Chapter 2
Output and Demand

The economy continued to grow at a good pace in 1995. GDP rose by 7 percent—4 percent per capita—despite the significant deterioration in Israel's terms of trade. Demand expanded at a similar rate to supply, yet even though the country was approaching full employment, this was accompanied by a slowing of the rate at which the implicit price of GDP rose. The real exchange rate appreciated by some 2 percent, lower than the long-term rate. Despite the extensive investment of recent years, no evidence of a substantial increase in productivity is apparent, although its decline was checked in 1995. The rate of return on capital continued to fall, mainly because of the deterioration in the terms of trade. The latter, together with fiscal policy, was chiefly responsible for the expansion of the balance of payments current-account deficit. In the last few years over a third of all investment in industry has been made under the Encouragement of Capital Investments Law, 5719–1959, which benefits investments whose yield may be lower than the interest on Israel's external debt.

1. MAIN DEVELOPMENTS

In 1995 economic activity rose impressively, continuing the growth rate evident since the beginning of the decade. GDP grew by a real 7.1 percent, and business-sector product by 8.6 percent, representing per capita growth rates of 4.3 and 5.8 percent respectively. The surge in economic activity of the last few years is the result of three main processes: first, the various stages of absorbing mass immigration; second, structural reforms, among them greater openness to movements of goods, factors of production, and financial capital; and third, political developments in the region.

Although the economy approached full employment, this was not accompanied by the acceleration of inflation, and there was even a slowing of the rise in the implicit price of GDP. Economic activity expanded despite the significant deterioration in the terms of trade: prices of imports, excluding diamonds, rose by 9.8 percent, while those of exports, excluding diamonds, rose by only 5.4 percent. Although output rose appreciably there was no increase in total factor productivity, but its decline was checked. The trend fall in the rate of return on gross physical capital persisted in 1995, too, however.

Table 2.1
Resources and Use of Resources, 1981–95

(percent change)

	NIS million 1995	Quantity								Price		
		1981–1985	1986–1989	1990–1995	1991	1992	1993	1994	1995	1995*	1994	1995*
Resources												
Gross Domestic Product	261,113	3.1	3.9	6.0	6.3	6.8	3.4	6.5	7.1		12.6	9.3
Imports of goods and services[a]	125,765	3.6	4.7	11.1	15.9	8.9	14.1	10.6	8.3		7.3	7.7
of which Civilian	120,753	4.4	6.6	11.8	15.1	11.9	12.4	13.7	9.3		7.7	8.2
Total resources	386,878	3.3	4.2	7.7	9.3	7.5	7.0	8.0	7.5		10.6	8.8
Use of resources												
Private consumption	161,245	4.7	7.4	7.3	7.1	8.0	7.2	8.9	7.2	5.1	11.8	8.9
Total public consumption	76,197	0.8	–1.3	2.8	4.3	0.9	4.8	–0.7	1.2	6.7	16.9	14.8
Public consumption[c]	71,185	1.3	1.2	3.1	1.6	5.2	0.4	4.0	2.7	8.8	17.9	15.7
Gross domestic investment												
Total	65,115	0.0	2.8	15.4	42.3	5.2	3.9	10.0	10.8		9.0	7.6
Fixed[b]	61,733	0.4	2.1	15.0	38.9	7.1	1.5	14.0	9.3		8.1	7.8
Domestic use of resources[c]	297,544	2.8	5.0	8.0	12.3	6.7	5.0	8.1	7.2		12.4	10.1
Exports[a,d]	84,322	5.2	4.6	7.7	–1.9	14.7	10.7	11.5	10.1		5.5	4.9
Use of resources[c]	381,866	3.5	4.9	7.9	8.9	8.4	6.3	8.9	7.9		10.8	8.9
Total	**386,878**	**3.3**	**4.2**	**7.7**	**9.3**	**7.5**	**7.0**	**8.0**	**7.5**		**10.6**	**8.8**
Net factor payments to abroad	3,975											
GNP at market prices	257,138											
Gross product of business sector[e]	174,083	3.7	4.9	7.2	7.6	8.3	3.6	7.6	8.6		8.4	6.8

[a] Imports (c.i.f.), exports (f.o.b.), excluding factor payments and general government interest from or to rest of world. Exports at effective exchange rate.
[b] Excluding change in stock.
[c] Excluding direct defense imports.
[d] Not including receipts from factors of production abroad, and interest received by the public sector from abroad.
[e] GNP *less* gross product of public services, non-profit institutions, and ownership of dwellings. At market prices.
* This column gives rates of change, taking into consideration the fact that the government has undertaken to pay the Health Funds directly (in the framework of the National Health Law). This represents a volume decline in private consumption and an equivalent increase in public consumption.
SOURCE: Central Bureau of Statistics.

On the demand side, the surge in economic activity was led by a real 11 percent rise in domestic investment, reflecting greater residential investment, due largely to the high level of apartment prices in 1994 and the policy of making more land available for construction. The output of the construction and allied industries contributed 1.3 percentage points to the rise in business-sector product. Investment in the principal industries continued to expand, though at a slower rate than in 1994, because firms wanted to bring their capital stock per employee to the desired level, after it had fallen in the wake of the influx of immigrants. Investment in inventory rose substantially in 1995, accounting for 2 percentage points of business-sector product. Although monetary policy was tight, investment did not fall, because of Israel's growing economic openness to the international capital market and the global reduction of real long-term interest, along with Israel's improved economic standing.

Goods and services exports (excluding diamonds, capital services, and the Autonomy and the administered areas) rose by a real 8.1 percent, albeit unevenly. Industrial exports increased by 4 percent in 1995, compared with 14 percent in 1994. Services exports accelerated this year, however, rising by 15 percent, compared with 7 percent in 1994. The rate at which total exports rose was similar to that of world trade, which in recent years has served as an underestimate of the demand for Israel's exports because geopolitical changes have improved the country's standing. The potential increase in exports has not been fulfilled, however, because of the significant worsening of the terms of trade and the sharp drop in defense exports in the wake of the continued decline of international demand for them (see Chapter 6).

Fiscal policy contributed directly to the expansion of demand through the 2.7 percent increase in public consumption (excluding defense imports). Public-sector wage hikes and the reduction of the net tax rate (net of Health Tax) contributed—although to a lesser extent than in 1994—to the increase in private consumption. In addition, the economic absorption of the new immigrants helped to increase private consumption.

The extensive supply-side response to the rise in demand was supported by a marked increase in capital stock (some 9 percent) as well as by the 3.5 percent expansion in the civilian labor force. The rise in factors of production made it possible to increase business-sector product by between 6 and 8 percent. In order to meet the greater demand, firms increased labor input beyond the rise in the labor force by expanding the hours worked per employee, as well as the number of foreign workers and of formerly unemployed persons.

In spite of the surge in economic activity, total productivity did not rise in 1995, though this constitutes a very slight improvement over 1993–94, when it declined by a cumulative 2 percent. In the short term, new equipment incurs costs of installation and of training employees to use it, which have an adverse effect on labor and factor productivity. In the longer term, after the training period ends, the economy benefits from the technological innovations implicit in the new capital stock. Despite the slight improvement in factor and labor productivity, the rate of return on gross capital in the business sector continued to fall (by 1 percentage point), reaching 12.6 percent. This

reflects mainly the deterioration in the terms of trade; when adjusted for this, the rate of return was 13.7 percent.

The expansion of demand paralleled that of supply, so that the share of the import surplus in GDP (at constant prices) remained stable. Nevertheless, prices of business-sector product rose more slowly in 1995, apparently due to the weakening of inflationary expectations.

The real exchange rate, measured by the difference between the rates of increase of prices of exports and of business-sector product (including housing services), indicates real appreciation of some 2 percent. According to this index, real appreciation has persisted since the late 1970s at an annual average of 3.4 percent (some 4 percent when export prices are deflated by the implicit price of GDP). For the most part, this appreciation is explained by tradables-biased economic growth, the rise in demand for nontradables which accompanied the expansion of GDP, and by government demand. These factors continued to have an effect in 1995. Nonetheless, the rate of real appreciation was lower in 1995 than its long-term trend. The main reason for this appears to have been the worsening of the terms of trade alongside the acceleration of import prices, especially of primary commodities. This development had several conflicting effects on the real exchange rate, their net effect being real depreciation. It would seem, however, that the slowing of the rate at which the nominal exchange rate rose, as a result of contractionary monetary policy, did not play a major role in determining the real exchange rate in 1995, most of its effect being felt only towards the end of the year.

Investment accounted for 22.6 percent of national income in 1995, compared with 22 percent in 1994, and the national saving rate declined from 18.7 percent in 1994 to 18.1 percent in 1995. Thus, the saving rate continued to fall, and for the first time since 1991 this decline was led by public saving. The expansion of investment beyond saving contributed to the rise in domestic long-term interest rates.

The current-account deficit, which reflects the difference between investment and saving, was 4.2 percent of national income (some 5 percent of GDP) in 1995—a level unknown since 1982–83, when the deficit led to the 1984 balance of payments crisis. Although Israel's economy today is very different from what it was then, largely with regard to rates of growth and inflation, caution is required in order to avoid falling into a negative short-term dynamic as a result of a capital outflow (see Chapter 6).

The current-account deficit rose from $ 2.5 billion in 1994 to $ 4 billion in 1995. This was mainly the result of fiscal policy and the deterioration in the terms of trade. Fiscal policy also had a direct effect on the increase in the current-account deficit. About a third of industrial investment in 1995 benefited under the Encouragement of Capital Investments Law. Although the domestic long-term interest rate is approximately the same as that Israel pays abroad, the generous subsidy granted under this law raises fears that the yield on some of the many investments of the last few years will not suffice to service the debt incurred because of them.

Table 2.2
Product and Productivity of the Business Sector, by Industry, 1981–95[a]

(real annual change, percent)

	1981–85	1986–89	1990–95	1991	1992	1993	1994	1995
GROSS PRODUCT								
Industrial composition[b]								
Industry	30.6	30.8	29.3	29.9	29.4	29.4	28.8	28.4
Agriculture	5.0	4.9	4.6	4.6	4.8	4.5	4.2	4.4
Transport & communications	12.2	12.6	12.5	12.5	12.4	12.5	12.4	12.6
Construction	9.6	7.7	9.8	10.6	10.5	9.6	9.6	9.8
Trade and services	38.3	39.8	39.8	38.2	38.8	40.0	41.1	41.0
Water and electricity	4.3	4.2	4.0	4.1	4.1	4.0	3.9	3.8
Total business sector	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tradables[c]	44.2	43.4	40.5	40.9	40.9	40.5	39.3	39.2
Nontradables	55.8	56.6	59.5	59.1	59.1	59.5	60.7	60.8
Real annual change								
Industry	3.7	2.8	7.3	6.7	8.2	6.8	7.4	8.2
Agriculture	5.6	3.0	6.8	–6.2	12.8	1.3	1.7	15.6
Transport & communications	4.2	5.1	7.7	5.2	9.0	7.9	8.5	12.1
Construction	–4.1	4.0	12.8	33.9	8.6[d]	–2.1[d]	9.7	12.3
Trade and services	4.1	5.0	8.7	3.2	11.5	10.4	12.3	9.7
Water and electricity	3.1	3.6	6.8	6.0	10.0	4.5	7.5	6.9
Total business sector	3.2	4.1	8.3	6.7	9.9	7.0	9.5	9.9
of which: excl. construction	4.0	4.1	7.9	4.2	10.0	8.1	9.4	9.7
Tradables[c]	3.9	2.3	6.7	2.8	9.6	6.1	6.3	9.6
Nontradables	2.6	5.6	9.4	9.6	10.1	7.7	11.6	10.2
PRODUCTIVITY[e]								
Labor productivity								
Industry	2.4	2.5	2.4	2.0	2.1	–0.9	1.5	4.2
Agriculture	4.8	5.4	6.8	4.9	11.1	–9.5	–2.5	7.5
Transport & communications	4.4	3.3	2.5	2.3	0.6	3.5	2.0	5.8
Construction	–4.4	3.3	2.0	14.4	–10.7	4.7	3.2	–1.3
Trade and services	1.1	0.4	1.2	–1.8	3.4	0.4	–0.1	1.8
Water and electricity	6.4	–1.9	2.9	8.0	23.0	–6.7	–3.2	4.0
Total business sector	1.5	2.0	2.1	1.7	0.9	2.1	0.7	2.6
of which: excl. construction	2.1	1.9	2.3	1.0	3.0	1.2	0.3	3.3
Total productivity[f]								
Industry	1.1	1.2	2.0	2.3	2.5	–0.2	0.4	1.9
Agriculture	4.6	4.9	7.5	2.5	12.7	–5.7	–0.8	10.5
Transport & communications	3.5	2.9	2.5	2.6	2.2	2.5	1.6	4.3
Construction	–4.2	4.1	1.9	16.8	–10.8	1.5	1.5	–2.1
Trade and services	0.0	0.5	1.9	–1.5	4.7	2.1	2.2	1.2
Water and electricity	2.6	–0.9	2.0	4.5	14.6	–4.0	–1.6	2.5
Total business sector	1.0	1.8	2.2	2.2	2.4	0.9	1.3	2.1
of which: excl. construction	1.5	1.6	2.5	1.0	3.8	1.7	1.1	2.5

[a] Business-sector product in the text is based on national accounts data, whereas here it is based on by-industry data, which is statistically less reliable.

[b] At 1990 factor prices.

[c] The product of tradables is the added value component of goods which are also traded internationally.

[d] These figures differ from those of the Central Bureau of Statistics, because the latter include rapid-completion incentives, which the government paid to residential-building contractors, as real growth of product.

[e] Product per man-hour.

[f] Product per weighted unit of capital and labor.

Since the beginning of the decade Israel's rate of economic growth has been impressive, leading to a substantial reduction of the unemployment rate and a rise in the standard of living. The latter was not uniform: incomes in the lower deciles rose more slowly than in the upper ones. Although data is not available on the distribution of wealth, an indication of increased inequality is provided by comparing the distribution of income among salaried employees with that of the general population. This indicator rose sharply in 1994, reaching its highest level since 1960. There has also been a substantial increase—11.5 percent—in the number of families below the poverty line.[1]

2. THE DEMAND FOR DOMESTIC PRODUCT

Use of resources (excluding defense imports), which constitutes an indication of the expansion of demand for domestic product, rose by a real 7.2 percent (Table 2.1), and business-sector use of resources by 8.3 percent (Table 2.4). In general, there was growth in all the components of aggregate demand.

There was a notable rise—11 percent—in gross domestic investment, while its components developed unevenly. Inventory investment rose from 1.5 percent to 2 percent of business-sector product (at 1990 prices), partly in order to adjust stocks to the level of economic activity, although the timing did not fit the tight monetary policy and rise in prices of raw materials. Residential construction rose considerably—by 19 percent (Table 2.6)—largely reflecting the supply-side response to the high prices of 1994. This response was made possible by *inter alia* the government's policy of the rapid release of land for construction, intended to moderate the rise in housing prices. Investment in housing made a direct contribution of 1 percentage point to the increase in business-sector product.

Business-sector investment in the principal industries rose by some 7 percent (Table 2.7), lower than the 1994 rate. This increase reflects the ongoing process of adjustment of capital stock. Following the influx of immigrants, capital stock per employee dwindled (Figure 2.1), alongside a rise in labor productivity and in the rate of return on

[1] The poverty line in Israel is defined in relative terms, and families below it do not necessarily go hungry. In fact, the number of families below the poverty line may increase even though their standard of living rises.

Table 2.3
Business-Sector Product, Factors of Production, and Productivity, 1961–95

(annual change, percent)

	Annual average							
	1961–72	1973–80	1981–85	1986–89	1990–95	1993	1994	1995
Total product	10.1	2.9	3.7	4.9	7.2	3.6	7.6	8.6
Excl. construction	..	..	4.4	5.0	6.8	4.1	7.4	8.2
Total labor input	3.5	0.5	1.7	2.0	6.1	4.8	8.7	7.2
Excl. construction	..	..	1.9	2.2	5.5	6.9	9.1	6.2
Total capital stock (beginning of year)								
Gross	9.0	6.2	3.4	2.7	5.0	5.4	6.9	8.8
Net	7.8	5.0	2.5	1.7	6.4	7.6	9.2	11.5
Gross, excl. construction	..	..	3.5	2.8	4.9	5.3	6.7	8.6
Total labor productivity[a]	6.4	2.4	1.9	2.8	1.1	–1.2	–1.0	1.3
Excl. construction	..	..	2.5	2.7	1.3	–2.6	-1.6	1.9
Capital stock per hour worked								
Gross	5.3	5.6	1.7	0.7	–1.0	0.6	–1.7	1.5
Net	4.2	4.5	0.8	–0.3	0.3	2.6	0.4	4.0
Gross, excl. construction	..	..	1.6	0.4	–0.5	–1.4	–2.2	2.3
Total productivity[b]	4.6	0.6	1.4	2.6	1.4	–1.4	–0.5	0.8
Excl. construction[c]			1.9	2.5	1.4	–2.1	–0.8	1.2
Capital/GDP ratio	1.90	2.04	2.17	2.00	1.78	1.77	1.75	1.76
Excl. construction	..	..	2.33	2.11	1.94	1.90	1.89	1.89
Share of investment in business-sector product	21.4	17.6	16.2	14.0	19.8	20.8	23.4	23.1
Average age of business-sector equipment (years)			5.9	6.2	6.2	6.2	6.1	5.9

[a] Product per hour worked.

[b] Labor input weighted by 0.68, and capital stock by 0.32. These weights are based on the distribution of gross national income between period averages of return to labor and return to capital, and on input/output data for 1977–78.

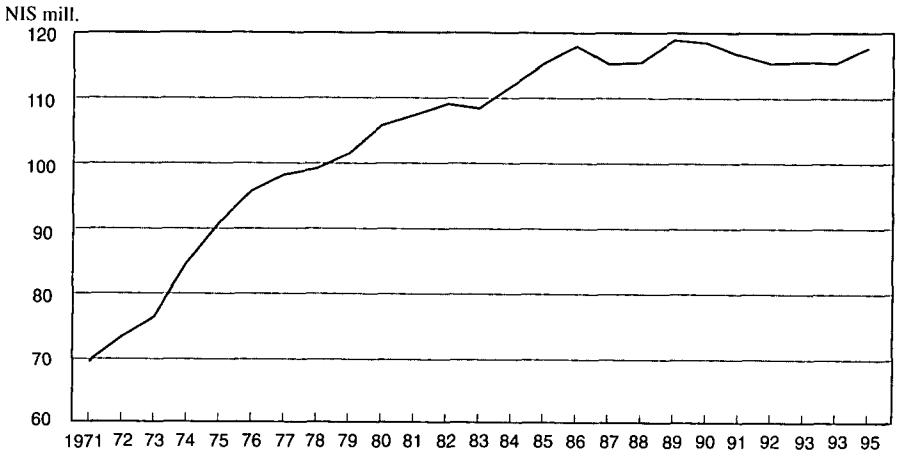
[c] Labor input weighted by 0.66, and capital stock by 0.34. These weights are based on the distribution of gross national income between period averages of return to labor and return to capital, and on input/output data for 1977–78.

SOURCE: Based on Central Bureau of Statistics data.

physical capital, so that there was an incentive to increase investment. This was reinforced by the Encouragement of Capital Investments Law, which makes private investment more profitable, and by the expansionary monetary policy that prevailed before 1994.

Capital stock per employee had been rising since the 1960s. This trend was checked, and even reversed, when mass immigration began late in 1989. In 1995 the ratio was still below what it had been prior to the influx of immigrants. It seems, therefore, that the main reason for the continued rise in investment demand has been the need to bring capital stock per employee to the desired level.

Figure 2.1
Ratio of Gross Capital Stock to Total Business-Sector Employment, 1971-95



SOURCE: Based on Central Bureau of Statistics data.

The tight monetary policy of the last two years, which was intended to help slow the inflation rate and was expressed by a rise in the interest rate on the monetary loan, does not appear to have discouraged investment to a significant extent. This is because some economic agents have access to international credit, so that domestic interest rates do not significantly affect their activity.[2] The clearest expression of this was the large capital inflow of 1995, indicating that the economy was very open. International interest rates fell in 1995, and this increased the demand for investment by those economic agents for whom this was relevant.

[2] This is illustrated by the increase in diamond stocks. Diamond merchants, whose access to foreign credit is quite good, were not deterred by the high domestic interest rate.

Exports of goods and services (excluding diamonds, capital services, and the Autonomy and the administered areas) continued to rise rapidly—by 8 percent—although at a slower pace than in the last few years. Industrial exports rose by 4 percent in 1995, down from 14 percent in 1994, while services exports accelerated—increasing by 15 percent after 7 percent in 1994. The rate at which exports rose was similar to that of world trade (some 8 percent), indicating the extent of demand for Israeli exports. The country has become more open to international trade in recent years, because of both the reduction of tariffs and the establishment of diplomatic ties, the latter serving mainly to open the markets of east Asia and eastern Europe to Israel's exports. In this context, the rate of growth of Israel's exports could have been expected to outstrip that of international trade, but two factors operated to moderate exports in 1995. First, Israel's

Table 2.4
Demand for Business-Sector Product, 1981–95

(percent change)

	NIS million 1995*	Annual average 1981–1985	1986–1989	1990–1995	1993	1994	1995
Business sector							
Uses	177,617	3.7	4.6	9.2	8.3	8.3	8.3
Product	102,836	3.7	4.9	7.2	3.6	7.6	8.6
Tradables sector							
Uses	133,365	4.8	4.3	9.1	10.9	8.2	8.0
Product[a]	40,313	4.6	3.1	5.8	2.7	4.5	8.3
Nontradables sector							
Uses	44,253	–0.6	6.4	9.6	1.1	8.8	8.8
Product[b]	62,523	3.1	6.3	8.3	4.2	9.7	8.8
Construction[c]				1.4	–0.7	0.9	1.4

* 1990 prices.

[a] Tradables product includes industry, agriculture, sea and air freight, and tourism.

[b] Nontradables product consists of business-sector product *less* tradables product. This form of measurement via the residual is not precise, but merely indicates the trend.

[c] Contribution of construction and allied industries to the rise in business-sector product; its average share in 1990–94 was 12 percent.

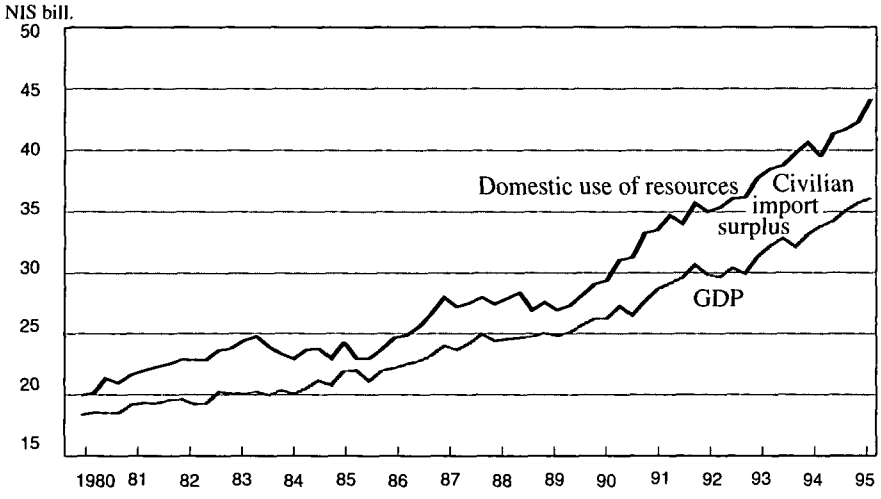
terms of trade deteriorated—the price of imports, which constitute an important intermediate for exports, rising more than the price of exports. Secondly, nondiamond industrial exports rose by a real 4 percent—the slowing of their rate of growth reflecting a steep drop in defense exports, which are very volatile. Excluding this item, industrial exports rose by 7–9 percent (see Chapter 6). Note that industrial production rose by 8 percent in 1995, and the gap between exports and production was reflected by an

increase in industrial stocks, which grew by 1.2 percent of business-sector product (at constant prices).[3] At this stage it is not clear whether this increase was planned or not.

Private consumption rose by 7.2 percent in 1995, after an 8.9 percent increase in 1994 (Table 2.10). Consumption of durables increased by a notable 15 percent—providing further evidence of the moderate influence on demand of tight monetary policy. Disposable private income rose by more than private consumption—8.2 percent (Table 2.11)—so that the private saving rate went up, after declining steadily in the last few years. The rise in the private saving rate was sharper when adjusted for durables consumption.

As the integration of new immigrants in the labor force was reflected by their income and lower unemployment rate, their increased share of national income had opposing effects on the saving rate. On the one hand, the saving rate of immigrants, who have been in Israel for a short time, is lower than that of the established population, so that the saving rate is reduced. On the other, the immigrants' saving rate is approaching that of the established population relatively quickly, and this becomes increasingly predominant the longer the immigrant has been in Israel.

Figure 2.2
Domestic Use of Resources, GDP, and the Civilian Import Surplus, 1980-95 [a]



[a] Quarterly data, seasonally adjusted.
SOURCE: Based on Central Bureau of Statistics data.

[3] This is another illustration of the mild effect of contractionary monetary policy, which appears to be explained by Israel's access to the international capital market.

In addition, some of the increase in net tax receipts in 1994, which helped to slow the rise in disposable income, was temporary, and was reflected by a decline in the private saving rate. In 1995 this effect was reversed: the decline of the share in GDP of net tax receipts was not considered permanent because the public expenditure rate fell slightly in 1995. The difficulty of cutting public expenditure makes it more likely that tax rates will be raised, and this is perceived by individuals as an indication of expected income.

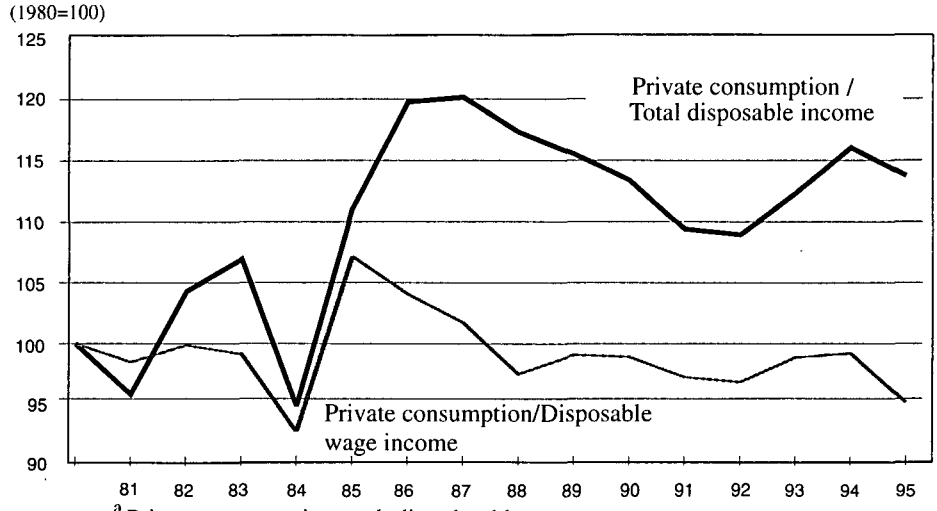
Table 2.5
Indicators of Business-Sector Profitability and Investment, 1983–95

	1983–85	1986–89	1990–95	1992	1993	1994	1995
Index, 1986 = 100							
Real wages[a]							
Total	83.8	107.2	111.1	108.4	109.1	111.2	114.8
of which Industry[b]	89.2	104.8	118.3	114.3	116.0	119.6	125.0
Unit labor costs							
Total	92.1	102.4	98.3	95.1	96.8	99.6	101.1
of which Industry	93.4	99.2	97.2	95.9	95.9	97.9	97.9
Percent							
Gross rate of return on capital							
Total (excl. roads)	12.8	9.6	13.6	15.4	14.5	13.4	12.6
of which Industry	16.7	12.8	14.9	15.8	16.0	15.7	15.5
Net rate of return on capital							
Total (excl. roads)	13.8	5.0	11.6	15.3	13.1	10.9	8.9
of which Industry	19.8	11.8	15.2	17.2	17.4	16.3	15.3
3-month Eurodollar interest[c]	10.2	7.7	5.2	3.7	3.1	4.6	5.9
Real interest on overdrafts[d]							
Current year	48.1	20.5	10.9	9.1	7.5	10.5	14.6
Moving 3-year average	32.0	31.4	11.4	10.8	8.5	9.0	10.9
Real gross yield to maturity of 10-year bonds[e]	3.4	4.7	3.0	2.6	2.9	3.2	4.3
Tax on nonwage income	24.8	31.5	26.4	23.7	26.3	30.3	29.6
Statutory corporation tax	62.7	49.0	39.8	40.0	39.0	38.0	37.0

[a] Deflated by product prices at factor cost
[b] Deflated by the price of industrial product.
[c] In annual dollar terms.
[d] Ex post.
[e] Calculated from 1982.
SOURCE: Based on Central Bureau of Statistics data.

Wage payments to public-sector employees continued to rise appreciably in 1995—by 18 percent (in nominal terms), but their effect was more moderate than in 1994. The wage hike increased the income of employees in this sector, though it is reasonable to expect that individuals will predict an increase in taxes to finance this. It could be claimed that in 1994 the situation regarding the need to finance wages became clear only some time after the increases had been granted, and in the short term wage increases would act to expand private consumption without the opposing effect arising from the need to finance them. In 1995, however, it was clear from the outset that there would be no wage reductions or dimissals in the public sector, so that the government could be expected to finance the increase by taxes, reducing private disposable income in the future.

Figure 2.3
Indices of Private Consumption as Proportion of Total Disposable Income and Disposable Wage Income, 1980-95[a]



[a] Private consumption excluding durables.
SOURCE: Based on Central Bureau of Statistics data.

The 1995 public-sector wage increment was largely expected, so that it had a moderate effect on private consumption. This is one of the factors behind the weakening of the traditional connection between disposable wage income and private consumption (Figure 2.3). The deterioration in the terms of trade also operated in the same direction, since a rise in the price of imported goods makes current expenditure more expensive and acts to reduce it. Tight monetary policy also acts to weaken that connection through higher interest rates, which increase saving (and reduce consumption).

The public sector affects demand directly via two channels—public consumption and public investment in the principal (i.e., nonresidential) industries. In 1995 the rate of growth of public consumption (excluding direct defense imports) was 2.7 percent. Civilian consumption rose by about 4 percent, so that per capita civilian consumption increased. Nonetheless, the rise in labor input in the public sector was similar to the increase in the civilian labor force, which reflects the potential for growth. In the long term, this development exerts pressure on the labor market. If it persists, as the economy approaches full employment, this could be reflected by increases in wages and prices.

3. THE SUPPLY OF DOMESTIC PRODUCT

Business-sector product rose by an impressive 8.6 percent in 1995, after an increase of 7.6 percent in 1994 (Table 2.1). At a rough estimate, potential output,[4] which provides an indication of the expansion of business-sector product, grew at a similar rate (6–8 percent) to actual output.

The growth rate of potential output reflects the expansion of the supply of output in or near a full-employment situation (or in the long term), and could be misleading in the short term if the situation is not approaching full employment. However, the fact that the unemployment rate has fallen to 6 percent, similar to the rate prevailing in 1988, indicates that the economy was approaching full employment in 1995. The marked increase in output did not reflect an increase in productivity (due to technological improvements inherent in capital), but was made possible by a greater rise in labor input than in the labor force.

Factors of production and productivity

The large extent of investment since the mass immigration began is reflected by the rapid rise in gross capital stock. This was 9 percent to the beginning of 1995, and it continued to rise at a similar rate to the beginning of 1996, encompassing most of the principal industries (Table 2.9), at similar rates. The exception is construction, whose growth rate was even higher. Net capital stock also soared—by 11.5 percent. In spite of the rapid rise in capital stock, gross capital stock per employee was still lower than in 1989, before the influx of immigrants began (Figure 2.1). The relatively sluggish convergence of capital stock to the desired level is explained mainly by the cost involved in the rapid adjustment of capital stock.

The civilian labor force grew by 3.5 percent in 1995, as immigrants continued to arrive at a rate similar to that of 1994 (75,000) and the working-age population rose. The increase in the civilian labor force reflects the potential expansion of the labor supply in

[4] This estimate is based on the growth rates of the factors of production—capital stock (9 percent) and the civilian labor force (3.5 percent)—plus a 1–2 percent rise in productivity.

Table 2.6
Gross Domestic Investment, by Type of Asset, 1981–95

(annual change, percent)

	NIS million 1995	Quantity						Price	
		Annual average							
		1981–85	1986–89	1990–95	1993	1994	1995	1994	1995
Gross domestic investment	65,115	0.0	2.8	15.4	3.9	10.0	10.8	9.0	7.6
Change in inventories	3,382								
Fixed investment	61,733	0.4	2.1	15.0	1.5	14.0	9.3	8.1	7.8
Residential construction[a]	17,711	–5.2	3.0	11.4	–23.7	3.1	18.7	9.8	10.0
Nonresidential investment	44,022	3.7	2.0	16.6	16.6	18.3	6.0	7.5	6.9
Shipping and aviation	973								
Nonresidential investment excl. shipping and aviation	43,049	3.8	2.0	16.0	16.8	16.5	6.3	7.6	6.8
Nonresidential and other construction	15,544	–3.4	7.1	17.1	28.3	12.5	7.2	9.0	10.2
Plant and equipment	21,749	8.3	0.2	14.7	13.2	18.6	9.9	5.3	5.6
of which Imports	14,561	6.9	–1.7	17.4	14.9	28.9	12.3	4.5	4.3
Domestic production	7,188	9.8	2.9	10.1	10.7	2.4	5.2	6.4	8.3
Transport equipment	5,757	1.1	3.4	18.6	5.8	19.1	–8.4	12.3	4.2

[a] Including earthworks.

SOURCE: Central Bureau of Statistics.

the long term, but in the short term the latter could outstrip the former. This is because of several factors: first, the number of hours worked per employee rose; second, if the actual unemployment rate is greater than the natural unemployment rate, the pool of unemployed persons is another source of increased supply in the short run; third, foreign workers entered Israel's labor market. In 1995 these three factors acted to increase labor input in the business sector by 7 percent.

In the last few years the factors of production have expanded appreciably. Since the beginning of the decade capital stock has risen by a cumulative 35 percent and business-sector labor input by 43 percent (the number of employed persons has risen by 36 percent). Note that capital stock began to rise significantly only in 1993. The combination of all the factors of production in the production process and the adoption of new technologies, which are the corollary of extensive investment, takes more than one year and involves adjustment costs. These last involve expenditure on installing equipment and adapting it to firms' special needs. They also include the creation of production bottlenecks in the short term, as production processes may have to be temporarily halted. In addition, costs are incurred through the need to train employees to use the new equipment and, finally, by having to take on new employees and train them—which often involves diverting the time and skills of veteran employees for this purpose.

The high educational level of the new employees often extends the process, as it takes longer for skilled employees to reach their full potential contribution to production than for unskilled ones.

Adjustment costs decline with time, while the benefits from the technological changes increase. In 1990 and 1991 factor productivity rose at an annual average rate of 4.3 percent, but stabilized in 1992. In 1993–94 it declined by a cumulative 2 percent (Table 2.3), while in 1995 it remained unchanged. Although its decline was checked, this was not reflected by the rate of return on gross capital which, as stated, continued to fall, because of the significant deterioration in the terms of trade. When adjusted for the latter, the rate of return on gross capital was 13.7 percent in 1995 (the actual yield was 12.6 percent).[5] According to the same calculation, the rate of return in 1994 was 14.2 percent.

4. DEMAND, SUPPLY, AND THE REAL EXCHANGE RATE

As stated, the expansion of demand for business-sector product, measured by business-sector use of resources, was similar to that of supply, measured by potential output. Another indication of this is the fact that the share of the import surplus in GDP remained steady (Table 2.7). Although the import surplus remained virtually unchanged, the deterioration in the terms of trade in 1995—with the acceleration of import prices

[5] This calculation is based on the assumption that import and export prices rise at the same rate, calculated as the weighted average of import prices (according to the share of imports in total imports and exports) and export prices (according to the share of exports in total imports and exports).

(excluding diamonds), which rose by 9.8 percent, while export prices (excluding diamonds) rose by only 5.4 percent—should be added to it. It appears that had it not been for the deterioration in the terms of trade, which makes it more expensive to switch to foreign demand, the move to this kind of demand would have been greater.[6] Note that if individuals regard the deterioration in the terms of trade as temporary they will postpone their foreign demand, thus moderating the increase in the import surplus.

Table 2.7
The Import Surplus and the Real Exchange Rate, 1981–95

(annual change, percent)

	Annual average				
	1981–85	1986–89	1990–95	1994	1995
Import surplus/GDP ratio[a]	–0.3	0.9	1.9	2.4	–0.2
Price of business-sector product[b] relative to					
Export prices[c]	1.8	5.3	3.4	4.2	2.2
Import prices[c]	1.9	7.1	3.2	2.7	–1.9
GDP price relative to					
Export prices	1.6	6.5	4.3	6.4	3.8
Import prices	1.8	8.2	4.1	4.8	–0.4
Export prices	208.3	19.5	8.9	5.8	5.4
Import prices	211.3	17.6	9.2	7.4	9.8
Currency-basket exchange rate	207.6	17.5	9.6	7.8	4.6
Product price					
Business sector	207.5	26.0	11.5	8.4	6.8
Business sector incl. housing	208.7	26.0	12.7	10.3	7.7
Total	208.4	27.4	13.7	12.6	9.3

[a] Percentage points, at constant prices.
[b] Including housing.
[c] Excluding diamonds.

The real exchange rate, measured by the price ratio of domestic business-sector product (including housing services) to exports (excluding diamonds), appreciated by 2.2 percent in 1995, compared with 4.2 percent in 1994. Since the late 1970s Israel has experienced real appreciation. According to implicit export prices, deflated by implicit business-sector product prices (including housing services), annual average real appreciation was 3.4 percent (Figure 2.4). This calculation is based on 1980 as the base year, and yields the same result when 1986 is used as the base year. An alternative measure of the real exchange rate, obtained from the price ratio of domestic business-sector product to imports, yields real *depreciation* of some 2 percent in 1995.

[6] Another way of looking at this is to regard the deterioration in the terms of trade as having an adverse effect on national income, without which demand would have expanded to a greater extent.

Table 2.8
Gross Fixed Investment, by Industry, 1981–95

(real annual change, percent)[a]

	NIS million 1995[b]	Quantity					
		1981–85	1986–89	1990–95	1993	1994	1995
Industry	13,266	10.1	–1.1	18.2	24.4	30.6	9.1
Agriculture	986	5.5	–14.5	10.2	23.5	–7.2	12.9
Transport and communications	13,087	0.9	5.7	20.0	6.8	21.2	0.6
Excluding transport vehicles	6,358	1.9	9.0	17.7	8.1	11.4	10.7
Construction equipment	1,134	–18.7	11.7	34.4	29.0	19.7	6.1
Private services	4,871	9.0	0.4	15.8	10.5	30.2	7.0
Electricity	4,008	–7.8	15.7	16.3	35.9	5.9	23.9
Waterworks	312	–12.7	0.8	7.0	48.9	–33.9	20.5
Earthworks	174	–26.1	24.6	31.0	–20.1	–41.1	0.0
Total business sector	37,838	3.7	1.9	18.2	16.4	21.5	7.1
Public services	6,184	1.6	5.0	8.1	17.5	1.4	0.0
Total principal industries	44,022	3.3	2.5	16.4	16.6	18.2	6.1
Residential construction	17,711	–5.1	3.0	11.4	–23.7	3.1	18.7
Total fixed investment	61,733	0.0	2.7	14.9	1.5	13.9	9.3

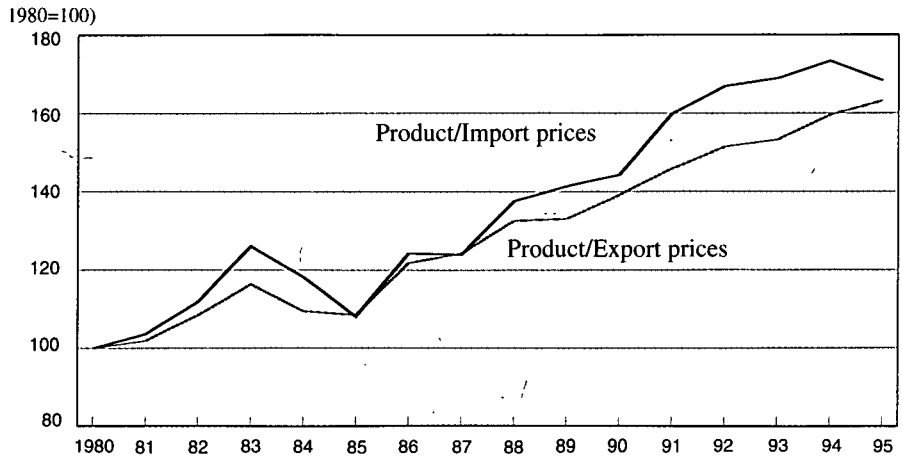
[a] At 1990 prices.

[b] At current prices.

SOURCE: Based on Central Bureau of Statistics data.

The question is, what are the roots of the real appreciation? Since there is no general agreement regarding the best definition of the real exchange rate, several indices are commonly used, i.e., the ratio between the wholesale price index and the CPI, between the weighted price index of imports and exports, on the one hand, and output, on the other, between import and output prices, and between the prices of exports and output. While the latter is relevant for this calculation, it is not consistent and may refer to GDP, business-sector product, or business-sector product including housing. For the sake of clarity, the index in the present discussion refers to the ratio between the prices of exports and of business-sector product including housing.[7] Figure 2.4 shows that movements of the exchange rate according to several definitions are closely correlated (Table 2.7 presents some other indices).

Figure 2.4
Ratio of Implicit Price Index of Business-Sector Product Prices[a] to Import and Export Prices,[b] 1980-95



[a] Including housing. [b]Excluding diamonds.
SOURCE: Based on Central Bureau of Statistics data.

In addition to the factors that affected the real exchange rate in 1995—which will be discussed in detail below—long-term trends have been at work in the background in the

[7] A similar definition—the ratio of export prices to the implicit price index of GDP—was used by Leora Meridor and Shula Pessach in their article, "The Real Exchange Rate in Israel: a Long-Run Perspective," *Economic Quarterly*, August 1995, pp. 284–317 (Hebrew).

Table 2.9
Gross Capital Stock, by Industry, 1981–96[a]

(real annual change, percent)

	1981–85	1986–89	1990–95	1992	1993	1994	1995	1996
Industry	5.1	3.8	5.8	4.8	5.6	7.7	10.5	10.4
Agriculture	1.2	–0.9	–2.8	–3.3	–3.0	–1.7	–2.0	–0.7
Transport and communications	1.6	2.4	5.0	4.9	6.5	7.2	9.0	8.0
Construction equipment	–1.4	–4.6	11.2	22.7	11.9	17.2	19.6	18.4
Private services	5.9	4.2	5.3	4.3	5.0	5.9	9.3	9.6
Electricity	6.7	4.7	8.0	7.3	7.0	9.3	8.9	10.4
Waterworks	2.9	0.0	–0.1	–0.4	–0.1	0.9	–0.6	–0.4
Earthworks	19.2	3.6	14.1	17.8	27.5	17.2	8.7	8.0
Total business sector	3.4	2.7	5.0	4.5	5.4	6.9	8.8	8.7
Public services	3.6	3.6	4.1	3.9	4.1	4.9	4.6	4.4
Total principal industries	3.5	2.9	4.8	4.4	5.1	6.4	7.7	7.7
Residential construction	5.1	3.1	4.5	6.4	6.0	4.1	4.0	4.6
Total fixed assets	4.2	3.0	4.7	5.3	5.5	5.3	6.0	6.3

[a] Beginning-of-year figures, at 1990 prices.

SOURCE: Based on Central Bureau of Statistics data.

last few years. The experience of Israel and developed economies throughout the world has shown that economic growth such as Israel has experienced since the influx of immigrants began (in 1989) tends to be accompanied by real appreciation. This is because growth is characterized by a relative rise in productivity in tradable goods, and is accompanied by an increase in the demand for nontradable goods. This plays a crucial part in explaining the real appreciation which has prevailed in Israel since the late 1970s. Another process which has been evident since 1987 is the exposure of the economy to competing imports, expressed by the reduction of tariffs and removal of other restrictions on imports, diverting demand to imports, and reducing the prices of nontradables (without altering export prices), i.e., real depreciation.[8] The effect of this factor becomes weaker as the main stages of the process are completed.

The three principal elements affecting the real exchange rate in 1995—the terms of trade, fiscal policy, and monetary policy—are discussed below.

The terms of trade

The deterioration in the terms of trade involves a reduction of national income. This was estimated at 1.5 percent in 1995, restricting demand for both tradable and nontradable goods. If the economy continues to approach a full-employment situation—as was the case in 1995—relatively more factors of production become available for tradable goods, creating the potential for real depreciation. The extent of the income effect depends on the permanence of the deterioration in the terms of trade.

No clear trend is evident in the 1980s and 1990s regarding the development of the terms-of-trade index. An examination of this index shows that it has a random walk characteristic, so that the present level provides the best prediction of the next period. Hence, the deterioration in the terms of trade should not be regarded as a temporary phenomenon. There are, however, two indications that the deterioration of the terms of trade is partly temporary. First, some 40 percent of the deterioration is explained by the weakening of the dollar against other currencies. Cross rates during 1995 developed unevenly, with the dollar weakening in the first six months and rallying in the second half of the year. If we assume that the level at the end of 1995 is sustained,[9] there will be some adjustment of the deterioration in the terms of trade. Secondly, according to the IMF forecast of May 1995 prices of raw materials excluding fuel will fall by 2 percent in SDR terms in 1996,[10] and the price of fuel by 5 percent. Prices of finished products, on the other hand, are expected to rise by about 1 percent in 1996, after falling by 4 percent in 1995. Israel's exports are final-goods-intensive, and its imports are intermediates-

[8] The removal of tariffs creates a positive income effect and works in the opposite direction, i.e., causes real appreciation. The generally accepted view is that the substitution effect predominates.

[9] It is generally accepted that the behavior of cross rates is that of a random walk, so that the best prediction for the coming year is the level of the last quarter.

[10] SDR is the currency unit of the IMF; the weights of the currencies that comprise it are independent of changes in cross rates.

Table 2.10
Total Private Consumption, 1981–95

(annnual change, percent)

	NIS million 1995[a]	Quantity							Price	
		Annual average								
		1981–85	1986–89	1990–95	1993	1994	1995	1995*	1994	1995
Consumption of										
Food, drink, tobacco, and other nondurables	61,375	4.7	6.5	7.5	10.1	9.0	7.2		9.3	7.6
Durables	19,001	5.9	12.8	14.6	0.5	11.1	15.1		6.9	8.1
Other services	42,734	4.4	6.7	7.2	7.6	9.4	8.5	–0.8	10.7	6.3
Services of nonprofit organizations	3,630	2.4	2.6	4.7	2.9	8.8	2.9		12.5	15.1
Housing services	35,334	3.9	2.4	3.5	4.5	3.2	2.8		20.8	13.8
By residents abroad	8,253	1.5	11.4	7.8	14.0	22.9	9.8		9.2	10.0
By nonresidents in Israel (–)	9,083	2.2	–2.4	8.6	8.0	8.6	16.6		7.0	2.9
Total excl. durables	142,244	4.5	6.5	6.5	8.2	8.6	6.2	3.7	12.4	9.1
Total private consumption	161,245	4.7	7.4	7.3	7.2	8.9	7.2	5.1	11.8	8.9

*See note to Table 2.1.
[a] At current prices.

SOURCE: Central Bureau of Statistics.

intensive. Consequently, if the forecast is realized, Israels's terms of trade will improve. In the last few years, however, the correlation between world prices of raw materials and finished products, on the one hand, and Israel's terms of trade, on the other, has been weak, so that assessments regarding the temporary nature of the deterioration in the terms of trade should be treated with caution.

Apart from having an income effect, higher import prices also divert demand to nontradables, causing their price to rise (without affecting export prices), i.e., real appreciation. If the deterioration in the terms of trade is expected to be temporary, the diversion will be more intensive, as will the pressure for real appreciation.

The deterioration in the terms of trade also affects the real exchange rate by making primary commodities more expensive. In 1995 the rise in the price of imported intermediates exerted upward pressure on import prices, reducing the supply of output, while causing real appreciation and increasing the import surplus.

Thus, Israel's experience has shown that the income effect, which creates pressure for real depreciation, outweighs both the substitution effect (on the demand side) and the supply effect, which exerts pressure for real appreciation.

Fiscal policy and excess demand

Although fiscal policy did not lead the marked rise in demand, it contributed to its expansion, and hence acted to create real appreciation. The expansion of public consumption and decline in net tax rate are not the sole sources of influence on the real exchange rate. The wage hikes granted to public-sector employees in 1993–94, which continued in 1995, could cause real appreciation in certain circumstances.

The wage increases and security of positions in the public sector make posts there more attractive. This may serve to increase public-sector employment even if the peak number of posts is reduced, provided not all the posts were manned from the outset. The number of Israelis employed in this sector rose by 4.4 percent in 1995.

Alongside the rise in real wage costs in the business sector, there was a marked increase in the number of employees in that sector. This indicates that the wage rise was the result of the relative increase in business-sector demand for labor rather than of lower supply, as employees went to the public sector. Hence, the generous wage increments were not transmitted to any significant extent to the business sector, via the mechanism of increased public-sector employment at the expense of the business sector, and the nominal wage rise in the public sector did not make a notable contribution to real appreciation.[11]

The significant deterioration in Israel's terms of trade in 1995 (mainly at the beginning of the year, continuing the 1994 trend) increased the current-account balance-of-payments deficit (especially in the short term), and tight fiscal policy should have been

[11] The distortion associated with the taxes required to finance wage increments reduces permanent income. This acts to reduce demand, including demand for nontradables, and hence exerts pressure for real depreciation.

Table 2.11
Private Disposable Income and the Saving Rate, 1991–95

	NIS million, at current prices					Real change (percent)[a]					
	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995	1995*
National income	96,922	116,458	134,621	161,465	186,279	10.2	8.5	4.6	7.3	8.2	6.0
General government domestic income from assets	1,914	2,342	2,113	2,346	3,460	6.3	10.5	–18.4	–0.7	38.3	35.5
Depreciation[b]	17,253	20,079	24,300	29,780	35,369	4.1	5.1	9.5	9.6	11.3	9.1
Gross private income from economic activity	112,261	134,195	156,808	188,899	218,188	9.2	8.0	5.7	7.8	8.3	6.1
Total direct taxes[c]	23,249	28,160	34,673	44,669	53,534	1.9	9.4	11.4	15.2	12.4	10.1
Net current transfer payments	12,980	15,284	17,925	21,297	25,841	9.4	6.4	6.1	6.3	13.8	11.4
Interest on internal debt	8,360	9,121	10,239	11,358	13,836	1.9	–1.4	1.6	–0.8	14.2	11.9
Gross disposable income from domestic sources	110,352	130,440	150,299	176,885	204,331	10.3	6.8	4.2	5.3	8.3	6.1
Transfers to individuals from abroad[d]	4,850	6,258	7,564	9,620	10,946	8.3	16.6	9.3	13.8	6.7	4.5
Total disposable income	115,202	136,698	157,863	186,505	215,277	10.2	7.2	4.5	5.7	8.2	6.0
Percent											
Saving rate on income from domestic sources	26.0	25.1	23.0	20.3	21.1						
Total saving rate	**29.1**	**28.6**	**26.7**	**24.4**	**25.1**						

* See note to Table 2.1

[a] In terms of purchasing power of basket of consumption goods.

[b] Private sector.

[c] Direct taxes include income tax, national insurance payments (including employers' contributions), and other property taxes.

[d] Not including transfers on capital account.

SOURCE: Based on Central Bureau of Statistics data.

implemented in order to moderate this increase. Policy of this kind helps to improve the balance-of-payments situation but tends to harm employment. In 1995 the buoyant economy created favorable conditions for budgetary restraint—but these were not utilized.

Monetary policy and the exchange rate

The contractionary monetary policy adopted in 1995, reflected by a rise in the average interest rate on the monetary loan (also in comparison with international rates), created an incentive for capital inflow, because of the yield gap. Throughout 1995 the Bank of Israel intervened in the foreign-exchange market, absorbing part of the capital inflow and thus moderating the rate at which the exchange rate rose. The exchange rate of the NIS vis-à-vis the basket of currencies continued to be managed within a band. During the year this exchange rate rose by an average of 4.6 percent—1.4 percent less than indicated by the slope of the crawling band—while the exchange rate against the dollar remained unchanged.

It is generally thought that in the long term the real exchange rate is not affected by changes in the nominal exchange rate. In the short term this does not necessarily hold because of downward price-rigidity. In order to enable the nominal exchange rate to induce real change, in an inflationary economy there should be downward rigidity of the rate at which prices of nontradables rise. If the rate at which the prices of nontradable goods increase is not slowed, that sector will not expand. This means that the pace at which employment expands in the tradables sector will slow, and there will be no equivalent increase in employment in the nontradables sector, so that total unemployment will rise. In effect, the unemployment rate fell in 1995 and the rise in the price of business-sector product (which serves as an indicator of nontradables prices) slowed.[12] Thus the data do not support significant downward price-rigidity in nontradables, and the slowing of the rise in the nominal exchange-rate did not play a major part in creating real appreciation in 1995, most of the effect being felt towards the end of the year.

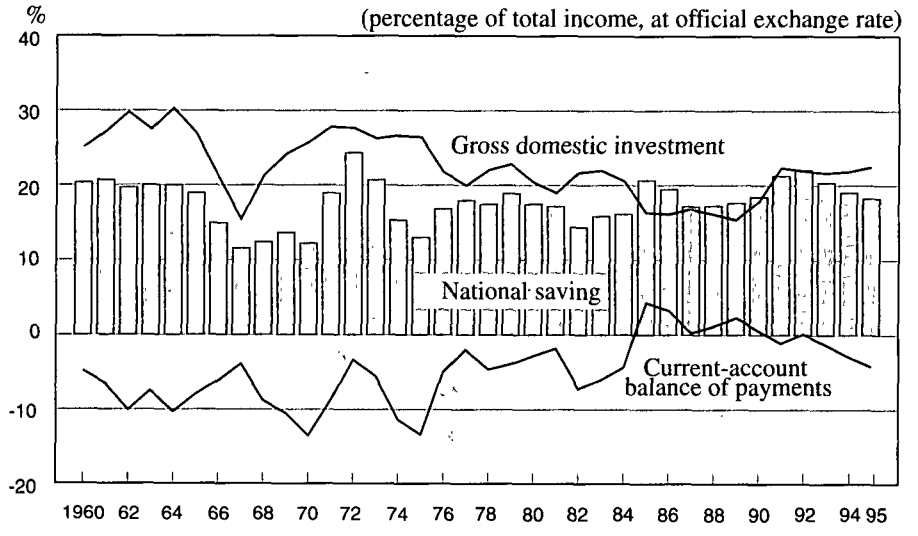
Monetary policy also exerts a direct effect. The rise in short-term interest motivates economic agents, who are influenced by domestic interest rates, to reduce demand for all goods (for current consumption), including nontradables. This contributes to real depreciation, though it would appear that in 1995 this effect was not very marked

5. NATIONAL SAVING, INVESTMENT, AND THE CURRENT ACCOUNT

The national saving rate was 18.1 percent in 1995, down from 18.7 percent in 1994 (Table 2.12), continuing the trend evident since 1993. But whereas in 1994 the fall in the private saving rate led the drop in national saving, in 1995 the reduction of the latter was led by public-sector dissaving.

[12] This was also evident in the prices of nontradable goods in the CPI.

Figure 2.5
Rate of Saving, Investment, and the Current Account, 1960-95



SOURCE: Based on Central Bureau of Statistics data

The public-sector dissaving mainly reflects government policy, which departed significantly from the planned deficit path. Most of the deviation was the result of the reduction of the net tax rate (excluding the Health Tax) as a share of GDP, and the continued wage hikes in the public sector. In 1994 the government submitted a supplementary budget, in response to an exceptional rise in tax receipts. The government did not react in the same way to the fall in tax receipts in 1995, however. The influence of the public sector on private saving was described extensively in last year's issue of this publication. In essence, the contention was that in the short term wage increments in the public sector increased private consumption and caused private saving to fall, even though individuals realized that it would be necessary to finance these increments by taxes. The reasons for this were the uncertainty surrounding the source of the finance (an increase in taxes or a reduction in expenditure), the extent of the wage hikes, and their permanence.

These arguments are not valid for 1995, as the picture has become much clearer. Consequently, in 1995 private consumption did not increase at the same rate as did all disposable income, so that some of the rise in the private saving rate is a response to

Table 2.12
National Saving, Investment, and the Current Account, 1981–95

	Percent of total income[a]								Annual average ($ million)	
	1981–85	1986–89	1990–95	1991	1992	1993	1994	1995	1994	1995
Gross saving[b]										
General government	–6.9	1.2	–0.5	–0.8	0.5	0.1	0.4	–0.7	311	(637)
Private	24.4	16.4	20.1	21.9	21.4	20.1	18.3	18.7	15,083	17,927
Total	17.5	17.6	19.7	21.0	21.9	20.2	18.7	18.1	15,394	17,289
Gross investment										
Inventories	0.4	0.1	1.1	1.3	1.0	1.4	0.9	1.2	738	1,122
Fixed nonresidential	12.7	11.6	13.8	12.5	13.1	14.6	15.6	15.3	12,862	14,606
Residential	6.7	4.5	6.6	8.6	7.9	5.7	5.5	6.1	4,492	5,876
Total	19.8	16.2	21.5	22.4	22.0	21.8	22.0	22.6	18,092	21,604
Capital transfers	0.7	0.4	0.3	0.4	0.3	0.3	0.3	0.3	225	261
Current account[c]										
Civilian import surplus[d]	6.6	3.9	7.0	7.0	6.2	6.5	8.0	9.1	6,554	8,721
Civilian unilateral transfers[b]	5.0	5.6	5.6	6.0	6.4	5.3	5.0	4.9	4,082	4,668
Total	–1.6	1.7	–1.4	–1.0	0.3	–1.3	–3.0	–4.2	(2,472)	(4,053)

[a] Total income is GNP (as per new SNA definitions) *plus* net unilateral transfers from abroad (converted to NIS at the official exchange rate).

[b] The current account in dollar terms is calculated as the difference between saving and capital transfers and investment, and hence does not necessarily fit the current account deficit as defined in Chapter 6.

[c] Saving *less* investment, *plus* capital transfers.

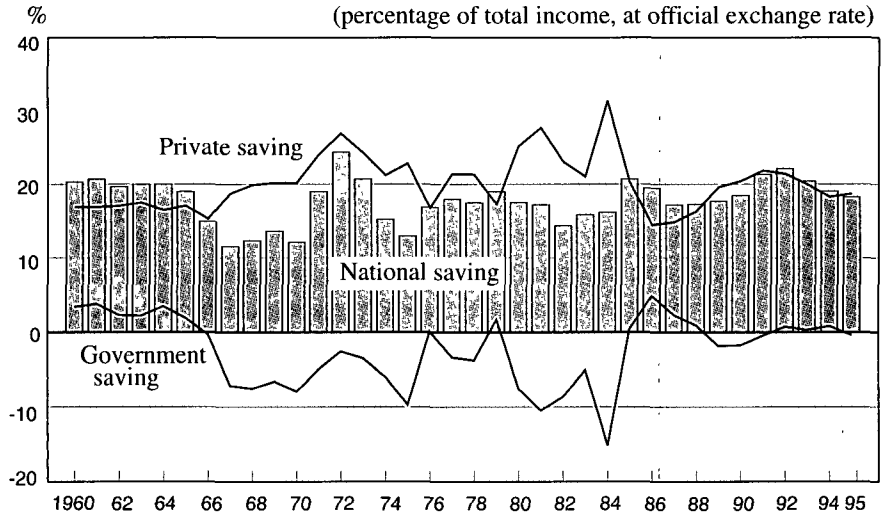
[d] Includes net payments to factors of production abroad.

SOURCE: Based on Central Bureau of Statistics data.

government dissaving. This reaction does not seem to have reached its maximum extent, however, as the rise in the private saving rate did not completely offset the decline in public saving, and thus reduced the national saving rate.

Here, too, the effect of the deterioration in the terms of trade is evident. If this is perceived as temporary, the private saving rate is likely to drop. The fluctuations in income are absorbed by savings, which also act as a shock absorber, moderating the effect on consumption and the standard of living. On the other hand, the rise in the price of current consumption as a result of the increase in the price of imported goods (which may be reversed to some extent in the future) has the same effect as a rise in the interest rate. While the deterioration in the terms of trade may be temporary, it makes current consumption more expensive and causes it to shrink, i.e., the private saving rate rises. Thus this deterioration has two opposing effects on the saving rate, which in sum tend to reduce private saving.

Figure 2.6
Gross National Saving Rate, by Sector, 1960-94



SOURCE: Based on Central Bureau of Statistics data

Contractionary monetary policy made a modest contribution to increasing private saving: past experience has shown that private saving responds positively—albeit to a limited extent—to a rise in the short-term interest rate.

Gross domestic investment accounted for 22.6 percent of total income in 1995, up from 22 percent in 1994 (Table 2.12). This is a very high level compared with the annual average in the 1980s (18.2 percent). The increase in the share of investment in 1995

reflects the expansion of investment in housing and inventory and a decline in investment in the principal industries. As Table 2.12 shows, alongside the expansion of the deficit in the balance of payments, in dollar terms investment rose by $ 3.5 billion, and the$ 2 billion increase in national saving moderated the rise in the deficit.

A review of saving and domestic investment by sector shows that domestic investment by the public sector contributed $1 billion to the expansion of the balance-of-payments deficit. When adjusted for government-initiated construction,[13] it contributed $4.5 million. To the extent that public investment makes business-sector production more profitable, part of the increase in private investment should also be ascribed to the contribution of public investment. The decline in public saving contributed about $1 billion to the expansion of the balance-of-payments deficit, though the rise in private saving due to the decline in public saving described above should be deducted from this figure. Assuming that the offset coefficient is about half,[14] the government contributed about $500 million to the decline in saving. Note that this calculation incorporates the contribution of the deterioration in the terms of trade to the reduction in public saving (principally through reducing income). Thus, a large part of the increase in the balance-of-payments deficit can be attributed to government policy.

In the long term, the rise in the external debt due to the balance-of-payments deficit will increase debt-servicing payments abroad and reduce national income. On the other hand, the investment will lead to more rapid growth, making it possible to service the debt. This is contingent on the government refraining from excessive interference in the investment process, which could make private investments profitable even though the yield to the economy as a whole is lower than the interest payments it faces. This will happen if the subsidy granted exceeds the possible positive externalities of physical investment. Three kinds of government intervention may give rise to such a situation. First, the Encouragement of Capital Investments Law provides generous incentives to invest in the principal industries. Secondly, the government borrows under the framework of the US government loan guarantees, and makes some of the money available to the private sector. Thirdly, restrictions on the free flow of capital could create differentials between domestic and foreign interest rates.

The marginal real foreign interest rate facing investors and savers, on the basis of the cost of borrowing under the US government guarantees, is estimated at 4 percent. The real yield to maturity on long-term (10-year) government bonds was 4.3 percent in 1995 (Table 2.5), and mortgage interest was 5.3 percent. Hence, the long-term domestic interest rate is similar to—and even slightly higher than—the international rate. This reduces the fear that investment is not profitable from the viewpoint of the economy as a whole.

This calculation is appropriate for firms that are not eligible for benefits under the Encouragement of Capital Investments Law. The law has several objectives (including

[13] Gross domestic investment by the public sector includes government-initiated construction. This construction is not implemented by the public sector, so is not part of the budget deficit.

[14] This estimate is based on the saving equation as calculated by Momi Dahan and Zvi Hercowitz in 'Fiscal Policy and Saving in an Open Economy' (1996) *Bank of Israel Discussion Paper* (Hebrew).

geographical dispersion), and is intended to foster investments which also increase the yield on other business-sector investments (positive externalities). The most significant benefit extended under the law is a grant or a tax exemption. The extent of the grant depends on the location of the investment, the industry (manufacturing, tourism, etc.), and the type of project. Thus, an industrial plant is entitled to a grant of 38 percent of the investment if it is located in Development Region A and meets specific criteria set out by the Investment Authority. In order to estimate the gap between the yield from the point of view of the private investor who is eligible for these benefits and the yield to the economy, the yield was calculated with a grant of 38 percent of the investment, reflecting the yield to the investor, and without such a grant, reflecting the yield to the economy. Different calculations show that in certain conditions the grant can create a sizable gap between the two yields. For example, a 7-year investment in Development Area A, with zero yield to the economy, gives a yield of 10.5 percent to the investor because of the law. Furthermore, some of the investments would be made anyway, and the additional benefits constitute economic rent. This calculation ignores the negative effect of the tax required to finance the grant. Were it not for the grant, the tax rate could be reduced, thereby encouraging firms to invest. Thus, the unduly high tax prevents investments which are worthwhile to the economy but not to the investor.

About a third of all investments in industry since 1994 received benefits under the Encouragement of Capital Investments Law, compared with some 40 percent in 1992 and 1993. The proportion of these investments made in Development Area A, where recipients are entitled to the maximum benefit, was 85 percent in 1995. According to the above analysis, the yield on some of these investments will not reach the level required to service the external debt incurred because of them.

The expansion of the share of investments in total income was accompanied by a decline in the proportion of national saving in total income, and was reflected by the current-account deficit. The long-term interest rate may have been affected by this. The current-account balance-of-payments deficit was 4.2 percent of national income in 1995—higher than in the period following the economic stabilization program of 1985. The average deficit was similar in 1982 and 1983, the period prior to the balance-of-payments crisis of 1994. Despite the basic differences in the state of the economy then and now, primarily as regards the rates of growth and inflation, measures should be taken to prevent the undermining of economic stability by capital outflow.

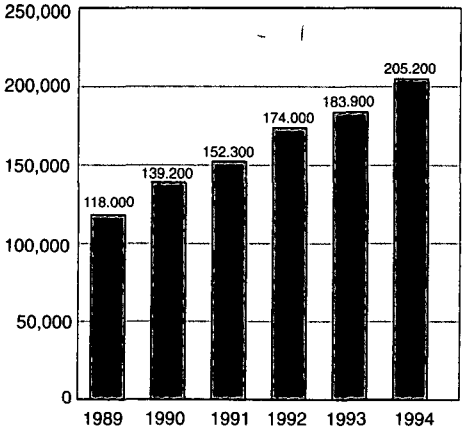
6. THE DISTRIBUTION OF INCOME

The income survey undertaken each year by the CBS provides information about the extent of inequality in income distribution. The survey encompasses about 80 percent of the population, and certain groups (e.g., the self-employed) are not fully covered. Although various indices are used to examine changes in income distribution, there is no agreement as to which is the best measure of income inequality, though the Gini index,

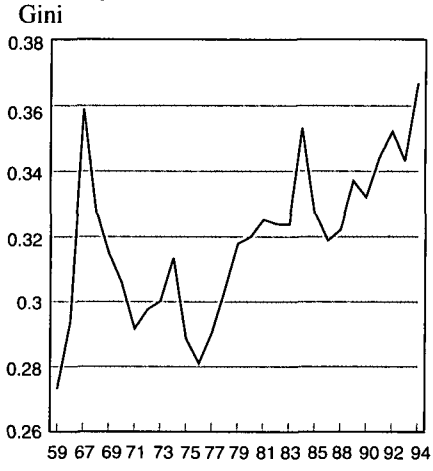
which measures this and the extent of the population below the poverty line, is the one generally used in the public debate.

In 1994 the Gini index of the gross income of wage-earners was at its highest level since 1960 (Figure 2.7); the average gross income of wage-earners in the lowest decile rose by a real 6 percent, while that of the top decile rose by a real 16 percent. At the same time, the number of families below the poverty line rose markedly (by 11.5 percent). In Israel the poverty line is defined as half the median income, and in 1994 this was NIS1,516 for a couple (see discussion in the survey published by the National Insurance Institute).

Figure 2.7
Families Below the Poverty Line, 1989-94[a]



Inequality Between Families of Wage-Earners, 1959-94

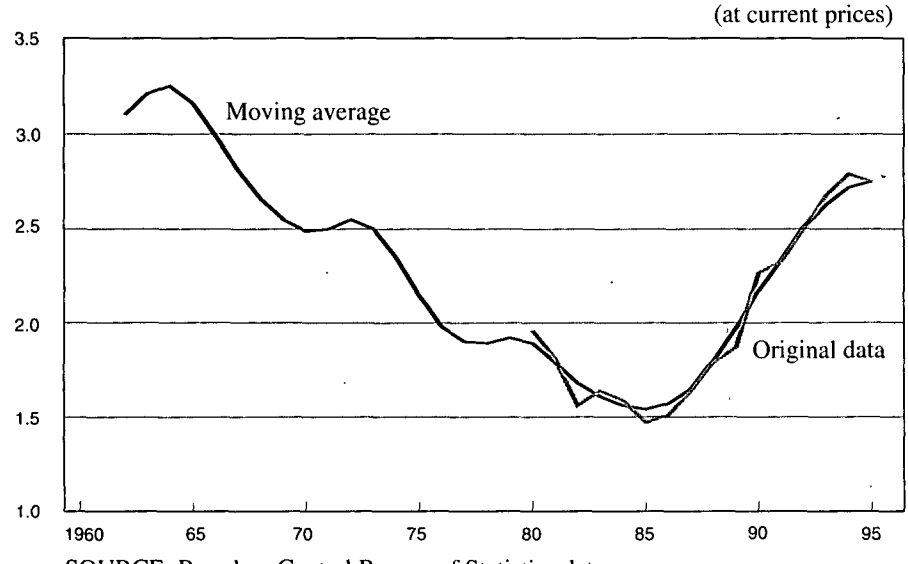


[a] In 1994 the poverty line was defined at NIS 1,516 per couple.
SOURCE: Central Bureau of Statistics and National Insurance Institute.

The rise in measured income inequality since 1990 may have been affected by the massive entry of new immigrants into the labor force. Their ignorance of the Hebrew language and lack of the professional qualifications required by Israel's economy forced them to offer their services in the short run in occupations that did not require a lengthy training period (physicians and engineers employed as street cleaners are an extreme example of this). The rise in the unemployment rate that accompanied the entry of the immigrants into low-wage occupations impaired the bargaining position of employees in the lower deciles, exerting downward pressure on their relative wage. The unemployment and inflation rates are among the main factors explaining changes in the inequality

of income distribution in Israel between 1960 and 1991.[15] Although there are no data on inequality for 1995, both the unemployment and the inflation rates declined, helping to reduce it. In addition, in August 1994 the government increased the allowances paid to low-income families (and introduced additional increases in June 1995). The effectiveness of these measures in reducing poverty will be evident once the data for 1995 has been analyzed.

Figure 2.8
Gross Infrastructure Investment as Share of Total Resources, 1962-95



SOURCE: Based on Central Bureau of Statistics data.

THE PRINCIPAL INDUSTRIES

Industry

The rapid growth of industrial product evident since 1990 persisted in 1995, at the relatively high rate of 8 percent.[16] In contrast to the three preceding years, however, this growth reflects primarily the expansion of production for the domestic market, while

[15] See, Momi Dahan, 'The Effect of Macroeconomic Variables on Income Distribution in Israel,' *Bank of Israel Economic Review*, 69, March 1996, pp. 19–43.

[16] Industry data in this section exclude diamonds, unless stated otherwise. The contribution of diamond exports to the rise in industrial product was 0.2 percent in 1995, the same as in 1994. The data on industrial production and labor inputs are both based on CBS calculations of industrial production.

exports rose by only 4 percent in real terms (compared with 14 and even 20 percent in previous years). The rapid growth was made possible by the considerable expansion of capital stock—especially tangible and R&D capital, each of which rose by 11 percent—in the wake of extensive investment in equipment, machinery and R&D since 1990. This process persisted, albeit to a lesser extent, in fixed investment in 1995. Labor input rose by only 4 percent, but as was expected in view of the increase in the infrastructures of tangible, human, and R&D capital, labor productivity also rose in 1995 by a substantial 4 percent, and total factor productivity went up by about 2 percent (Table 2.13).

There was a significant expansion of production for the domestic market in 1995 in industries producing inputs for construction, especially nonmetallic minerals and basic metals—which grew by over 20 percent, the highest rate since 1990–91—largely because of the acceleration of residential construction.[17] Industrial product excluding these industries increased by 6.5 percent. Many firms in the plastics, wood, and metal products industries also appear to have benefited from construction demand.

The contribution of private consumption to industrial product in 1995 was similar to that in 1994, but particularly large increases were evident in food, drink, and tobacco for the domestic market. This may be because a larger proportion of immigrants have found employment and are earning more, and because the number of foreign workers in Israel has risen. Textile, clothing, and leather production rose only slightly, however, apparently because of competition from imports as liberalization continues.

Two main factors account for the slowing of the rapid expansion of exports in 1995 in view of the potential afforded by the new markets of the Far and Near East, increasing openness to Israel as the peace process progresses, and the 8 percent growth of international trade. First, the decline in demand for the product of the defense industry, which accounts for a substantial proportion of Israel's exports, had a marked effect. When the exports of some of the major defense industry firms are excluded,[18] the estimated real growth rate of industrial exports was a reasonable 9 percent, similar to the 1990–95 annual average. Naturally, the decline in exports may also be connected with the demand for the civilian—rather than the defense—goods produced by the defense industry (e.g., the 25 percent drop in transport vehicles).[19]

Another reason for the slower growth rate of exports was the deterioration in the terms of trade. Whereas prices of industrial exports rose by 5.5 percent, those of imported intermediates went up by 9.7 percent, and those of domestic inputs rose by 11 percent on average, so that exports became less profitable. The slower rate of depreciation may also have contributed to this.

[17] See also the section on construction in this chapter.

[18] In these large firms the delivery dates of goods has a strong influence on the growth of exports in a given year. Export production may, thus, have been greater, so that accumulated stock will be marketed in 1996.

[19] See also the discussion in Chapter 6, where the calculation shows that industrial exports excluding defense goods rose by 7 percent.

Table 2.13
Industrial Indicators, 1980–95

(annual change, percent)

	1980–85[a]	1986–87	1988–89	1990–95	1993	1994	1995
Activity							
Output and exports (excl. diamonds)							
Gross value added	2.6	4.3	–2.4	7.3	6.8	7.4	8.2
Real industrial exports	9.2	7.5	6.5	9.1	19.5	13.9	3.7
Labor and capital inputs							
Labor input (hours)	0.5	1.0	–5.2	4.4	5.1	5.8	4.0
Number of employees	0.5	1.5	–4.9	3.8	5.3	4.6	4.1
Real gross capital stock	4.9	4.2	4.0	5.8	5.7	7.6	10.5
Gross capital stock in R&D	16.0	16.6	6.0	3.1	2.7	6.9	11.0
Real gross investment	6.1	7.4	–4.3	17.4	22.8	29.8	10.0
Productivity							
Gross value added per man-hour	2.1	3.3	2.9	2.8	1.6	1.5	4.0
Total factor productivity	0.6	2.4	–0.3	2.3	1.4	0.9	1.9
Profitability							
Relative prices (1991=100)							
Unit labor costs[b]	95.0	103.0	102.0	100.0	99.0	101.0	101.0
Labour/output prices	72.0	86.0	91.0	102.0	101.0	104.0	109.0
Input/output prices	107.0	106.0	104.0	100.0	99.0	100.0	100.0
Capital/output prices	94.0	105.0	89.0	98.0	98.0	97.0	96.0
Export/wholesale prices	125.0	114.0	105.0	100.0	102.0	100.0	95.0
Rate of return							
Gross capital[c]	17.5	12.7	12.4	14.9	16.0	15.7	15.5
Net capital[d]	21.0	11.7	10.5	15.2	17.4	16.3	15.3
Real interest	32.0	22.0	18.0	13.0	9.0	12.0	13.0
Industrial share price index	56.0	61.0	46.0	134.0	197.0	159.0	133.0

[a] The figures for 1980–82 are less reliable due to problems in calculating stock prices.
[b] The index of total labor costs (labor input *multiplied by* labor costs), deflated by the index of industrial product prices and *divided by* the index of industrial output.
[c] The yield to gross capital is the ratio of product *less* labor costs to capital stock (including vehicles).
[d] The net yield to capital is calculated as the ratio of product *less* depreciation and labor costs to depreciated capital stock.
SOURCE: Based on Central Bureau of Statistics data.

When the defense industry is excluded, the growth rate of the major industrial exporters (some 50 plants operating in the framework of 30 companies) was similar to that of all exports. Thus, the deterioration in the terms of trade appears to have harmed a wide range of firms, large and small alike, in various industries, preventing them from reaching their potential growth rates. This last should also have been higher in view of the marked increase in R&D investment in the last few years (an annual average of 11 percent since 1990); it is generally agreed that R&D contributes to the acceleration of export growth, both in Israel and other developed countries.

If the profitability of industrial exports did in fact decline in 1995, that of domestic sales rose; there may also have been a shift to more profitable industries. This conclusion is based on indicators of the total yield on capital, which show that this has fallen only slightly since 1994. Additional evidence of the greater profitability of the domestic market is the 11 percent increase in wholesale prices there (Table 2.13). The rise in net profitability may also have exceeded that in gross profitability, as corporation tax was reduced by one percentage point to 37 percent.

The main factor determining yield and profitability in industry is the cost of labor, which accounts for 70 percent of added value. Real labor costs rose by some 4 percent in 1995, similar to the increase in labor productivity, so that unit labor costs remained essentially unchanged after rising by 2 percent in 1994 (Figure 2.9). Note that the yield on capital remained stable in 1995 despite the extensive introduction of new capital stock into the production process. Although this capital is probably not yet fully utilized, its full extent is incorporated in calculations of the yield on capital.

Interest constitutes another element of yield, though its average share in product is far smaller than that of wages. It can, however, substantially affect the profitability of certain firms which, because of their financial structure, require extensive bank credit, or of small firms which do not have access to the international capital market. Real interest on domestic credit appears to have risen significantly in 1995, although an increasing number of firms are resorting, via the banks, to international credit, even for short-term loans. This credit is cheaper than domestic credit and has recently become more accessible as Israel's international economic standing and risk rating has improved.

In 1994 firms resorted extensively to public share issues, raising investment capital to a net amount of NIS 1.9 billion. This fell to almost zero in 1995, following the slump on the stock exchange. Industry did not raise capital through bond issues either.

Part of the investment in industry (both in capital assets and in R&D) came from capital grants.[20] Under the Encouragement of Capital Investments Law, these rose by 13 percent in real terms in 1995, after increasing at an annual average of 20 percent in real terms in 1990–94 (from $ 164 million to over $ 400 million). The grants increased in 1995, even though approved investments declined, because the share of investment in Development Area A—which is eligible for the maximum benefit—rose to 85 percent

[20] The alternatives to grants—tax exemptions and government guarantees—were chosen by some 25 percent of approved investors in the last few years. Note that allowance for accelerated depreciation and other benefits arising from running-in equipment and training employees have not been included here.

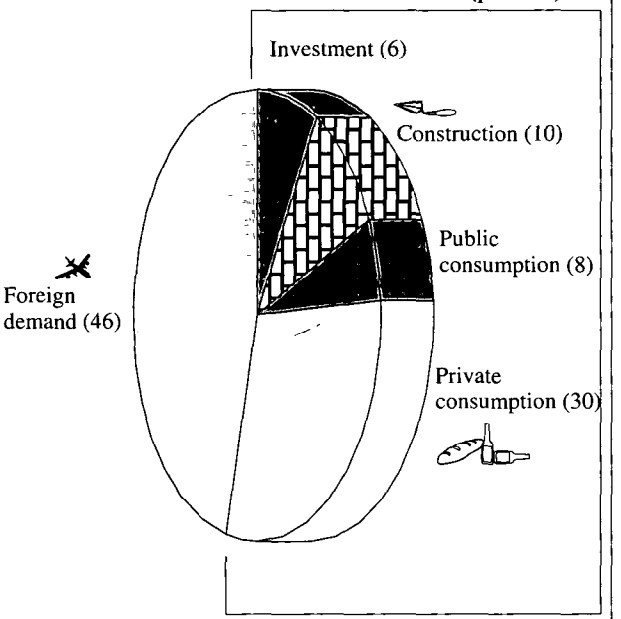
Figure 2.9

Contribution to Change in GDP (percent)

1995	1994	1993	Average 1993-95	Average 1990-92	
6.6	9.4	10.0	8.7	6.6	1. Total change in GDP due to final uses (1=2+3)
2.1	5.1	6.7	4.6	2.2	2. Exports
4.5	4.3	3.3	4.0	4.4	3. Domestic uses
2.4	2.7	3.2	2.8	1.6	*of which* Private consumption
0.4	0.4	-0.8	0.0	0.2	Public consumption
1.3	0.9	0.2	0.8	1.7	Construction
0.4	0.3	0.7	0.5	0.9	Investment
1.8	-1.7	-3.1	-1.0	-0.3	4. Adjustment and inventory
8.4	7.7	6.9	7.7	6.3	5. Actual industrial product[a]

[a] Including diamonds.

Average Share in GDP, 1993-95



SOURCE: Based on Central Bureau of Statistics data (input-output tables) for 1988 and 1990.

(compared with 69 percent in 1990). Grants actually paid since 1991 have been estimated at a total of 37 percent of all approved investments (which account for about a third of all investment in industry). There is grave concern that given such heavy subsidization, many investments were made which were not worthwhile for the economy as a whole, though they were for the manufacturer. Furthermore, the discriminatory element in this kind of aid apparently gives rise to additional distortions in the allocation of sources.[21]

The R&D grants given by the Office of the Chief Scientist of the Ministry of Industry and Trade also increased in 1995—by a steep 10 percent—after rising by an annual average of over 15 percent since 1990 (from $110 million to $300 million in 1995). New venture-capital funds were also established, some of them at the initiative of the government, to finance R&D investment. There was an estimated balance of over $500 million of risk capital in Israel by the end of 1995. Much of the investment is concentrated at the start-up stage, when a small investor finds it difficult to finance alone the initial development, which involves a high level of risk. The main economic justification for government involvement in this sphere is in the extensive positive externalities arising from the R&D of an individual firm. Note that the market for risk-capital funds in Israel has now reached the stage at which it is continuing to develop without government involvement, indicating that the time has come for this involvement to end.

Regarding the development of human capital, special mention should be made of the continued absorption of immigrants from the CIS, who have a relatively high level of education, but whose knowledge and experience in many cases did not fit Israel's economic needs. In June 1995, 79,000 immigrants were employed in industry (accounting for some 22 percent of all industrial employment), compared with 65,000 in 1994 and 50,000 in 1992.[22] In certain industries, such as metals, machinery, electricity, rubber, plastics, and textiles and clothing, immigrants account for 25 and even 30 percent of employment. Although a great many immigrants did not initially find work in occupations that were commensurate with their abilities, some 80 percent of firms reported that the immigrants had adapted well to the professional requirements of the job, most of them functioning as skilled production workers, which was not previously the case.

Note that 46 percent of the immigrants employed in industry have been working in the same plant for at least two years. This accumulation of experience and skill on the job contributes to productivity and the better utilization of the human capital inherent in this particular influx of immigrants. In addition, some 45 percent of the immigrants do shift-work—making a substantial contribution to the utilization of firms' old and new tangible capital (in the past many firms had to manage with one shift because of the difficulty of finding suitable employees for evening or night work). Thus, the process of immigrant absorption appears to have helped improve total productivity in 1995.

[21] See the discussion of investment in this chapter.

[22] Data from the *Survey of Immigrant Employment in Industry,* published by the Israel Manufacturers' Association in November 1995.

All in all, industry expanded rapidly in 1995, as productivity increased and the yield on capital—and also profitability—remained stable. In contrast with previous years, this expansion was biased towards the domestic market rather than exports. In addition, the accumulation of capital stock—tangible, human and R&D—which constitutes the essential basis for rapid growth in the future, persisted.

BOX 2.1 BASIC DATA ABOUT ISRAEL'S INDUSTRY

In 1995 there were some 19,000 enterprises (excluding diamonds) employing workers; 9,000 of them were small firms with less than 5 employees. The total number of employees in these enterprises was 390,000 in 1995. Another 10,000 were employed in the diamond industry. There were an estimated 25,000 engineers and scientists.

Industrial revenue amounted to NIS155 billion—about $51 billion—NIS12.3 billion representing direct nondiamond exports and NIS4 billion diamond exports.

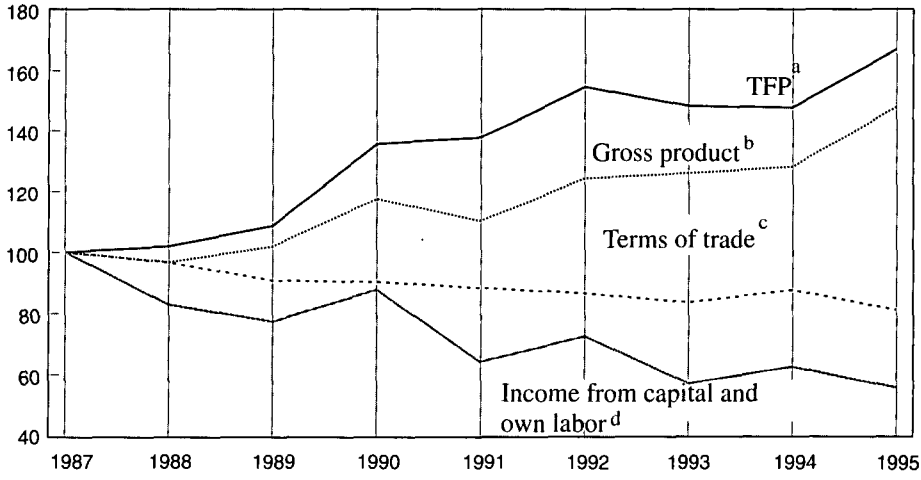
GDP (added value) constituted some 35 percent of output at nondiamond factor prices, and was divided up between return to labor (70 percent, i.e., NIS127 billion) and return to capital (some 30 percent), including profits, interest, and rent.

Agriculture

In 1995 Israel's agricultural output, product, and export production in real terms rose more steeply than they had in a decade—by 11, 16, and 11 percent respectively. However, while the productivity of crops increased greatly, the relative price of agricultural product fell yet again, by 13 percent (deflated by the price of business-sector product). These developments were reflected by a decline in average current income from agriculture—by 5 percent in real terms—as well as in income from own labor and capital, which fell by 11 percent. The decline in the price of agricultural product is derived from the standstill in the average nominal price of output and the 8 percent rise in the average price of purchased inputs. Compensation payments, which had risen steeply in 1994, were reduced by 10 percent, and this also contributed to the decline in income. The fall in income from current agricultural activity appears to have contributed to the departure from the industry of farmers who were not wage-earners—about 9 percent of them in 1995 and a total of 22 percent since 1991 (Table 2.15, Figure 2.10).

The volume rise in output and product, after two years of very slow growth (an annual rate of about 2 percent), was evident in a wide range of crops, especially field crops (cotton), citrus, and fruit (avocado). Note, however, that crops have an inherent tendency to fluctuate widely from one year to the next, due to weather conditions. Livestock farming, on the other hand, has a steadier rate of output, partly as a result of the reforms introduced in the industry since 1994 in order to reduce production surpluses and improve efficiency, especially in poultry.

Figure 2.10
Agriculture: Selected Indicators, 1987-95



[a] Total factor productivity (see note f, Table 2.14).
[b] At constant prices.
[c] Output/input price ratio.
[d] Income from capital and own labor, excluding compensation and other payments, deflated by the CPI.

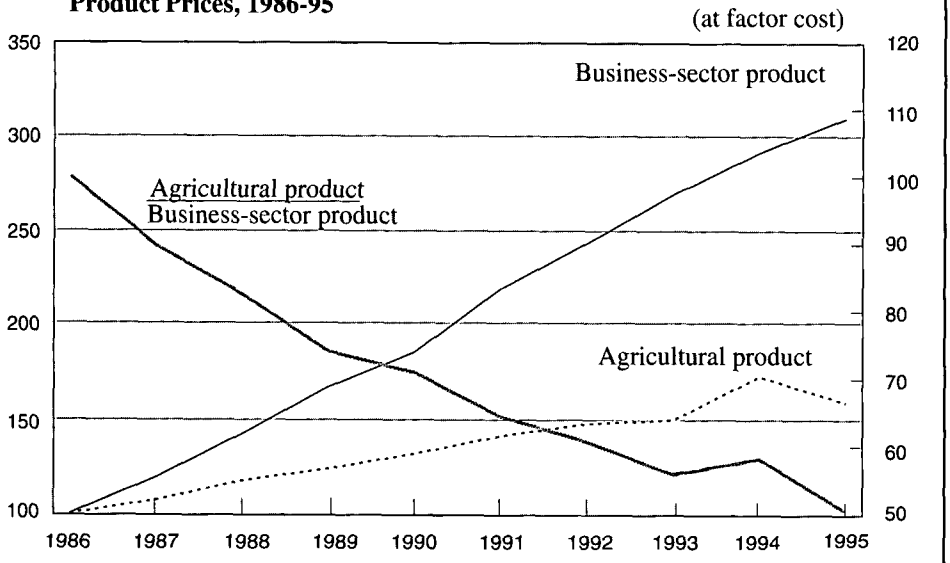
The sharpest falls in producer prices were in vegetables (some 11 percent), which are exposed to competing imports from the Autonomy, and in fruit, except for citrus (about 18 percent). Together they offset most of the steep rise in prices of 1994 (Figure 2.11). Note that fruit and vegetable prices have a marked effect on the Consumer Price Index (CPI).[23] In order to reduce price fluctuations—in addition to exposing the economy to imported vegetables—the government also provided subsidies and 'safety net' prices for fruit and vegetables.

The real expansion of export production has been evident since 1994, particularly in citrus (30 percent), avocados (35 percent), and cotton (40 percent). Because of the large share of citrus and flowers in agricultural exports—over 55 percent in 1995—these items will be described in greater detail below.

Citriculture has undergone structural and organizational changes in recent years, so that it is profitable once again. Marketing is no longer undertaken by the Citrus Marketing Board, but by 13 authorized export firms that compete with one another. The system whereby growers received the residue of the revenues after marketing, packing, and management costs had been deducted, was abandoned. The subsidization of failed transactions and poor fruit by successful growers was also abolished. Under the new

[23] See also Chapter 4.

Figure 2.11
Indices of Agriculture and Business-Sector Product Prices, 1986-95



system, the grower negotiates with citrus exporters but is assured of a fixed minimum 'farm-gate' price. In effect, growers currently receive prices that are above the minimum, because of competition between exporters as well as between growers regarding quality and service. Production appears to have become significantly more efficient, new strains have been developed, more fruit is produced per unit of land, and profitability has increased, providing an incentive for further improvement. Note that a new market for Israel's citrus—Japan, where prices are higher than in Europe—has recently opened up.

The export of flowers continued to grow, though the kinds exported and their share of exports changed, with a transition to varieties which fetch high prices, even though fewer are grown per unit of land. Competiton from Europe (Holland) and Africa (large-scale production and cheap labor) has increased recently, and investment in this sphere has grown slowly in Israel. A marked increase in the amount exported brought prices down, leaving revenue unchanged. Most flowers exported are sold via the flower markets of Holland and Germany. The process of reducing the number of smallholdings and shifting to larger farms is continuing, making it possible to benefit from economies of scale, technological innovations, and changes in the composition of manpower.

Labor input in agriculture has risen by an annual average of 5 percent since 1994, with a significant change in its composition. The number of self-employed farmers declined by 10 percent, so that their share of all agricultural employment went down from 51 percent in 1993 to 45 percent in 1995. The proportion of workers from the Autonomy

Table 2.14
Indicators of Agricultural Production, 1987–95[a]

(real annual change, percent)

	Average					
	1987–90	1991–95	1992	1993	1994	1995
Output						
Total output[b]	3.2	3.5	6.8	2.6	2.1	10.8
Inputs	0.2	2.3	1.6	3.8	2.5	6.5
Gross product	6.6	4.7	12.8	1.3	1.7	15.6
Total farm income[c]	–3.5	–0.7	13.9	–11.8	10.9	–5.2
Factor input						
Labor[d]	–4.6	2.6	3.2	11.4	4.8	5.5
Gross capital stock[e]	–1.7	–2.7	–3.3	–3.0	–1.7	–1.9
Capital/labor ratio	3.0	–5.2	–6.3	–12.9	–6.2	–7.0
Productivity						
Product labor ratio	11.7	2.1	9.3	–9.1	–2.9	9.6
Total productivity[f]	10.4	4.3	12.2	–4.0	–0.4	12.8
Exports[g]						
Citrus	–2.5	6.4	–1.9	3.8	12.0	20.3
Other	–4.6	–4.0	–14.0	–10.6	–1.7	40.1
Total	–1.6	9.4	1.4	7.2	14.7	17.0
Prices						
Output	11.0	6.3	6.9	5.6	9.2	0.2
Purchased inputs	14.4	8.6	9.0	9.4	4.2	8.2
Terms of trade[h]	–3.1	–2.1	–1.9	–3.4	4.8	–7.4

[a] Calendar years, except for data on citrus, avocados, bananas, and flowers, which are for agricultural years. Output and productivity are according to average annual prices. Agricultural production comprises marketed produce, consumption of home-grown produce, changes in livestock, intermediate output, investment in newly planted orchards, and afforestation.

[b] Output calculated at producer prices; including subsidies.

[c] At constant prices, deflated by CPI.

[d] Million man-hours; data from Labour Force Surveys and family survey in administered areas. Data from 1992 include estimates of foreign labor (from various sources). Data on workers from the Autonomy and the administered areas from 1992 are based entirely on employment services data, while those for 1995 are based on national accounts data.

[e] At beginning of previous year, at constant prices. Based on CBS investment data. Data in this table are adjusted, and differ from the figures in previous editions of the *Annual Report*.

[f] Product per weighted unit of capital and labor (the average weight of labor is 59 percent).

[g] Based on data in1988 dollars (foreign-trade statistics). Excluding exports to the Autonomy and the administered areas.

[h] Change in the index of relative output/input prices.

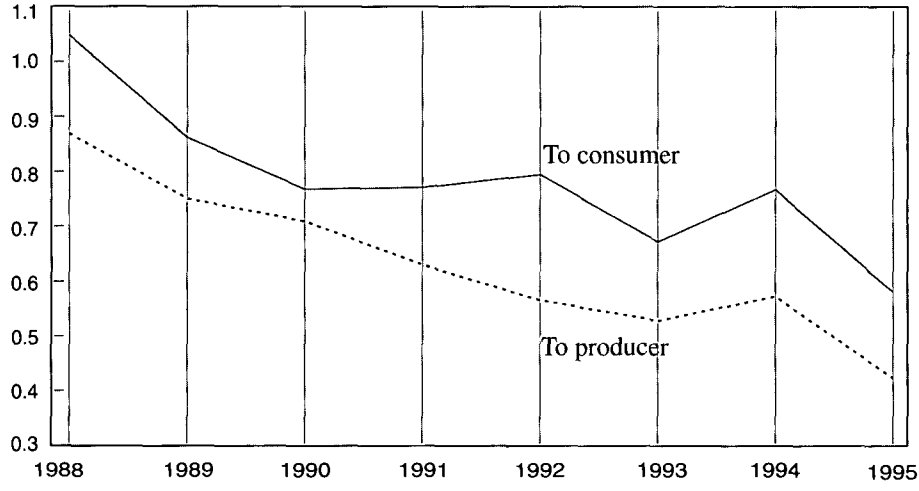
SOURCE: Based on Central Bureau of Statistics data.

and the administered areas fell from 12 to 8 percent in the same period, while that of foreign workers rose from 4 to 17 percent (from 3,000 workers to 13,000). These changes have wide-ranging implications for both the structure of agriculture and

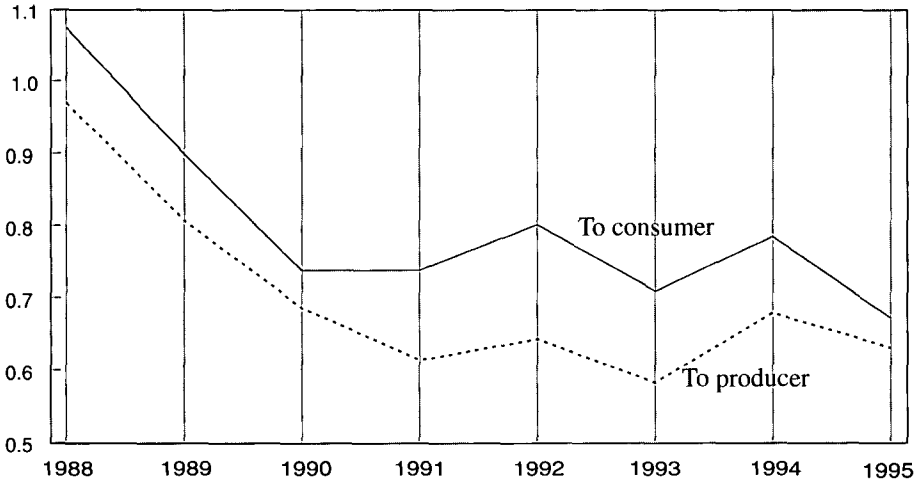
earnings. First, the decline in the number of self-employed farmers greatly moderated the reduction of their average income. Secondly, the foreign workers, who live on the premises, enable the farmer or his family to work part-time elsewhere, not necessarily in

Figure 2.12

A. Relative Producer and Consumer Prices of Vegetables, 1985-95 [a]



B. Relative Producer and Consumer Prices of Fruit, 1985-95 [a]



[a] Deflated by CPI; producer prices on domestic market; index,1987 = 100.

agriculture, thus increasing their income. This was particularly evident in 1995, when Israel was approaching full employment, and the demand for workers rose in many areas. These permanent workers also contributed to the rise in surplus vegetables (in some months), because in addition to growers receiving a 'safety net' price, which is not lower than the known costs of production, these employees work on a steady basis and can generally be regarded as a fixed cost. For the last ten years capital input in agriculture has been declining at an annual average of 2 percent, and this trend continued in 1995. It reflects the relatively low level of investment, which was lower than the annual discard level (i.e., the value of the equipment, buildings, and orchards which were taken out of the production cycle). One of the reasons for the low level of investment in agriculture was the problem of the kibbutz debt, from which some kibbutzim have not yet recovered. It seems that not until a final settlement is made will it be possible to enter into new commitments on a large scale. A prominent aspect of the reduction in capital stock is the low level of investment in orchards relative to their discard level. Until 1994 there was insufficient replacement of old orchards, whose productivity was low and which tended to be neglected. Many hectares of orchards in the inner coastal plain (Sharon region) are uprooted annually, reducing the area given over to citriculture by 3 percent a year. In the framework of the restructuring of this branch and the rapid expansion of exports, emphasis was placed on planting new orchards, particularly in the Negev, which would be irrigated by water pumped from the north of Israel.

Since 1994 government involvement in agriculture has been rising again, influencing the risk and profitability of production and exports. Mention should be made of the 'safety net' policy referred to above, which guarantees growers compensation should certain crop prices fall below a minimum level, as well as the reforms in poultry growing, grants to cattle and sheep-farmers to increase the size of their herds and flocks, as well as to fish-breeders, the rise in funds for developing new strains and undertaking R&D in various fields, as well as subsidies for marketing new products and penetrating new markets. This increased involvement can be regarded as positive provided it is restricted to overall planning in this industry, which depends to a great extent on the vagaries of the weather, and to encouraging investments which provide positive externalities to the industry and the economy as a whole, such as high-risk investment in innovation and R&D in every branch of agriculture. All in all, a slight decline can be seen in the extent of current subsidies for agricultural output, from 8 percent of output in 1994 to 6.6 percent in 1995.[24] This rate is still high compared with the annual average of 4 percent in 1990–93, but the trend is clearly moving towards extending aid directly to the farmer rather than to product, for example through buying production quotas. This means that a growing share of aid to the industry is defined as transfer payments to farmers rather than agricultural subsidies.

Despite the overall decline in income from agriculture in 1995, farmers increased their fixed investment—total investment rose by 13 percent and investment in equipment rose

[24] According to national accounting definitions and estimates.

by 20 percent—returning to the level of the mid-1980s. Thus, the substantial real increase in output and exports, the large-scale employment of foreign workers, and other structural changes—with increased government involvement in the background—appear to have increased the sense of stability and certainty in the industry. The reduction of uncertainty also contributed to increased R&D investment in various spheres. Since 1994, alongside the decline in income from agriculture, and as a result of it, the range of occupations in the rural sector has expanded appreciably. Land has been rezoned. Agricultural land is still cheaper than urban land, and some farmers are expecting capital gains from it after the adjacent land has been developed.

Transport and communications

In 1995[25] the output of this industry[26] rose by 12 percent, up from 8 percent in 1994 (Table 2.15), while prices increased relatively slowly. This growth rate outstripped that of business-sector product, so that the industry's share in it rose slightly, to 12.5 percent (Table 2.2). The growth was due to a rise in the demand of other industries, which expanded, as well as of final uses, such as consumers and abroad. The decline in relative price also contributed. When the growth in the product of two-digit industries is weighted by their share in the industry, the growth rate is 12 percent, a marked acceleration over 1994. Industry inputs grew at a slower rate than output, so that total factor and labor productivity rose by 4 percent—more than in the entire business sector.

Growth was concentrated in communications, which continued to soar (by 14 percent),[27] air transport (17 percent)—because of the increase in incoming and outgoing tourism (which by far exceeded the world rise in tourism)—and sea transport and ports (12 percent), because of the increase in the use of foreign ports. The rise in land transport services was slower, mainly because of the moderate growth of bus output.[28] This trend is evident worldwide, as greater use is made of private transport, and has negative implications as it increases road congestion.

Investment in transport and communications rose by 2 percent in 1995 (Table 2.16), after reaching a high level in 1994, and capital stock increased by 9 percent. This stabilization reflects two conflicting trends. On the one hand, the rise in investment in

[25] Developments are generally analyzed on the basis of data for the first three quarters, in the absence of data for the whole year.

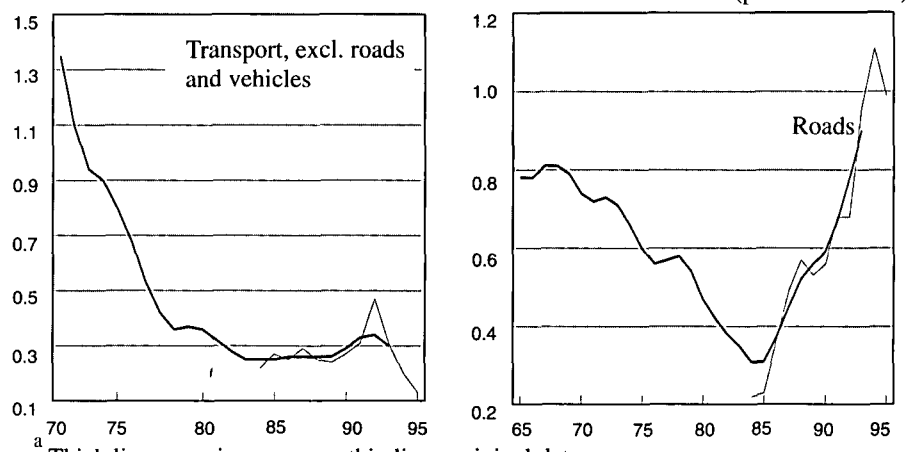
[26] Since there is no data for the real growth of output, i.e., revenues (for taxis, oil and gas pipelines, and storage, parking lots, and freight terminals), its rise is estimated from demand on the basis of input-output tables. For the last four years the rise in other transport services has been derived from the increase in VAT payments, and truck output from the 1990 survey of trucks. The source of the data is the CBS.

[27] Under its new definition, communications now includes—in addition to the Postal Authority and Bezeq—companies providing mobile telephones, cable television, private delivery services, and other communications services.

[28] Note the significant decline in travel on regular lines—albeit temporary—after terrorist attacks on buses.

communications continued, reaching 30 percent; investment in the mobile telephone infrastructure has been particularly great in the last two years, as this area was opened to competition. On the other, investment in transport declined, partly as the rise in road-building investment stabilized at a high level after expanding rapidly in 1993–94. In 1995 investment in transport vehicles fell, led by the decline in trucks,[29] but the rise in investment in sea- and air-ports persisted, as their infrastructure did not meet the growing demand, reflected by their overcrowded state. Although investment in railways increased in 1995, it remained low, and the expansion of Ben-Gurion Airport is currently at a standstill. The sea-ports are congested, despite the investment intended to increase the efficiency of the docks; a plan to expand the Ashdod and Haifa ports is currently being discussed. The process of dealing with congestion in the ports includes considering making changes in the structure of charges for freight handling, so that they reflect more accurately their relative cost (and relative scarcity of various capital stock components). This will also end the cross-subsidization stemming from the exaggerated charge made for imports, which reduces the cost of exports.

Figure 2.13
Infrastructure Investment, 1965-95[a,b]



[a] Thick line - moving average; thin line - original data.
[b] Calculations based on current prices.
SOURCE: Based on Central Bureau of Statistics data.

[29] Despite the more stringent application of regulations concerning overloading, which may be reflected by truck imports in 1996, due to the lag in their supply.

Table 2.15
Output and Prices of Transport and Communications, 1987–95[a]

(percent)

	Estimated share of total 1994		Annual change							
			Real output				Relative price[b]			
	Product	Revenue	1987–92	1993	1994	1995	1987–92	1993	1994	1995
Land transport	**47.4**	**43.9**	**2.7**	**4.5**	**4.3**	**8.1**	**7.9**	**0.6**	**–3.2**	**–0.2**
Buses	11.8	8.6	–3.9	–6.3	–1.4	2.1	13.1	8.2	3.8	4.4
Taxis[b]	6.5	5.2	3.4	8.9	6.3	11.7	9.5	4.1	–1.7	1.6
Road haulage[b,g]	28.0	29.5	5.0	8.2	5.8	9.1	4.8	–3.5	–5.7	–1.8
Railways	0.5	0.6	4.0	7.5	3.3	10.6	2.7	1.1	–6.6	–1.6
Oil and gas pipelines[b]	0.6	0.0	4.7	9.1	1.6	9.1				
Shipping and ports	**12.2**	**17.1**	**7.3**	**1.2**	**3.2**	**11.6**	**–3.0**	**4.1**	**–1.7**	**–5.6**
Shipping	7.3	15.3	6.9	4.7	2.5	10.5	–4.1	4.6	–1.9	–5.7
Ports	4.9	1.8	9.4	–4.4	9.1	19.0	1.6	3.2	–0.2	–5.4
Civil aviation and airports	**10.1**	**14.0**	**4.3**	**5.5**	**13.5**	**17.1**	**1.7**	**2.1**	**–4.7**	**–3.2**
Civil aviation	8.1	12.8	4.3	5.3	12.2	17.8	1.6	2.3	–5.1	–3.5
Airports	2.0	1.2	5.6	6.5	31.1	9.7	1.8	0.4	–2.5	–1.9
Communications[a]	**19.8**	**17.8**	**9.7**	**15.3**	**14.7**	**14.1**	**4.5**	**–6.6**	**–7.9**	**0.1**
Other	**10.5**	**7.3**	**–1.7**	**21.0**	**14.2**	**21.4**				
Storage, refrigeration, terminals, parking lots[b]	3.7	2.3	4.2	6.8	5.9	9.2				
Other transport services[c]	6.8	5.0	2.4	27.9	18.7	28.0				
Total output at market prices		**100.0**	6.1	7.9	7.5	11.6	5.1	–0.3	–4.1	–1.6
Total gross product at 1988 prices	**100.0**		4.8	7.9	8.5	12.1				
Gross investment[d]			15.6	6.8	23.2	1.7				
Gross capital stock[e]			2.7	6.5	7.2	9.0				

Employed persons	3.1	2.1	2.6	7.7
Labor input	3.4	4.3	6.4	7.5
Labor productivity[f]	1.4	3.4	2.0	4.3
Total factor productivity[h]	1.7	2.4	1.7	3.6

[a] Communications data for 1995 according to new classification; percent of total product and revenue derived from input-output tables.
[b] Estimated shares of total product derived from input-output tables; estimate of price based on CBS data relative to price index derived from business-sector product.
[c] Estimated change in output based on VAT data of CBS. Most of this sub-industry is based on travel agencies.
[d] Investment in 5-year period compared with preceding 5-year period; change in annual terms.
[e] At beginning of year.
[f] Product per unit of labor input.
[g] Estimate of change in output for 1990–95 based on 1990 survey of trucks.
[h] Estimate of productivity is biased as roads, which account for a large part of capital stock, are also used for private travel.
SOURCE: Based on Central Bureau of Statistics data.

The relative prices of transport and communications services[30] (compared with the implicit price index of business-sector product) continued to fall in most categories. The decline in the price of the telecommunications services persisted alongside technological advances, as did that of truck services. The relative price of shipping, sea-port and air services fell, the latter due to competition from foreign airlines. The lower price of these international services may have been partly due to the weakening of the US dollar, in which prices are denominated. Despite the reduction of fuel and oil prices, the relative price of bus and taxi services rose, the former by 4 percent as the subsidy was reduced.

In general, the industry wage per employee rose considerably in real terms, compared with a negligible increase (0.2 percent) in the business sector as a whole. Since the price of transport and communications lagged behind other prices, the increase in wage costs per employee to the producer was even greater. In air and rail transport, real wages rose by 17 percent, in communications by 11 percent (as public-sector wage agreements percolated through to the private sector), and in ports by 10 percent. The exception was wages in bus services, which fell by 4 percent; this comprises an increase in the wage of members of bus cooperatives, whose share of employment fell, and a decline in the wage of employees, whose share rose.

Table 2.16
Investment in Transport and Communications, 1987–95

	Composition of investments in 1994				
	Amount (NIS million)	Share of total (percent)	Real annual average change (percent) 1987–93	1994	1995
Roads	2,775	19	17	30	0
Total vehicles	6,730	51	14	31	–8
of which Trucks[a]	2,660	20	14	19	–22
Other transport[b]	1,428	11	15	–38	–32
of which Railways	120	1	...	–87	323
Total transport	**10,752**	**81**	**14**	**25**	**–7**
Communications[c]	2,441	19	14	18	30
Total transport and communications	**13,193**	**100**	**14**	**23**	**2**

[a] Including commercial vehicles.

[b] Including railways, sea- and air-ports, storage, terminals, parking lots, and items not specified elsewhere.

[c] Estimated investment of Bezeq and the Postal Authority. The data for 1995 are according to the new classification of industries.

SOURCE: Based on Central Bureau of Statistics data.

[30] Indices of transport and communications prices are taken from output prices, so that they also reflect a change in the composition of these services.

The regulation of the industry, in much of which there is no competition, is currently proceeding. Competition is being introduced into the trucking industry (containers and cement mixers), an additional Israeli air carrier is being allowed to penetrate regional air traffic (the Mediterranean region and neighboring countries), and another air carrier will be permitted to fly to Eilat. Freight charges at Ben-Gurion Airport, which are provided by a monopoly, are being examined as regards both their level and the cross-subsidy between service components. The possibility of rationalizing air- and sea-port charges and aircraft fuelling services, and of reducing the strength of the cartel in international air fares, is being examined. International telephone connections are about to be opened to competition: during 1996 one or two additional concessionaires will be chosen to provide these services, and the need for a third mobile-telephone operator will be reviewed. In the taxi industry, the order permitting 13 passengers per taxi was revoked.

The slow increase in the number of taxis evident in the last few years persisted in 1995, although a significant rise could improve this service and make buses, with which they compete, more efficient. The shortage of taxis is reflected by the black market price of a license, which is estimated at between $ 80,000 and $ 90,000—several times the official Ministry of Transport price. Although the authorities have decided to improve the situation in this industry, they have not opened it up to competition. In 1994 the government decided to increase the number of taxi licenses issued to 550 a year, plus another 2,000 licenses—to compensate for the lag of many years—to veteran drivers. The decision was adopted by the Knesset in 1995, but the implementation of even this small step was deferred to 1996.

The share of Israeli shipping in domestic ports continued to fall, stemming from the relatively high wage paid to Israeli sailors, whom Israeli shipping companies are committed to employ (under labor agreements). On the other hand, the share of Israeli air traffic rose, after falling in previous years, despite some easing of competition in the industry, and the range of lines, services, and carriers grew. This provides an example of the substantial expansion (by 17 percent) of the economic activity of Israeli companies, despite competition from abroad. Most of the growth was in passenger flights, and by far outstripped the increase in tourism to Israel.

Construction

Total output of the construction industry (i.e., investment in residential and nonresidential structures and earthworks) rose by 13 percent in 1995, compared with 8 percent in 1994. Industry product increased by 12 percent, after rising by 9 percent in 1994, and its share of gross domestic business-sector product (at current prices) went up by about 1 percentage point, to reach 11.1 percent—higher than at any time since the early 1980s. Derived product prices rose by some 10 percent, twice as much as the implicit price of business-sector product.

Table 2.17
Indicators of Construction Activity, 1981–95[a]

			Annual average change, percent								
	1994	1995	1981–85	1986–90	1991–95	1990	1991	1992	1993	1994	1995
Total output (millions of 1990 NIS)	**17,719**	**20,046**	–5.5	6.5	12.6	19.7	47.2	6.7	–5.8	8.1	13.1
Residential	8,113	9,761	–5.9	5.8	11.1	17.4	83.4	–0.1	–25.4	2.9	20.3
Nonresidential	8,349	8,965	–3.7	9.7	17.3	26.9	14.4	24.6	28.4	13.1	7.4
Other[b]	1,257	1,320	–7.7	1.0	0.5	9.8	–12.5	–2.6	3.2	10.7	5.1
Total area of starts (thousand sq. m.)	**10,070**	**12,430**	–4.7	12.7	12.1	11.4	45.7	–23.1	1.5	26.0	23.4
Residential	6,420	8,610	–5.8	15.1	8.9	80.4	55.6	–34.1	–9.2	23.0	34.1
Nonresidential	3,650	3,820	–1.6	5.4	21.9	44.9	6.3	40.4	30.7	31.8	4.7
Total area completed (thousand sq.m.)	**6,865**	**8,280**	–2.6	–1.6	14.8	–6.5	52.8	46.2	–17.2	–10.6	20.6
Residential	4,865	5,850	–2.6	–0.5	13.9	–9.6	68.2	48.6	–28.0	–11.5	20.2
Nonresidential	2,000	2,430	–3.4	–4.4	17.3	3.3	9.6	35.8	33.7	–8.3	21.5
Residential units (thousands)											
Starts	44	63	–36.1	103.0	8.1	113.5	97.1	–44.9	–22.2	21.7	43.8
Completions	34	38	–19.4	–19.5	14.0	–10.6	111.8	65.9	–38.5	–21.1	13.0
Construction time[c] (months)	20	18	4.2	–2.8	–2.5	–10.6	–1.0	2.0	4.4	–6.0	–10.9
Total employment (thousands)[d]	188	208	0.2	3.7	8.3	9.6	16.6	18.6	–5.4	2.7	10.6
Israelis	125	129	–8.8	5.1	11.2	6.0	26.7	11.9	9.7	5.9	3.2
From Autonomy and administered areas	49	43	21.4	44.5	–7.6	14.3	4.5	28.4	–29.0	–19.7	–12.2
Foreign workers	14	36								250.0	157.1
Stock of construction equipment[e] (millions of 1990 NIS)	2,777	3,321	–1.4	–4.4	14.4	–3.7	2.0	22.7	12.0	17.2	19.6

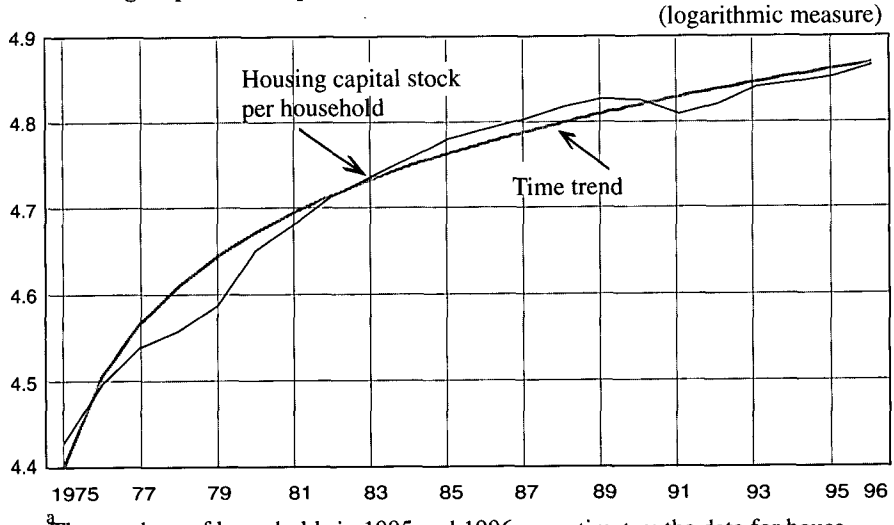
Change in			188.4	25.0	11.2	16.3	16.4	10.9	8.3	9.1	11.3
Residential construction inputs											
Cement sales ('000 tons)	5,051	6,264	–2.2	6.9	16.8	14.5	35.6	12.5	6.3	8.2	24.0
Derived output prices			199.6	27.3	11.2	14.5	17.4	10.6	8.6	9.5	10.1
Construction product			–4.1	6.0	12.7	14.1	36.6	11.8	–5.4	8.5	12.2
Derived product prices			189.9	30.3	12.4	18.5	16.2	11.4	10.6	13.7	10.1

[a] Calculated from unrounded figures.
[b] Includes defense construction and a rough estimate for maintenance.
[c] Private residential construction.
[d] Employment figures from national accounts data of Central Bureau of Statistics
[e] Beginning-of-year stock.
SOURCE: Based on Central Bureau of Statistics data.

The rapid rise in output was particularly evident in residential construction, which increased by 20 percent, while nonresidential construction grew by 7 percent, the slowest rate since 1990 (Table 2.17); investment in roads stabilized in 1995, after rising steeply in the last two years—by 30 and 51 percent in 1994 and 1993 respectively.

The increase in the rate of investment in residential construction in 1995 contributed to the 1.3 percent rise in housing stock per household at the beginning of 1996. The influx of immigrants, which began at the end of 1989, led to a turnaround in the development of housing stock[31] per household (this does not include land value), which fell in 1990 and 1991 (Figure 2.14). It rose again in 1992–96, and now appears to be approaching the trend before mass immigration began (1975–89). This trend is consistent with the slower rise in the relative price of apartments in 1995, after a steep increase in 1994.

Figure 2.14
Housing Capital Stock per Household,[a] 1975-96



[a] The numbers of households in 1995 and 1996 are estimates; the data for households are adjusted for census data; housing capital stock is for beginning of year, at 1990 prices.

The relative price of apartments[32] rose by 4.7 percent in 1995 (13.9 percent in 1994). This was largely due to extensive land sales by the Israel Lands Authority and the Ministry of Construction and Housing which began in the second half of 1994 and served to increase the supply of apartments in 1995. The object of this was to check the rise in apartment prices and its inflationary effect, with all the attendant social costs.

[31] Housing stock at the beginning of the year.

[32] When deflated by the CPI excluding housing, apartment prices rose by 5.9 percent.

Note that the supply of land for alternative uses is relatively limited, giving rise to congestion, most commonly in motor transport. Furthermore, changing the allocation of land uses is a lengthy process, especially in the main urban areas where demand is great. This is the principal reason for the long-term rise in real-estate prices. As in every congested system, a gap is created between the welfare of the individual and that of society in general, requiring public-sector involvement in planning the nature and intensity of land uses.

Decision-making and planning processes—which are associated with the density and height of construction, dispersal of population and centers of activity, the combination of systems of roads and transportation in urban centers, and the preservation of open spaces, nature, and the quality of life—restrict the flexibility of supply-side response to demand pressures. Developments in the industry should be examined in this context.

Table 2.18
Housing Construction, by Initiating Sector, 1979–95[a]

(thousand units)

	Starts			Completions		
	Total	Private	Public	Total	Private	Public
1979–86[b]	28.3	19.3	8.9	29.1	19.6	9.5
1987–89[b]	21.2	18.0	3.2	20.6	17.2	3.4
1990	42.4	22.8	19.6	20.0	16.7	3.3
1991	83.5	21.8	61.7	42.2	19.1	23.1
1992	46.0	23.3	22.7	70.1	21.6	48.5
1993	35.8	29.2	6.7	43.1	21.6	21.6
1994	43.6	32.4	11.1	34.0	24.6	9.5
1995	62.6	34.9	27.7	38.5	31.2	7.3
1994						
I	9.8	7.7	2.1	7.9	5.6	2.4
II	9.7	7.3	2.4	9.3	6.8	2.4
III	10.1	8.4	1.7	8.4	5.9	2.5
IV	13.9	9.0	5.0	8.5	6.3	2.2
1995						
I	20.2	9.1	11.1	8.4	6.6	1.7
II	16.2	9.0	7.2	7.6	5.9	1.7
III	14.3	8.2	6.0	9.4	7.7	1.7
IV	12.0	8.6	3.4	13.1	11.0	2.2

[a] Calculated from unrounded figures.
[b] Period average.
SOURCE: Based on Central Bureau of Statistics data.

The availability of factors of production made the expansion of the industry possible in 1995, and labor input rose by 14 percent. In 1995, as in 1994, foreign workers and Israelis were substituted for workers from the Autonomy and the administered areas, after the government increased the number of permits for foreign workers (Table 2.17). At the same time, the accelerated growth of gross capital stock evident since 1992 continued. At the beginning of 1995 capital stock had risen by 20 percent, and total factor productivity in construction declined by 2 percent, after falling slightly in 1994. Both the substitution of workers and the relative shortage of skilled labor appear to have contributed to this. The rise in the relative price of owner-occupied apartments was significantly slower in 1995 than in 1994—4.7 and 13.9 percent respectively, though the relative price of rent fell more steeply than in 1994.

Construction of some 63,000 apartments began in 1995—an increase of 44 percent in the number of units, and of 34 percent in area, over 1994. Growth rates were higher only in 1990 and 1991, when immigration was at its height, as a result of the government policy of initiating construction (Table 2.17). The sharp rise in the relative price of apartments in 1994 provided an incentive for expanding their supply, and this was reflected by starts (in the last few years over 50 percent of units were sold at the planning or preliminary stages). Government-initiated construction[33] expanded greatly in 1995 in comparison with both 1994 and private construction in 1995, accounting for 44 percent of total starts. Completions rose far less, influenced by starts since 1993.

The demand to purchase apartments derives from the need for housing services as well as from portfolio considerations. The former stems from the desire to improve living conditions, immigration, and natural increase. The persistent rise in disposable income, and hence in the standard of living, contributed to the increase in demand for apartments by established residents seeking to improve their living conditions. Especially prominent is the decline in the share of immigrants and rise in that of young couples among eligible persons taking up mortgages. Immigrants' potential for taking mortgages fell in 1995, after a large number of mortgages were taken up in 1993–94, alongside the stabilization of the number of immigrants arriving annually. In the last few years, however, as a result of the demographic composition of the established population, demand by young couples has risen sharply. These consist mainly of cohorts born in 1967–77, the second generation of the 1945–54 baby-boom. According to the most recent family expenditure survey, undertaken in 1992–93, at least 71 percent of Israeli households are owner-occupiers.

Asset considerations also cause apartment purchases to be brought forward or postponed. The stabilization of immigration and the land sales of 1994 appear to have allayed fears of a physical shortage of apartments, which in the past caused purchases to be brought forward. In addition, the possible effect of interest rate and stock market developments is consistent with the slower rise in the relative price of apartments in 1995.

[33] Government-initiated construction is not implemented by the government, but is planned (as to location, standard, and area) and supervised by it, the National Institutions, the local authorities, and firms controlled by them.

The higher yield to maturity of medium- and long-term CPI-indexed government bonds served to moderate the rise in the relative price of apartments. The decline in share prices in 1994 appears to have accelerated the rise in the relative price of apartments, while in 1995 stock-market trends do not seem to have had this effect. Higher interest rates, which were also influenced by the Bank of Israel's monetary policy, contributed to higher interest rates on nondirected mortgages, and hence to lower demand for apartment purchases (because of both portfolio considerations and demand for housing services).

While higher interest rates serve to reduce construction investment, their effect is the reverse with regard to apartments in construction or stock, serving to accelerate sales and reduce prices. Financing difficulties in the construction industry, which is credit-intensive, could have a similar effect.

Trade and private-sector services

The product of this segment rose by some 10 percent in 1995, similar to the annual average since 1990, after increasing by a more rapid 12 percent in 1994 (Table 2.19). The growth this year was in line with that of business-sector product, so that the share of private-sector services remained 41 percent (Table 2.2). The rise in the industry's product reflects increased demand, as can be inferred from the fact that its price rose by 4 percent more than that of business-sector product (after exceeding it by less in previous years). This was the result primarily of consumer demand, as the standard of living rose, as well as of a gradual change in the composition of business activity, which depends more than in the past on the purchase of services. The capital stock of the industry rose by 9 percent in 1995 and labor input by 8 percent, less than the increase in product, so that both labor and total productivity rose by approximately 1 percent. The moderate slowing of the increase in the industry's product in 1995 reflects the slower growth of many of its components, though this is particularly evident in the banks (which account for about a fifth of the industry's product) and in trade. Technological advances in the trade and services segment may feature less prominently than in the tradables sector, as is consistent with the persistent rise in the relative price of the former.

The rise in labor input in the industry—which is labor-intensive—is borne out by the addition of 55,000 employees. These constitute some 55 percent of incremental employment in the business sector, and almost half that in the economy in general, so that this segment continued to lead in reducing unemployment. Note that its rising share of employment did not require any special increase in the average wage per employee—which amounts to 90 percent of the business-sector wage—and this rose in tandem with that in the business sector. This is explained by the relatively slow growth of employment in the banks, where the wage per employee is particularly high.

Most of the demand (57 percent) that served to increase the product of trade and services derived from private consumption; other factors were the growth of exports (24 percent), while the contribution of increased investment and consumption by nonresidents was less (12 percent each).

Table 2.19
Principal Trade and Services Indicators, 1989–95

(percent change)

	1993	1994	1995	Average 1989–90	Average 1991–95
Product	10.4	12.3	9.7	3.2	9.4
Labor input[a]	6.9	12.3	8.2	3.1	7.6
Capital stock[b]	3.7	5.9	9.3	3.2	6.1
Labor productivity	3.3	0.0	1.4	0.1	1.7
Total factor productivity[c]	4.5	2.4	1.3	0.0	2.6
Employed persons[a]	7.1	10.5	7.9	2.9	6.7
Average hours per employee	–1.8	1.7	–1.0	0.3	0.2
Real wage per employee post [d,e]	0.0	–0.3	–1.0	–2.5	..
Deflated by CPI[e]	–0.2	0.7	–1.7	–3.2	..
Relative price[f]	1.2	2.5	4.0	3.1	1.6
Exports[g]	6.9	12.8	10.5	2.6	7.8
Fixed investment	10.5	30.2	7.0	13.4	14.1

[a] Unlike other tables in this Report, this includes imputed private education and health services.
[b] At beginning of year.
[c] Input weighting is 62 percent labor and 38 percent capital (on the basis of the 1988 input-output tables).
[d] At constant prices (deflated by the trade and services index).
[e] The 1995 data are according to the new classification of principal industries, and hence cannot be compared with previous years. Workers from the Autonomy and the administered areas are not included.
[f] Annual change in the CPI of business services to consumers relative to the implicit price index of business-sector product.
[g] Based on the 1988 input-output tables.

SOURCE: Based on Central Bureau of Statistics data.

Product due to the export of services rose by 11 percent. Part of the industry's exports are direct, e.g. tourism services (which increased by 18 percent in 1995), but most of it is exported indirectly, as in services to other export industries. Bank services, as well as business and legal services and trade, are responsible for a large part of the increase in the latter.

The different pace of development of various sections of the industry derive from its highly heterogeneous composition. It provides a wide range of services, ranging from cleaners to education and medical services, legal advice, such business services as advertising and computerization, and even private employment agencies. While in some parts of the industry, such as the banks, growth was relatively moderate (Table 2.20), in others, such as private education services, product soared. Personal and other services (cultural and recreational services, entertainment and sport), which account for 12

percent of the industry product, have been increasing rapidly for several years, far outstripping the growth rate of the industry as a whole.

Table 2.20
Product of Private-Sector Services, 1989-95[a]

(percent)

	Share in product 1995[b]	Product per employee 1994[c]	Real change 1994	Real change 1995	Average 1989–95
Wholesale trade	14.3	69.6	13.4	7.8	7.1
Retail trade	12.9	29.9	15.6	12.2	8.5
Total	27.2	43.1	14.4	9.8	7.8
Catering	3.3	26.0	9.1	8.3	5.5
Hotels	2.0	28.6	1.5	9.2	2.1
Total	5.3	7.9	6.1	8.6	4.1
Business and legal	19.9	45.8	16.6	16.9	9.6
Banks	18.4	149.6	4.2	0.7	4.7
Insurance and real estate	8.1	95.5	5.6	8.3	6.6
Total	46.4	74.8	9.0	8.4	6.9
Education services	3.6	51.9	15.9	19.0	12.4
Health services	5.2	72.6	22.2	12.5	9.4
Total	8.7	62.7	19.6	15.0	10.5
Personal services	5.1	32.5	28.7	11.0	11.8
Household services	4.5	25.1	11.9	11.6	9.8
Garages	2.7	25.3	14.4	11.4	5.8
Total	12.3	27.8	16.5	12.5	9.6
Total private-sector trade and services	93,132[d]	48.3	12.3	9.7	7.6

[a] The data on trade, catering, business, legal, education, health, personal and household services, and on garages are estimated from VAT returns at constant prices; the data on hotels are from hotel income and the number of bed-nights. The data on banks are from the number of debits, labor input, active financial assets, and mortgages granted—a general index of the activity of the banks. The data on insurance and real estate are from the number of employed persons, part-time jobs, and business-sector product.

[b] At current prices.

[c] At 1988 prices, NIS '000,

[d] Product at current prices, NIS '000.

SOURCE: Based on Central Bureau of Statistics data, the trade and services survey, and data prepared for the 1988 input-output tables.

Investment in the industry increased by 7 percent in 1995, after climbing by an extraordinary 30 percent in 1994. The continued increase in investment reflects economic agents' assessment that the rise in the demand for the industry's services is not temporary.