CHAPTER VI

THE PRINCIPAL ECONOMIC SECTORS

1. MAIN DEVELOPMENTS[1]

In 1986 the gross domestic product of the business sector grew by some 4 percent—the result, on the one hand, of a substantial expansion of domestic demand and, on the other, supply-side constraints following the adoption of the July 1985 stabilization program (see Table VI–1). Per capita product in the business sector rose by about 2 percent—a relatively high rate compared with the stagnation in recent years and the negligible growth since the beginning of the present decade. Total productivity also picked up to some extent, and the two principal factors of production, labor and capital, increased by about 2 percent.

Many factors combined to restrain GDP growth in 1986; some of these were long-term factors that have held back growth in the business sector for many years, and others were of a short-term nature, peculiar to the last year or two. Interestingly, the slow-down of inflation has been among the principal causes that retarded growth in 1985–86.

Prominent among the short-term impediments to growth was the steep rise of real wages in 1986, and the resulting fall in the overall profitability of production and exports. Similarly, the increase in effective taxation similarly reduced the returns to capital and the rate of return. The fall in profitability not only hampers current output, but may also have an adverse effect on current investment (and thus on future output) and this—after three years of declining growth of capital input. The slow GDP growth of 1986 may also have been affected by the uncertainty still prevailing and expectations of revisions in the price controls and reforms of the tax system and the capital market.

[1] The change in the GDP is measured from the product side. For most years this differs slightly from the expenditure-side estimates of the national accounts. For a further explanation, see Chapter II. In the long run the difference between the two estimates is not significant.

Table VI–1
BUSINESS SECTOR INDICATORS, 1960–86
(Annual average real change, percent)

	1960–1965	1966–1972	1973–1979	1980–1986	1983	1984	1985	1986
Product[a]	8.9	9.2	3.9	2.4	4.7	0.8	1.9	3.7
Labor input[b]	4.6	2.7	0.8	1.3	3.4	2.4	0.0	2.1
Capital stock[c]	10.4	7.5	6.3	3.4	3.1	4.7	3.1	2.3
Investment	8.2	7.5	–0.3	0.8	26.8	–15.4	–8.9	–1.3
Labor productivity[d]	4.2	6.4	3.1	1.1	1.2	–1.6	1.9	1.5
Capital intensity[e]	5.6	4.7	5.5	2.1	–0.3	2.2	3.1	0.2
Total productivity[f]	2.5	5.0	1.4	0.5	1.3	–2.4	0.9	1.5
Exports			7.0	5.6	1.1	17.2	9.4	10.7
Credit[g]					–7.4	–13.4	18.1	13.6
Energy consumption[h]			3.3	–0.2	2.0	–5.2	–3.8	2.9

[a] GDP at factor cost.
[b] Man-hours (labor force survey data).
[c] Beginning-of-year stock.
[d] Product per man-hour.
[e] Capital stock per man-hour.
[f] Product per unit of factor input (average weight of labor is 68 percent).
[g] Medium and long term credit flows, including recycling.
[h] 'Final' use of energy in tons of oil equivalent. The data apply to the whole economy.

Most of the GDP growth in 1986 occurred in the second half of the year. The set of indicators of the quarterly changes in the business sector product by branches shows a decline in the second half of 1985, a return, in mid-1986, to the level of the first half of 1985, and a rapid acceleration of output from the third quarter of 1986. There were signs in early 1987 that this positive development was continuing, possibly indicating a change of trend in the growth path. If this is to become rapid and sustained growth, it will be necessary to deal with the long-term factors hampering economic growth.

The influences of these long-term impediments to growth still made themselves felt in 1986 despite the pick-up of economic activity. In the last three years the composition of output by branch has been undergoing a structural change (see below), but naturally there are time lags in the increase in production factors implied by it, particularly as regards the capital stock for the production of goods for which demand has expanded. Even the switch from supplying defense goods to the IDF to exporting the same products requires changes in the production set-up and, especially, in marketing. It is also possible that efficiency and output are reduced by obsolescence of equipment, and particularly by the declining share of new and advanced equipment in the total capital stock (the share of equipment acquired in the last five years has fallen from 59 percent of the total capital stock in 1975 to 49 percent in 1986). As for the

labor input, it is difficult to exaggerate the negative impact of the institutional rigidities of the labor market on output and productivity in the business sector. These rigidities reflect themselves in a system of comprehensive linkages of wages among different industries, enterprises, occupations and qualification levels of workers, as well as in low labor mobility between enterprises and industries.

For many years, new small-scale enterprises, some of which have a considerable potential for innovative production and rapid growth, have encountered serious difficulties in obtaining appropriate credit for investment in fixed assets or even research and development. The government has, in addition, restricted the access of all business firms to the capital market. In 1986 the government took some steps to liberalize the capital market which may signal the beginning of a new opening in the future. More private capital issues have been allowed, and the liquidation of the system of subsidized development loans has continued, with the conversion of the capital subsidies embodied in them into outright grants.

However, not much has been done to reduce the government's intervention in the business sector, either with regard to keeping production in the hands of government enterprises which are often inefficient, or as regards the bailing out of failing enterprises. Nor has there been any removal of the bureaucratic obstacles represented by the existing system of licenses and permits, controls, grants, directed credit, etc. This system of 'assistance' to capital, while labor is taxed heavily, not only causes loss of output because it distorts the allocation of resources, but deters private investors and retards investment and growth.[2]

The infrastructure necessary for production is developing at an inadequate rate (see Chapter II, the section on investment), and in certain areas, such as roads, communications and occupational training, the resulting bottlenecks to production may persist for a long time.[3] These problems are generally not of the kind that can be solved by the business sector; they are among the principal tasks of the public sector. The government's budgetary considerations, however, do not give adequate consideration to alternative returns on various public investments and to production efficiency—factors on which growth depends heavily.

To conclude: it is possible that even if the necessary conditions for growth in the business sector are fulfilled—if stability is maintained, inflation falls to a one-digit

[2] Empirical studies in industry reveal clearly what distortions have been created by government subsidies, and particularly their negative effect on output and productivity. Thus, a high and significant negative correlation (of –0.88) has been found between the share of subsidized capital in a branch and the estimated rate of capital utilization. It is hardly necessary to describe the deterrent effect of bureaucracy on investors. Various surveys, in particular those relating to potential foreign investors, explicitly confirm it.

[3] Many producers claim that this is the case.

Table VI–2
GROSS DOMESTIC PRODUCT AT FACTOR COST, 1960–86
(Percent)

	Composition of GDP by sectors, 1980 prices					Percent change in GDP over preceding period					Percent change over previous year						
	1960	1970	1975	1980	1986	1960–1985	1960–1965	1966–1972	1973–1979	1980–1986	1980	1981	1982	1983	1984	1985	1986
Agriculture[a]	10.0	8.0	8.1	9.1	9.8	5.4	6.7	6.4	5.9	4.3	5.2	10.0	11.0	3.6	–1.4	4.7	–2.0
Industry[b]	21.3	28.4	28.5	29.2	29.9	7.0	13.4	10.3	4.8	2.6	–2.3	2.3	0.3	4.0	5.4	3.9	4.8
Transport and communications	11.0	12.6	12.5	13.4	14.4	6.7	10.3	10.8	4.9	3.0	–3.9	5.5	–0.2	7.9	7.7	0.1	4.8
Electricity and water	3.5	3.7	3.7	3.9	4.2	6.3	10.2	9.1	5.1	3.6	–0.8	5.7	4.2	3.7	2.7	4.0	5.6
Construction	18.5	18.3	19.3	14.2	9.7	3.1	11.2	8.3	–1.1	–2.4	3.8	1.4	–1.4	–0.8	–7.8	–5.3	–6.1
Commerce and services	35.7	29.0	27.9	30.2	31.9	5.1	4.6	9.0	4.8	3.2	–1.6	4.9	5.4	6.7	–2.4	2.4	7.1
Total business sector	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**5.6**	**8.9**	**9.2**	**3.9**	**2.4**	**–0.8**	**4.2**	**2.7**	**4.7**	**0.8**	**1.9**	**3.7**

[a] Annual rates of change in the product of agriculture by calendar years; the discussion in the section on agriculture refers to agricultural years (October–September).

[b] The changes in the product of industry in this table are slightly different from the changes presented in Table VI–10 below. In this table the industrial product includes an estimate of the product of the diamond industry, based on exports of diamonds.

level, and the government reduces its involvement in the capital market significantly—the promotion of investment and high and sustained growth will still require the elimination of the existing system of incentives and institutional rigidities. Such a reform might include measures that would make it possible to expand the credit available to the business sector locally and in the international money market (where interest rates are now relatively low), substantial changes in the existing system of direct and indirect taxes and their rates, transferring government activity to the business sector, and a considerable expansion of the infrastructure.

In three sectors GDP grew in 1986 at a rate higher than the average of the business sector as a whole: commerce and services, communications, and industry. The share of industry in the business sector product has been rising for the past three years, apparently reflecting a gradual structural change. The main features of this industrialization process are a steady increase in the share of exports and export-intensive branches, such as diamonds and defense products. The growth of the industrial product in the last three years was accompanied by a slight rise of productivity, compared with the previous period (see Tables VI–2 and VI–3).

Table VI–3
TOTAL AND LABOR PRODUCTIVITY IN THE BUSINESS SECTOR, 1960–86
(Average annual change, percent)

	Labor productivity: product per man-hour					Total productivity: product per unit of weighted capital and labor				
	1960–1965	1966–1972	1973–1979	1980–1983	1984–1986	1960–1965	1966–1972	1973–1979	1980–1983	1984–1986
Agriculture	8.2	8.6	8.0	8.8	–2.8	5.6	6.6	5.7	7.3	–2.5
Industry	6.3	6.6	3.2	1.6	1.7	6.1	6.0	1.1	–0.3	1.1
Transport and communications	3.5	7.0	5.2	2.4	4.2	0.9	4.7	3.2	1.8	3.5
Electricity and water	10.2	9.5	1.6	0.6	3.4	5.3	6.7	0.4	–1.2	2.1
Construction	3.5	2.9	–0.3	–1.4	0.3	2.5	3.0	–1.1	–1.5	–0.2
Commerce and services	–0.2	6.2	3.0	0.6	–0.6	–3.6	4.1	1.4	0.2	–1.5
Total business sector	**4.2**	**6.4**	**3.1**	**1.5**	**0.6**	**2.5**	**5.0**	**1.4**	**0.8**	**0.0**

Construction and agriculture, by contrast, grew less than the average of the business sector. The product of the construction sector continued its fall since 1984, contracting by 6 percent in 1986. The sector's share in total business sector product correspondingly shrank to the very low figure of less than 10 percent, as compared with 14 percent in 1980 and 19 percent in 1975. This contraction has been due to a combination of several factors, the most important of which has been the slow-down of population growth (especially in the age group of 20–29, the size of which is the main determinant of demand for housing) and the government's policy of reducing its

investment in infrastructure works with a high construction component—defense construction and public housing. As a result of these factors and the high interest rates of recent years, several of the large construction firms ran into financial difficulties and the number of bankruptcies among building contractors increased.

The product of agriculture also fell in 1986 substantially below the business sector average of the last three years. The contraction was due to climatic conditions (three consecutive years of low rainfall) and to external factors, such as the fall in the international price of cotton and the chronic credit crisis in the farming sector. It appears that the high real interest rates of the last three years have had a marked impact on both agriculture and construction, since both sectors depend to a high degree on credit—the former, because of the fluctuations of output and the two-year cycle of some crops, and the latter, because of the length of the construction period. Under these circumstances, non-repayment of principal of loans quickly leads to an accumulation of fresh debt.

2. AGRICULTURE

The year 1986[4] has been bad for agriculture in almost every respect: output, product, labor productivity and total productivity all fell by 2–3 percent, and farmers' earnings from their work and capital also declined substantially. In addition to the direct effects of climatic conditions—three consecutive years of insufficient rainfall and the two-year cycle of certain crops—the contraction was also due to short-run factors external to the farming sector. Among these were the sharp fall of international prices of cotton, the cuts in water rations for irrigation necessitated by the continuous depletion of the national water reserves, the cuts in government subsidies to farm products, and the consequences of the fundamental crisis in agriculture which reflects itself primarily in the financing of the farming sector. On the other side of the coin, the slow improvement of the sectoral terms of trade seems to have continued; prices obtained by farmers rose somewhat more than the prices of their inputs, except wages (see Table VI–4).

Although exports of fresh farm produce increased in 1986,[5] this did not change the fact that since the beginning of the 1980s agricultural exports remained virtually

[4] Unless otherwise stated, the data refer to agricultural years (ending September 30 of the stated year).

[5] One source of export statistics, the foreign trade department of the Central Bureau of Statistics, shows an increase in exports, in 1980 dollars; according to the agriculture department of the CBS, exports declined.

static at an annual level of some $550 million. The main changes were in the composition of agricultural exports—citrus continued to decline while exports of other farm produce increased.

The GDP of agriculture fell in 1986 by 3 percent, following a 7 percent increase in the preceding year. The growth rate has fallen sharply in the last four years, to an annual average of one percent, as compared with the 6–7 percent annual growth rate in the preceding decade. The slow-down has also made itself visible in the capital stock and the expenditure on research and development. The labor input, by contrast, shows an unexplained increase, with the result that productivity growth has fallen precipitously, from annual rates of 7–9 percent (the highest of all economic sectors in the 1973–83 decade), to negative rates in recent years. This clearly reveals the crisis that has overtaken the agricultural sector, especially in the last few years. This crisis is deeply rooted in the history of Israel's farming sector, the analysis of which is beyond the scope of this report. The present discussion will restrict itself briefly to several causes of the crisis which students regard as central.[6] It should be emphasized that the difficulties of the last two years are, at least in part, more a crisis of the agricultural settlements than of the farming sector, and the solution lies in a restructuring of the settlements on a communal and industrial basis.

In the past, the expansion of agricultural output was accompanied by changes in the structure of production. These were brought about by rapid technological progress resulting from local research, both in new products and varieties, and in improved production processes, marketing, storage and transport. However, as a result of a relatively low income-elasticity of demand for farm produce, and sharper competition in the international market, a substantial surplus of output and workers has emerged.[7]

Rapid industrialization, primarily in the kibbutzim, and outside non-farming work have provided a partial solution for the surplus of manpower. Part-time farming is known world-wide; its extent depends, *inter alia,* on the state of employment in general and in the rural areas in particular. Only 45 percent of the labor input in the moshavim, and some 28 percent in the kibbutzim, are in farming (compared with 60 and 35 percent, respectively, in the early 1970s). The shift to part-time farming, or the complete abandonment of farming work, is in turn connected with another problem that weighs down on the farming sector—the size of farm units and the full utilization of their production capacity. The land, water and capital allotments of many family farms are too small, despite the transition to more intensive cultivation methods and

[6] See also the section on agriculture in Chapter VI of Annual Report 1983.

[7] The general statement that there is excess production and under-utilized production capacity is not contradicted by the appearance of seasonal shortages of various products, such as vegetables, fruit and animal products. Such shortages may be due to natural causes, inadequate planning, and the difficulty which farmers have in adjusting supply to demand.

Table VI–4
INDICATORS OF GROWTH IN AGRICULTURE, 1973–1986[a]
(Real annual change, percent)

	1973–1978	1979–1982	1983–1986	1984	1985	1986
Total output[b]	5.0	4.1	1.0	–3.2	2.2	–1.4
Gross product	6.3	6.8	1.5	–4.3	7.3	–3.2
Total income from agriculture[c]	3.7	5.8	11.0	6.5	27.6	–8.4
Factor input						
Labor[d]	–1.6	–2.0	2.6	3.0	6.2	0.0
Capital stock[e]	4.8	3.3	2.0	2.7	1.6	1.0
Capital-labor ratio[f]	6.5	5.4	–0.6	–0.3	–4.3	1.0
Productivity						
Product-labor ratio[f]	8.0	9.0	–1.1	–7.1	1.0	–3.2
Total productivity[g]	5.3	6.6	–0.9	–7.0	3.0	–3.6
Exports[h]						
Total fresh farm produce	8.6	2.3	1.1	3.8	–3.9	13.0
Thereof: Citrus	2.3	–3.0	–5.9	–15.8	–20.5	33.9
Other	17.9	7.6	6.2	15.1	3.1	6.2
Prices[i]						
Output prices[j]	35	105	201	278	418	72
Prices of purchased inputs	38	110	184	260	382	69
Terms of trade[k]	–2.2	–2.4	6.0	5.0	7.3	1.5

[a] Agricultural years ending September 30 of stated year.

[b] At producer prices; excluding inputs to agriculture.

[c] At constant prices; deflated by the consumer price index; includes wages and the entire gross return to capital—profit, interest and rent.

[d] Calculated from figures in millions of man-hours. Includes residents of Judea-Samaria and the Gaza District employed in Israel.

[e] Gross capital stock (beginning of year).

[f] Per man-hour.

[g] Product per unit of factor input (the average weight of labor is 59 percent).

[h] Based on export data in 1980 dollars; does not include exports to Judea-Samaria and the Gaza District.

[i] Annual rates of change, percent.

[j] Producer prices; excludes inputs to agriculture.

[k] Ratio of output prices to prices of purchased inputs.

new varieties and crops. It seems that only a far-reaching consolidation of farm units, or cooperation in production, can make it possible to take advantage of economies of scale.

The factors listed above are not the only ones that have created the background for the financial crisis that has brought many moshavim and even some kibbutzim to the verge of bankruptcy; the institutional structure, the interests of the kibbutz and moshav movements, as well as the government's agricultural policy, have all played

their part. Monetary policy and the high interest rates of the last two years also had a considerable impact on the timing and the aggravation of the crisis.

The accumulation of debt in the moshavim and kibbutzim was not confined to credits for agricultural production, but was also due to loans taken up for housing and current household consumption as well as for working capital and long-term loans for industry and other lines of production. It is, in practice, impossible to segregate these different credits quantitatively. It can be said, however, that they all increased rapidly, due to the easy financing terms that prevailed particularly during the 1970s, when real interest was generally negative and the principal was eroded rapidly as inflation accelerated. However, even after these conditions changed and credit became more expensive and risky, it seems that there was no change in the rate at which new loans were taken up and in their purposes. The principle of mutual guarantee in the cooperative moshavim caused some individuals to be little concerned with the cost of financing borne by the movement as a whole. The purchasing organizations, set up for the centralized purchase of inputs, expanded the scope of their operations, and some functioned in every respect as banks. They served as the conduit for financing provided by the farm units, the banks and money-lenders in the gray credit market. The considerations guiding the purchasing organizations were not strictly economic, and they enjoyed the support of the agricultural establishment and the settlement institutions. The individual moshav had little influence on the policy of these organizations. In addition, it seems that in its financial operations, the agricultural sector as a whole paid very little regard to risk. The government and the settlement institutions generated the feeling that they were committed to come to the aid of the agricultural sector whenever it runs into difficulties. This feeling of having firm 'public backing', which greatly reduces uncertainty, goes far to explain the conduct of the purchasing organizations of the moshavim, the kibbutzim, and individual farmers.

A rough estimate[8] put the indebtedness of the family farms at the end of agricultural 1986 at some $840 million—an amount very close to the annual value of the output of the moshavim. The debt of the kibbutzim is also estimated to be close to the value of a year's output—about $1.2 billion. There are, of course, great differences between the debts of different moshavim and kibbutzim.

The financial difficulties of the last two years were greatly aggravated as real interest rates rose: between July 1985 and June 1986 the purchasing organizations paid interest at an average real rate of 39 percent per annum on their debts (which are

[8] See Report of the Planning Committee for Strengthening the Family Farming Sector, submitted to the government in September 1986.

linked to the consumer price index). A year earlier they paid an average of 54 percent p.a.[9] A possible explanation for the willingness of the banks to continue lending under such circumstances is to be found, as said earlier, in the assumption that the government and the settlement institutions were firmly committed to support the agricultural settlements.

The 'financing crisis' is probably also reflected in the changes in two principal production factors—the capital stock and investment in research and development. Both fell off conspicuously in the last four years. There was a gradual decrease in the growth rate of the capital stock, which between 1973 and 1978 was some 5 percent a year, and by 1986 it had declined to a mere 1 percent per annum.[10] The proportion of R&D expenditure also fell, from some 3 percent of output at the beginning of the 1980s to no more than 1.5 percent in 1986. These reactions of basic production factors to marketing difficulties, stagnation in exports, and financing problems may retard exports in the future.

In 1986 there was a 10 percent cut in another prime production factor—the water input: irrigation quotas, which had remained more or less constant for a decade (disregarding seasonal and annual variations) were cut. The output of field crops nevertheless rose by some 40 percent, and the area of irrigated land increased by 30 percent—clearly reflecting a more efficient use of water. The water savings were even greater than the data show, because they do not reflect the increasing use of brackish and recycled water in place of sweet water. It may be assumed that water savings in agriculture and higher output per unit of water are in part the result of innovations in the irrigation systems, such as drip irrigation of various types, computerized planning of irrigation, etc. It seems that the potential of further progress in this area of agricultural development has not yet been exhausted. At the same time it must be remembered that the price of irrigation water is subsidized both directly, by budgetary allocations, and by not charging for depreciation—which means that the capital stock of the national water system is being depleted. There can be no doubt that a price of water that does not cover its cost of production leads to distortions in the allocation of water between different crops and areas, and may cause unnecessary infrastructure investments.

[9] According to the 'Ravid Committee', November 1986.

[10] Other data, compiled by the agriculture department of the Central Bureau of Statistics, show an even sharper fall in the growth rate of the capital stock—in fact, complete stagnation in the last four years, following an increase by an average of some 1.5 percent a year between 1979 and 1985.

The industrial product, excluding diamonds, rose by some 4 percent in 1986[11]—a growth rate similar to that of the business sector as a whole and not significantly different from the average growth of industrial product in the 1980s (see Table VI–5).

Growth of the industrial product in 1986 was uneven. In the first half of the year growth was still retarded by the contraction of domestic demand following the adoption of the stabilization program in July 1985, running at an annual rate of 2 percent, mainly as a result of the 6 percent increase in exports.

Table VI–5
INDICATORS OF GROWTH IN INDUSTRY, 1968–86[a]
(Real annual change, percent)

	1968–1972	1973–1978	1979–1985	1984	1985	1986	1986 Jan.–June	1986 July–Dec.
Industrial production	15.1	4.8	2.9	4.9	2.9	3.7	2.1	6.6
Labor input (man-days)	9.1	–0.1	1.1	2.1	–0.2	2.0	1.8	3.2
Number of employees	8.1	1.8	0.9	0.9	–0.3	0.9	0.9	2.5
Gross investment[b]	28.2	3.2	4.7	0.5	3.1	–5.7	..	..
Gross capital stock[c]	6.5	7.7	5.2	5.6	4.7	4.3	..	..
Production per man-day	5.5	4.9	1.8	2.7	3.1	1.7	0.3	3.4
Total productivity[d]	6.5	1.6	0.0	1.3	1.0	0.7	..	..
Industrial exports	16.6	10.1	8.8	19.6	7.6	6.3	6.0	0.9
Unit wage bill[e]	–4.2	–1.8	0.7	–6.6	–3.3	17.0	15.0	1.6
Input prices relative to output prices	1.4	0.5	–0.5	–1.1	3.5	–1.2	1.2	0.0

[a] Excluding diamonds. The labor input figures are from the industrial production indexes of the Central Bureau of Statistics. Industrial production (from the same source) is value added at constant prices. The indexes for 1968–78 are adjusted for full-time equivalent labor input.

[b] Excluding motor vehicles.

[c] Beginning-of-year stock.

[d] The labor input for the calculation of total productivity is from the industrial production indexes of the CBS, and not from the labor force surveys.

[e] Index of total labor cost deflated by the wholesale price index of industrial output, divided by the index of industrial production.

SOURCE: Central Bureau of Statistics and Bank of Israel calculations.

[11] Industrial production including diamonds increased by 5 percent in 1986, compared with 4 percent in 1985

The trend changed in the second half of the year (mainly in the third quarter), and industrial product rose by 7 percent. The increase was due mainly to an expansion of output for private consumption and for exports. The growth of exports continued until the third quarter, but was followed by a sharp drop in the last quarter of the year. Exports fluctuated widely during the year, and again rose considerably in the first quarter of 1987.

While the industrial product destined for private consumption increased by some 15 percent and that for exports by 6 percent, the product for public consumption decreased by 2 percent and that for fixed investment by some 7 percent (see Table VI–6).

On the demand side, these changes in the composition of the industrial product were the result of the fiscal restraint imposed by the stabilization program, which reduced defense expenditure and public sector investment. The stabilization program also created supply-side constraints: as a principal instrument of curbing inflation, the exchange rate was held fixed, while real wages increased and raised employers' labor costs. Taken together, these two amounted to a real appreciation which lowered profitability in most industrial branches, and in particular, in the export sector.

Table VI–6
INDUSTRIAL OUTPUT DERIVED FROM FINAL USES, 1968–86[a]
(Percent, 1977/78 prices)

	Share in derived output					Annual change		Share in increment	
	1968–1972[b]	1973–1975[c]	1976–1983[d]	1985	1986	1985	1986	1985	1986
Private consumption	37	27	27	23	25	1.8	15.0	0.4	3.4
Public consumption	15	21	15	13	12	–1.2	–2.4	–0.2	–0.3
Investment	18	18	14	9	7	–18.0	–25.2	–2.1	–2.3
Thereof: Fixed investment	(18)	(18)	(13)	(9)	(–2)	(–4.9)	(–6.6)	(–0.5)	(–0.6)
Total domestic uses	**70**	**66**	**56**	**45**	**44**	**–3.8**	**1.7**	**–1.9**	**0.8**
Exports	30	34	44	55	56	7.0	6.4	3.7	3.6
Total final uses	**100**	**100**	**100**	**100**	**100**	**1.9**	**4.3**	**1.9**	**4.3**
Index of industrial output, excl. diamonds						2.9	3.7		

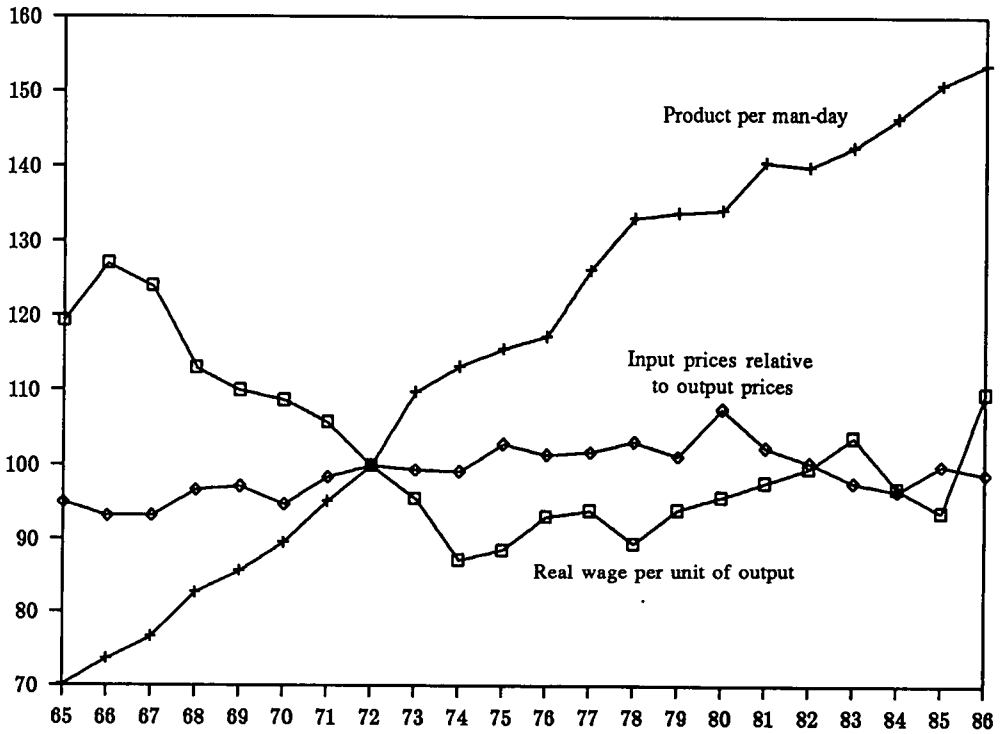
[a] Derived output is the value added in the production of goods for each final use, including the estimated intermediate output. The estimates are based on data on final uses from the Central Bureau of Statistics and Bank of Israel calculations on the basis of input-output tables for 1977/78. The estimates of derived output are at 1977/78 prices.

[b] Based on input-output tables for 1968/69.

[c] Based on input-output tables for 1975/76.

[d] Based on input-output tables for 1977/78.

Figure VI–1
INDUSTRY: REAL VALUE ADDED, REAL WAGES AND RELATIVE PRICES OF INPUTS,[a] 1965–86
(Index, 1972 = 100)



[a] Index of input prices ÷ index of output prices.

The deterioration in the profitability of industry is illustrated by the 17 percent increase in the unit wage bill—a particularly sharp rise when compared with the decline of this cost index in the last two years. Its increase in 1986 returned it to the moderately rising trend during the last decade (see Figure VI–1).

In the export sector profitability fell even more than in the sector producing for local uses, because local-currency prices of exports (including subsidies) rose on average less than the prices of output destined for the local market. The deterioration of export profitability continued throughout 1986.

Real wages per unit of product[12] rose by 15 percent—somewhat less than the unit wage bill, because prices of industrial inputs (imported and locally produced) rose less than the prices of industrial output.

[12] Product is defined as value added, i.e. total output less purchased inputs.

Net profitability in industry was also affected by the changes in effective tax payments and by the high real interest rates. Real tax payments continued to rise in 1986, as inflation fell further. Real interest rates, on the other hand, declined—particularly for firms producing for the domestic market, which rely relatively heavily on non-directed local-currency credit. The fall in the interest rates was particularly sharp in the first half of 1986, contrasting with their level in the second half of 1985. In the first half of 1986 the marginal rate of interest (on overdraft facilities) in industry fell to a real level of 35 percent p.a., as against some 170 percent in the second half of 1985. Despite this sharp decline, marginal interest rates have remained high by comparison with the rates prevailing in international money markets. Nevertheless, the real average cost of the total short-term credit basket was no more than 3 percent p.a., although this cost varied widely between firms according to the share of directed export credit in their total credit basket (for a detailed discussion of average and marginal interest rates see Chapter VIII).

Although the slow-down of inflation was expected to raise productivity, this did not occur. The relatively moderate growth of industrial product took place while total productivity remained stagnant. One reason for this stagnation may be that time is needed for the adjustment to falling inflation by a shift of production factors idled by the contraction of output destined for public consumption and fixed investment to alternative uses. Another explanation for the low rise of productivity in 1986 may be that administrative intervention in the determination of prices in industry through price controls has in some cases caused sharp changes in relative prices and thereby impaired the efficiency of production and marketing.

4. CONSTRUCTION

The long-term decline in the volume of construction continued in 1986, and the sector's output fell to its lowest level since 1970. The product of construction declined by 6 percent, continuing a similar fall of the previous two years. Investment in housing construction contracted by 16 percent, and investment in structures in the economic sectors—by 2 percent. Other construction (mainly defense construction and, roughly estimated, renovation work) increased by 3 percent and now accounts for nearly 40 percent of the construction sector's total product. Considering the large rise in private consumption, and the increase in cement consumption in 1986, it is likely that this year expenditure on maintenance and renovation of apartments was particularly high.The input of production factors shrank in accordance with the decline in the sector's level of activity. Both the number of employed and the capital stock fell by 6 percent. Product per worker therefore remained at the previous year's level, following the decline, at an average annual rate of 0.5 percent, that had begun

as early as 1973. This steady decline in productivity—sharper than in other economic sectors—may be due, among other factors, to the inflexibility of the large construction firms and their inability to adapt the input of production factors to the steady decline in demand for construction. In addition, it seems that the increase in the proportion of workers from Judea-Samaria and the Gaza District (among whom the proportion of unskilled workers is high) may also have reduced productivity.

Construction activity has been declining steadily since the mid-1970s, reflecting the fall in demand for the sector's two principal activities—construction of housing and structures in the economic sectors.

Demand for non-residential construction diminished as a result of the enduring stagnation of economic activity in general. The contraction of this demand was concentrated in agriculture, industry and services, while in electricity, transport and communications demand increased (for greater detail, see Chapter II).

The principal causes of the decline in demand for housing were: (a) Population growth slowed down mainly because immigration contracted (from10,600 immigrants in 1985, to 9,500 in 1986). The change in the population's age structure was particularly important: there was a decline in the relative size of the age group 20–29, which has a proportionately high demand for housing. However, in 1986 the proportion of this age group in the total population increased slightly (from 535,000 in 1985 to 537,000 in 1986)—the beginning of a trend that may cause a revival in residential construction. (b) The long-term rising trend of the relative price of housing has reversed itself in the last two years. This has almost eliminated the speculative element which has in the past boosted demand for housing as an investment yielding capital gains or a return from renting. Investment has therefore been diverted from housing and real estate to the acquisition of consumer durables and investment in financial assets. (c) The effective rates of interest on directed mortgages and on nondirected commercial mortgages rose in 1986; this dampened the demand for housing. The mortgage sums for eligible applicants were raised at the end of 1985. In the course of 1986 they were eroded in real terms, but on average a slight rise was recorded which, to some extent, offset the rise in interest rates.

In 1986 total disposable income rose by 1 percent; the rise in disposable income from wages and transfer payments was much higher—some 11 percent. Various studies have shown that the latter, being an indicator of the ability to repay loans, clearly influences the demand for housing. However, its effect is no more than partial since there is uncertainty among the public whether this rising trend will continue.

On the supply side, the high real interest rates of 1985–86 further depressed residential construction activity. As a result of mounting current debts and interest pay-

Table VI–7
INDICATORS OF CONSTRUCTION, 1968–86[a]

	Absolute figures		Percent annual change					
	1985	1986	1968–1973	1974–1979	1980–1986	1984	1985	1986
Output ('000 of 1980 NIS)								
Total	16,930	15,890	18.7	–4.4	–3.0	–7.9	–5.3	–6.1
Thereof: Residential	7,179	6,038	30.1	–7.7	–6.6	–8.4	–11.9	–15.9
Nonresidential	3,767	3,705	11.2	–3.0	–5.8	–14.6	–3.9	–1.6
Other[b]	5,984	6,147	9.9	2.2	4.7	–1.8	3.1	2.7
Starts (thousand m^2)	3,705	3,370	25.8	–6.6	–9.0	–8.4	–16.9	–9.0
Thereof: Residential	2,670	2,510	31,0	–8.5	–8.7	–11.1	–11.4	–6.0
Nonresidential	1,035	860	15.7	–2.1	–9.7	–2.4	–28.4	–16.9
Dwelling units (thousands)								
Starts	20.2	17.6	28.5	–11.8	–12.1	–11.3	–13.4	–12.5
Completions	24.6	21.0	11.2	–7.5	–6.0	–10.0	–10.1	–14.8
Employed persons ('000)	114.6	107.2	15.3	–2.8	–1.7	–5.9	–6.7	–6.5
Thereof: Israelis	72.2	61.8	9.7	–3.5	–4.6	–8.2	–8.7	–14.4
From Judea-Samaria and Gaza	42.4	45.4		–0.7	3.7	–1.4	–3.0	7.1
Stock of construction equipment ('000 of 1980 NIS)[c]	3,594	3,357	2.3	4.6	–0.6	–0.1	–4.7	–6.6
Price index of residential construction inputs	1,313.4	1,926.1	8.7	38.0	195.5	388.4	246.0	46.6

[a] Calculations are from less rounded figures.
[b] Includes defense construction and a Bank of Israel estimate of maintenance and renovations.
[c] Beginning-of-year stock.

SOURCE: Central Bureau of Statistics and Bank of Israel calculations.

ments many construction firms and contractors ran into financial difficulties, and several went bankrupt.[13]

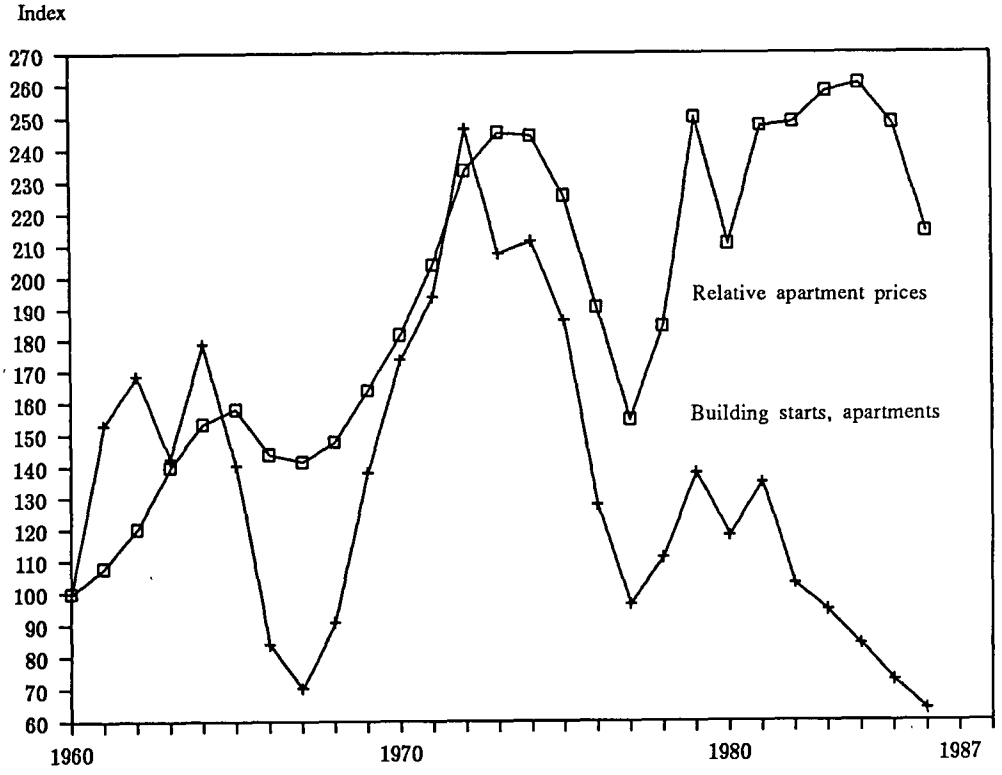
Developments in the construction sector in 1986 were uneven and raise the question whether there were signs of a lasting revival. There was a small rise in residential building starts in the private construction sector, beginning in the second quarter of the year, but this increase was not continuous. A slight downturn was recorded in the third quarter, followed by another upturn in the last quarter. The data on building starts (in thousands of square meters) show a similar picture. The discontinuity in the increase of building starts indicates that construction activity is still subject to random fluctuations, and no lasting change is discernible for the time being. The

[13] The assets of a firm in financial difficulties may exceed its liabilities, but only provided that it is not compelled to liquidate its assets (real estate and apartments) hastily. A quick liquidation of assets may reduce their value considerably.

percentage of unsold apartments out of the total supply of apartments nearing completion declined during 1986. This fall seems to reflect both a decline in supply, as a result of fewer building starts, and some rise in demand.

In conclusion it may be said that the slight recovery of the construction sector that became visible in the second half of 1986 will persist only if there is growth of the population in need of housing, and this depends mainly on the migration balance.

Figure VI–2
BUILDING STARTS AND PRICES OF APARTMENTS RELATIVE TO CONSUMER PRICE INDEX, 1960–86
(1960 = 100)



5. TRANSPORT AND COMMUNICATIONS

Both gross product and total output of the transport and communications sector grew in 1986 by 4.5–5 percent, recovering from the slow-down in 1985, with growth nearly back to the rapid rates of 1983 and 1984 (see Table VI–8). The recovery was most evident in the transport sector, which expanded by 3 percent after a 1.5 percent decline in the preceding year, while the communications sector continued the rapid growth of recent years. Labor input remained constant in 1986, so that product growth was due to higher labor productivity—a trend that has lasted for several years. Total productivity also increased at a high rate in 1986. The steep rise of real wages—by 9 percent (in purchasing power terms), similar to the rise in the business sector as a whole—was a growth-retarding factor also in the transport sector (see Chapter IV).

Gross investment expanded substantially after two years of sharp contraction: investment in roads and vehicles, in particular, increased considerably. There was also a rise in investment in equipment and machinery, especially in the second half of 1986. The expansion of investment raised the growth of the capital stock, which had slowed in the two preceding years, but there was a further conspicuous decline in the stock of ships and airplanes, which had already contracted in 1985. The stock of ships has in fact been declining for five consecutive years, and seems to be related to the continuing recession in international shipping.

The product of the bus cooperatives fell in 1986 by 7 percent, following a moderate one percent decline in 1985. This steep fall actually began in the second half of 1985, after the introduction of the stabilization program which included a sharp cut in subsidies to public transport, raising fares by 100 percent. In March 1986 bus fares were raised by another 25 percent, and between June 1985 and the end of 1986 the relative price of bus travel[14] rose by 32 percent on urban lines and by some 46 percent on interurban travel.

The subsidies to the bus cooperatives totalled some NIS273 million in 1986, compared with NIS312 million in 1985. This represents a reduction of the subsidies by 44 percent in real terms (deflated by the index of inputs to bus transport), following a 28 percent increase in 1985.[15] Subsidies fell also as a proportion of the total income (including subsidies) of the bus cooperatives: from over 60 percent in 1983–84 to 56

[14] Relative to the consumer price index.

[15] In past years there were also sharp fluctuations in the level of real subsidies to bus transport: a rise of 67 percent in 1983 and a 17 percent decline in 1984. This reflects the inconsistency of policy in this area. Although subsidies were cut in 1986, the subsidies to public transport remained a substantial slice of the total subsidies to goods and services—47 percent, as against 45 percent in 1985.

Table VI–8
OUTPUT OF TRANSPORT AND COMMUNICATIONS, 1983–86[a]

	Percent of total		Percent change over preceding year							
	Product[b]	Output	Real output				Price			
	1985	1985	1983	1984	1985	1986	1983	1984	1985	1986
Land transport	**40.3**	**31.0**	4.0	–1.0	–0.9	3.1				
Buses	14.0	7.0	2.9	–0.5	–2.5	–7.0	119	355	408	86
Taxis	4.6	2.7	–3.0	–6.0	2.0	2.0	132	339	309	67
Trucks[c]	19.2	20.3	6.0	–0.5	–1.2	–6.7	138	340	293	58
Railways	1.4	0.9	3.5	–1.6	8.5	4.4	119	319	306	45
Oil and gas pipelines	1.1	0.1	–4.7	–1.2	21.0	–12.0				
Shipping and ports	**22.6**	**31.0**	2.5	12.2	–4.5	1.9	124	302	304	32
Shipping	13.5	25.3	2.2	14.5	–3.4	–0.7	113	377	298	28
Ports	9.1	5.7	4.0	3.5	–8.8	13.5	174	282	332	47
Civil aviation and airports	**17.4**	**19.3**	20.9	15.4	2.4	4.8	126	364	294	33
Civil aviation	15.6	17.3	21.6	17.8	2.6	5.3	122	358	296	34
Airports	1.8	2.0	15.7	–1.9	0.5	0.1	162	426	281	29
Communications	**19.7**	**18.7**	12.9	15.0	6.3	11.5	108	346	378	39
Total output		**100.0**		7.6	8.7	–0.2	4.6			
Total gross product, at 1977/78 prices	**100.0**		7.9	7.7	0.2	4.8				
Gross fixed investment			36.6	–28.3	–21.3	12.9				
Gross capital stock, at beginning of year			1.5	4.1	1.8	0.7				
Employed persons			–1.4	3.0	–3.6	0.5				
Total productivity			6.6	1.7	4.7	4.0				

[a] Output and product at market prices.
[b] At 1977/78 prices.
[c] Estimates for trucks are based on input-output tables.

SOURCE: Central Bureau of Statistics and Bank of Israel.

percent in 1985 and to 39 percent in 1986. (In 1980 the economic policy of the end of 1979 had reduced the subsidies to 33 percent of the bus cooperatives' total income.)

One purpose of subsidizing the bus cooperatives is to promote the use of public transport instead of private cars, in order to save fuel and reduce urban congestion. Another reason for the subsidization is social, since low income groups have a high propensity to use public transport. In the long run it would seem desirable to reduce these subsidies to the minimum budgetary outlay required to adhere to these objectives, and to abstain from the frequent changes in the rate of subsidization that have taken place in recent years. Such a policy would ensure that the bus cooperatives will raise their efficiency and would reduce the negative effects of their monopolistic position.

After two years of slow decline, the trucking industry[16,17] increased its product in 1986 at the rapid rate of 7 percent, in response to the expansion of economic activity during the year. Shortages of trucks emerged, and after two years in which the acquisition of new trucks had fallen sharply, the decline was arrested in 1986; towards the end of the year and in early 1987 investment in new trucks accelerated.

Although the output of the construction sector contracted by 6 percent, road construction, which makes intensive use of trucking services, expanded considerably and thus increased freight haulage. There was also an expansion of industrial branches with a large trucking component, such as mining and quarrying and non-metallic minerals. Exports of citrus, which similarly require much truck transportation, also increased. Another cause of the trucking sector's growth was the increase in the freight haulage of civilian imports.

The price controls on trucking freight rates were lifted in July 1986, and in the second half of the year freight rates tended to rise in line with the increase in input prices. For several years freight rates have lagged behind the rise in input prices, as a result of excess supply which had led to stiff competition among trucking companies.

The product of railway transport, which had increased in 1985, slowed in 1986. Nearly the entire income of the railways comes from freight transport—in recent years, 75–80 percent of total income in real terms. Railway freight haulage is highly concentrated in terms of types of goods transported: some 70 percent of the railway's total freight are chemicals and fertilizers. It therefore seems that the slow-down in the growth of exports of chemicals in 1986 (after a rapid increase in 1985) accounts for the slower growth of railway transport.

[16] According to the Transport Ministry's official definition, trucks are freight vehicles of 10 tons gross weight. The truckers prefer to classify only vehicles weighing 16 tons or more as trucks. Smaller transport vehicles are classified as 'service lorries.'

[17] Current data on the product of the trucking industry are not available. The product is estimated from input-output tables with coefficients of 1977/78, when the last survey of trucks was taken. These ten-year old coefficients may now be inadequate because in the last decade the trucking industry has undergone substantial change, technological as well as in the pattern of use of truck transportation. The product estimates presented here should therefore be treated with caution.

In 1986 the product of the communications sector expanded for the fourth consecutive year, at the high rate of 12 percent. The product of the telephone services, which accounts for nearly 90 percent of the sector's income, grew by 13.5 percent. The product of the post and telegraph services, which had fallen sharply in 1985, recorded some increase in 1986. This expansion, however, did not signify a change in the downward trend in the share of the postal and telegraph services in the communications sector, which results from their substitution by telephone services. This process was stepped up markedly in 1984–85, when the share of the post and telegraph service in the communication sector's product fell to 7.5 percent, as compared with 15 percent in 1982. A government corporation has recently been set up to supply postal services, with the purpose of raising the efficiency of this service.

The telephone service also receives income from exports. In the settlement of accounts with the main partner countries for international telephone calls, the country from which the calls originate pays the recipient country part of the costs. The volume of incoming calls from the main partner countries (the U.S. and the U.K.) is much greater than that of outgoing calls, so that in 1986 Israel's telephone service had an export surplus of some $70 million.

The product of Israel's shipping remained stable in 1986, after a decline of 3.5 percent in 1985. In both years there was a decline in the product of freight transport between foreign ports. This was offset by an increase in maritime transport of Israel's foreign trade, especially of import freight, which increased substantially in 1986 (see Chapter VII, the section on the current account). Freight transport between foreign ports, which has in recent years accounted for 50 percent of the shipping industry's total output, is needed to justify the commercial fleet's present size, beyond that required for the maritime transport of Israel's foreign trade.

Israel's shipping industry benefited from the slight recovery in international shipping: freight carried between foreign ports increased in 1986 by some 12 percent.[18] In sheqels, there was nevertheless a decline in the share of this branch of maritime transport in the real product of the shipping industry. This export sector, in which most payments are in dollars, was therefore also hurt by the fall of the dollar against the other major currencies, and its profitability declined.

The growth rate of civil aviation, which in 1985 had been 2.5 percent, rose in 1986 to 5 percent, but remained lower than in 1983–84. The product of airports has remained stable for three consecutive years. Within the civil aviation sector, developments in different branches varied widely: the product of passenger transportation, which had contracted in 1985, expanded by 5 percent, while the product of air freight, which in the three preceding years had on average expanded by an annual 24 percent, increased only slowly in 1986.

[18] The decline in 1985 was due to the voluntary closing of two lines by Zim.

The expansion of passenger transport in 1986 is explained by two main factors: the substantial increase, after the contraction of 1985, in the number of Israelis going abroad; and the growing preference of foreign tourists for Israeli airlines, in response to terrorist attacks in Europe in the second half of 1985. This shift to Israeli airlines to some extent offset the effect of the decline in tourist arrivals and resulted in a higher occupancy rate of airplanes (see below, Tourism).

6. TOURISM

Tourist arrivals[19] contracted in 1986 by 13 percent, and arrivals of cruise passengers by 45 percent. This decline came after three consecutive years of growth in which tourism to Israel recovered from the effects of the Lebanon war (see Table VI–9). The 41 percent fall in the number of tourists from the U.S. and Canada was especially conspicuous, while the number of tourists from Europe remained nearly unchanged (about 80 percent of all tourists visiting Israel come from these two areas). The contraction of incoming tourism to Israel was part of a general decline in tourism to the Middle East, which fell by 16 percent while world tourism as a whole increased by 2 percent. Although the contraction was severe, it did not last for the whole year, and by mid-year there was a sharp turnaround. The number of tourist arrivals increased and with it—the number of hotel nights spent in Israel. This revival continued into early 1987.

The decline in the number of tourist arrivals did not affect the hotel industry to the same extent. The number of nights spent in hotels recommended for tourists[20] declined by only 3 percent, as a result of an offsetting large increase in domestic tourism. The rate of bed occupancy fell from 54 percent in 1985 to 50.5 percent in 1986, but still remained higher than in 1984. Profitability in the hotel industry seems to have declined, especially in hotels catering primarily to foreign tourists. This was a direct result of the policy of maintaining a fixed exchange rate while operating costs continued to rise. The tourist hotels recorded a decline of income in sheqels, at constant prices,[21] together with a slight increase in employment and in the number of beds.

[19] Most of the analysis in this chapter is based on this definition of the number of tourists since this group of visitors tends to stay in Israel relatively long, with significant implications for the various tourist branches (hotels, restaurants, etc.)

[20] These hotels account for 90 percent of the hotel industry in terms of rooms, beds and nights spent in Israel.

[21] Income was deflated by the consumer price index, since there is no price index of inputs in hotels; its construction requires a study of the 'expenditure basket' of hotels.

Incoming tourism in 1986 was influenced by two principal factors: (a) the feeling that the security risk was higher in consequence of increased terrorism in Europe and in the Mediterranean countries in the second half of 1985; and (b) the weakening of the U.S. dollar against the European currencies throughout 1986, which reduced the purchasing power of tourists from the U.S., in Israel as in countries competing with Israel as tourist destinations, including Europe. Both factors reduced tourism from the U.S., and offset each other where tourism from Europe is concerned.

Although tourist arrivals fell sharply, the income from tourism recorded by the commercial banking system increased. This shows that the stability of the exchange rate and the low premium on the black market for foreign currency increased the propensity of tourists and of money-changers to exchange foreign currency through the banks.

Table VI–9
TOURISM TO ISRAEL, 1983–86

	Thousands		Percent annual change			
	1985	1986	1983	1984	1985	1986
Tourist arrivals, total[a]	**1,436**	**1,196**	**17.0**	**7.9**	**14.1**	**–16.7**
Arrivals other than cruises	1,264	1,102	15.9	5.0	15.5	–12.9
Cruise travelers	172	94	26.3	32.3	4.7	–45.1
By mode of travel						
Air	1,079	930	8.2	9.9	15.3	–13.9
Thereof: to Eilat	(46)	(63)	(–33.0)	(116.7)	(41.5)	(35.2)
Charter flights	192	185	0.6	7.8	6.7	–3.6
Scheduled flights	887	744	10.6	10.2	17.5	–16.1
Land	166	154	76.5	–17.5	17.6	–7.2
Sea	20	18	35.1	–9.3	7.5	–6.2
By selected countries of residence						
Europe	677	665	2.4	8.0	20.2	–1.7
United Kingdom	129	134	–3.8	0.7	17.6	3.9
France	141	136	–1.9	1.0	17.8	–3.5
West Germany	146	139	6.1	14.7	25.1	–4.8
United States and Canada	405	240	26.4	8.0	12.4	–40.7
Asia and Africa[b]	75	80	18.3	11.5	–10.6	6.8
Latin America	37	50		17.1	11.0	33.4

[a] Excludes persons arriving from Lebanon without a tourist visa (residents of southern Lebanon, U.N. military personnel, and diplomats), foreign tourists in transit to Judea-Samaria and the Gaza District, and visits by holders of Israeli passports residing abroad. From May 1985, includes tourists arriving after a stay of one week or less in Sinai (from May to December 1985—16,999, and in 1986—30,075).

[b] Excluding Lebanon. The annual fluctuations in 'tourism' from that country were related to the Lebanon war and its aftermath.

7. ENERGY

The world oil cartel quota system collapsed in 1986 and the price of oil dived from $28 per barrel to as low as $5 to $8 in the third quarter of 1986. Towards the end of the year a similar, but more modest structure was rebuilt, pushing prices back, first to $15 and, finally, to $18 per barrel.[22] At the same time the OPEC countries decided to set their total output at 15.8 million barrels per day, down from 18 million b/d in the first half of 1986 and a peak output of 20.8 million b/d in July and August (when oil prices were at their lowest). Despite the sharp fall in oil prices, world consumption remained almost stable in 1986. Most of the additional OPEC output went into increasing oil stocks in the industrialized countries, mainly in the U.S.

In Israel the reaction to the collapse of oil prices was similar to that in the rest of the world: while the cost of oil imports fell nearly to one half, consumption stabilized after a trend of gradual decline. The substantial increase in oil imports therefore reflects a sensible exploitation of the opportunity provided by low prices for accumulating stocks.

As in other countries, real prices of refined products fell considerably, and the decline was reinforced by a 12–13 percent fall in the real exchange rate (which in its turn tended to offset an increase in the average rate of taxation of such products)

A first step in a reform of Israel's energy economy came into force in April 1987. It is meant to provide for greater competition among the companies supplying and refining oil (the refineries, the three oil companies, and the major oil consumers). This first step of reform extends to a quarter of Israel's total oil requirements.

[22] The $15–18 range is probably one of sharply rising longer term demand elasticity. It is also noteworthy that a price below the middle of this range is regarded as inconsistent with the continued production of a sizable portion of the oil output of higher cost areas (e.g., U.S., North Sea).

Table VI-10
SELECTED INDICATORS OF PRICES, OUTPUT AND CONSUMPTION OF LIQUID FUEL, 1974–86

	1974	1977	1979	1980	Average 1981–1982	Average 1983–1984	1985	1986
1. Average posted f.o.b. price per barrel, U.S.$	11.25	12.95	19.02	31.51	34.21	29.05	26.45	15.75
2. Index of relative wholesale price of refined products[a]	70.0	74.0	81.7	100.0	105.6	(98.6)	95.9	72.8
3. Index of fuel consumption[b] as a share of GNP (1979=100)								
Developing countries[c]		101.0	100.0	94.5	88.6	82.1	77.0	–
Industrialized countries		104.2	100.0	91.3	85.8	75.3	70.6	70.5
Israel		–	100.0	99.0	97.0	84.0	76.0	74.0
4. Output of crude oil, OPEC countries, b/d million	31.1	31.7	31.5	27.8	21.9	18.5	17.2	19.0

[a] Wholesale prices of refined oil products in 15 countries, relative to consumer price indexes (1980=100).

[b] Fuel consumption by volume relative to GNP at constant prices.

[c] Not including oil-exporting developing countries.

SOURCES: For rows 1 and 2: OECD, *Economic Outlook*, 1985, 1986. Includes spot purchases. Data for 1986 are estimates for 10 months. For row 3—until 1983, calculations based on IMF data; from 1984, OECD data. Data for Israel—Central Bureau of Statistics. For row 4: IMF data for 1985 and 1986, and OECD, *Economic Outlook;* includes liquefied natural gas.