum.

There are presumably also many internal lessons that the experience of falling revenues may have taught; but there are probably even more lessons that the Gulf states will encounter in the future. They learned, or will yet have to understand, that one cannot sustain beyond the short run economies that have been built without almost any regard to prices, be it prices of water and agricultural products, or health and welfare services, or infrastructure and its maintenance. They will experience the gradual deterioration of all these and the growing frustration of the masses as well as of the emerging middle class, which will have to

give up many of the pleasures of life they have gotten used to. It is still impossible to assess the eventual impact of these events on the Saudi regime, society, and politics.

Of potentially large effect may also be the masses of workers repatriating from the Gulf states, which may have to reaccustom themselves to the squalid life in their homelands. They may prove to be a very destabilizing factor at home, with far-reaching consequences for these countries and for the Middle East at large.

The failure of oil power, the missed opportunity to meaningfully reconstruct the Arab countries despite enormous wealth, the failure to achieve the main Arab goals, and the resulting diminution of the Arab position in the world, may prove to be of historical dimensions and may relegate the Arab Middle East to the backyard of history for a long time to come.

All this could be the result of an irresponsible oil-extraction and -pricing policy and of Iraq's gross misjudgment of its true relative military power.

STATISTICAL APPENDIX

PETROLEUM AND MILITARY BALANCE

Table 1
Average Crude-Oil Sales Prices
1973-1987
(current* dollars per barrel)

Year	\$/b.	Year	\$/b.
1973	3.4	1981	34.5
1974	11.3	1982	33.6
1975	11.0	1983	29.3
1976	11.8	1984	28.7
1977	12.9	1985	27.2
1978	13.0	1986	15.4
1979	18.7	1987 (1st quarter)	17.2
1980	30.9	1987 (June 5)	17.7

Source: CIA: *Economic Energy Indicators*, February 27, 1987. The 1973 price is derived from posted prices; 1974-84 prices derive from official OPEC prices; 1985-86 prices are a measure of average world prices; 1987 prices from *Petroleum Economist*.

*Constant prices in 1980 dollars were in 1987 by 25%-33% lower than the 1987 nominal prices.

Table 2
World Crude-Oil Production
1973-86
(in billion barrels per annum)

Year	World Total [*]	OPEC	Other non-CPE Countries	Main Arab Donors: Saudi Arabia, Kuwait, UAE
1973	21.2	11.3	6.2	4.4
1974	21.2	11.2	6.0	4.6
1975	20.2	9.9	5.9	4.0
1976	21.9	11.3	6.0	4.6
1977	22.6	11.4	6.3	4.8
1978	23.1	10.9	6.8	4.5
1979	24.0	11.3	7.2	5.1
1980	23.1	9.8	7.6	4.9
1981	21.6	8.2	7.7	4.5
1982	20.6	6.9	8.0	3.1
1983	20.4	6.2	8.4	2.5
1984	20.7	6.0	8.9	2.3
1985	20.6	5.8	9.1	1.9
1986	21.2	6.8	9.0	2.8
Percentage Change:	%	%	%	%
1973-79	13.2	0.0	16.1	15.9
1979-85	-14.2	-48.7	26.4	-63.0
1985-86	5.8	16.0	0.3	53.0

Source: *Petroleum Economist*, January 1987.

^{*} Includes CPEs.

Table 3
Quantitative Shifts in the Arab-Israeli
Military Balance
1974–86¹

	1974–75 (1)	1981–82 (2)	1982–85 (3)	1983 (4)	1984 (5)	1985 (6)	1986 (7)
Army Personnel—Regular (thousands)²							
Israel	145	174	141	130	130	130	130
Syria	129	170	290	240	300	396	396
Jordan	75	65	68	70	70	70	70
Egypt	225	225	230	280	320	320	320
Saudi Arabia ⁵				58	63	72	72
Iraq ³				?	?	475	550
Libya				50	60	85	85
Army Personnel—Total⁴							
Israel	375	450		440	440	440	440
Syria	325	290	465	700	650	696	696
Jordan	90	95	90	100	100	100	100
Egypt	725	620	515	540	680	680	680
Saudi Arabia ⁵				58	63	72	72
Iraq				?	?	955	1035
Libya				50	60	85	115
Tanks—Total⁵							
Israel	2400	3600	3600	3600	3650	3800	3900
Syria	1790	3990	4100	3600	3700	4100	4100
Jordan	450	616	750	780	915	1095	1095
Egypt	1880	2100	1750	2400	2400	2500	2300
Saudi Arabia				550	450	450	450
Iraq				3000	3000	5000	5000
Libya				3700	3000	3000	3000
Tanks—High Quality⁶							
Israel				550	600	750	1050
Syria				2100	2100	2000	2000
Jordan				50	230	395	395
Egypt				1000	1000	1300	1350
Saudi Arabia				550	450	450	450
Iraq				1500	1700	5000	5000
Libya				1300	1300	3000	3000

le 3 cont.

	1974-75 (1)	1981-82 (2)	1982-85 (3)	1983 (4)	1984 (5)	1985 (6)	1986 (7)
Combat Aircraft—Total							
Israel	466	769	678	670	640	645	626
Iran	350	534	503	600	650	650	650
Jordan	50	94	103	110	130	115	107
Lebanon	676	429	504	612	635	608	587
Saudi Arabia				150	205	195	178
Turkey				500	532	615	592
U.S.A.				470	510	565	565
Interceptors—Total							
Israel				40	40	125	125
Iran				330	360	360	360
Jordan				—	—	—	—
Lebanon				280	310	320	324
Saudi Arabia				55	95	85	60
Turkey				225	225	270	270
U.S.A.				135	135	145	130
Interceptors—High-Quality							
Israel				40	40	125	125
Iran				50	50	50	50
Jordan				—	—	—	—
Lebanon				—	—	40	54
Saudi Arabia				20	60	60	60
Turkey				25	25	30	40
U.S.A.				60	60	70	60
Strike & Multi-Role Aircraft							
Israel				630	600	510	501
Iran				270	290	290	290
Jordan				110	130	115	107
Lebanon				312	310	273	248
Saudi Arabia				95	110	110	118
Turkey				145	185	323	400
U.S.A.				315	355	400	410
Strike & Multi-Role Aircraft—High-Quality							
Israel				445	415	330	341
Iran				160	190	190	190
Jordan				30	36	35	34
Lebanon				132	190	158	148
Saudi Arabia				—	—	—	4
Turkey				185	190	228	220
U.S.A.				275	315	360	410

Table 3 cont.

	1974-75 (1)	1981-82 (2)	1982-85 (3)	1983 (4)	1984 (5)	1985 (6)	1986 (7)
Helicopters—Total							
Israel				175	188	190	215
Syria				165	215	235	235
Jordan				40	33	30+ ⁷	57
Egypt				180	187	204	196
Saudi Arabia				50	81	107	108
Iraq				320	150	435	433+
Libya				409	200	200	200
Helicopters—Attack							
Israel				42	55	55	70
Syria				45	80	90	90
Jordan				—	—	?	24
Egypt				54	56	65	65
Saudi Arabia				—	—	24	24
Iraq				120	144	164	150
Libya				40	50	50	75
SSM Launchers							
Israel				?	12	12	12
Syria				35	42	53	53
Jordan				—	—	—	—
Egypt				12	12	12	12
Saudi Arabia				—	—	—	—
Iraq				36	36	36	36+
Libya				100	100	100	100
Long-Range SAM Batteries							
Israel				?	?	?	?
Syria				102	150	150	150
Jordan				20	20	20	24
Egypt				125	131	131	140
Saudi Arabia				10	10	15+	27
Iraq				70	70	70+	90
Libya				100	100	100	70

1) Sources: 1974-75, 1981-82, 1982-85—Cordesman, Anthony H.: *Jordanian Arms and the Middle East Military Balance*, 1983; update, 1985. Middle East Institute, Washington, D.C., 1985.

1983-86—Jaffee Center for Strategic Studies (JCSS):

The Middle East Military Balance, 1984, 1985, 1986.

Jerusalem Post, Jerusalem, Israel; Westview Press, Boulder, Colorado.

2) For the years 1974-75, 1980-81, and 1982-85 we used for Israel Cordesman's definition of "Total Active Military" and for the three confrontation states "Total Effective Army Manpower."

3) Iraq data do not include the "popular army," estimated in 1985 at 600,000.

4) For the years 1974-75, 1980-81, and 1982-85 we used for Israel and the confrontation states Cordesman's definition of "Total Mobilized Army Manpower."

5) Includes army and National Guard.

6) The definition of "High-Quality Tanks," as with any high-quality weapon system, is bound to change over time.

7) Plus sign indicates that precise number is unknown.

Table 4
The Military Balance between Israel
and Various Combinations of Arab Countries
Selected Indicators
1974/75-1986¹

	1974/75 (1)	1981/82 (2)	1983 (3)	1985 (4)	1986 (5)	1986 (6)
	Ratio Israel – Relevant Arab Countries (Percentages)					Total Strength of Relevant Arab Countries (Absolute Figures)
Israel: Syria						
Army Regular Personnel	112	102	54	32	32	396.000
Army Total Personnel	115	155	63	63	63	696.000
Total Tanks	209	93	100	93	95	4,100
High Quality Tanks			26	38	53	2,000
Total Combat Aircraft	133	144	112	99	96	650
High Quality Combat Aircraft			230	190	194	240
Total Helicopters			106	81	91	235
Attack Helicopters			93	61	78	90
Value of Military Gross Capital Stock ²	265	200		158		\$30 bn.
Israel: Confrontation States (Syria, Jordan, Egypt)						
Army Regular Personnel	34	38	22	17	17	786.000
Army Total Personnel	33	45	33	30	30	1,476.000
Total Tanks	58	54	53	49	52	7,496
High Quality Tanks			17	20	28	3,745
Total Combat Aircraft	78	72	51	47	47	1,344
High Quality Combat Aircraft			119	114	100	476
Total Helicopters			45	40	44	488
Attack Helicopters			42	35	39	179
Value of Military Gross Capital Stock ²	74	85		76		\$63 bn.

Table 4 cont.

	1983 %	1985 %	1986 %	1986 Total Strength of Relevant Arab Countries (Absolute Figure)
Israel: Confrontation States + Saudi Arabia				
Army Regular Personnel	20	15	15	858,000
Army Total Personnel	31	28	28	1,548,000
Total Tanks	49	47	48	7,946
High Quality Tanks	15	18	25	4,195
Total Combat Aircraft	44	41	41	1,522
High Quality Combat Aircraft	124	85	88	540
Total Helicopters	40	33	44	596
Attack Helicopters	42	31	34	287
Israel: All Arab Coalition (Confrontation States, Saudi Arabia, Iraq, Libya)				
Army Regular Personnel	11	10	9	1,498,000
Army Total Personnel	21	17	16	2,698,000
Total Tanks	29	24	26	15,495
High Quality Tanks	9	11	19	7,195
Total Combat Aircraft	26	23	24	2,679
High Quality Combat Aircraft	47	37	37	1,010
Total Helicopters	19	16	17	1,229
Attack Helicopters	16	14	16	512
Israel: "Arab Eastern Front"				
Army Regular Personnel		14	12	1,093,000
Army Total Personnel		24	23	1,903,000
Total Tanks		36	36	10,645
High Quality Tanks		17	23	4,545
Total Combat Aircraft		47	41	1,527
High Quality Aircraft		66	79	598
Total Helicopters		24	26	1,029
Attack Helicopters		20	24	437

1) Sources - See Table 3.

2) Sources Based on Halperin Aryeh: *The Development of Military Capital Stocks of Israel and the Confrontation States* (Draft): The Maurice Falk Institute for Economic Research, Jerusalem, January 1985, p. 23.

For detailed explanations of the calculation of the Value of Military Gross Capital Stock, and reservations about this concept, see source.

STATISTICAL APPENDIX

SYRIA

Table S1
Syria – Oil Production (thousand b/ds)
1968–1986

Year	Thousand b/ds
1968	20
1972	117
1976	200
1979	166
1983	168
1984	161
1985	162
1986	200

Sources: Petroleum Economist, January 1987; 1972–85—p. 26, 1986—p. 45.

Table S2
Differential Development of
Economic Sectors in 1968–1984
(calculated on the basis of 1982 constant prices)

Economic Sector	Differential Ratio of Increase of Sectors in 1968–84 (index: 1968=100) (1)	Contribution to Total GDP Increase by Sectors in 1968–84 (percentages) (2)	GDP by Sectors	
			1968 (percentages) (3)	1984 (percentages) (3)
All Sectors	313	100	100	100
Agriculture	199	13	23	16
Manufacturing & Utilities	183	4	11	6
Petroleum	723	11	4	9
Construction	512	9	5	8
Services	333	63	57	61

Sources: Syrian Central bureau of Statistics.

Concerning Manufacturing, Utilities and Petroleum Extraction, see Table S3. The share of the petroleum sector could be lower in 1984, reaching only seven percent, while manufacturing could reach up to eight percent. As refineries are included in manufacturing, the result may depend on the somewhat arbitrary setting of prices of crude oil for the refineries.

Table S3
Syrian GDP by Economic Sectors
Index Based on Constant 1982 Prices in SL
(1968=100)

GDP at Market Prices	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
All Sectors	100	120	113	125	152	148	176	218	236	232	252	260	282	311	321	320	313
Agriculture	100	115	89	97	160	97	147	168	186	162	200	171	239	215	235	212	199
Manufacturing & Utilities	100	131	115	122	129	179	167	197	129	163	194	155	176	178	215	177	183
Petroleum Extraction	100	254	411	512	568	537	623	927	972	883	865	836	806	832	793	823	723
Construction	100	124	105	137	163	143	201	203	318	323	335	439	412	429	480	471	512
Services	100	111	104	112	126	138	164	202	213	223	237	265	276	345	331	335	333

Source: Syrian Central Bureau of Statistics.

Table S4
Syria
Oil Extraction as Percentage of GDP
1968–1986

Year	Percentage of GDP
1968	3.7
1972	13.8
1976	15.3
1979	11.9
1983	9.6
1984	8.6
1986	5.0*
1988–9	7.5–8.5**

* Preliminary estimate.

** Forecast.

Table S5
Syria
Oil and the Balance of Payments (selected items) 1980–1989
(in \$ billions)

	1980	1981	1982	1983	1984	1985	1986	1988–89	
								exp. \$13/b. imp. \$15/b.	\$17/b. \$20/b.
Trade Balance	–1.9	–2.5	–1.6	–2.1	–1.9	–1.9	–1.8	–1.4	–1.3
Exports (f.o.b.)	2.1	2.1	1.9	1.8	1.9	1.7	1.1	1.5	1.7
Imports (f.o.b.)	–4.0	–4.6	–3.5	–4.0	–3.8	–3.6	–2.9	–2.9	–3.0
Thereof: Trade in Crude and Products:									
Exports	1.6	1.6	1.4	1.3	1.1	1.1	0.4	0.7	0.9
Imports	–1.0	–1.6	–1.3	–1.2	–1.2	–1.0	–0.4	0.3	0.4
Current-Account Balance	–2.2	–2.3	–1.6	–1.9	–2.0	–2.1			
Official Transfers (net)	1.5	1.7	1.3	1.2	1.2	1.2	0.7		
Long-Term Loans (official):									
Receipts	0.6	0.5	0.5	0.8	0.7				
Payments	–0.6	–0.5	–0.5	–0.5	–0.4				

Sources: 1980–84: IMF; 1985 estimate: Economist Intelligence Unit (EIU), fourth-quarter report on *Syria*, 1986; 1986 trade-balance projection: EIU, *Syria* 1986, no.4; 1986 official transfers (net): provisional estimate in EIU, country profile of *Syria*, 1986–87 p. 45; oil trade: author's estimate; 1988–89: author's projection.

Table S6
Syria: Influence of Decline in Oil Prices and Aid
in 1986 on the Government Budget
(in SL billions)

	1984 (actual budget)	1986 (projection)
1. Tax Revenues	9.0	9.0
2. Non-Tax Revenues	9.3	6.4/7.4
2a. Thereof: Transfers from Public Enterprises	8.7	5.8/6.8
2b. Thereof: Transfers from Public Enterprises in Oil Sector	4.4	1.5/2.5
3. Total Expenditures	35.0	35.0
4. Deficit (excl. grants and loans)	-16.7	-18.6/-19.6
5. Grants and Loans	6.9	3.8
6. Deficit (incl. grants and loans)	-9.8	-14.8/-15.8

Sources and Remarks:

1984 — All data except 2b are from the Syrian Ministry of Finance and from the Central Bank; item 2b was calculated from these data.

1986 — Assumes a change in item 2b in accordance with the decline in oil prices, and item 5 changed in accordance with estimates of the decline in grants and loans in 1986 in comparison with the decline of these items in the balance of payments; items 1, 2, 2a, and 3 assumed unchanged in 1984 prices. Deficits—items 4 and 5—calculated according to these assumptions.

The 1986 figures are neither an estimate nor a prediction, but a projection of the influence of the decline in oil prices and aid on the budget assuming *cet. par.* in all other items (which certainly is not a realistic assumption).

Table S7
Estimate of Syrian Balance of Payments
Including Estimates of Unofficial Import of Arms and Unrecorded Aid, 1978-1984
(in \$ billions)

	1978	1979	1980	1981	1982	1983	1984	Total
1. Balance of Trade	-2.0	-3.6	-4.6	-4.6	-3.5	-3.9	-3.2	-25.4
Civilian Exports	1.1	1.6	2.1	2.1	1.9	1.8	1.7	12.3
Civilian Imports	-2.2	-3.1	-4.0	-4.6	-3.5	-4.0	-3.5	-24.9
Military Imports	-0.9	-2.1	-2.7	-2.1	-1.9	-1.7	-1.4	-12.8
2. Balance of Services and Private Official Transfers	-0.1	-0.1	-0.3	0.2	0.0	0.1	-0.1	-0.3
3. Balance of Current Account (1+2)	-2.1	-3.7	-4.9	-4.4	-3.5	-3.8	-3.3	-25.7
4. Repayment of Long-Term Debt	-0.3	-0.5	-0.6	-0.5	-0.5	-0.5	-0.4	-3.3
5. Total Foreign Financing Needed (3+4)	-2.4	-4.2	-5.5	-4.9	-4.0	-4.3	-3.7	-29.0

Sources: Central Bank of Syria, except for item 1.3, which is taken from the ACDA: *World Military Expenditures and Arms Transfers*, 1985.

Remark: The accuracy of the above estimate depends heavily on the accuracy of the ACDA estimates of arms transfers. It should also be noted that it is not clear whether the annual figures for arms transfers represent dates of arms ordering, delivery, or payment. This, however, would not greatly affect the total of an extended series, especially as Soviet delivery periods are mostly short.

Table S8
Estimates of Aid to Syria
1978–1984
(in \$ billions)

Source of Aid	1978	1979	1980	1981	1982	1983	1984	Total
1. Grants Mainly from Arab Countries—under Baghdad Agreement	0.8	1.6	1.5	1.8	1.4	1.3	1.2	9.6
2. Arab Countries—In Wake of Lebanon War					2.0	2.0		4.0
3. Lybia—for Soviet Arms to Syria			2.0					2.0
4. Iran—Value of Free Oil and of Discount on Price					0.3	0.3	0.3	0.9
5. Iran—Value of Oil Delivered to Syria but Not Paid For						—1.0—		1.0
6. Long-Term Loans Specified in Balance of Payments	0.6	0.6	0.6	0.5	0.5	0.8	0.8	4.4
7. Total Grants and Long-Term Loans Rec'd, 1978–84, in current \$(1+2+3+4+5+6)								21.9
8. Decline in Reserve ⁵ (gross convertible reserves minus gold and payment agreement balances)								0.5
9. Total Finance Accounted for (7+8)								22.4

Sources for Lines:

1. *IMF Balance of Payments Statistics*, 1986, p. 654, "Official Unrequited Transfers—Credit":
The entries include grants of goods and services procured by the UNRWA with Syrian pounds obtained by selling foreign exchange, but through 1983 they do not include the value of imported supplies donated by the UNRWA to refugees in the Syrian Arab Republic, nor do they include the value of grants of military imports.
2. Kanovsky, Eliyahu: "What is Behind Syria's Current Economic Problems?" Dayan Center for Middle East Studies, May 1985.
3. EIU-QER, annual supplement on Syria, 1985, p. 7.
4. Calculations by author.
5. EIU-QER fourth-quarter report on Syria, 1986, pp. 14–15.
6. Central Bank of Syria—Balance of Payments.
8. IMF International Financial Statistics, 1984.

In Table S8 we have put together information available about grants and loans to Syria. As most of the items are not specified by their detailed sources or purpose, two kinds of errors may have occurred: double counting and omission of relevant items. Our inclination was to avoid as much as possible the error of double counting, even if this increased the danger of omission. We did this especially in view of the results, which apparently provide a far-reaching explanation of how Syria's needs for aid—grants or loans—were met. Accordingly, we excluded all information on grants and loans for specific projects because they may be included in lines 1 and 6, which may include all, or at least part, of such loans.

There are question marks concerning lines 2 and 3. In line 2 there can be no doubt that much aid was forthcoming; however, it could be bigger or smaller. The same is true of line 3.

Among the items omitted are likely to be concessionary terms for Libya's supply of oil in 1984 and a large number of commercial loans, some of them at concessionary terms, which were not included in line 6. Though it is impossible to quantify the probable omissions and double countings, the omissions are likely to be larger than the double countings.

One last remark must be given special attention. It is most likely that grants and loans extended to Syria by the USSR—for economic and military purposes—have not been recorded and cannot be traced in their entirety because the supplied items—arms, machinery, etc.—have not been recorded. This is the most likely explanation for the gap of \$6.6 billion between the financial and needed according to Table 7 and aid extended according to Table 8, during the period 1978–84.

Table S9
Aid to Syria as Reflected in the Balance of Payments
and the Budget, 1980–1984

	1980	1981	1982	1983	1984
1. Total Aid in Balance of Payments— Grants and Long-Term Loans (in current U.S. \$ millions)	2,097	2,209	1,747	1,997	1,860
2. Total Aid in Budget (in current SL billions)	8.3	8.3	7.2	9.0	6.9

Sources: Balance of Payments items—Central Bank of Syria and IMF.
Budget items—Ministry of Finance and Central Bank of Syria and IMF.

Table S10
Grants and Loans in the Syrian Budget
(in SL billions)

	1981	1982	1982	1983	1984
1. Total Government Revenues	13.8	16.6	19.2	21.2	18.3
2. Grants	6.0	6.3	5.3	5.8	3.8
3. Loans	2.3	2.0	1.9	3.2	3.1
4. Grants and Loans	8.3	8.3	7.2	9.0	6.9
5. Total expenditures	24.9	27.0	31.2	33.6	35.0
6. Deficit (5-4)	-11.1	-10.4	-12.0	-12.4	-16.7
7. Grants and Loans (4) as % of Expenditure (5)	33%	31%	23%	27%	20%
8. Grants and Loans (4) as % of Deficit (6)	75%	80%	60%	73%	41%

Source: Syrian Ministry of Finance and Central Bank.

Table S11
Growth Rates in Syria
(percentages, based on 1980 constant prices)

	1979	1980	1981	1982	1983	1984	Projected	
							1986-87	1988-89
GDP Growth	3.4	8.4	10.2	3.2	-0.4	-2.1	-7%	+5%
GDP Growth Per Capita	0.01	4.9	6.7	-0.1	-3.7	-5.3	-10.3%	+1.7%

Source: 1979-84: EIU country profile of Syria 1986-87, p. 16; 1986-87, 1988-89—author's projections.

STATISTICAL APPENDIX

EGYPT

**The Impact of Dollar Devaluation and the Decline in Oil Prices
on Egypt's Current Account (civilian)**
(in \$ billions)

	(1)	(2)	(3)	(4)	(5)	(6)
			The Impact of Devaluation on the Current Account			
	1984-85 Actual Data ¹ (at \$27/b.)	1984-85 at \$20/b. of Oil in 1984-85 Dollars	1984 / 85 Col. 2 at 33% Devaluation	Col. 2 at 50% Devaluation	Projections at 33% dollar devaluation In the Late 1980s	In the Mid- 1990s ²
Current Account, Total	-3.6	-4.3	-7.4	-8.7	-7.9	-9.1
Receipts, total	9.8	8.5	8.9	9.1	8.7	9.4
thereof:						
Oil (f.o.b.) Exports ³	5.0	3.7	3.7	3.7	4.7	5.8
Other Exports of Goods ⁴	1.3	1.3	1.7	1.9	1.7	1.9
Remittances (in dollars)	3.5	3.5	3.5	3.5	2.3	1.7
Payments, total	13.4	12.8	6.3	17.8	16.6	18.5
thereof:						
Oil (c.i.f.)	0.5	0.4	0.4	0.4	0.5	0.5
Other Dollar Imports	1.8	1.8	1.8	1.8	1.8	1.8
Other Imports of Goods ⁵	9.0	9.0	12.0	13.5	12.0	13.5
Profit Transfers by Foreign Oil Companies (in dollars)	2.0	1.5	2.0	2.0	2.2	2.6
Net Services ⁶	0.1	0.1	0.1	0.1	0.1	0.1

1. Sources and Remarks: Table E8, col. 8.

2. Based on Table E8, cols. 12 and 15; imports based on col. 8 and the IMF.

3. Includes exports by foreign oil companies.

4. Col. 3—the export of non-oil goods to countries paying in dollars is small, and presumably the value of exports to other countries increased somewhat.

5. Col. 3—includes all imports of goods from non-dollar countries: 11 percent from Japan, 40 percent from other industrial countries, and 30 percent from non-oil developing countries and the Communist bloc.

6. Col. 3—The implied assumption is that net services are also netting out when devaluation is taken into consideration.

Table E1
Oil Production—1939–1986
(millions of tons)

Year	Millions of Tons
1939	0.7
1945	1.3
1952	2.2
1966	8.0 (with Sinai fields)
1974	7.5 (without Sinai fields)
1979	27.4 (with Sinai fields)
1980–81	31.0
1981–82	32.5
1984–85	43.7
1985/86	42.2

Sources: 1939, 1945, 1952, 1966: Mabro Robert, *The Egyptian Economy 1952–1972*; 1980–86: Egyptian General Petroleum Corporation, Cairo.

Table E2
Production Shares and Uses of Crude Petroleum
(in 1984–85)

	Millions of Tons	%
Total Production	43.7	100
Thereof: Egyptian Share	33.1	76
Foreign Companies' Share	10.6	24
Uses of Egyptian Share:	33.1	100
Refining	20.4	62
Exports	11.6	35
Change in Stocks	1.1	3
Uses of Foreign Companies' Share	10.6	100
Sales to Egypt	0.2	2
Exports	10.4	98
Final Uses of Total Production:	43.0 *	100
Domestic Consumption	17.9	42
Exports of Crude	22.0	51
Exports of Refined Products	3.1	7

Source: EGPC.

* The unexplained discrepancy between total production and uses is 0.7 million tons.

Table E3
Natural-Gas Reserves and Production, 1978–1994
Data, Estimates, and Projections

Year (millions of tons)*	Production
1978	0.6
1979	0.9
1980/81	1.8
1981/82	1.9
1982/83	2.2
1983/84	2.7
1984/85 ^{xx}	3.2
1985/86 estimate	3.9
1986/87 estimate	4.2
1987/88 projection	5.0
1991/92 projection	10.4
1993/94 projection	15.0

Sources: 1979–85: EGPC.

1985–87: estimates based on *MEED*, February 14, 1987, p. 32.

1987–94: projections by World Bank.

* One metric ton of natural gas equals approximately 46,200 cubic feet or 1.2 metric tons of oil-equivalent.

^{xx} Proven natural resources in 1984/5 were 34 million tons.

Table E4
GDP at Factor Cost by Industrial Sectors

Sector	1974	1979	1980–81	1983–84	1984–85
Total GDP at Factor Cost	100.0	100.0	100.0	100.0	100.0
Agriculture	30.1	20.1	20.1	19.8	19.8
Industry and Mining	17.8	13.6	12.9	14.5	14.8
Petroleum	2.7	15.8	18.8	12.1	10.9
Electricity and Public Utilities	1.5	1.1	0.9	1.0	1.0
Construction	3.1	5.3	5.1	6.0	6.3
Suez	–	3.4	3.3	2.7	2.7
All Other Sectors	44.8	40.7	38.9	43.9	44.5

Source: Egyptian Ministry of Planning and World Bank.

Percentages calculated from GDP of Current Prices in LE.

Table E4a
GDP at Factor Cost by Industrial Sectors*
(percentages)

	1974	1979	1980–81	1983–84	1984–85
Total GDP in Constant 1981–82 prices (LE billions)	9.7	15.8	18.1	21.3	22.4
Total GDP in Percentages	100.0	100.0	100.0	100.0	100.0
Petroleum	4.9	13.6	15.4	16.1	17.0
Agriculture	32.7	22.7	20.9	18.5	18.0
Industry and Mining	15.9	13.6	13.5	14.1	14.0
Electricity and Public Utility	0.8	1.0	0.9	1.1	1.1
Construction	5.0	5.7	5.4	5.5	5.6
Suez	–	3.3	3.5	2.9	2.9
All Other Sectors	41.2	40.0	40.4	41.8	41.4

Source: Egyptian Ministry of Planning and World Bank.

* Calculated from table of GDP at constant 1981–82 prices in LE.

Table E5
Growth of GDP at Factor Cost*
by Industrial Sectors, 1974–1985

GDP at Factor Cost by Industrial Sectors	Total Periodical Growth in %		
	1974–1980/81	1980/81–1984/85	1974–1984/85
Total GDP	86	24	131
Petroleum	477	38	694
Agriculture	21	7	29
Industry & Mining	58	29	106
Electricity & Public Utilities	105	45	197
Construction	100	29	159
Suez (since 1975)	601	4	630
All Other Sectors	83	27	133

Source: Egyptian Ministry of Planning and World Bank.

* Calculated from table of GDP at constant 1981–82 prices in LE.

Table E6
Impact of Change in Oil Prices on Total GDP
Base Year 1984–85 = 100%
 (percentages)

Price	100	75	55
Total GDP	100	97.3	55

Table E7
Oil Sector's GDP
Actual 1984–85 Data; 1988–89 and 1993–94 Projections at Different Prices
 (percentages)

Year	1984–85 Actual	1988–89 Projections	1993–94 Projections
1. Quantities of Oil and Natural Gas Produced ¹	100	117	139
=====			
2. Assumed Price as % of Constant 1984–85 Price ²	Actual Oil Sector's GDP	Projected Oil Sector's GDP as % of Actual 1984–85 Oil Sector's GDP	
100	100	117	139
75	\ /	88	104
55	/ \	65	76

Source: Actual and projected oil and natural-gas production—EGPC and World Bank.

Remark: The price range encompasses, in our opinion, the majority of expert opinions on the subject.

Table E8
The Impact of Oil and Related Activities on Egypt's Balance of Payments
as a Result of Changes in Petroleum Prices—1974–1985,
and Projections at Alternative Prices
(in \$ billions)

	(1) 1974	(2) 1977	(3) 1979	(4) 1980–81	(5) 1981–82	(6) 1982–83	(7) 1983–84	(8) 1984–85 Actual \$27/b.	(9) 1984–85 Alternative Prices \$20/b.	(10) 1984–85 Alternative Prices \$15/b.
Selected Items in Balance of Payments										
A. Receipts:										
1. Export of Oil (fob)	0.5	2.3	5.8	8.2	7.6	8.4	9.4	9.4	8.1	7.2
thereof: Egypt's Share	0.3	1.0	2.8	4.5	4.7	4.2	4.5	5.0	3.7	2.8
FOC ¹ Share	(0.2)	(0.7)	(1.9)	(3.2)	(3.3)	(2.8)	(2.9)	(3.0)	(2.2)	(1.7)
2. Suez Canal Dues ²	(0.1)	(0.3)	(0.9)	(1.3)	(1.4)	(1.4)	(1.6)	(2.0)	(1.5)	(1.1)
3. Worker Remittances ³	0	0.4	0.6	0.8	0.9	1.0	1.0	0.9	0.9	0.9
B. Payments										
1. Imports of Oil (cif)	0.2	0.9	2.4	2.9	2.0	3.2	3.9	3.5	3.5	3.5
2. Imports of Other Goods & NFS ⁴ by FOC (cif)	0.6	0.8	1.6	2.3	2.6	2.7	2.9	3.4	2.8	2.3
3. Profit Transfers by FOC	0.4	0.1	0.2	0.3	0.5	0.5	0.5	0.5	0.4	0.3
C. Total Oil Connected Foreign Exchange Net Income (A-B)	0.1	0.4	0.5	0.7	0.7	0.8	0.8	0.9	0.9	0.9
D. Trade Balance	0.1	0.3	0.9	1.3	1.4	1.4	1.6	2.0	1.5	1.1
1. Exports of All Goods (fob)	-0.1	1.6	4.2	5.9	5.1	5.7	6.5	6.0	5.3	4.9
2. Imports of All Goods (fob)	-1.8	-2.8	-3.8	-4.7	-4.6	-4.4	-5.3	-5.0	-6.2	-7.0
E. Current Account Balances ⁵	1.8	2.3	4.0	5.6	5.8	5.3	5.9	6.3	5.0	4.1
1. Receipts	-3.6	-5.1	-7.8	-10.3	-10.4	-9.7	-11.2	-11.3	-11.2	-11.1
2. Payments	-1.6	-1.5	-1.9	-2.4	-3.5	-2.9	-3.5	-3.6	-4.3	-4.7
	2.6	4.9	8.2	11.1	10.4	11.5	13.0	13.2	11.9	11.0
	-4.2	-6.4	-10.1	-13.5	-13.9	-14.4	-16.5	-16.8	-16.2	-15.7

Sources: 1974–1985: Egyptian Ministry of Finance and World Bank. For calculation of alternative price projections, see Table E8a.

Remarks: 1) FOC = foreign oil companies.

2) Suez Canal Dues—see Table E9.

3) Officially recorded by the Egyptian authorities; for projections, see text.

4) NFS = non-factor services.

5) Does not include official transfers.

**Share of Egypt and Foreign Oil Companies in Total
Production of Oil and Natural Gas and Oil Export;
Data, Estimates, and Projections**

	(1) 1979	(2) 1980-81	(3) 1981-82	(4) 1982-83	(5) 1983-84	(6) 1984-85	(7)* 1984-85	(8)* 1984-85	(9)	(10) End-1980s	(11)	(12)	(13) Mid-1990s	(14)
	MILLIONS OF METRIC TONS Actual									MILLIONS OF METRIC TONS Projected				
1. Total Production of Oil & Gas	27.4	32.8	34.4	36.7	41.8	46.9			55.0	55.0	55.0	65.0	65.0	65.0
2. Total Domestic Consumption of Oil & Gas	11.3	13.7	15.3	17.5	19.5	21.1			22.9	22.9	22.9	25.0	25.5	26.0
3. Total Domestic Consumption of Oil	10.4	11.9	13.4	15.3	16.8	17.9			17.9	17.9	17.9	10.0	10.5	11.0
4. Total Oil Production	26.5	31.0	32.5	34.5	39.1	43.7			50.0	50.0	50.0	50.0	50.0	50.0
5. Actual "Cost Recovery" by Foreign Oil Cos.	2.4	1.8	2.3	3.0	3.9	5.6			7.0	9.5	12.7	8.3	11.2	15.0
6. "Cost Recovery" by EGPC	2.6	4.4	4.2	4.1	4.3	4.3			4.5	4.5	4.5	4.7	4.7	4.7
7. EGPC-Own Production	1.3	1.1	1.1	1.1	1.3	1.6			4.8	4.8	4.8	4.8	4.8	4.8
8. "Profit Oil"—Total (4+5+6+7)	20.2	23.8	24.9	26.3	29.6	32.2			38.7	36.2	33.0	47.2	44.3	40.5
9. "Profit Oil"—Egyptian Share	17.0	20.2	21.2	22.4	25.1	27.2			32.9	30.8	28.1	40.1	37.7	34.4
10. "Profit Oil"—Foreign Share	3.2	3.6	3.7	3.9	4.5	5.0			5.8	5.4	4.9	7.1	6.6	6.1
11. Total Egyptian Share (6+7+8)	20.9	25.7	26.5	27.5	30.7	33.1			42.2	40.1	37.4	49.6	47.2	43.9
12. Total Foreign Share (5+10)	5.6	5.4	6.0	6.9	8.4	10.6			12.8	14.9	17.6	15.4	17.8	21.1
13. Total Oil Exports (14+15)	16.1	18.2	20.0	20.2	22.9	25.3			32.0	32.0	32.0	40.0	39.5	39.0
14. Egypt's Oil Exports (11-4)	10.7	12.8	14.6	13.5	14.9	14.7			19.3	17.2	14.5	24.6	21.7	17.9
15. Foreign-Company Exports	5.4	5.4	5.4	6.7	8.0	10.6			12.7	14.8	17.5	15.4	17.8	21.1
16. Average Price of Egyptian Exported Crude Oil \$/b.	21.68	33.60	30.92	28.00	26.98	27.00	20.0	15.0	27.0	20.0	15.0	27.0	20.0	15.0
17. Total Export of Oil	2.8	4.5	4.7	4.2	4.5	5.0	3.7	2.8	6.4	4.7	3.5	7.9	5.8	4.3
18. Egypt's Oil Exports	1.9	3.2	3.3	2.8	2.9	3.0	2.2	1.7	3.9	2.5	1.6	4.9	3.2	2.0
19. Foreign-Company Oil Exports	0.9	1.3	1.4	1.4	1.6	2.0	1.5	1.1	2.5	2.2	1.9	3.0	2.6	2.3

Source: 1979-85: World Bank. End-1980s, mid-1990s: projections by author.

* No change in quantities.

Table E9
Suez Canal Operations, 1981-1994—
Data, Estimate, and Projections

	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87 Estimate	1987-88 Projections	1993-94
Total Activity:								
Cargo Transit (millions of tons)	219	240	264	263	262	269		
Net Tonnage of Transport Vessels	353	368	383	356	330	354		
Number of Transits	21,921	22,760	21,725	20,567	19,250	19,780		
Petroleum Activity Only:								
Oil & Products (millions of tons)	70	90	102	97	95	105		
Net Tonnage of Oil Tankers (millions of tons)	135	129	143	121	121	129		
Number of Oil Tankers	3,518	3,522	3,638	3,425	3,240	3,448		
Total Receipts (in \$ millions)	917	969	982	913	1,020	1,039	1,000	1,100

Source: 1981-87, Suez Canal Authority, IMF; 1987-88, 1993-94, projections by author.

Table E10
The Oil Sector, Suez, and the Egyptian Budget
(in LE billions)

	1981-82	1982-83	1983-84	1984-85	All calculations of 1984-85 quantities			
				Actual Revenues (exports at \$27/b.)	(exports at \$20/b.) Domestic Prices at 1984-85	(exports at \$20/b.) Domestic Prices at 1984-85 + 50%	(exports at \$15/b.) Domestic Prices at 1984-85	(exports at \$15/b.) Domestic Prices at 1984-85 + 50%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Total Revenue	8.3	9.8	10.4	11.3	10.9 *	11.6 *	10.6 *	11.2 *
2. Revenue from Oil and Suez (3+6)	2.1	2.1	2.0	1.9	1.5	2.2	1.2	1.8
3. Tax Payments & Profit Transfer by EGPC:								
4. Thereof: Tax on Profits	1.7	1.6	1.5	1.5	1.0	1.7	0.7	1.3
5. Profit Transfers	0.6	0.7	0.5	0.5				
6. Suez	1.1	0.9	1.0	1.0				
7. Thereof: Tax on Profits	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5
8. Profit Transfers	0.2	0.2	0.2	0.2				
9. Total Expenditure	0.2	0.3	0.3	0.2				
10. Total Fiscal Deficit (9-1)	13.3	14.5	16.8	18.5				
11. Total Contribution to Revenues by Oil & Suez (%)	5.0	4.7	6.4	7.2	7.6 *	6.9 *	7.9 *	7.3 *
12. Oil-Sector Contribution (%)	25	22	19	17	14	19	11	16
13. Suez Contribution (%)	21	17	14	13	9	15	7	12
	4	5	5	4	5	4	4	3

Source: Table 10a and Suez Authority.

* Assuming that the only changes in comparison to actual 1984-85 results are those in the oil sector and in Suez revenues.

** Actual.

Table E10a
The Contribution of the Oil Sector (EGPC)
to the Egyptian Budget
(in LE millions)

	1984-85	All calculations at 1984-85 quantities			
		(exports at \$20/b.)		(exports at \$15/b.)	
	Actual Revenues (exports at \$27/b.)	1984-85*	Domestic Prices at 1984-85 + 50%	Domestic Prices at 1984-85*	Domestic Prices at 1984-85 + 50%
Total Revenue	3,350	2,719	3,373	2,322	2,856
Thereof: in Foreign Currency	2,284	1,713	1,713	1,256	1,256
Domestic Receipts	1,066	1,066	1,600	1,066	1,600
Total Expenditures	1,872	1,721	1,721	1,603	1,603
Operating Expenditures (excl. oil)	963	963	963	963	963
Operating Expenditures on Oil	498	374	374	274	274
Other Expenditures (excl. taxes and reserves)	110	110	110	110	110
Reserves	301	274	274	256	256
Revenue Expenditures = Total Transfer to Budget (incl. taxes and surplus)	1,478	998	1,652	719	1,253

Source: EGPC and World Bank.

* Actual.

STATISTICAL APPENDIX

JORDAN

Table J1
Jordan's Balance of Payments, 1980-1986¹
(selected items)
(in \$ millions)²

	1980	1981	1982	1983	1984	1985	Preliminary	1986
Current-Account Balance	-965	-1,347	-1,396	-1,200	-996	-1,054		-726
Trade Balance	-1,825	-2,435	-2,490	-2,451	-2,024	-1,934		-1,693
Exports, f.o.b.	576	735	751	579	756	790		732
Thereof: re-exports	173	226	225	140	77	141		
Imports, c.i.f.	-2,402	-3,170	-3,240	-3,030	-2,780	-2,724		-2,425
Thereof: petroleum	-383	-529	-655	-565	-530	-489		-245
Services Balance	861	1,088	1,093	1,252	1,029	881		966
Thereof: Remittance Receipts	795	1,033	1,085	1,108	1,235	1,023		1,186
Remittance Payments	-155	-156	-177	-200	-254	-236		-247
Unrequited Transfers (net)	1,340	1,305	1,060	811	725	800		681
Capital Accounts								
(incl. SDR allocation)	112	213	322	431	167	350		146
Net Errors and Omissions	-113	-125	-163	-96	-77	-49		
Overall Balance	373	46	-177	138	-180	47		100

Sources:

1) Central Bank of Jordan—*Monthly Statistical Bulletin*, vol. 23, no. 2, April 1987.

2) The original table, in Jordanian dinars, was converted to U.S. dollars using the average exchange rate as published in the *IMF International Financial Statistics*, May 1987.

3) In the original table unrequited transfers are included in the current account. Here they are excluded.

Table J2
Jordanian Public Sector
Foreign-Grant Receipts and Net Long-Term Loans *
1980-1986
(in \$ millions)

	1980	1981	1982	1983	1984	1985	1986
Total Grants	1,311	1,264	1,035	798	692	762	642
From Arab Governments	1,242	1,202	956	712	614	687	
From UN Agencies	48	62	79	86	78	75	
From U.S. Government	21	-	-	-	-	-	
Long-Term Loans (net)	76	68	263	402	94	335	51
Total Grants and Long-Term Loans (net)	1,387	1,332	1,298	1,200	786	1,037	693
Grants as Percentage of Total Aid	94	95	80	67	88	73	93
Total Aid as Percentage of Trade-							
Balance Deficit	76	54	56	49	39	54	41

Sources and Remarks:

1) Central Bank of Jordan, *Monthly Statistical Bulletin*, vol. 23, no. 2, April 1987, and IMF.

2) The original data were published in Jordanian dinars and SDR, and converted to U.S. dollars using the average exchange rate as published in the *IMF International Financial Statistics*, May 1987.

* The table does not include military and private grants and loans.

Table J3
Jordan's Central Government Operations
1980-1986
(in JD millions)

	1980	1981	1982	1983	1984	1985	1986
1. Total Receipts (1a+1b+1c)	507	590	627	674	640	803	821
1a. Revenue	226	309	362	400	412	425	517
1b. Foreign grants	209	206	200	197	106	188	144
1c. Foreign development loans	72	75	65	77	122	190	160
2. Total expenditure	563	648	694	706	721	812	1,002
2a. Recurring (excl. defense)	336	392	286	286	320	352	370
2b. Defense (not incl. internal security)			157	168	168	189	209
2c. Capital	227	256	251	252	233	271	423
3. Deficit Excluding Grants & Loans (1a-2)	-337	-339	-332	-306	-309	-387	-485
4. Deficit Incl. Grants (1a+1b-2)	-128	-133	-132	-109	-203	-199	-341
5. Deficit Incl. Grants & Loans (1-2)	-56	-58	-67	-32	-81	-9	-181
(3) Deficit Excluding Grants & Loans (%)	34	29	25	22	21	25	30
(4) Deficit Including Grants (%)	13	11	10	8	14	13	21
(5) Deficit Including Grants & Loans (%)	6	5	5	2	5	0.5	11

Source: Central Bank of Jordan, *Monthly Statistical Bulletin*, vol. 23, no. 2, April 1987, line 1a—p. 40; lines 1b and 1c—p. 42; lines 2, 2a, 2b, and 2c—p. 43 except 1981-82, whose data are taken from p. 44. In the source there are inconsistencies in definitions of data for grants and loans.

Table J4
Selected Budget Items*
as Percentage of GDP at Market Prices
1980-1986
 (percentages)

	1980	1981	1982	1983	1984	1985	1986
1. Total receipts:							
1a. Revenues	52	51	47	47	42	51	51
1b. Foreign grants	23	27	27	28	27	27	32
1c. Foreign loans	21	18	15	14	7	12	9
	7	6	5	5	8	12	10
2. Total expenditure:							
2a. Defense (without internal security)	57	56	53	50	48	52	62
2b. Capital	n.a.	n.a.	12	12	11	12	13
	23	22	19	17	16	17	26

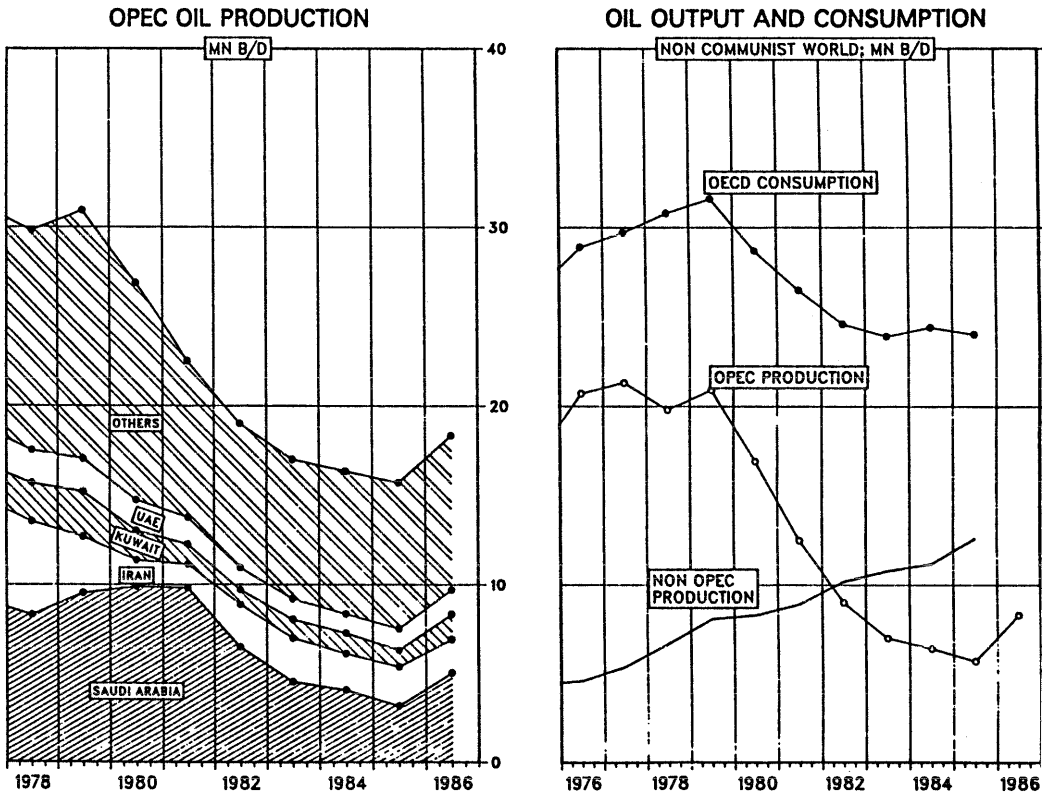
Source: Based on Central Bank of Jordan, *Monthly Statistical Bulletin*, Vol. 23, No. 2, April 1987.

* Does not include all military budget revenues and expenses.

STATISTICAL APPENDIX

THE ARAB GULF DONOR STATES

Chart I
OPEC and non-OPEC Oil Production
1978-1986



Source: EIU - Country Report: Saudi Arabia, 1988, No. 1.

Table G1
Oil Revenues of Main Arab Gulf Donor States
1979–1986
(in \$ billions)

	1979	1980	1981	1982	1983	1984	1985	1986
Saudi Arabia	58	102	113	78	45	46	27	20
Kuwait	17	18	15	9	10	11	9	6
UAE	13	20	19	16	13	12	12	7
Total	88	140	147	103	68	69	48	33

Source: Petroleum Economist, July 1987.

Table G2
Current Accounts of Main Arab Gulf Donor States
1982–1987
(in \$ billions)

	1982	1983	1984	1985	1986	1987
Saudi Arabia	7.6	–16.1	–19.0	–13.0	–9.0	–10.1
Kuwait	5.1	5.9	5.6	5.6	5.2	5.0
UAE	7.0	5.3	7.5	7.1	1.2	2.6

Sources: Saudi Arabia—EIU, 1987, no. 2; 1987 based on *MEED* forecast, July 4, 1987.

Kuwait—EIU, 1987, no. 2; 1987 based on *MEED* forecast, July 25, 1987.

UAE—Based on EIU, 1987, no. 1; *UAE-Central Bank Bulletin*, June 1986.

Table G3
The Actual Balance in the Budget of Main Arab Gulf Donors
Fiscal 1982-1986, Provisional Budget 1987-8
(in \$ billions)

Country	Fiscal Years					
	1981-82	1982-83	1983-84	1984-85	1985-86	1987-88
Saudi Arabia	25.0	1.0	-10.0	-13.0	-19.0	-14.0
Kuwait	3.7	5.2	2.5	2.2	1.2	-3.8
UAE (calendar years)	1.5	-0.6	-1.5	-1.9	-3.3	n.a.

Sources:

Saudi Arabia: Fiscal 1981-82 to 1983-84 based on EIU Annual Supplement, 1984, p. 25. Fiscal 1984-85 to 1987-88 based on *MEED*, July 4, 1987, including forecast. Conversion from Saudi riyals to U.S. dollars according to IMF *International Financial Statistics*, June 1987. For 1987 the exchange rate for March 1987 was used. Fiscal 1984-85 starts April 1; Fiscal 1985-86 begins March 22; fiscal 1987-88 starts January 1.

Kuwait: 1981-82 to 1984-85—Central Bank of Kuwait, 1985-86—*MEED*, March 15, 1986; 1986-87 (preliminary) and 1987-88 (forecast)—*MEED*, July 25, 1987.

UAE: EIU annual supplement, 1985, and country report, 1986, no. 4. 1984 (preliminary), 1985 (provisional).

Table G4
Expenditures as Percentage of Revenues
in Budget of Main Arab Gulf Donor States
Fiscal 1981-82 to 1987-88
(percentages)

Country	Fiscal Years					
	1981-82	1982-83	1983-84	1984-85	1985-86	1987-88
Saudi Arabia	77	99	117	128	163	145
Kuwait	n.a.	109	97	116	121	59
UAE	89	105	117	123	141	n.a.

Sources: See Table G3.

Table G5
GCC Countries' Imports
1984–1987
(in \$ billion)

Country	1984	1985	1986 ¹	1987 ²
Saudi Arabia	28.6	20.4	16.1	18.0
Kuwait	6.7	5.5	4.5	4.6
UAE	6.9	6.4	5.8	5.9
Qatar	1.2	1.2	1.0	1.1
Oman	2.6	3.1	2.8	3.0
Bahrain	3.1	2.8	2.2	2.4
Total	49.1	39.4	32.4	35.0

Sources: *MEED*, February 14, 1987:

1) Estimate.

2) Projection.

Saudia Arabia: 1987 from IMF *International Financial Statistics*, May 1987.

Table G6
Official Development Assistance by OPEC and OAPEC Members
(In \$ millions and % of GNP of Country)

Country	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
	(\$ m i l l i o n s)									
Saudi Arabia	2,791	2,900	5,250	3,941	5,682	5,514	3,854	3,304	3,212	2,646
Kuwait	706	1,302	1,001	971	1,140	1,163	1,161	997	1,018	749
UAE	1,028	1,091	889	968	1,118	805	407	348	84	58
Total OAPEC	4,937	5,688	7,529	7,246	9,538	8,247	5,786	4,820	4,359	3,621
Total OPEC	5,877	5,917	7,883	7,365	9,635	8,341	5,776	5,017	4,487	3,527
	% of GNP									
Saudi Arabia	6.0	4.9	8.1	5.2	4.9	3.5	2.5	2.9	3.4	2.9
Kuwait	4.8	8.2	5.5	3.5	3.5	3.7	4.3	3.7	3.8	3.2
UAE	9.0	7.3	6.4	5.1	4.1	2.6	1.4	1.3	0.3	0.2
Total OAPEC	4.2	5.0	4.5	3.3	3.2	2.5	1.8	1.7	1.6	1.6
Total OPEC	2.3	2.0	2.4	1.8	1.8	1.5	1.0	0.9	1.1	1.1

Source: The World Bank: *World Development Report*, 1987.

Note: The figures do not include all military assistance.

Table G7
Official Development Assistance—
Receipts from All Sources
(in \$ millions)

Country	1978	1980	1981	1982	1983	1984	1985	1985 % of GNP
Egypt	1,450	1,387	1,292	1,417	1,438	1,768	1,759	6.1
Jordan	1,299	1,275	1,065	799	788	697	550	14.5
Syria	1,773	1,697	1,500	962	998	863	639	3.9
Israel	1,185	892	772	857	1,345	1,256	1,978	10.3

Source: The World Bank: *World Development Report, 1987*.

Remarks: The assistance to Egypt and Israel comes mainly from the US.

NOTES

- 1 During 1981, there were instances when spot prices even approached \$40/b.
- 2 OAPEC – Organization of Arab Petroleum-Exporting Countries.
- 3 During 1986, there were instances when spot prices even fell below \$10/b.
- 4 Unofficial assistance in all years was probably larger than the official aid.
- 5 OPEC – Organization of Petroleum-Exporting Countries.
- 6 CPE – Centrally Planned Economies.
- 7 UAE – United Arab Emirates.
- 8 Sources based on Syria's Central Bureau of Statistics and on ACDA (for Military Expenditures and for Arms Transfers). These statistics are believed to have several faults: overvaluation of the GDP because of use of overvalued exchange rate for Syrian currency; undervaluation of aid because not all Soviet aid and arms transfers are recorded; some Arab aid is not recorded; worker remittances are apparently undervalued because a considerable portion of them is brought—in cash or kind—through various unofficial channels. The GDP is probably considerably overvalued, but as the rest of the elements in Total Resources are likely undervalued, the Total Resources are probably not very much off the mark.
- 9 The sources of data for this section are taken from the Syrian Ministry of Petroleum and Mineral Resources and the Central Bureau of Statistics.
- 10 *EIU* fourth-quarter report on Syria, 1986, p. 142.
- 11 *Petroleum Economist*, January 1987, p. 10.
- 12 Source: Syrian Central Bureau of Statistics, *Statistical Abstract*, 1985.
Note: In the official publications the sectors of manufacturing, utilities, and mining, including petroleum extraction, have been presented in one unified item: "Industry." To estimate the petroleum sector separately we have made estimates by using published data on quantities of petroleum extracted and prices of crude petroleum. This way, a direct estimate of petroleum extraction was obtained, while the other combined items included in "Industry" were obtained as residuals. This procedure may involve an underestimate of the "residual" by up to two percent and an equivalent overestimate of the petroleum sector. As refineries are included in "Industry," the data may depend on the somewhat arbitrary setting of prices of crude petroleum for refineries.
- 13 It should be noted that it is not clear how—if at all—these reductions in prices figure into the balance of payments.
- 14 *EIU* fourth-quarter report on Syria, 1986, p. 15.

- 15 EIU country profile of Syria, 1986-87, p. 45.
- 16 It should be noted that according to *MEED*, March 21, 1987, p. 22, Syrian budget expenditures would be reduced nominally by about five percent (in 1987 in comparison with 1986), which in real terms amounts to a reduction of about 26 percent.
- 17 It should be noted that throughout this section the oil exports of foreign companies are included in total oil exports, in the balance of trade, in profits transferred abroad, and in the transfer of payments for factor services. In presentations of Egypt's balance of payments, foreign companies' transactions are mostly excluded because the value of their oil exports is counterbalanced by the transfer abroad of their receipts (for factor services). We had to include these items because they are indispensable for calculating the impact of price changes on the current-account balance.
- 18 Based on World Bank data and the EIU country profile of Egypt.
- 19 *MEED*, July 11, 1987, p. 55.
- 20 Based on World Bank estimates.
- 21 Based on the EIU country profile of Egypt, nos. 1, 2, 1987.
- 22 EIU second-quarter report on Egypt, 1987.
- 23 The reader is advised to remember that the conclusions are based to a large extent on forecasts, which in turn hinge on a number of assumptions. Most of the assumptions have been explained explicitly in the previous section and in the statistical appendix and will not be repeated in this section.
- 24 The description of economic measures taken by Egypt under the Paris Club agreement is based mainly on publications in *MEED*, May 16, 1987, and May 23, 1987, and on the EIU country profile of Egypt, nos. 1, 2, 1987.
- 25 EIU second-quarter report on Egypt, 1987.
- 26 Part of the payment may have been made for delivering military equipment to Iraq.
- 27 Saudi Arabia, Kuwait, UAE.
- 28 *Petroleum Economist*, July 1987.
- 29 Ibid.
- 30 Based on: OECD, *Economic Outlook*, no. 41, June 1987, p. 138.
- 31 *Petroleum Economist*, July 1987.

- 32 If the calculations had been according to the actual price of oil during the first quarter of 1987, \$17/b., the equivalent 1984-85 prices would have been \$12.8-11.4/b.
- 33 The growth data are calculated from National Accounts data in constant 1975 Jordanian dinars. Source: Central Bank of Jordan, *Monthly Statistical Bulletin*, vol. 23, pp. 70-71, April 1987.
- 34 Central Bank of Jordan.
- 35 EIU country profile of Jordan, no. 2, 1987.
- 36 Diammonium phosphate (DAP).
- 37 Central Bank of Jordan.
- 38 This number apparently includes workers from the West Bank as well as from Jordan. Other economic figures on Jordan usually do not include the West Bank data. The 340,000 workers abroad are about 40 percent of the total Jordanian labor force, or 35 percent if the foreign workers in Jordan are included in the labor force.
- 39 The difference between recorded and unrecorded remittances should be much smaller for Jordan than that for Egypt and Syria because the large gaps between official and unofficial exchange rates do not exist in Jordan.
- 40 For the calculation of the decline in constant prices, the cost-of-living index was used. There are many doubts about the reliability of this index. However, it is certain that the "true" decline can only be steeper.

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