Chapter 2
Output and Demand

Business-sector product expanded rapidly in 1994, by about 7.5 percent, in contrast to its slow rise in 1993. Despite this, there was no significant change in total productivity, which had also marked time in 1992–93. Labor productivity declined, while real wage costs rose, reflected by a fall in the rate of return on capital.

Total domestic use of resources continued rising faster than GDP, so that the increase in the share of the import surplus in GDP (at constant prices) also persisted. Alongside the notable rise in the balance of payments deficit, the national saving rate fell, and the investment rate remained stable.

Business-sector product grew rapidly because faster demand growth was largely met by supply, albeit not entirely. This led to demand pressure, expressed as an increase in the share of the import surplus in GDP, in quantitative terms, alongside a rise in the price of GDP relative to that of imports, and an even greater rise relative to that of exports.

Fiscal and monetary policies had an expansionary effect on domestic demand. Fiscal expansion derived mainly from the exceptional real wage increments in the public services. The economic optimism which prevailed at the end of 1993 reinforced the expansionary effect of policy.

1. MAIN DEVELOPMENTS[1]

Business-sector product rose rapidly in 1994, by about 7.5 percent, similar to its rate of increase in 1990–92, and in contrast to its slow rise in 1993. Despite the accelerated growth of output, total productivity showed no significant change, as was also the case in 1992–93.

The rapid expansion of business-sector product was notable in the second half of 1993. It peaked in the first quarter of 1994, and eased during the rest of the year.

Employment of Israelis continued to rise significantly, and the unemployment rate fell below its level prior to the mass immigration which started at the end of 1989. Inflation rose faster than the inflationary environment of recent years.

Domestic use of resources (excluding defense imports) increased rapidly, by 8 percent, compared with a 5 percent rise in 1993, and similar to the annual average rate of

[1] Business-sector product referred to here and in most of this analysis is based on national accounts data, and is measured in terms of the use of resources (Tables 2.1, 2.3, and 2.4). According to indicators of business-sector product by industry (Table 2.2)—which are less reliable statistically—growth rates in 1992–94 were higher, with the difference in 1993 figures being particularly notable.

growth in 1990–93 (Table 2.1). Most of the components of domestic use of resources followed the same rising trend—private consumption, public domestic consumption, and investment in the principal industries. Investment in residential construction also rose, albeit slightly, in contrast to its sharp decline in 1993 (Table 2.5). Alongside the accelerated growth of the domestic use of resources, GDP surged, too, rising by 6.5 percent, compared with 3.4 percent in 1993. Nonetheless, the former continued to outstrip the latter, and hence the share of the import surplus in GDP (at constant prices) continued rising;[2] excluding the diamond component, it rose even faster than in 1993, after remaining stable in 1992. The higher import surplus reflects the continued rapid growth of imports and slower expansion of exports. The considerable increase in the import surplus in foreign-currency terms exceeded the combined effect of quantitative growth and the rise in prices abroad. The difference reflects the deterioration in the terms of trade—lower dollar prices for exports and higher import prices. This resulted in an increase of about $ 700 million in the real cost of imports.

Import and export prices (excluding diamonds) relative to GDP price (which serve as indicators of the real exchange rate) fell steeply, after a slight decline in 1993, denoting faster real appreciation (Figure 2.1).

The rate at which private consumption grew accelerated, and this was particularly marked in the 6.3 percent increase in per capita private consumption, following the rise of 5 percent in 1993, and an average of 2.5 percent a year in 1990–92 (Table 2.11). In 1994 consumption again grew faster than private disposable income, so that the private saving rate declined for the third successive year (Table 2.10).

Nonresidential business-sector investment accelerated (Table 2.7), its high level reflected by the continued acceleration of gross capital stock, which rose by about 8 percent to the beginning of 1995, compared with 6.5 percent to the beginning of 1994 (Table 2.6). Most of this reflects the considerable increase in private-sector investment.

The real hourly wage of Israelis,[3] rose by about 0.5 percent, after falling slightly in 1993. The entire increase reflects the rise in public-services wages, while in the private sector the hourly wage continued to fall. To the producer, the real hourly wage, adjusted by the price of business-sector product and paid to all domestic workers (including those from the administered areas, and other foreign workers)[4] is the relevant figure, and this rose by 1.2 percent, after a minimal increase in 1993. As labor productivity fell in 1993–94, the increase in the real wage was expressed by a lower rate of return on capital, after this had risen continuously in 1988–92.

* * *

[2] Deriving from the identity: $\frac{\text{Total domestic use of resources}}{\text{GDP}} = 1 + \frac{\text{Import surplus}}{\text{GDP}}$

[3] In terms of purchasing power of private consumption.

[4] Since it affects the return on capital.

Table 2.1
Resources and Use of Resources, 1981–94

(annual rate of change, percent)

	At current prices (NIS million)	Quantity						Price	
	1994	1981–85	1986–89	1990–94	1992	1993	1994	1993	1994
Resources									
Gross Domestic Product	221,456	3.0	3.6	5.7	6.7	3.4	6.5	11.3	13.0
Imports of goods and services[a]	107,363	3.6	4.6	11.7	9.3	14.5	9.7	10.8	7.2
of which Civilian	101,747	4.4	6.6	12.3	12.4	12.8	12.7	10.5	7.6
Total resources	328,819	3.2	4.0	7.7	7.5	7.2	7.7	10.8	10.9
Use of resources									
Private consumption	141,959	4.6	7.0	7.5	8.2	7.7	8.8	10.3	12.2
Public consumption									
Total	60,950	1.1	–1.1	2.8	0.2	5.6	–0.8	11.8	16.0
Excl. direct defense imports	55,334	1.6	1.4	2.8	4.3	1.3	3.9	12.0	16.8
Gross domestic investment									
Total	53,568	–0.1	2.2	16.7	6.2	2.9	9.7	9.6	10.5
Fixed[b]	51,028	0.2	2.0	15.6	6.3	0.2	12.8	10.1	8.7
Domestic use of resources[c]	250,861	2.8	4.7	8.1	6.9	5.2	8.0	10.5	12.7
Exports[a]	72,342	5.0	4.7	7.1	14.3	10.6	10.8	12.0	5.6
Use of resources									
Excl. direct defense imports	**323,203**	**3.5**	**4.7**	**7.8**	**8.5**	**6.5**	**8.7**	**10.8**	**11.0**
Total	**328,819**	**3.2**	**4.0**	**7.7**	**7.5**	**7.2**	**7.7**	**10.8**	**10.9**
Net factor payments to abroad	2,919								
GNP at market prices	218,537								
Gross product of business sector[d]	149,301	3.6	4.6	6.8	8.0	3.5	7.6	9.9	9.0

[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] GNP *less* gross product of public services, non-profit institutions, and ownership of dwellings. At market prices.
SOURCE: Central Bureau of Statistics.

Figure 2.1
Civilian Import Surplus/GDP Ratio, and Relative Prices, 1988-94[a]

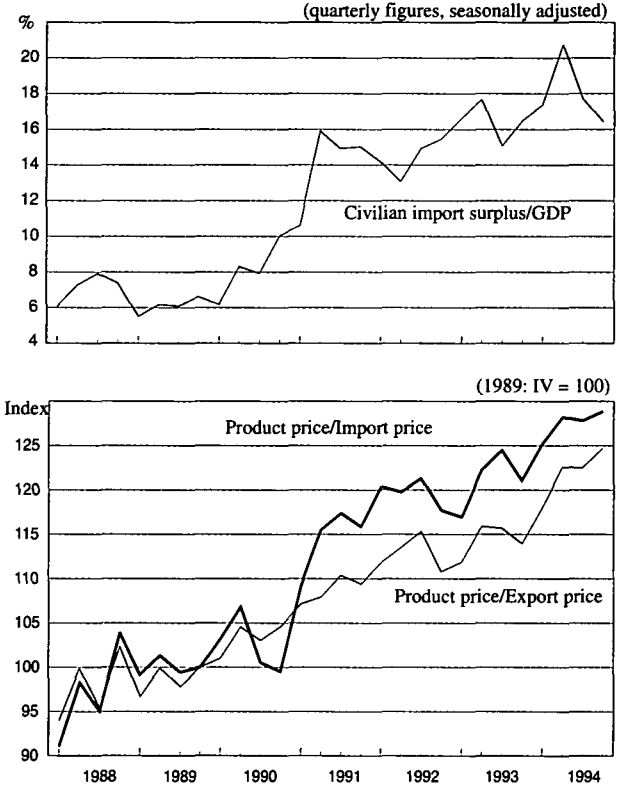
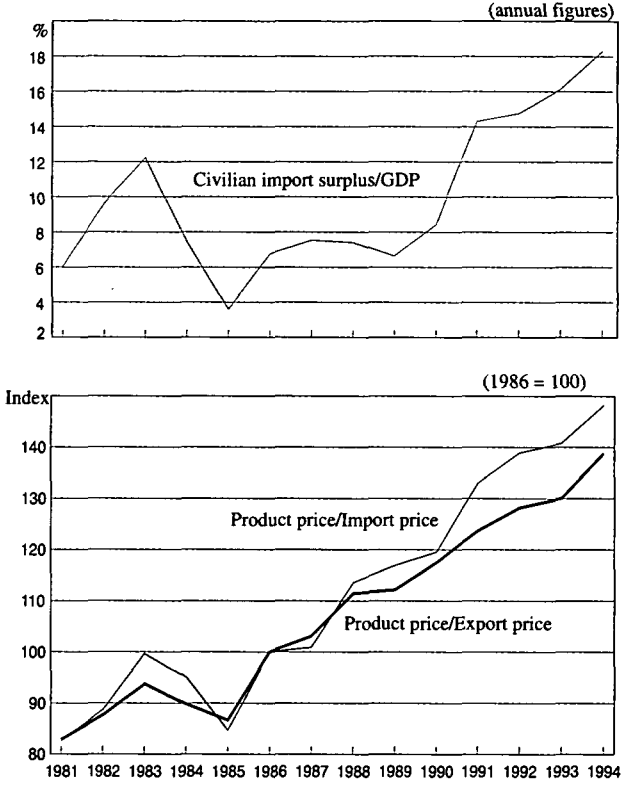


Figure 2.1a
Civilian Import Surplus/GDP Ratio, and Relative Prices, 1981-94[a]



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

Table 2.2
Product and Productivity of the Business Sector, by Industry, 1981–94[a]

(percent)

	1981–85	1986–87	1988–89	1990–94	1991	1992	1993	1994
GROSS PRODUCT								
Industrial composition[b]								
Industry	30.6	31.4	30.0	29.5	29.8	29.4	29.5	29.0
Agriculture	5.0	5.0	4.8	4.7	4.6	4.8	4.5	4.2
Transport & communications	12.2	12.2	13.0	12.5	12.4	12.4	12.6	12.4
Construction	9.4	7.6	7.9	9.7	10.8	10.6	9.3	9.1
Trade and services	38.5	39.5	40.1	39.6	38.2	38.8	40.2	41.3
Water and electricity	4.3	4.3	4.2	4.1	4.1	4.1	4.0	4.0
Total business sector	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tradables[c]	44.3	44.1	42.5	40.8	40.8	40.8	40.6	39.6
Nontradables	55.7	55.9	57.5	59.2	59.2	59.2	59.4	60.4
Real annual change								
Industry	3.7	6.4	–0.7	7.1	6.7	8.2	6.8	7.5
Agriculture	5.6	5.8	0.3	4.8	–6.2	12.8	1.3	0.5
Transport & communications	4.2	4.9	5.3	6.7	5.0	9.1	8.4	7.5
Construction	–3.2	4.6	3.7	11.2	33.0	8.0[d]	–7.0[d]	7.0
Trade and services	4.1	7.4	2.6	8.5	3.4	11.3	10.4	12.2
Water and electricity	3.1	6.3	1.0	6.8	6.0	10.0	4.5	7.5
Total business sector	3.3	6.4	1.8	7.7	6.8	9.8	6.6	9.0
of which Excl. construction	4.0	6.6	1.6	7.5	4.3	10.0	8.2	9.2
Tradables[c]	3.9	4.6	–0.1	6.1	2.8	9.6	6.1	6.3
Nontradables	2.8	8.0	3.3	8.9	9.6	9.8	6.9	10.9
PRODUCTIVITY[e]								
Labor productivity								
Industry	2.4	3.3	1.7	2.2	2.0	2.1	–0.1	1.6
Agriculture	4.8	5.6	5.2	6.0	4.8	9.3	–9.1	–4.1
Transport & communications	4.4	0.9	5.7	1.7	2.1	0.7	4.0	1.0
Construction	–3.5	3.3	3.7	1.5	13.6	–11.2	2.0	0.7
Trade and services	0.5	3.1	–2.6	1.9	–0.9	3.0	3.9	0.2
Water and electricity	6.4	1.0	–4.7	0.5	8.0	23.0	–10.5	–9.9
Total business sector	1.6	3.3	0.8	1.8	1.8	0.8	1.8	0.4
of which Excl. construction	2.1	3.2	0.5	2.0	1.1	2.9	0.9	0.2
Total productivity[f]								
Industry	1.5	2.8	–0.3	2.3	2.5	2.5	0.5	1.3
Agriculture	4.2	5.5	3.7	5.8	1.7	10.8	–5.9	–2.6
Transport & communications	3.5	2.0	3.8	1.8	2.3	2.1	2.8	0.4
Construction	–3.3	4.6	4.0	1.5	16.0	–11.2	–1.5	–0.9
Trade and services	–0.3	2.9	–1.9	2.8	–0.7	4.7	4.9	2.5
Water and electricity	2.6	2.0	–3.7	0.6	4.5	14.6	–6.4	–5.5
Total business sector	1.1	3.4	0.2	2.5	2.4	2.2	1.9	1.1
of which Excl. construction	1.6	3.4	–0.1	2.5	1.2	3.8	1.6	1.1

[a] See note 1 in text.
[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] Change in product per man-hour.
[f] Change in product per weighted unit of capital and labor.

The rapid expansion of business-sector product in 1994 was the result of accelerated demand that was to a great extent met by supply.[5] This represents a marked change from the situation in 1993, when demand growth moderated to some degree (due entirely to domestic demand), and supply responded even more sluggishly.

Supply did not fully meet the marked increase in product demand in 1994, resulting in demand pressure. This was reflected by real appreciation of the NIS, while the share of the import surplus (excluding diamonds) in GDP rose in quantitative terms, as a result of the rapid growth of imports and a slowdown in the increase of exports.

The faster rate of expansion of aggregate demand in 1994 encompassed almost all its components, and is explained by several major factors:

- Exceptional real wage increases in the public services, which had a pronounced expansionary effect,[6] reflected mainly in private consumption. The public-services wage agreements, moreover, guarantee significant wage increments in 1995 as well, so that some households may have brought consumption forward against this future income. On the other hand, the tax/GDP ratio deriving from current economic activity did not rise (see Chapter 5). Despite the exceptional wage increases, the target of a reduced public-sector domestic deficit was met (due mainly to exceptional corporation tax receipts). Thus, the wage hikes do not appear to have created fears that tax rates would be raised to finance the increased expenses. Such fears would have dampened the expansionary effect of the wage increments. Moreover, statutory tax rates were reduced in 1994, reinforcing the impression that higher taxes were unnecessary.
- A real increase of about 3 percent in direct general government demand (including government-initiated residential construction), following a 5 percent decline in 1993 (Table 5.7). An increase of this magnitude would not itself create pressure on sources, but in conjunction with the exceptional real wage increments it spurred the rise in aggregate demand.
- Expectations of a quick recovery of economic activity and sustained growth, which strengthened in the second half of 1993, boosted firms' desire to continue investing. Optimistic expectations were supported by both the considerable expansion of economic activity in that period, and the peace process resulting in

[5] Reflecting both a shift of the supply curve and movement along it (see note 9).
[6] This is not expressed by the direct real demand of the sector.

Israel's improved international ties, which gathered momentum at that time. The stock-market boom of 1992–93 made it easier for firms to invest, by making ample and cheap capital available to them by means of flotations.

- Faster monetary expansion—together with lower interest rates at the end of 1993—which was offset only in the second half of 1994, created conditions which encouraged current consumption on account of future income, and served to increase investment.
- Private residential construction accelerated, mainly because of the marked increase in housing demand in 1993, which persisted in 1994. In addition to demand from new immigrants and young couples, which was similar in extent to that of 1993, the increase in demand reflects mainly expectations of a continued rise in the relative price of housing. Low mortgage interest at the beginning of the year encouraged this demand.
- Foreign demand for Israel's tradable goods appears to have accelerated in 1994 as well (this argument is borne out by the faster expansion of world trade).

Optimistic economic expectations at the end of 1993 intensified the effect on demand of expansionary fiscal and monetary policy.

Supply of GDP also expanded faster in 1994. This was reflected by the factors of production: capital stock rose more rapidly, and demand for labor adjusted accordingly. Actual labor input rose by more than this—i.e., production became more labor-intensive—despite higher unit labor costs. This appears to be because the expansion of demand outstripped that of supply, so that demand pressures were met by supply, with a rise in relative product price and a sizable increase in labor input. The latter could rise considerably, as it is relatively elastic (compared with capital), and can adjust to demand pressures relatively quickly. The increase in the number of entry permits for foreign workers not from the administered areas compensated for the reduction in the number of the latter, and made the labor supply more elastic than in 1993. This helped supply respond better to aggregate demand. The fact that imported intermediates became cheaper (relative to the price of GDP) also helped supply react to demand pressures, increasing demand for labor as a complementary production input.

2. BUSINESS-SECTOR PRODUCT, THE IMPORT SURPLUS, AND THE REAL EXCHANGE RATE

The rapid expansion of business-sector product in 1994 (7.5 percent)—similar to the rate of increase in 1990–92 and faster than its sluggish growth in 1993—was the result of a faster rise in demand being met by supply. This created demand pressures, resulting in a higher import surplus/GDP ratio, alongside an increase in product price relative to that of imports, and an even greater rise relative to the price of exports. The difference between the rates at which prices of imports and exports rose reflects the deterioration in Israel's terms of trade, which reduced national income by about 1 percentage point of GDP. The

Table 2.3
Business-Sector Product, Factors of Production, and Productivity, 1961–94

(percent change in quantity)

	Annual average							
	1961–72	1973–80	1981–85	1986–89	1990–94	1992	1993	1994
Product								
Total	10.1	2.9	3.6	4.6	6.8	8.0	3.5	7.6
Excl. construction			4.2	4.6	6.5	8.0	4.6	7.7
Labor input[a]								
Total	3.6	0.8	1.7	2.0	5.8	8.9	4.7	8.6
Excl. construction			1.9	2.2	5.4	6.9	7.2	9.0
Capital stock[b]								
Gross	8.5	6.1	3.1	2.7	4.0	4.4	5.1	6.4
Net	7.8	5.0	2.0	1.7	5.2	6.4	7.2	8.6
Gross, excl. construction			3.2	2.8	4.0	4.1	5.0	6.3
Labor productivity[c]								
Total	6.3	2.1	1.9	2.5	1.0	–0.8	–1.1	–0.9
Excl. construction			2.3	2.4	1.1	1.1	–2.4	–1.2
Capital stock per man-hour								
Gross	4.7	5.3	1.4	0.7	–1.7	–4.2	0.4	–2.0
Net	4.1	4.2	0.3	–0.2	–0.6	–2.3	2.4	0.0
Gross, excl. construction			1.3	0.4	–1.3	–2.5	–2.0	–2.5
Total productivity								
Total[d]	4.7	0.4	1.4	2.3	1.5	0.5	–1.2	–0.3
Excl. construction[e]			1.8	2.2	1.6	2.0	–1.7	–0.4
Capital/GDP ratio								
Total	2.14	2.22	2.23	2.06	1.84	1.79	1.82	1.80
Excl. construction			2.39	2.18	2.01	1.94	1.95	1.93

[a] Man-hours.
[b] To beginning of year.
[c] Product per man-hour.
[d] 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.
[e] 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.

deterioration apparently resulted from the strengthening of European currencies against the dollar, and the world-wide rise in raw materials prices due to the economic recovery in the industrialized countries. Thus, the rise in the import surplus/GDP ratio (at constant prices) reflects the extent of surplus demand, which was satisfied by the continued rapid increase of imports (relative to the growth of GDP and the use of resources), and a slowdown in the growth of exports (excluding diamonds). The latter reflects the diversion of some of the incremental domestic production of tradables from exports to domestic demand.[7] [In effect, the rate of increase of tradables in 1994 was similar to that in 1993 and its long-term rise (Table 2.2), despite real appreciation of the NIS.] It may be assumed that had it not been for the pressure from domestic demand, exports would have been able to respond more fully to the greatly increased foreign demand for them. Moreover, in 1992–94, concurrent with the rise in the import surplus, both imports and exports rose rapidly. This contrasts with the situation in earlier years, when demand pressure not only served to increase the import surplus, but also occasionally had an adverse affect on the level of exports. The change in the response of exports to domestic demand pressures apparently reflects the economy's greater openness resulting from the liberalization policy and the improvement in Israel's geopolitical standing. The rise in imports above that implied by the increase in aggregate demand may reflect a diversion of domestic demand due to liberalization. This spurred domestic producers to find new overseas markets and expand existing ones while reducing prices.

There was real appreciation in 1994 even though there was no change in the rate at which the price of business-sector product (including housing services) rose, and this was reflected entirely by slower rates of increase in the prices of imports and exports, which also indicates slower nominal depreciation. This suggests that appreciation may be affected also by a certain nominal rigidity deriving from the easing of the rate at which the nominal exchange rate changed. Despite this possible effect, it is uncertain whether a discrete devaluation would have eroded real wage costs in the tradables sector; real erosion depends to a considerable degree on the effect of devaluation on inflationary expectations, and hence on pressures for further wage increases, creating a vicious circle. Thus, it seems that in the context of higher inflation, especially during 1994, and concern that it would accelerate even more, the rate at which the exchange rate changed could have been expected to fall behind the rate of inflation, as indeed occurred. The short-term damage to the tradables sector is the price of the battle against inflation.

The large wage increases in the public services have so far had relatively little effect on wages in the private sector, and hence have not exerted appreciable upward pressure (via labor costs) on the price of nontradable business-sector product. However, total product price also incorporates the wage increases of public-services employees, and hence it accelerated. As a result, real appreciation relative to total product price is even

[7] Although Israel's economy is very small in world trade terms, some of its exports consist of very specialized items, which may have an effect on world prices in those spheres, and which are therefore also affected by the level of world trade. Thus, the relative contraction of the supply of exports abroad should have raised their price in foreign-currency terms; in actual fact, however, this price fell.

Table 2.4
Indicators of Business-Sector Profitability and Investment, 1982–94

	1982–85	1986–89	1990–94	1991	1992	1993	1994
Index, 1986 = 100							
Labor costs per man-hour							
Total	83.8	107.1	110.5	110.1	109.4	109.7	110.9
Industry	88.4	104.8	114.7	116.9	114.3	116.0	119.6
Unit labor costs							
Total	91.1	102.6	98.5	96.3	96.8	98.3	100.8
Industry	93.6	99.2	94.4	96.2	92.0	92.0	93.7
Percent							
Gross rate of return on capital[a]							
Total	12.1[b]	9.7	13.1	13.9	14.2	13.5	12.7
Industry	16.8[b]	12.8	14.2	13.7	15.1	15.0	14.3
Net rate of return on capital[a]							
Total	11.5[b]	6.7	11.4	13.4	13.6	11.7	10.0
Industry	19.9[b]	11.8	14.6	13.9	16.6	15.9	14.2
3-month Eurodollar interest[c]	10.2[d]	7.7	5.1	5.8	3.7	3.1	4.6
Real interest on overdrafts[e]							
Current year	37.8	20.0	10.2	9.1	9.5	7.4	9.9
Moving 3-year average	27.8	30.9	11.7	12.4	11.2	8.7	8.9
Yield to maturity of 10-year bonds	3.4	4.7	2.7	2.9	2.6	2.9	3.2
Tax rates							
Nonwage income, A[f]	25.6	31.2	26.2	23.1	24.3	27.0	31.2
Nonwage income, B[f]	13.8	25.2	20.8	17.2	19.3	21.1	25.6
Statutory corporation tax	62.3	49.0	40.3	41.0	40.0	39.0	38.0
Investment							
Investment/product ratio	16.0	14.1	18.8	17.8	18.3	20.4	22.4
Average age of equipment (years)	5.9	6.2	6.3	6.4	6.3	6.2	6.1

[a] Capital stock excluding roads.
[b] 1981–85.
[c] In dollar terms.
[d] 1983–85.
[e] Ex post; deflated by product prices at factor cost.
[f] Variant B is variant A *less* credit concessions and capital grants to firms; it includes taxes on managerial salaries.

SOURCE: Based on Central Bureau of Statistics data.

greater, far outstripping its rate in the past. In the long run, the change in relative total product price (including public services) should also be reflected by a change in the allocation of factors of production between tradables and nontradables. The economy has not yet reached equilibrium, however, and in the course of its convergence to it there will be changes both in the relative total product price (e.g., a certain erosion of real wage increases in the public services) and in the allocation of the factors of production between the two sectors.

3. BUSINESS-SECTOR PRODUCT—THE SUPPLY SIDE

Profitability

The rate of return on capital—a major determinant of the profitability of supply in the business sector—fell for the second successive year (Table 2.4), after improving greatly in 1991–92 to slightly above the high level which prevailed in the first half of the 1980s. In 1991–92, however, corporation tax was slightly higher than its current rate, so that after-tax rates of return in the two periods may not differ significantly.

The decline in the rate of return on capital in 1993–94 was mainly due to the decline in labor productivity together with the rise in real hourly wage costs. The latter had two causes in 1994. First, excess supply in the labor market contracted, reflected by the steep decline in unemployment, in part the result of the substitution of some workers from the administered areas by Israelis because of the closure and employers' personal security considerations. Secondly, the rate at which the price of private consumption rose outstripped that of business-sector product (including housing services).[8] Thus, there was tension between the worker's need to protect his real wage and the employer's desire to keep real labor costs down if there was no parallel increase in labor productivity. Thus, the real business-sector wage declined from the employees' point of view, and rose from the producers' point of view, reflected in a decline in the return on capital.

The improved return on capital in 1990–92, by contrast, in part reflected the restructuring and rationalization which followed the stabilization program, and in part the fall in the real wage caused by the appreciable increase in the labor supply in the wake of mass immigration.

Thus, the rise in the supply of business-sector product in 1994 was caused by improved profitability in 1991–92—only slightly offset in 1993–94—and by optimistic expectations of continued rapid growth which were reinforced in the course of 1993.

[8] Under certain assumptions, it can be proved that most of this difference is the result of the deterioration in the terms of trade.

Productivity and factors of production

The 7.5 percent increase in business-sector product in 1994, compared with 3.5 percent in 1993, reflects in part the acceleration of GDP supply.[9] The latter is mainly an indication of the continued acceleration of business-sector capital stock, while demand for labor input adjusted itself at least partially to this. This is explained as follows: labor input grew by a marked 8.6 percent, compared with 3.9 percent in 1993, and an average of 5.2 percent a year in 1990–92, exceeding the rise in capital stock (Table 2.3). Nonetheless, since unit labor costs rose, and the Business-Sector Encouragement Law—under which net incremental employment in the business sector was subsidized—expired, the rise in labor intensity reflects producers' response to excess demand for nontradables, which are labor intensive, alongside a rise in the relative product price. Most of the increase in labor input was indeed concentrated in the nontradables sector. Labor input may be adjusted relatively quickly (like imported intermediates) to raise supply, whereas capital stock is constant in the short run (if it cannot be better utilized, as in fact occurred in 1994). The lower relative price of imported raw materials due to real NIS appreciation helped supply respond to demand pressures, with a rise in demand for labor as a complementary factor of production.

Total productivity fell slightly in 1994, by 0.3 percent, after declining by 1.2 percent in 1993, and hence did not contribute to the faster expansion of potential GDP.

Several short-term features may have harmed factor utilization in 1993: these include the sharp shift in the composition of demand, the change in employment—the substitution of some of the workers from the administered areas by other foreign workers and Israelis, and the discrepancy between immigrants' qualifications and the requirements of the labor market (their employment was made possible chiefly through the subsidy of incremental labor). Some of these (especially the change in the composition of demand) no longer applied in 1994, and this prevented a further significant decline in labor productivity. Thus, total productivity could have been expected to rise. Furthermore, when exceptional demand pressure acts to increase GDP (as was apparently the case in 1994), factor utilization generally rises on a temporary basis, until capital stock adjusts to the new level of demand. Nevertheless, total productivity failed to rise in 1994, for the third successive year, having increased by an average of 2.3 percent during 1981–91. Labor productivity fared even worse, falling by an annual average of 0.9 percent in 1992–94, after rising by about 2 percent a year in the 1980s. Even if construction, which suffered wide fluctuations, is excluded, the same trend is evident. This development is of special concern when compared with the past; in the last decade, productivity accounted for half the increase in business-sector product, the same as in the 1960s and early 1970s. The factors preventing growth in productivity in 1992–94 are not yet sufficiently clear, but the fact that this has continued for three years suggests that underlying causes are at work, over and above the following short-

[9] In other words, there was a shift of the supply curve, and not movement along it. The latter is the reaction of supply to changes in aggregate demand, alongside a change in relative product price.

term features: first, the growing proportion of immigrants not employed in their original occupations may have had a negative effect on labor productivity. Secondly, the persistent rise in gross investment relative to capital stock in recent years leads to an increase in the share of new capital being absorbed or run-in, adversely affecting productivity in the interim. The large increase in the number of Israelis employed in 1993–94 (7.5 percent in each year) necessitated widespread retraining, again impairing both labor and total productivity in the interim. Nonetheless, the greater share of new, technologically advanced equipment, can be expected to increase productivity after the running-in period once the new technology has been mastered. This effect has not yet been observed. The third factor was the closure imposed on the administered areas, which caused wide fluctuations in labor input, and increased uncertainty regarding the availability of labor from those areas. Hence, employers needed an emergency 'stock' of employees to mitigate the fluctuations in employment and production, particularly in those fields in which the interruption of production has negative effects over and beyond the immediate damage caused. (This argument has been weakened in 1993–94, as the number of employees from the areas has contracted.)

4. INVESTMENT AND CAPITAL STOCK[10]

Total real investment grew by about 10 percent, following a rise of only 3 percent in 1993 (Table 2.5). Investment in stocks fell, after increasing sharply in 1993, reflecting mainly fluctuations of diamond stocks. Investment in fixed assets surged by 13 percent, after remaining stable in 1993, despite the continued decline in investment in government-initiated residential construction which followed its sharp reduction in 1993. All other components of fixed investment, including that of the private sector in housing, rose markedly. Investment in the principal industries increased by some 17 percent, similar to its rate in 1993, most notable being the 25 percent expansion of private-sector investment, following its 19 percent rise in 1993 (Table 2.7).

In 1994 the level of business-sector investment in the principal industries reached more than double its level in 1989, before the influx of immigrants began. This enabled the further acceleration of gross capital stock, and its rate of increase to the beginning of 1995 reached some 8 percent, after rising by 6 percent up to the beginning of 1994, and by an annual average of 3.5 percent in 1990–93 (Table 2.6). Net capital stock increased even faster, by 10 percent to the beginning of 1995. This represents a significant acceleration in the rate of increase of capital stock in recent years, and a return to its rapid growth rate of the 1960s and early 1970s. Investment and capital stock in manufacturing industry followed a similar trend.

[10] A detailed discussion of investment in residential construction appears in the section on construction below.

Table 2.5
Gross Domestic Investment, by Type of Asset, 1981–94

(percent change)

	At current prices (NIS million)	Quantity						Price	
		Annual average							
	1994	1981–85	1986–89	1990–94	1992	1993	1994	1993	1994
Nonresidential and other construction	11,977	–3.5	6.0	18.6	21.4	30.4	10.7	7.7	8.7
of which Nonresidential	6,371	–2.3	2.7	18.6	22.2	33.5	18.4	7.5	9.1
Other	5,605	–5.0	10.2	18.6	20.7	27.5	3.1	7.9	8.1
Plant and equipment	18,640	8.0	0.3	15.4	5.2	13.5	16.9	8.8	5.2
of which Imports	12,347	6.9	–1.7	18.2	–2.4	16.4	26.3	9.4	4.5
Domestic production	6,293	9.0	3.3	10.8	19.1	9.3	2.1	7.9	6.3
Transport equipment	6,477	1.1	3.4	24.7	21.7	4.7	17.7	23.6	12.9
Nonresidential investment excl. shipping and aviation	37,094	3.5	1.9	17.7	12.3	16.9	15.0	10.9	7.6
Shipping and aviation	920								
Gross domestic nonresidential investment	38,014	3.4	1.7	18.5	11.0	16.7	16.9	10.9	7.4
Residential construction[a]	13,014	–5.2	3.0	8.6	–0.6	–27.1	2.0	8.3	12.6
of which Private	10,862	–1.7	4.5	6.8	9.1	7.9	11.8	7.3	12.6
Public	2,152	–17.3	–6.9	20.5	–9.0	–64.0	–29.1	8.8	12.2
Gross domestic investment in fixed assets	51,028	0.2	2.0	15.6	6.3	0.2	12.8	10.1	8.7
Change in inventories	2,540								
Gross domestic investment	53,568	–0.1	2.2	16.7	6.2	2.9	9.7	9.6	10.5

[a] Including earthworks.

SOURCE: Central Bureau of Statistics.

Table 2.6
Capital Stock, by Industry, 1981–95[a]

(real change, percent)

	Total					Equipment					Buildings				
	1981–85	1986–89	1990–94	1994	1995	1981–85	1986–89	1990–94	1994	1995	1981–85	1986–89	1990–94	1994	1995
Industry	3.8	3.8	4.4	6.7	9.4	4.4	4.8	5.1	7.2	9.8	1.9	0.2	0.9	3.7	7.1
Agriculture	2.4	0.2	–1.1	–0.4	–1.2	3.2	0.5	–2.5	–1.1	0.3	2.1	0.1	–0.7	–0.2	–1.6
Transport & communications	1.6	2.4	4.6	7.8	9.0	0.9	2.1	4.0	8.5	11.1	2.5	2.8	5.2	7.0	6.8
of which Excl. transport equipment	2.4	4.1	6.5	8.4	7.7	1.9	11.2	11.9	13.3	10.8	2.5	2.8	5.2	7.0	6.8
Construction equipment	–1.4	–4.6	9.1	16.6	19.0	–1.4	–4.6	9.1	16.6	19.0					
Private services	5.9	3.9	3.9	5.4	8.7	8.2	5.9	4.3	5.0	9.5	3.7	1.7	3.4	5.9	7.7
Electricity	6.7	4.5	7.8	9.0	10.3	8.6	5.3	9.6	10.8	12.1	4.4	3.3	4.9	5.7	6.8
Waterworks	2.9	0.5	–0.0	0.9	–0.6	6.1	2.1	2.4	4.8	2.1	2.6	0.2	–0.4	0.2	–1.1
Earthworks	19.2	3.4	15.4	18.0	15.9						19.2	3.4	15.4	18.0	15.9
Total business sector	3.1	2.7	4.0	6.4	8.1	3.5	3.5	4.9	7.7	10.3	2.7	1.6	2.9	4.7	5.0
Public services	3.6	3.6	4.0	5.1	5.4	2.4	5.7	3.1	2.0	1.8	3.8	3.3	4.1	5.6	6.0
Total principal industries	3.2	2.9	4.0	6.1	7.5	3.4	3.7	4.8	7.3	9.7	3.1	2.2	3.4	5.1	5.4
of which Excl. transport equipment	3.6	3.2	4.3	6.0	7.0	4.5	4.8	5.6	7.4	9.3	3.1	2.2	3.4	5.1	5.4
Residential construction	5.0	3.1	4.4	3.7	3.6						5.0	3.1	4.4	3.7	3.6
Total fixed assets	4.1	3.0	4.3	5.1	5.8	3.4	3.7	4.8	7.3	9.7	4.3	2.8	4.1	4.3	4.4

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

SOURCE: Based on Central Bureau of Statistics data.

Investment in the principal industries and capital stock

Business-sector investment should express the adjustment of capital stock to a level which enables expected GDP growth in the next few years to be achieved, and it is in this context that the level and trend of investment should be examined. The influx of immigrants which started at the end of 1989 raised expectations of faster economic growth and a higher rate of return on capital, at least in the interim. These expectations should have been reflected by firms' greater willingness to expand and invest, and indeed there was considerably faster growth in 1990–92, alongside improved profitability and significantly increased business-sector investment in the principal industries. The latter was encouraged both by direct government aid and by the expansionary monetary policy adopted in those years.[11] In the second half of 1992 and at the beginning of 1993 the economy underwent a process of adjustment, following the heavy cutback in government-initiated residential construction. As expected, this had an adverse effect on GDP growth in the short run, but it was also expected that the economy would recover quickly and return to a rapid growth path. These expectations were supported by the government's large-scale investment in roads, by the peace process which reached its zenith in the second half of 1993, and by the improvement in Israel's international relations. Hence, business-sector investment continued expanding rapidly in 1993, too, rising by 16 percent. The surge in domestic demand in the second half of 1993 reinforced the optimistic expectations, which were thus the main cause of the 18.5 percent rise in private-sector investment in 1994. The level of investment attained allows potential growth of at least 5–6 percent a year in the next few years,[12] or 3 percent per capita; it also reflects investors' awareness of the process of change, already evident, in the source of future growth. Immigration created a large pool of cheap labor (albeit with a higher than average level of education), which encouraged more labor-intensive production. The sharp decline in unemployment to a level of almost full employment, the stabilization of immigration at a level of about 77,000 a year, and the fact that Israel cut its ties with the large cheap labor force in the administered areas, require a restructuring that enables future growth to be based on more capital-intensive production, reminiscent of the process which took place in the 1960s. The current level of investment, which

[11] For a detailed account see the *Annual Reports* for 1991 and 1992.

[12] This estimate is based on the following assumptions: the level of investment in 1994 enables capital stock to grow at a rate of 7–8 percent in the next few years. In the labor market, continued immigration at the current level (about 77,000 immigrants a year) ensures a 3.5 percent increase in the civilian labor force. The rise in factors of production made possible on the supply side, together with a reasonable increase in productivity of 1 percent a year, enable potential GDP to grow over the next few years at an annual rate of about 6 percent. Several developments support a rise in productivity over the next few years: extensive investment in equipment in recent years has considerably reduced its average age, allowing its improved utilization. It is also reasonable to assume that this investment brings with it new technologies, and should thus raise productivity, and that the productivity of immigrants will rise considerably after their period of absorption and retraining. As the share of immigrants who have accumulated seniority will be greater than that of new entrants, their positive effect on productivity will predominate.

Table 2.7
Nonresidential Investment, by Sector, 1981–94

(percent)

	At current prices (NIS million)	Real change[a]						
	1994	1981–85	1986–87	1988–89	1990–94	1992	1993	1994
Structures and earthworks								
Public sector[b]	7,854	–3.3	17.9	2.4	20.1	19.2	38.8	10.2
Public-sector corporations[c]	1,858	–6.9	7.9	1.8	10.5	17.1	3.4	–5.3
Total	9,712	–4.5	15.1	2.3	17.8	18.6	29.2	6.8
Private sector	2,265	–1.4	–10.5	3.7	22.9	40.7	37.1	30.9
Total	**11,977**	**–3.7**	**9.2**	**2.5**	**18.7**	**21.5**	**30.4**	**10.6**
Equipment								
Public sector[b]	1,493	6.5	2.5	1.2	4.7	1.5	–0.5	0.7
Public-sector corporations[c]	5,373	0.9	–1.5	4.7	15.9	13.5	12.3	8.6
Total	6,866	2.9	–0.2	3.6	12.8	10.2	9.1	6.8
Private sector	11,774	10.9	1.8	–4.2	17.0	2.0	16.7	23.6
Total	**18,640**	**8.0**	**1.0**	**–1.3**	**15.4**	**5.2**	**13.5**	**16.9**
Structures and equipment								
Public sector[b]	9,347	–0.2	12.0	2.1	16.5	14.5	29.6	8.5
Public-sector corporations[c]	7,231	–1.7	0.8	3.8	14.4	14.5	9.7	4.8
Total	16,579	–0.9	6.2	2.9	15.5	14.5	19.8	6.8
Private sector	14,039	8.9	0.4	–3.4	17.8	5.6	19.2	24.7
Total	**30,617**	**4.0**	**3.2**	**–0.0**	**16.6**	**10.5**	**19.5**	**14.5**
Transport equipment[d]	7,397	–1.1	37.3	–23.8	30.4	13.1	4.5	28.7
Grand total	**38,014**	**3.4**	**8.9**	**–4.6**	**18.5**	**11.0**	**16.7**	**16.8**

[a] At 1990 prices.

[b] Including investment in public services, roads, afforestation, earthworks, and land development.

[c] Public-sector corporations and local authorities; including electricity, water, estimated investment in the transport equipment, mining and quarrying industries, additional estimated investment by public-sector corporations in industry, transport, and services, as well as government enterprises (railways, ports, aviation and mail services), and some construction equipment.

[d] For practical reasons, transport equipment cannot be classified.

SOURCE: Based on Central Bureau of Statistics data.

enables business-sector capital stock to rise at 8 percent, and the increase in population, which allows the civilian labor force to grow by 3.5 percent a year over the next few years, yield the same rates of increase of factors of production as prevailed in the 1960s. The significant difference is the expected 1 percent annual rise in productivity, far below the annual 4.5 percent of those years.

Regarding the timing of investment, the question is why the fall in the rate of return on capital in 1993–94 did not harm the level of investment in 1994. The reduction in real interest at the end of 1993 and the beginning of 1994 may have had a dominant effect. Moreover, the lower rate of return in 1994 was apparently the result of the deterioration in the terms of trade, and investors may have regarded it as temporary. The rise in productivity may also have been adversely affected by the short-term features described above, so that it may be expected to increase again, which may help the return on capital to revert to its upward path. Capital raised on the stock exchange by means of flotations increased greatly in 1992, and continued rising in 1993. Assuming that there is a certain lag between the time capital is raised and the implementation of investment, it appears that the timing of investments in 1993–94 was also influenced by the convenient and cheap sources of finance which the stock market offered investors.[13] The decline in flotations, together with high real interest at the end of 1994, may thus reduce the future level of investment.

Table 2.8
Stock-Exchange Flotations, 1990–94

(NIS million, current prices)

	1990	1991	1992	1993	1994
Total flotations	2,432	2,132	5,066	9,358	5,437
of which Shares	1,255	1,815	4,707	8,993	5,416
Bonds	1,177	317	359	365	21
Proceeds paid to the government and individuals	280	589	1,514	2,598	746
Bond redemptions	396	758	1,249	1,348	1,949
Proceeds retained by firms	1,756	785	2,303	5,412	2,742
Proceeds at 1990 prices	1,756	695	1,834	3,863	1,820
Percent					
Share of flotations in business-sector investment	16.0	5.0	11.9	21.7	8.7

[13] This claim is based on the assumption that firms face liquidity constraints (reflected *inter alia* by differences in rates of return), and hence contradicts the Modigliani-Miller Law, according to which sources of finance need not affect investments.

Table 2.9
Total Private Consumption, 1981–94

(Percent change)

	At current prices (NIS mill.)	Quantity						Price	
		Annual average							
	1994	1981–85	1986–89	1990–94	1992	1993	1994	1993	1994
Consumption of nondurables	53,495	4.7	6.5	7.7	8.1	10.1	9.6	5.5	9.4
of which Food and tobacco	31,663	3.9	5.0	5.8	4.1	7.5	7.3	5.5	11.5
Other nondurables	21,831	6.1	9.2	10.5	14.7	13.8	12.8	5.8	6.7
Other services	39,190	4.2	5.4	6.9	10.3	7.2	9.1	10.7	10.8
Consumption by Israelis abroad	7,760	1.5	11.4	9.4	3.7	28.3	16.3	15.4	16.6
Consumption by nonresidents in Israel (–)	7,447	2.2	–2.4	6.8	46.6	7.9	8.8	13.6	7.2
Private consumption, excl. nonprofit institutions, housing and durables	92,998	4.7	7.2	7.6	6.4	10.2	9.9	7.7	10.7
Durables	15,239	5.9	12.8	14.4	24.6	0.5	11.0	14.2	6.9
Services of nonprofit institutions	3,498	0.0	0.6	4.1	5.8	3.4	8.0	11.3	14.3
Consumption of housing services	30,223	3.9	2.4	3.6	5.2	4.5	3.2	16.8	20.8
Total private consumption	141,959	4.6	7.0	7.5	8.2	7.7	8.8	10.3	12.2
Total private consumption excl. durables	126,720	4.4	6.1	6.7	6.2	8.8	8.5	9.7	12.9

SOURCE: Central Bureau of Statistics.

5. PRIVATE CONSUMPTION AND SAVING

Per capita private consumption continued to grow rapidly, its annual rate of increase rising to 6.2 percent from a 5 percent average in 1992–93 (Table 2.11). Per capita private consumption excluding durables (an indication of current consumption) also rose by a marked 6 percent, similar to its growth in 1993 and significantly above the 1 percent annual average of 1990–1992.

The ratio of consumption to disposable wage income remained fairly constant in the long run—even in recent years, despite mass immigration—in contrast to that of consumption to total disposable income (Figure 2.3). It is thus a crucial variable in determining the trend of private consumption. Many other factors affect consumption in the short run. In 1994 per capita disposable wage income rose by about 5.5 percent in real terms, similar to the increase in per capita private consumption excluding durables. This represents a considerably faster rise in per capita income than the annual 3 percent rate of 1992–93. An attempt is made below to explain why this significant increase affected consumption—which in theory is determined by the permanent rise in income. The sizable rise in disposable wage income was led by the exceptional wage agreements in the public services, which accounted for about 40 percent of its total increase. These wage increments, which to some extent represented the correction of distortions in wage levels of certain groups of public-services employees (mainly in education), may have been considered permanent by employees, and hence their great effect on consumption. Part of the agreement also specifies considerable wage increases in 1995, and this may have reinforced the feeling that they were permanent. Empirical studies throughout the world have found a strong link between current income and consumption, apparently because of the liquidity constraint.[14] Hence, this income can explain most of the rise in per capita consumption. Faster monetary expansion, alongside a reduction in interest at the end of 1993 and offset only in the second half of 1994, gave rise in particular to increased purchases of consumer durables. The marked improvement in immigrants' employment and the fall in their unemployment rate, which boosted their economic capabilities and their feeling of belonging, also had a considerable effect on purchases of durables (as it did on housing purchases). Falling share prices should have reduced consumption, but the public's past behavior patterns indicate that this effect is relatively minor (about one percentage point of consumption), and occurs with a lag. Moreover, if falling share prices create expectations of a fall in their yield, this may increase current consumption at the expense of future consumption. Thus, two conflicting effects may be evident, so that the net result is uncertain, and in any event is not very significant.

The acceleration of the inflation rate during the year may have given rise to uncertainty regarding the continuation of rapid growth and the future trend of income, and apparently acted to stabilize or even reduce per capita consumption in the second half of 1994.

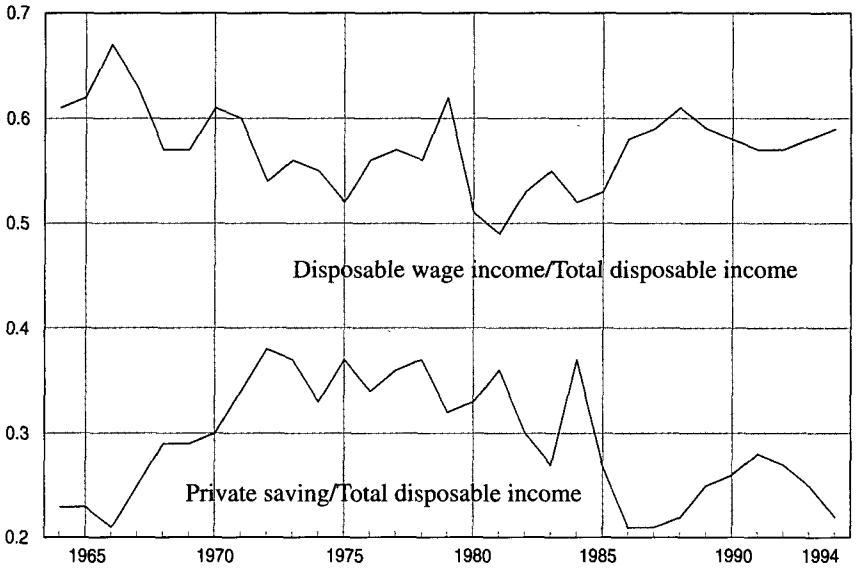
[14] The high level of liquidity in 1993–94 reduced households' liquidity constraint, and hence boosted their propensity to consume.

Table 2.10
Private Disposable Income and the Saving Rate, 1990–94

	At current prices (NIS million)					Real change[a]			
	1990	1991	1992	1993	1994	1991	1992	1993	1994
National income	74,220	96,145	114,219	132,313	158,704	10.4	7.3	5.0	6.9
General government domestic income from assets	1,534	1,914	2,342	2,347	3,054	6.3	10.5	–9.2	16.0
Depreciation[b]	14,118	17,253	20,079	24,300	29,780	4.1	5.1	9.7	9.2
Gross private income from economic activity	86,804	111,484	131,956	154,266	185,430	9.4	6.9	6.0	7.1
Total direct taxes[c]	19,430	23,249	28,170	34,734	44,773	1.9	9.4	11.8	14.9
Net current transfer payments	9,819	12,563	14,743	17,228	20,600	9.0	6.0	5.9	6.6
Interest on internal debt	6,987	8,377	9,190	10,277	11,184	2.2	–0.9	1.4	–3.0
Gross disposable income from domestic sources	84,180	109,175	127,719	147,037	172,441	10.5	5.7	4.4	4.5
Transfers to individuals from abroad[d]	3,814	4,688	6,252	7,559	9,580	4.7	20.4	9.6	13.0
Total disposable income	87,994	113,863	133,971	154,596	182,021	10.2	6.3	4.6	4.9
Percent									
Saving rate on income from domestic sources	22.9	25.1	23.4	20.9	17.7				
Total saving rate	**26.3**	**28.2**	**26.9**	**24.8**	**22.0**				

[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.

Figure 2.2
Private Saving and Disposable Wage Income as Proportion of Total Disposable Income, 1964-94

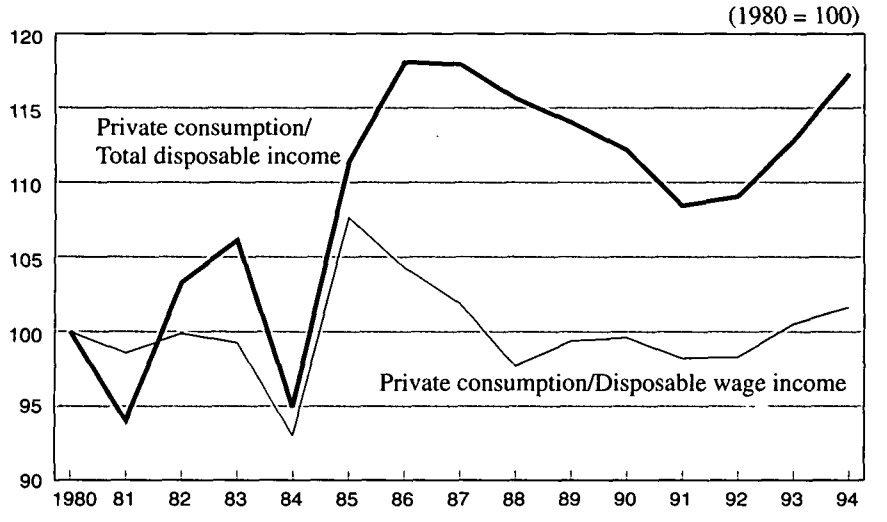


SOURCE: Based on Central Bureau of Statistics data.

The assumption that the public attaches greater importance to the trend of disposable wage income than to other income when assessing permanent income should be explained. The reason seems to be that the former is transferred directly to households, whereas the mechanism by which some of the latter reaches them (mainly through firms quoted on the stock exchange) is more complex and more exposed to irregularity and uncertainty. A large share of physical capital is held by quoted companies, and in Israel only a small proportion of their profits (which constitute the return on this capital) is distributed to shareholders in the form of dividends. The balance of the companies' profits should be reflected in the value of shares held by the public, and the transmission mechanism from the companies to households passes through the stock exchange. Experience has shown that this mechanism is faulty, and in the interim period there is frequently a major divergence between a company's economic value and the market value of its shares. It is therefore difficult for the public to evaluate this wealth correctly.

The faster growth of private consumption than total disposable income is reflected by a significant fall in the private saving rate since 1992, down to 22 percent of total disposable income in 1994 (Table 2.10), a low level in comparison with the past (Figure 2.2). The decline in the saving rate in 1993–94 appears to reflect a fall in the rate for both households and firms, also indicated by the real reduction in the return on capital.

Figure 2.3
Indices of Private Consumption as Proportion of Total Disposable Income and Disposable Wage Income, 1980-94 [a]



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

6. NATIONAL SAVING, INVESTMENT, AND THE CURRENT ACCOUNT

The national saving rate fell for the second successive year, and is currently lower than the average for 1990–94, but higher than that prevailing in the 1980s (Table 2.12). The decline reflects a lower private saving rate, with no significant change in the government rate. The rate of investment stabilized at a relatively high level in 1993–94 compared with the 1980s. The composition of investment changed, that in the principal industries rising at the expense of inventory and housing.

The combination of the lower national saving rate and the unchanged rate of investment was reflected by the large deficit in the current-account balance of payments —$ 2.8 billion in 1994 and $ 1.4 billion in 1993—after it had been in balance on average in 1990–92. The balance of payments deficit (as a percentage of total income) was twice that in the first half of the 1980s. The reduction in national saving in 1993–94 thus increased the net external debt by about $ 4.4 billion—some 5 percent of total income.

The decline in the national saving rate reflects several factors. First, the deterioration in the terms of trade and the failure of productivity to rise adversely affected the return on capital and reduced the saving rate of firms. Secondly, the exceptional wage increments in the public services greatly increased the share of public consumption in total income,

Table 2.11
Per Capita Income, Consumption, and Wealth, 1981–94

(Real change, percent)

	Average								
	1981–89	1986–87	1988–89	1990–94	1990	1991	1992	1993	1994
Total private consumption	3.9	10.0	0.7	3.8	2.3	1.1	4.5	5.0	6.2
Total consumption excl. durables	3.4	7.4	1.4	3.0	0.9	–0.3	2.5	6.0	5.9
Purchases of durables	7.1	29.3	–4.7	10.5	13.6	13.6	20.3	–2.0	8.4
Standard of living[a]	3.9	7.2	2.6	2.9	0.9	–0.7	1.7	6.9	5.9
Disposable income from all sources	2.5	5.3	3.8	2.9	3.5	3.9	2.6	2.0	2.5
Disposable income from domestic sources	2.7	4.4	4.0	2.8	3.9	4.1	2.0	1.7	2.1
Disposable income from wages and current transfer payments	4.1	11.3	3.3	3.0	1.7	1.9	3.1	3.1	5.4
Private wealth				2.1	–1.6	–2.1	8.8[b]	4.3	0.9

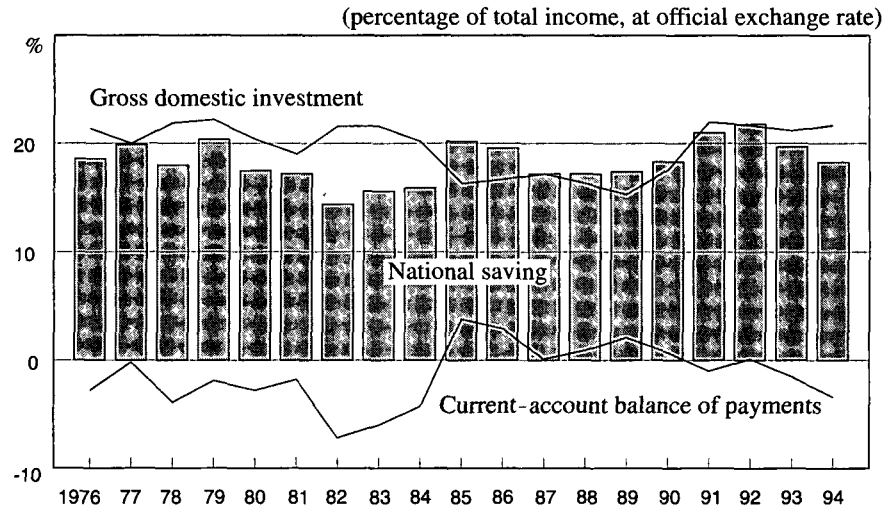
[a] Defined as private consumption excluding purchases of durables, *plus* an estimate of imputed services deriving from the stock of durables.
[b] The estimate for this year appears to be biased upwards.

Table 2.12
National Saving, Investment, and the Current Account, 1981–94

	Percent of total income[a]						Annual average ($ million)		
	1981–85	1986–89	1990–94	1992	1993	1994	1986–89	1990–94	Change
Gross saving[b]									
General government	–6.1	1.5	0.5	1.6	1.1	1.8	523.5	437.4	–86.1
Private	23.4	16.0	19.1	20.0	18.4	16.3	7,078.7	13,382.1	6,303.4
Total	17.2	17.5	19.6	21.6	19.5	18.1	7,602.2	13,819.5	6,217.3
Gross investment									
Inventories	0.3	0.5	0.9	0.8	1.2	1.0	190.8	678.9	488.1
Fixed nonresidential	12.6	11.4	13.4	12.9	14.6	15.4	4,951.1	9,541.9	4,590.8
Dwellings	6.7	4.5	6.6	7.9	5.5	5.3	1,996.7	4,618.1	2,621.4
Total	19.6	16.4	20.9	21.7	21.3	21.7	7,138.7	14,838.9	7,700.2
Capital transfers	0.7	0.4	0.4	0.6	0.3	0.3	174.0	279.2	105.2
Current account[c]									
Civilian import surplus[d]	6.7	4.1	6.7	6.3	6.8	8.4	1,758.3	4,823.1	3,064.8
Civilian unilateral transfers[e]	5.1	5.6	5.8	6.8	5.3	5.1	2,395.7	4,082.8	1,687.1
Total	–1.7	1.5	–0.9	0.5	–1.4	–3.3	637.5	–740.3	–1,377.7

[a] Total income is GNP (as per new SNA definitions) *plus* unilateral transfers from abroad (converted to NIS at the official exchange rate).
[b] The saving figures are based on nominal interest payments.
[c] Saving *less* investment, *plus* capital transfers.
[d] The civilian import surplus includes net payments to factors of production abroad.
[e] Calculated as the current account deficit *less* the civilian import surplus, and hence it includes some foreign-currency conversions by the IDF.
SOURCE: Based on Central Bureau of Statistics data.

Figure 2.4
Rate of Saving, Investment, and the Current Account, 1976-94



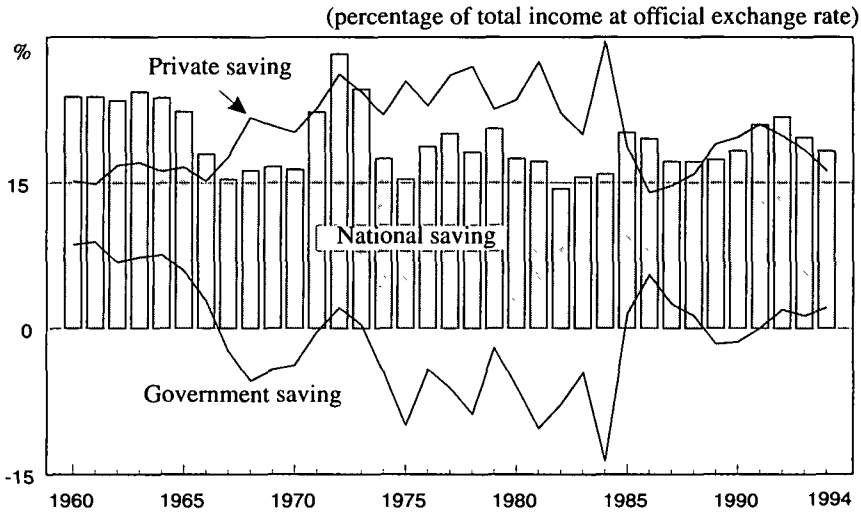
SOURCE: Based on Central Bureau of Statistics data.

as well as boosting private consumption. Thirdly, the acceleration of monetary expansion was accompanied by a reduction of the interest rate at the end of 1993 which was offset only in the second half of 1994.

An analysis of the reasons for the decline of the private saving rate in 1993 suggests that it was caused in the main by permanent factors, i.e., the adjustment of consumption to the trend of disposable wage income. Assessing the causes of its further fall in 1994, it appears that at least some of them are transient, e.g., the effect of expansionary monetary policy (expansionary at the beginning of the year and contractionary towards the end). It seems therefore that in the next few years there will be forces acting to raise the private saving rate to some extent.

If the increment in the external debt arising from the decline in the national saving rate is not long term, it leads to a one-off reduction in future national income due to the greater debt-servicing burden. However, as the current level of investment enables future per capita national income to grow at an annual rate of 3 percent (see note 12), the rise in the external debt by about 5 percentage points of income does not represent a particularly heavy long-term burden. If the deficit persists, however, it will impair the future rate of growth of national income. This contrasts with a situation in which (over several years) the external debt finances profitable investments, whose future yield is expected to cover the cost of debt servicing, but which also enable national income to increase through higher employment (as a complementary factor of production). Moreover, a comparison of the balance of payments deficit with its possible future financing indicates that if the

Figure 2.5
Gross National Saving Rate, by Sector, 1960-94



SOURCE: Based on Central Bureau of Statistics data.

present current-account balance of payments deficit continues, it will result in the utilization within the next two and a half years of all the loans guaranteed by the US government. (At the end of 1994 the balance of the guarantees was $5.5 billion.) A situation in which the loan guarantees have been almost entirely utilized, alongside a considerable deficit in the current-account balance of payments, would harm Israel's international financial standing. Therefore, measures should be considered which will raise the long-term real interest rate. Furthermore, the significance of financing the current-account deficit by means of foreign loans guaranteed by the US government is that the rate of interest on these loans is the long-run marginal rate of interest currently facing the economy. If savings and investment are to be determined efficiently, investors and savers must be able to meet this long-term real interest rate.[15] To calculate this interest rate, certain assumptions must be made.[16] These are that the real interest rate in

[15] As investors do not receive loans directly from the guarantees, a situation may arise in which the government makes these monies available to them at a different interest rate.

[16] The assumptions are: first, the rate of increase of the dollar prices of exports is 3 percent per annum, the same as in 1985–94; second, the trend of appreciation in the real exchange rate is 0.5 percent a year; third, the premium for uncertainty regarding dollar inflation is 0.5 percent. The trend of appreciation underlying this calculation is evident, but it is not clear whether it will continue, because the full cost of servicing the debt will be incurred only in the future, and because it may be assumed that eventually housing demand will contract significantly, when mass immigration ends and the population stabilizes. Demand will then be diverted to tradables, with real depreciation, reversing the trend of the last ten years. Hence, a trend of slow appreciation—0.5 percent a year—has been assumed.

Table 2.13

Infrastructure Investment, 1970–94

	Electricity	Waterworks	Transport and communications			Total infrastructure
			Excl. roads	Roads	Total	
Total infrastructure stock end–1994 *(NIS million)*	25,507	10,375	30,649	25,541	56,190	92,072
Real annual average rate of change						
1970–80	8.0	2.4	7.4	6.3	6.8	6.1
1981–85	5.5	2.3	2.7	2.2	2.4	3.2
1986–92	6.3	0.0	6.2	4.3	5.3	4.8
1992	7.0	–0.1	9.5	6.1	7.9	6.7
1993	9.0	0.9	7.7	9.3	8.4	7.7
1994	10.3	–0.6	6.3	9.3	7.7	7.5
Gross investment in 1994 *(NIS million)*	3,342	231	2,942	2,376	5,318	8,891
Real annual average rate of change						
1970–80	11.0	8.2	–2.1	–4.0	–2.7	1.9
1981–85	–7.8	–12.7	5.7	–9.5	1.9	–3.2
1986–92	16.4	4.6	16.2	30.0	19.2	17.5
1993	31.2	48.9	–5.8	61.6	13.7	20.2
1994	21.9	–35.6	–2.9	9.5	2.2	7.1
Infrastructure/GDP ratio[a] At current prices						
1970	9.2	11.2	12.8	8.1	20.9	41.3
1980	10.6	8.3	15.5	13.3	28.8	47.8
1985	12.8	8.7	13.8	13.3	27.1	48.6
1993	11.9	5.2	14.0	12.0	26.0	43.0
1994	11.5	4.7	13.8	11.5	25.4	41.6
At 1990 prices						
1970	7.5	10.4	10.9	11.7	22.6	40.5
1980	9.7	7.9	14.1	13.5	27.5	45.1
1985	11.6	7.9	13.7	13.1	26.8	46.2
1993	12.8	5.6	15.2	12.5	27.7	46.0
1994	13.1	5.3	15.3	12.8	28.1	46.5

[a] Infrastructure stock at beginning of year *divided by* GDP during the year.

SOURCE: Central Bureau of Statistics data.

1994 was about 5 percent, compared with 3.5 percent in 1993 (the nominal rates were 8.4 percent and 7 percent respectively). The real yield to maturity of long-term (10-year) government bonds in 1994 was 3.2 percent, compared with 2.9 percent in 1993 (Table 2.4). Mortgage interest was 4.5 percent, annual average, similar to its rate in 1993. Thus, it would seem that the annual average long-term interest rate was too low in 1994 (it rose towards the end of the year). This contrasted with the situation in 1993, when real long-term interest was similar to that derived from the nominal interest paid on foreign loans guaranteed by the US government.

7. PRINCIPAL INDUSTRIES

Industry[17]

Industrial production, which accounts for 30 percent of business-sector product, grew by 7.2 percent in 1994, continuing the expansion which began in 1990 with the large influx of immigrants, and which has been characterized by rates of growth unseen since the early 1970s. Production rose fairly evenly during the year, and all the principal industries —except for transport equipment—expanded by between 6 and 11 percent (Table 2.15). Alongside the growth in product, capital and labor input rose in all the principal industries except for transport equipment. Labor input[18] and capital increased by 6 percent, so that labor and total productivity rose by only 1 percent.[19] Investment grew by 21 percent, similar to its increase in 1993.

Industrial exports increased by 12 percent, after rising by 19 percent in 1993. As in 1993, the increase in exports to new Asian markets was notable, but in contrast to that year, exports to the traditional Western European markets also grew while those to East Europe declined. Export growth by industry was more even than in 1993, when 90 percent of the increase was concentrated in three industries (representing 55 percent of exports)—transport equipment, electrical and electronic equipment, and chemical and oil products. By contrast, in 1994 the rate of increase of exports of these three was similar to that of other industries.

[17] Industry data in this section exclude diamonds, and are based on industrial production indices and labor inputs calculated by the CBS. Growth rates of industrial product in 1993—implicit in business-sector product according to National Accounts figures for that year—are lower than the indices given here, as are rates of profitability and productivity. The financial statements of quoted industrial companies, which account for some 40 percent of industrial revenue, also indicate a significant decline in profitability in 1993.

[18] Labor input in industry includes industrial workers employed through employment agencies. Nonetheless, the rate of increase is lower than the 8 percent estimated in the Labour Force Surveys.

[19] Profitability indices, i.e., labor productivity, total productivity, and return on capital, are defined in section 1 above.

Table 2.14
Industrial Indicators, 1980–94[a]

(annual change, percent)

	1980–85	1986–87	1988–89	1990–94	1990	1991	1992	1993	1994
Activity									
Output and exports									
Gross value added	2.6	4.3	–2.4	7.0	6.3	6.7	8.2	6.8	7.2
Real industrial exports	9.2	7.5	6.5	9.8	6.2	0.3	11.4	18.7	12.2
Labor and capital inputs									
Labor input (hours)[b]	0.5	1.0	–5.2	4.4	–1.1	5.0	7.3	5.1	5.8
Number of employees	0.5	1.5	–4.9	3.6	–0.8	4.7	4.7	4.9	4.6
Gross capital stock[c,d]	4.9	3.9	3.2	4.2	2.0	3.0	4.6	5.1	6.4
Real gross investment[c]	6.1	3.8	–7.2	17.2	17.2	23.1	8.7	16.3	21.0
Productivity[b]									
Gross value added per man-hour	2.1	3.3	2.9	2.6	7.5	1.6	0.8	1.6	1.3
Total productivity	0.6	2.4	–0.1	2.6	6.4	2.2	1.6	1.6	1.2
Profitability									
Relative prices									
Unit labor costs[e,f]	92.0	99.0	99.0	97.0	98.0	97.0	95.0	96.0	97.0
Input/output prices[e]	100.0	99.0	97.0	94.0	97.0	94.0	93.0	94.0	94.0
Export/wholesale prices[e]	110.0	100.0	92.0	89.0	91.0	88.0	88.0	90.0	88.0
Rate of return									
Gross capital[g]	17.5	12.7	12.8	14.2	13.0	13.7	15.1	15.0	14.3
Net capital[h]	21.0	11.7	11.9	14.6	12.4	13.9	16.6	15.9	14.2
Real *interest*	32.0	22.0	18.0	10.0	15.0	9.0	9.0	7.0	10.0
Industrial share-price index[e]	103.0	113.0	85.0	248.0	119.0	185.0	277.0	364.0	294.0

[a] Excluding diamonds.
[b] Taken from indices of indutrial production, *plus* industrial workers employed by employment agencies.
[c] Including motor vehicles.
[d] Real gross capital stock at beginning of year.
[e] Index 1986 = 100.
[f] Index of total labor cost (the multiple of labor input and labor cost), *less* the index of industrial product prices, *divided by* the index of industrial production.
[g] Calculated as the ratio of gross value added *less* labor costs to capital stock including vehicles.
[h] Calculated as the ratio of gross value added *less* depreciation and labor costs to depreciated capital stock including vehicles.
SOURCE: Based on Central Bureau of Statistics data.

Profitability declined in 1994: real wages (relative to product prices) increased by more than productivity, so that unit labor costs rose by 2 percent, similar to their increase in 1993; net return on capital fell from 15.9 percent to 14.2 percent, and the total return on gross capital also declined.[20]

The components of output growth in 1993–94 differ from those in 1990–92, although the average annual rate of increase of industrial product was the same in both periods—7 percent. In 1990–92 construction industry demand was buoyant, and industrial production deriving directly from construction—concentrated mainly in the industries associated with construction, such as quarrying, construction carpentry, metal products, cement, glass, and tiles—surged by an annual average of 24 percent. In 1993–94, however, the increase in industrial product derived mainly from greater international demand, *inter alia* from markets newly opened to Israel, and from the rise in private consumption, while construction demand remained relatively stable. Another difference between the periods is that profits grew in the first, but not in the second. A third difference is the increase in the current-account deficit in 1993, as industrial output failed to keep up with demand.

The decline in profitability in 1993–94 (compared with 1992) was caused partly by low productivity, and partly by the fact that costs of wages, inputs and capital all rose faster than industrial product prices. Profitability of exports fell in 1994, due to the exchange-rate policy and the deterioration in the terms of trade, which contributed to the relative fall in export prices (Table 2.14). However, due to the rise in export prices in 1993, their level in 1994 did not decline below that prevailing in 1991–92. In addition, the relative profitability of export industries increased, as a result of their improved labor productivity, whereas in industries producing mainly for the domestic market it remained unchanged.

Real wage increases are expected in 1995, as wage hikes in the public services arising from wage agreements signed in 1994 are apt to spill over into the business sector. Furthermore, wage costs are expected to rise as a result of legislation which increased mandatory employee benefits from January 1995. It is also reasonable to assume that wages will rise as the economy approaches full employment.

[20] The estimates of return on capital are based on the 1990 Industry and Crafts Surveys and annual industrial indices published by the CBS. Note that nominal labor cost in transport equipment fell, increasing profitability in this major industry. The reason for the fall in labor costs in this industry and in defense plants belonging to other industries is that it does not include extraordinary severance payments covered by the government. If these were included, profitability would have declined even more.

Table 2.15
Industrial Production, Exports, and Investment, 1980–94

(percent)

	Average annual change				Annual change					Weight
	1980–85	1986–87	1988–89	1990–94	1990	1991	1992	1993	1994	1994
Production										
Food, beverages, & tobacco	3.4	13.3	–1.5	4.0	1.1	1.7	2.8	7.6	6.7	11.3
Textiles, clothing, & leather	–0.1	7.5	–8.4	7.6	8.5	6.9	7.1	4.8	10.8	9.0
Wood, paper, & printing	2.1	11.1	–1.5	7.7	5.6	3.0	9.8	12.7	7.4	10.6
Rubber, plastics, chemicals, & oil	4.2	6.8	1.0	9.3	7.2	6.3	11.4	10.9	10.7	16.8
Mining, etc.[a]	–0.0	7.6	–2.7	10.9	13.0	20.5	11.9	3.0	6.1	7.3
Basic metals, etc.[b]	2.0	3.4	–2.6	7.6	6.1	9.1	6.8	5.4	10.4	17.1
Transport equipment	–0.3	–6.4	–6.7	0.5	4.7	4.5	8.1	–6.9	–7.9	5.4
Electrical equipment, etc.[c]	5.8	–3.5	–1.2	7.1	6.6	5.9	8.2	8.2	6.7	22.5
Weighted average	2.6	4.3	–2.4	7.0	6.3	6.7	8.2	6.8	7.2	100.0
Weighted standard deviation	3.8	6.7	4.8	3.8	2.7	4.5	2.6	4.7	4.3	
Exports										
Food, beverages, & tobacco	3.9	7.4	1.2	2.0	7.3	–7.9	–3.7	10.0	4.4	7.0
Textiles, clothing & leather	5.5	10.4	–4.2	8.0	13.8	4.4	12.4	2.9	6.2	7.6
Wood, paper, & printing	–0.7	11.3	–0.1	1.6	9.7	5.5	8.2	0.2	–15.8	0.9
Rubber, plastics, chemicals, & oil	9.1	12.4	6.1	12.9	7.3	3.3	10.7	26.2	17.0	30.3
Mining, etc.[a]	11.1	2.8	–4.4	3.7	–3.6	–2.2	–3.4	6.2	21.3	2.7
Basic metals, etc.[b]	7.5	2.1	7.8	2.8	3.6	–4.7	–5.9	5.1	15.7	9.6
Transport equipment	4.3	12.5	13.0	9.9	–13.6	–2.4	15.4	45.5	4.6	8.3
Electrical equipment, etc.[c]	22.6	7.5	14.1	14.1	11.2	4.2	22.8	22.2	10.0	33.7
Weighted average	9.2	7.5	6.5	9.8	6.2	0.3	11.4	18.7	12.2	100.0
Weighted standard deviation	12.3	8.7	13.7	8.6	7.4	4.4	11.4	13.1	6.6	

Investment										
Food, beverages, & tobacco	10.3	11.2	–9.0	18.5	–2.9	23.9	35.9	–7.8	43.4	9.1
Textiles, clothing & leather	11.4	8.1	–22.7	20.0	27.2	–5.2	51.3	31.3	–4.6	6.4
Wood, paper, & printing	7.7	19.9	–17.3	31.5	24.2	58.7	–9.0	10.4	73.2	8.6
Rubber, plastics, chemicals, & oil	7.1	18.6	5.6	6.8	14.3	–1.2	32.3	–0.9	–10.5	19.5
Mining, etc.[a]	–4.2	18.9	–13.2	39.1	19.7	76.2	–9.9	42.4	67.0	15.2
Basic metals, etc.[b]	3.6	–5.6	–20.7	15.0	14.8	38.9	–12.7	33.4	0.7	10.1
Transport equipment	12.9	–11.1	–5.4	19.9	43.1	61.8	–26.1	3.2	17.7	6.1
Electrical equipment, etc.[c]	16.1	–7.8	0.7	22.1	18.1	16.1	6.1	35.6	34.7	25.1
Weighted average	6.1	3.8	–7.2	17.2	17.2	23.1	8.7	16.3	21.0	100.0
Weighted standard deviation	19.5	15.5	13.1	22.0	10.0	28.0	23.7	18.4	29.6	

[a] Mining, quarrying, and nonmetallic minerals.
[b] Basic metals, metal products, and machinery.
[c] Electrical and electronic equipment, and other.
SOURCE: Based on Central Bureau of Statistics data.

In addition to the above factors, profits were also affected by the cost of credit and taxation:[21] real *ex post* interest on local-currency credit rose from 7 percent in 1993 to 10 percent in 1994. The cost of indexed credit rose in 1994, as did that of capital, for firms issuing shares on the stock exchange. On the other hand, corporation tax was reduced from 39 to 38 percent, as part of the long-term program to bring it down from 43 to 36 percent. Nevertheless, corporation tax receipts rose significantly, and it appears that the reduction of the tax rates has not yet lowered the actual tax burden. One indicator of profitability is the index of share prices. The 50 percent fall in the general share-price index suggests that profit expectations declined.

Despite improved profitability at the beginning of the 1990s, the yield on gross capital is still lower than in the early 1980s, and far below that of the 1970s and that prevailing in many developed countries. In the long term, the most important determinant of investment in buildings, equipment, and other assets is the expected level of profits. In 1994, internally generated funds—corporate profits *less* interest payments, dividends and taxes—contracted (as a percentage of gross capital), due to lower profits and higher tax payments. The reduction was more than offset by an increase in bank credit, so that gross investment increased. Other factors which constitute a smaller share of investment finance are public offerings, and capital grants from the government, mainly in the context of the Encouragement of Capital Investments Law. The grants did not increase in 1994,[22] and there was a decline in new issues, as share prices fell.

Agriculture

The most notable features in agriculture in 1994 were the lack of growth of product, the decline in productivity alongside the continued rise in labor input, and the exceptional increase in the relative price of agricultural product. If crop insurance compensation and other subsidies (which are not included in the value of production) are deducted from total income in the industry, there was an improvement in farmers' average current income from capital and own labor, after this had fallen in 1993 and followed a downward trend in recent years (Table 2.16). The rise in relative prices of agricultural output, particularly of certain crops, was of special significance in 1994 due to its effect on the CPI.

Most indicators show that the relative contraction of the industry continued in 1994: its share of gross business-sector product (at constant factor prices) declined to 4.2 percent; fresh agricultural exports, which increased by about 10 percent, amounted to some $580

[21] Hence the data on profitability appearing in Table 2.14 overestimate capital profits. The yield on net capital including the stock of inputs, working capital, and land, is estimated at about 8–9 percent, while after tax (excluding tax benefits and capital grants) it is only 5 percent.

[22] The government's commitment to finance future investment increased, suggesting that government grants will grow in the next few years. In the context of the Encouragement of Capital Investments Law, the government also guarantees approved programs, and expenses related to meeting these guarantees may also rise in future.

million, but their share of total merchandise exports fell to 3.5 percent.[23] Agriculture's share of employed Israelis was 3.3 percent. The average number employed in agriculture (including workers from Judea, Samaria, Gaza, and abroad) was 76,000, or 4 percent of total employment, the same as the industry's share in GDP. The contraction of the industry's gross capital stock, and the rise in the number of employed and in labor input persisted in 1994.

The rate of increase of both components of agricultural output—crops and livestock—fell in 1994, and per capita output actually dropped. Some crops suffered from an unusual combination of natural conditions and supply factors under farmers' control, both of which acted to reduce output, especially in the second half of the year. In the absence of close substitutes, demand for fresh agricultural produce is inelastic, as is supply in the short run, due *inter alia* to short shelf life and the lack of competition from imports, so that a relatively small reduction in supply sends prices soaring. Crop output for the domestic market fell by an estimated 3–4 percent in 1994, compared with a 6 percent rise in 1993. As the winter of 1993/94 was warmer than usual, and some (particularly deciduous) orchards were not exposed to the required amount of cold, certain crops (apples, pears, etc.,) plummeted from their 1993 levels. Others (bananas and flowers) benefited from these weather conditions. The weather was the decisive factor regarding fruit, and the uprooting of orchards and groves had only a marginal effect. Consumer and producer prices of fruit rose by 16 percent and 9 percent respectively, relative to the CPI.

Relative domestic consumer prices of vegetables rose by 11 percent, annual average, and prices to farmers by 13–14 percent. The reason for these increases, unlike those of fruit, was the fall in output, especially in the second half of the year, mainly due to steps taken by farmers. First, following the sharp fall in prices in 1993 and declining profitability, farmers reduced the area under cultivation and cut output. Secondly, the planning of tomato production was canceled, and some farmers who had received compensation for forgoing their production quotas left the industry. Thirdly, in 1993 farmers in the Gaza area had expanded vegetable production by some 18 percent, at the expense of orchards which were uprooted because of water salinity. Vegetable production in the administered areas reached 41 percent of that in Israel, and some of it was sold in Israel. Production did not increase further in 1994, as farmers in the administered areas feared that their exports to Israel would be harmed by the autonomy agreement. Fourthly, Israel's farmers did not share this assessment, and their fear that the domestic market would be inundated with produce from the administered areas spurred them to reduce areas under cultivation. Fifthly, although tomato exports are protected by minimum prices, they are also supported by the diversion of surplus exports to the domestic market. Due indirectly to the fall in domestic prices in 1993, the profitability of exports declined, as did the availability of this source for domestic sales in 1994.

[23] According to foreign-trade statistics.

The main crops responsible for the marked price increases of agricultural products accounted for 14–15 percent of agricultural output, and the 19 percent fall in their output caused a 43 percent rise, on average, of prices to farmers. Production of other crops expanded by 6 percent, and their producer prices rose by only 4 percent.

The government neither foresaw the shortage of fruit and vegetables, nor considered the use of imports as a regulator—due to its negative attitude to agricultural imports—and hence it did not authorize them in time or efficiently. As a result, consumer prices of fresh fruit and vegetables rose by 27.3 percent, annual average, and by 76.7 percent during the year. These two items thus contributed 0.9 percent and 3.6 percentage points respectively to the rise in the CPI.

In the context of these price increases, the subject of agricultural planning arose once again, just when the system of production quotas for vegetables—which had been found inefficient—was almost completely abolished, greatly reducing the government's ability to guarantee minimum prices for farmers. A scheme which insures against sharp price reductions and guarantees farmers' income and market stability should be considered. It would be in the government's interest to help finance this, while permitting imports within the limitations required for crop and consumer protection.

Livestock output continued expanding in quantitative terms faster than the population. The reform in egg production, intended to reduce overproduction and the number of farmers in that branch, was unsuccessful, and surpluses continued to accumulate in 1994. The rise in subsidies for the disposal of surpluses, the purchase of quotas etc., prevented the total collapse of the family poultry farming unit. Nonetheless, the fall in consumer prices resulted in reduced egg production in Judea, Samaria, and Gaza and lower imports from there. The producer price, determined by production costs, is elastic with regard to the price of feed, which fell in real terms; hence the price of total inputs rose by only 4 percent. Poultry-meat production was also reformed, the principal features being that production quotas were eased, and their conversion from group to individual quotas was allowed, thus making them transferable, and also that they were enlarged, enabling production units to be streamlined.

Agricultural production for export surged in 1994, especially in crops, which had remained unchanged in 1993. Nevertheless, the share of the total value of agricultural production exported remained 19 percent, due to the decline in the relative price of exports. The terms of trade for crop exports (the ratio of export price to prices of inputs in crop production) deteriorated by 6 percent in 1994, because for most of the period exports to Europe suffered from the slump and fierce competition. As agricultural exports recorded in the balance of payments are not the same as production for export, it is difficult to assess the effect of the change in the exchange rate on them.

Production of flowers for export, whose share of total agricultural exports is constantly rising, increased by 40 percent in volume terms, with price falling considerably. This was due to favorable weather conditions in the winter of 1993/94, and the changed composition arising from the increase in exports of summer varieties (generally cheaper than winter ones). Production of citrus for exports has contracted

Table 2.16
Indicators of Agricultural Production, 1987–94[a]

(real annual change, percent)

	Average					
	1987–90	1991–94	1991	1992	1993	1994
Output						
Total output[b]	3.2	1.6	–4.4	6.8	2.6	1.6
Inputs[c]	0.2	1.3	–2.8	1.6	3.6	2.5
Gross product	6.6	1.9	–6.2	12.8	1.3	0.5
Total farm income[d]	–3.5	–1.3	–12.7	13.9	–11.8	8.3
Factor input						
Labor[e]	–4.6	1.9	–10.5	3.2	11.4	4.8
Gross capital stock[f]	–1.7	–3.0	–3.6	–3.5	–3.0	–2.0
Capital/labor ratio	3.0	–4.8	7.7	–6.5	–12.9	–6.5
Productivity						
Product/labor ratio	11.7	0.0	4.8	9.3	–9.0	–4.1
Total productivity[g]	10.4	2.0	1.6	12.3	–3.9	–1.5
Exports[h]						
Citrus	–2.5	2.6	–0.9	–1.9	3.7	9.9
Other	–4.6	–12.7	–22.9	–14.0	–10.9	–1.8
Total	–1.6	7.0	7.5	1.4	7.1	12.1
Prices						
Output	11.0	7.8	9.8	6.9	5.6	9.0
Purchased inputs	14.4	8.7	12.1	9.0	9.4	4.3
Terms of trade[i]	–3.1	–0.8	–2.1	–1.9	–3.4	4.5

[a] Calendar years, except for data on citrus, avocado, 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, and investment in newly-planted orchards and afforestation.

[b] Output calculated at producer prices, including intermediate output.

[c] Purchased inputs *plus* intermediate output.

[d] At constant prices, deflated by CPI.

[e] Million man-hours; data from Labour Force Surveys and family survey in administered areas. From 1993, data on workers from the administered areas are based on employment services data. Data from 1992 include estimates of foreign labor. 1994 data on workers from the administered areas are based entirely on employment services data.

[f] 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 Annual Reports.

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

[h] Based on data in 1988 dollars (foreign-trade statistics), excluding exports to the administered areas.

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

SOURCE: Based on Central Bureau of Statistics data.

greatly in recent years, but in 1994 its rate of decrease moderated considerably. The 19 percent rise in the producer price is notable, and was largely due to a change in marketing policy and the method of determining citrus prices, completing the reform of recent years. The new system includes a quality premium, and makes growers more export-oriented.

For the second year in succession, the rise in the industry's purchase of inputs outstripped the growth of output, and as in 1993, there was a 6 percent rise in feed purchases (which account for a third of the value of the industry's total input purchases). This is a higher rate of increase than that of livestock output, apparently due to price stability in dollar terms. Water prices rose at the same rate as the CPI, due to the introduction of an automatic price-adjustment system. Water consumption rose by less than in 1993, but again farmers left some 20 percent of their quotas, offered at the top price bracket, unused. The aggregate price of purchased inputs rose by a nominal 4–5 percent.

The agricultural output/input prices ratio improved for the first time in many years, rising by 4.5 percent. As agricultural output increased by less than the extent of input purchases, the quantitative rise in the former was minimal—less than 1 percent—and its share of gross business-sector product at constant prices fell.

Agricultural investment, especially in buildings, declined by 4 percent in 1994, after three years of rapid growth. This seems to have resulted from falling profitability in various branches of the industry in recent years, domestic surpluses, the quest for alternative non-agricultural rural occupations, credit difficulties which affected much of the agricultural sector because of the historical debt burden, and uncertainty regarding the expected level of agricultural trade with the autonomy and Judea and Samaria. As gross investment in 1994 was again less than the annual discard rate, gross capital stock continued to shrink.[24] Since 1985 agriculture has been characterized by its high consumption of capital, amounting to approximately 20 percent by the end of 1994.

While capital stock contracted, labor input expanded, continuing a trend which started in 1992. The faster rate of increase of labor input in 1993–94 is due mainly to the employment in agriculture of thousands of foreign workers.[25] The rise in employment in agriculture was accompanied by a significant change in its composition. Although since 1991 only 700 workers (net) have been added to those employed in agriculture, this is the result of significant changes in the composition of employment: the number of non-wage-earners (mostly members of *kibbutzim* and *moshavim*—smallholders' cooperative settlements) fell by 6,400, and the number of workers from the administered areas by 4,800 in the same period. On the other hand, the number of Israeli wage earners rose by

[24] Data relating to agricultural capital stock have been reclassified and recalculated.

[25] Employment data for 1993–94 have become less reliable, due to the incomplete statistics regarding workers from the administered areas (and in particular from Gaza since autonomy). The same applies to foreign workers. Information on their number, industrial distribution, number of hours worked, etc., is obtained from several sources. According to Ministry of Agriculture data, more than 10,000 foreign workers were employed in agriculture at the end of 1994.

6,900, and of foreign workers by 6,000.[26] As a result, the share of non-wage-earners in the number employed fell from about 60 percent in 1990 to 50 percent, on average, in 1994. In the same period the share of workers from the administered areas fell from 17 to 10 percent. In the context of the special structure of the rural sector in Israel, sharp changes in the composition of employment are a direct cause of the decline in labor and total productivity in 1993–94, a most unusual trend in agriculture. The composition of groups employed in agriculture differs in occupations, professional skill, and motivation, and hence in productivity. It is also relevant that in 1993–94 employment in afforestation, where output is measured differently, increased, In 1994, too, the government subsidized the employment of Israelis in agriculture, as part of its efforts to reduce unemployment. It is no surprise, therefore, that an average annual increase in product of 1.9 percent in 1991–94 was accompanied by a similar rise in labor input, and that labor productivity marked time, after rising rapidly in 1987–1990. It is difficult to assess whether the change in productivity is long term, because it is unclear whether the new composition of employment is stable.

If the above trend of substitution in agriculture continues, together with privatization and liberalization, changes in the industry's structure may be expected—in the composition of the factors of production; areas of specialization; size and geographical spread of production units; greater dependence on cheap, not necessarily seasonal, workers; relatively lower capital intensity; the abandonment of the family farming unit; a move to large production units or farms in order to benefit from economies of scale—in contrast to mixed agricultural units; and the changeover from agricultural to community settlements in which a minority is engaged in agriculture and employs hired labor. In this context, structural changes in the marketing of agricultural produce are also expected.

Direct subsidies of agricultural output for the domestic market doubled in real terms, with disposal of surpluses of eggs and poultry accounting for the lion's share. Restructuring various branches of agricultural production to limit overproduction, in the context of exposure to imports from the autonomy, is likely to reduce this subsidy component. Subsidies are estimated at about 32 percent of agricultural output in 1994. With the necessary reservations arising from differences in definitions and methods of measurement, note that aid to agriculture in the EU and the OECD in 1993 totaled 48 percent and 42 percent respectively of the value of production.

[26] Annual averages, estimates. These are subject to sampling and other errors, and are intended to illustrate the development.

Table 2.17
Output and Prices of Transport and Communications, 1986–94

(percent)

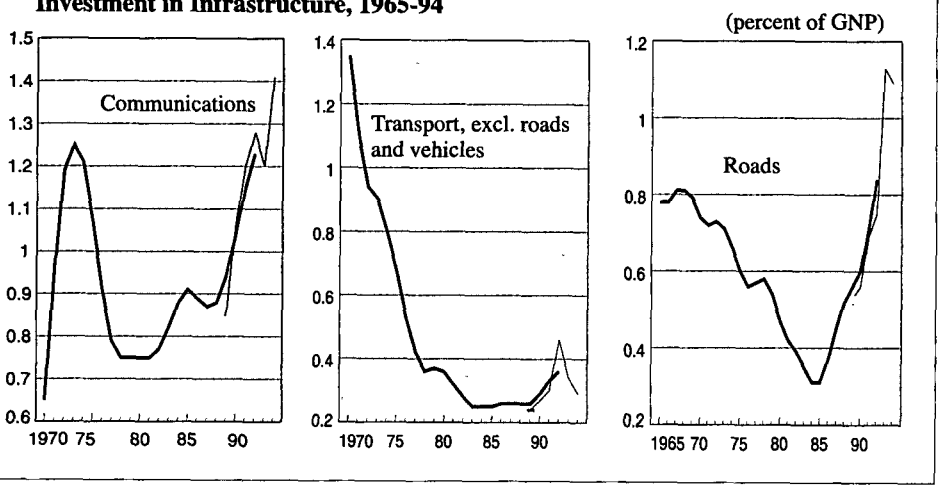
	Estimated percent of total 1993		Annual change							
			Real output				Relative price[b]			
	Product[a]	Income	1986–91	1992	1993	1994	1986–91	1992	1993	1994
Land transport	**47.4**	**32.0**	**1.1**	**6.9**	**4.5**	**5.9**	**2.6**	**–0.5**	**0.6**	**–3.5**
Buses	11.8	6.5	–6.3	7.0	–6.3	–2.0	7.6	5.2	8.2	3.5
Taxis[a]	6.5	4.1	2.3	9.2	8.9	7.8	4.1	–0.6	4.1	–2.1
Road haulage[a,c]	28.0	20.8	4.5	6.9	8.3	8.1	–0.3	–3.1	–3.5	–6.0
Railways	0.5	0.6	6.0	–5.0	7.5	0.3	–2.3	–1.5	1.1	–3.6
Oil and gas pipelines[a]	0.6	0.0	2.8	7.1	6.6	6.6				
Shipping and ports	**12.2**	**20.1**	**6.0**	**8.9**	**5.3**	**3.2**	**–7.7**	**–3.6**	**–0.0**	**3.0**
Shipping	7.3	15.4	5.3	8.9	4.7	0.9	–8.8	–3.1	4.6	–0.4
Ports	4.9	4.7	9.8	9.0	6.3	13.8	–3.0	–5.0	–7.3	18.2
Civil aviation and airports	**10.1**	**13.0**	**3.6**	**9.6**	**5.5**	**12.8**	**–3.3**	**–4.5**	**2.1**	**–3.8**
Civil aviation	8.1	11.4	3.8	8.2	5.3	10.2	–3.3	–4.6	2.3	–4.0
Airports	2.0	1.6	2.5	20.3	6.5	34.6	–3.2	–3.9	0.4	–2.1
Communications	**19.8**	**25.3**	**10.1**	**13.0**	**15.3**	**8.2**	**–0.5**	**–6.8**	**–6.6**	**–8.8**
Other	**10.5**	**9.5**	**0.9**	**11.0**	**21.0**	**15.3**				
Storage, refrigeration, terminals, parking lots[a]	3.7	0.0	3.4	9.6	7.9	9.0				
Other transport services[d]	6.8	0.0	–0.5	11.8	27.9	18.7				
Total output at market prices		**100.0**	5.0	9.3	8.4	7.5	–0.0	–3.1	–0.9	–3.2
Total gross product at 1988 prices	**100.0**		4.8	9.1	8.5	8.1				
Gross investment[e]			13.8	17.5	8.8	23.4				
Gross capital stock[f]			1.9	5.2	6.9	7.8				

Employed person[g]	0.3	7.6	2.1	2.6
Labor input[g]	0.7	8.2	4.4	6.3
Labor productivity[h]	4.0	0.8	3.9	1.6
Total productivity[i]	3.4	2.2	2.7	1.0

[a] Output estimated from the output-input tables. Price estimates calculated by the Central Bureau of Statistics.
[b] Relative to implicit price index of business-sector product.
[c] Estimated increase in output from 1990 to 1994 based on the 1990 road haulage survey of the Central Bureau of Statistics.
[d] Estimated increase in output based on VAT data from the Central Bureau of Statistics.
[e] The 1986–90 figure gives the change over the preceding five years (annual rate). The year-to-year change during 1986–90 averaged one percent per year.
[f] At beginning of year.
[g] Data on communications are for Bezeq and the Postal Authority only.
[h] Output per unit of labor input.
[i] Estimated productivity is biased, as roads, which account for a large share of capital, are also used for private travel.

SOURCE: Based on Central Bureau of Statistics data.

Figure 2.6
Investment in Infrastructure, 1965-94 [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.

Transport and communications

In 1994 the industry's product rose by some 8 percent, slightly less than in 1993 (Table 2.17).[27] Labor productivity rose by 2 percent, and total productivity by 1 percent; the share of the industry in the business sector remained at its 1993 level of 12.5 percent (Table 2.2). Growth resulted from the demand of other industries which expanded, and from higher consumption demand. It was concentrated mainly in aviation, travel agencies,[28] trucks, and communications; in the latter competition increased significantly. The decline in the use of buses continued, slowing down the rate of growth. Prices of transport and communications[29] rose by 3 percent less than that of total business-sector product. The real wage in the industry as a whole, which is higher than in other industries, did not rise in 1994 (in terms of consumer prices), although its continued rise in communications is notable.

[27] The total rate of increase of output, weighted by its sub-industries' shares in revenue, was 7.5 percent. In the absence of data for the whole year, developments in the industry are generally analyzed using January–September data.

[28] These account for the bulk of services not elsewhere specified, in the item 'Other' in Table 2.17.

[29] Price indices for these are of output prices.

Table 2.18
Investment in Transport and Communications, 1986–94

	Composition of investments in 1994		Real average annual change (percent)		
	Amount (NIS million)	Share of total (percent)	1986–92	1993	1994
Roads	2,376	18	25	62	9
Total vehicles	7,397	55	17	4	29
of which Trucks[a]	3,328	25	18	14	19
Other transport[b]	724	5	16	–22	1
of which Railways	162	1	...	–45	3
Total transport	10,412	77	18	12	21
Communications[c]	3,075	23	13	–0.1	30
Total transport and communications	13,487	100	17	9	23

[a] Including commercial vehicles.

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

[c] Estimated investment of Bezeq, Cellcom, and the Postal Authority.

SOURCE: Based on Central Bureau of Statistics data.

Investment in roads increased by 9.5 percent, after the breakthrough in 1993 had brought it to a high level (Table 2.18 and Figure 2.6). This investment did not solve the problem of congestion, however: vehicle movement (mileage) rose rapidly, exerting pressure on the infrastructure. After many years of underinvestment, not enough is being done in this sphere. Traffic in city centers requires special solutions, *inter alia* greater utilization of public transport, and in the longer run, establishing a mass-transportation system such as a light rail or subway, currently under discussion. Investment in air and sea ports continued, but they still suffer from considerable pressure due to the increase in traffic passing through them. The sharp rise in investment in communications in 1994 is the result of somewhat increased competition; investment in mobile telephones expanded greatly after a license was granted to another operator, and the benefits of competition were evident in improved and cheaper service.

Relative prices of different branches of the industry (compared with prices of business-sector product) continued to follow the same path as in recent years: in communications, where there is rapid innovation, prices fell faster, following government intervention; prices of international flights and truck haulage also continued to fall, in response to continued surplus capacity. On the other hand, as the subsidy on public transport was reduced, bus fares rose relative to the CPI.

Construction

Construction output expanded by about 6 percent in 1994, after falling in 1993. Most of the expansion was in nonresidential construction investment, which rose by 11 percent, after increasing by an annual average of 26 percent in 1992–93. Investment in residential construction, by contrast, rose by only 2 percent in 1994. This was due to a decline in investment in government-initiated residential construction—following its sharp reduction in 1993—offset by an increase in private investment in residential construction.

The trend evident in 1993 persisted in 1994: excess demand in the housing market was reflected by a 28 percent rise in the prices of owner-occupied apartments,[30] or 14 percent in their relative price,[31] and an increase in apartment sales following a considerable rise in 1993. Despite the addition of apartments completed and some of those under construction, stock was lower than demand, so that prices rose. Demand for apartments consists of demand for housing services and also arises from portfolio considerations;[32] The real fall in the rent index, contrasting with the increase in prices of owner-occupied apartments, is an indication of the significant weight of the latter element (Figure 2.7).

In May, due to the adverse effects of the rise in the relative price of owner-occupied housing,[33] the government approved a program intended to moderate price increases for apartments. The program includes the widespread release of land in 1994 and 1995 for sale via public tender to accommodate construction of at least 50,000 units a year in areas of high demand,[34] and also to streamline procedures for obtaining planning and building approval. At the same time, due to the difficulty of employing workers from the administered areas, the government authorized the employment of foreign workers. These measures resulted in a rise in the number of residential building starts at the end of 1994.

Residential construction: As in 1993, there was considerable excess demand in the housing market in 1994, and the relative price of owner-occupied apartments rose by about 14 percent. As supply and demand factors in the housing market are interrelated, so that it is difficult to distinguish between them.

[30] In 1994 the survey of apartment prices changed from its quarterly format to a bi-monthly one, hampering comparisons with previous years.

[31] The relative price is the price of owner-occupied apartments, adjusted by the CPI. Prices of owner-occupied apartments adjusted by the CPI excluding housing rose by about 17 percent in 1994.

[32] Portfolio considerations reflect expected changes in capital gains resulting from the asset's relative price.

[33] A rise in the price of owner-occupied housing has repercussions on inflation, and is likely to create social pressures, and hence pressure for government intervention.

[34] According to Ministry of Construction and Housing data, about 48,000 units were sold via tender by the Ministry and the Israel Lands Administration in 1994, 85 percent of which were in the central, Jerusalem, and Haifa conurbations. A further 8,800 units were sold under other systems.

The demand for apartments derives from both the need for housing services and portfolio considerations. The rise in the former is due to the increase in the population resulting from both natural causes and immigration, and to people's desire to improve their standard of living. The absorption of immigrants continued, and their unemployment rate fell from about 19 percent in 1993 to 14 percent in 1994. The immigrants' higher rate of employment enables them to commit themselves to the repayment of long-term loans, and hence to purchase apartments. The increase in immigrants' housing demand, most of which is for small apartments, supports the increased demand of the veteran population for large apartments to improve their standard of living; also, some housing purchases are due to a rise in permanent income. This can be seen from the 20 percent rise from 1993 to 1994 in the number of privately constructed apartments of four or more rooms sold in the 24 largest towns.

The demand deriving from the need for housing services is indicated by the number of eligible persons who took out directed mortgages. Although this fell by about 16 percent from 1993, when it peaked, it was still high in January–June 1994, in annual terms, compared with 1991 and 1992, due mainly to the number of immigrants who took out mortgages.[35] In the second half of 1994, the number of eligible persons taking directed mortgages fell, due to the significant decline in the number of immigrants doing so. High apartment prices may have been a cause, together with the extension from 5 to 7 years of immigrants' entitlement to assistance in the purchase of an apartment.

In 1994, apartment prices were expected to rise relative to other assets, raising their expected yield, and hence increasing their share of the portfolio.[36] Developments on the stock market and their effect on portfolio considerations also increased housing demand: falling share prices in 1994 apparently led the public to view the stock market as a relatively risky channel for savings, and this also contributed to the rise in the share of real estate in the portfolio. Although falling stock-market prices also operated in the opposite direction by reducing net financial wealth, the substitution effect apparently outweighed the income effect.[37]

Another factor influencing the demand for apartments in 1994 was the low rate of interest on nondirected mortgages for periods of more than 15 years. This led the banks to offer the public cheap credit, which expanded considerably after rising sharply in 1993, too. Nondirected mortgages rose by about 45 percent, adjusted by the rise in prices of owner-occupied apartments, and their average rate of interest for more than 15 years was 4.7 percent in 1994, higher than the 4.4 percent in 1993, but lower than in 1990–92. During the year interest on mortgages rose from an average of 4.5 percent in January–June to 4.9 percent in the subsequent six months. This may have been partly due to contractionary monetary policy in 1994 which raised the short-term interest.

[35] The number of mortgages taken out by immigrants in the first half of 1994 was 3 percent lower in annual terms than in 1993.

[36] See Chapter 7 for details of the composition of the portfolio.

[37] In 1991–93 the rate of return on shares rose together with the increase in housing prices and the overall yield on bonds.

Table 2.19

Indicators of Construction Activity, 1980–94[a]

	Number of units		Annual change, percent				
	1993	1994	1980–86	1987–93	1992	1993	1994
Output (millions of 1990 NIS)							
Residential	7,466	7,602	–4.2	9.0	–0.9	–29.6	1.8
Nonresidential	6,798	7,571	–4.2	15.0	22.0	30.6	11.4
Other construction output[b]	3,868	4,070	1.7	2.6	2.2	3.3	5.2
Total	**18,132**	**19,243**	**–2.6**	**9.2**	**5.2**	**–6.8**	**6.1**
Starts (thousand sq. m.)							
Residential	5,405	6,340	–6.4	10.2	–34.1	–6.0	17.3
Nonresidential	2,765	3,330	–6.5	15.7	40.4	30.4	20.4
Total	**8,170**	**9,670**	**–6.4**	**11.9**	**–23.1**	**3.8**	**18.4**
Completions (thousand sq. m.)							
Residential	5,470	4,865	–2.4	9.4	48.6	–28.4	–11.1
Nonresidential	2,120	1,985	–6.1	8.2	35.8	30.1	–6.4
Total	**7,590**	**6,850**	**–3.6**	**9.0**	**46.2**	**–18.1**	**–9.7**
Residential (thousand units)							
Starts	37	43	–9.6	10.1	–44.9	–19.7	17.1
Completions	43	34	–4.7	10.3	65.9	–38.6	–21.1
Construction time[c] (months)	21.5	20.8	3.0	–1.4	2.0	4.4	–3.3
Employment (thousands)							
Israelis	118	125	–4.0	9.8	11.9	9.7	5.9
From Judea, Samaria, and Gaza	61	49	3.9	3.4	28.4	–29.0	–19.7
Foreign	4	14					
Total	183	188	–1.2	7.9	18.6	–5.4	2.7
Stock of construction equipment[d] (millions of 1990 NIS)	2,332	2,719	–0.8	2.5	21.5	11.2	16.6
Index of input prices (residential construction)			153.1	16.5	10.9	8.3	9.1

[a] Calculated from unrounded figures.

[b] Includes defense construction and a rough estimate for maintenance.

[c] Private residential construction.

[d] Beginning-of-year stock.

SOURCE: Based on Central Bureau of Statistics data.

Table 2.20
Housing Construction, by Initiating Sector, 1979–94[a]

(thousand units, period average)

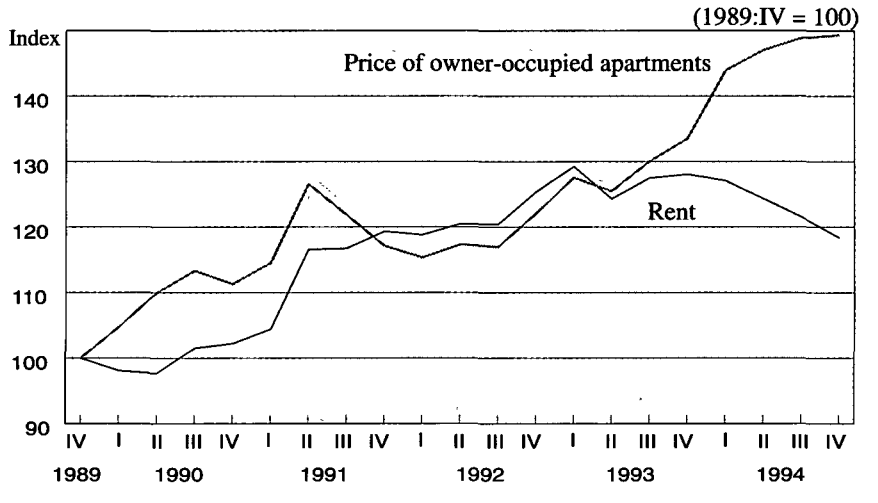
	Starts			Completions		
	Total	Private	Public	Total	Private	Public
1979–86	28.3	19.3	8.9	29.1	19.6	9.5
1987–89	21.2	18.0	3.2	20.6	17.2	3.4
1990	42.4	22.8	19.6	20.0	16.7	3.3
1991	83.5	21.8	61.7	42.3	19.1	23.1
1992	46.0	23.3	22.7	70.1	21.6	48.5
1993	37.0	30.2	6.8	43.0	21.6	21.4
1994	43.3	32.9	10.5	33.9	24.5	9.5
1994						
I	9.3	7.2	2.1	8.0	5.8	2.2
II	9.3	7.4	1.8	9.1	6.5	2.5
III	10.3	8.7	1.6	8.4	5.9	2.4
IV	14.5	9.5	4.9	8.5	6.2	2.3

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

The supply of completed apartments in 1994 amounted to some 34,000 units, 21 percent below the 1993 level. This was because the increase in private building completions was more than offset by the decline in government-initiated completions following the fall in government-initiated starts in 1992–93 (Table 2.20). Total building starts were some 17 percent higher than in 1993, with the private sector accounting for about 33,000 units, a rise of 9 percent. Most of the increase in private-sector residential building starts occurred in the second half of the year, following the rise in prices of owner-occupied apartments, and was encouraged by the easing of restrictions on factor inputs which had hampered expansion. Government-initiated residential building starts also rose in 1994, reaching 10,500 units, with most of the increase—connected with the sale of land by the Ministry of Construction and Housing (see below)—occurring in the last quarter.

Among factors which restricted the expansion of residential construction, especially in the first half of 1994, were the closures imposed on the administered areas in February, April, and October, which disrupted the attendance of workers from there. When the closure was imposed in February, 20,000 permits to employ foreign workers were issued, and another 15,000 in October. Thus, the composition of employment in the industry changed in 1994, the number of workers from the administered areas falling, and the number of foreign and Israeli workers rising (Table 2.19). This reflects the industry's adaptation to uncertainty regarding the labor force from the administered areas, i.e., contractors' attempts to find a more permanent solution to their labor problem.

Figure 2.7
Relative Prices of Owner-Occupied Apartments and Rent, 1990-94



SOURCE: Central Bureau of Statistics.

The Ministry of Construction and Housing, in accordance with government decisions, increased the supply of land for residential construction. In 1994 land sales for 39,000 apartments were approved, 39 percent more than in 1993.[38] Most land sold for residential construction was in the Jerusalem and central areas. A considerable share of land sales in 1994 took place after May, so that their effect was felt towards the end of the year, and the number of residential building starts is expected to continue rising.

Output, productivity, and the factors of production: Construction product rose by about 7 percent in 1994, after declining by 7 percent in 1993 (Table 2.2), and output—which had also fallen in 1993—rose by 6 percent (Table 2.19). The rise in output in 1994 derived from the considerable increase in investment in both nonresidential and private-sector residential construction—11 percent and 13 percent respectively—the former having risen since 1991. In the latter category, investment in industry grew by 48 percent, and in roads by 9.5 percent (following annual average increases of 36 percent in 1991–93). The rise in investment in nonresidential construction indicates expectations of continued expansion in economic activity over the next few years. By contrast, public-sector investment in residential construction fell.

The industry's capital stock grew by 16 percent, continuing the upward trend evident since 1991, a further indication of the expected future expansion of economic activity.

[38] Differences between these data and those in note 36 arise from differences in definitions used by the Israel Lands Administration and the Ministry of Construction and Housing.

Labor input increased by 6.3 percent, while total and labor productivity remained virtually unchanged,[39] the net effect of conflicting forces. The higher ratio of building starts to completions tends to increase productivity, as the former are more capital intensive. For the same reason, the rise in the investment component of nonresidential construction also increases productivity. On the other hand, the change in the composition of employment described above—the larger proportion of unskilled workers and the fall in the number of workers from the administered areas—serves to reduce it.

Real wages in construction rose by 4 percent; this may be due to higher demand for Israeli workers in the industry due to the security situation.

Trade and private-sector services

In 1994 the product of trade and private-sector services continued its rapid growth, rising by about 12 percent (Table 2.21), similar to its increase in 1992–93, but far greater than its long-term rise (about 7 percent annual average, Table 2.22). This growth rate exceeded that of the rest of business-sector product, so that the industry's share of the latter continued its upward trend of recent years—a characteristic of developed economies—and reached about 40 percent.[40] In 1994 the increase in personal, business and legal, and health and education services were notable, while banking and hotels rose only slightly.

It is very difficult to obtain a reliable estimate of the industry's product.[41] Those given here are derived mainly from VAT payments by different industries, based on detailed data from a 1988 CBS survey of trade and services.[42] Despite the difficulty in obtaining a reliable estimate of the industry's product, it appears that its increase in 1992–94—which was higher than its long-term rise—is greater than that of the rest of business-sector product.

Some 59,000 workers found employment in the industry in 1994, more than 60 percent of incremental employment in the business sector, thus leading the significant reduction in unemployment. Labor productivity was unchanged, and total productivity rose by about 2 percent. The real wage per employee post rose by 2 percent (in terms of consumer prices), in line with the increase in man-hours. Investment in the industry grew by 30 percent, while prices continued to rise faster than that of total business-sector product.

[39] Labor productivity rose by 0.7 percent, and total productivity declined by 0.9 percent.

[40] At 1990 prices (Table 2.2). The rise in the industry's share of total product is even greater if measured at current prices.

[41] See Zvi Griliches, "Productivity, R&D, and the Data Constraint," AER, March 1994, 84(1).

_____, (ed.), *Output Measurement in the Services Sector*, NBER Studies in Income and Wealth, Vol. 56, University of Chicago Press, 1992.

[42] The product of some sectors is estimated by means of indices: the financial sector, which does not appear in the VAT data, and hotels and real estate services, as their VAT returns do not accurately reflect their transactions.

Table 2.21
Principal Trade and Services Indicators, 1989-94

(percent change)

	1992	1993	1994	Average 1989–90	Average 1991–94
Product	11.3	10.4	12.2	3.3	9.2
Labor input[a]	7.8	6.1	12.3	3.1	7.3
Capital stock[b]	3.6	3.7	5.4	3.2	4.1
Labor productivity	3.2	4.0	–0.1	0.2	1.8
Total factor productivity[c]	4.8	4.9	2.3	0.1	2.6
Employed persons[a]	5.4	6.2	10.5	2.9	7.1
Average hours per employee	3.0	–1.7	1.7	0.3	0.5
Real hourly wage A[d]	0.9	0.1	1.7	–1.8	0.5
Real hourly wage B[e]	–0.2	–0.2	0.7	–3.2	–0.4
Relative price[f]	0.7	1.2	3.3	3.1	1.2
Exports[g]	18.4	8.0	8.0	2.6	9.4
Investment in fixed assets	6.6	18.8	28.8	12.4	15.7

[a] Unlike other tables in this report, this includes imputed labor input for 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] Wages per employee post at constant prices (deflated by the CPI).
[e] Wages per employee post at constant prices (deflated by the trade and services index).
[f] Annual change in the price of business services to consumers relative to the business-sector-product price index.
[g] Estimate based on 1988 input/output table.
SOURCE: Based on Central Bureau of Statistics data.

In recent years the faster growth of demand for the industry's product—which is mainly nontradable—than for tradables is one of the factors creating pressure for local-currency appreciation (see Chapter 3). The relatively large increase in demand for trade and services is reflected by the growth of the industry's product, while its price rose by 3 percent more than that of the entire business sector in 1994. Product growth was based on the significant rise in employment, with the real wage in the industry rising accordingly. Technological progress tends to be slower in trade and services than in tradables, consistent with both the slight rise in its relative price and real appreciation.

Product due to the export of trade and services rose by 8 percent in 1994, the same as in 1993. This is far above the long-run growth rate, but significantly below the 18 percent surge of 1992. Some of the industry's export is direct, e.g., hotel and catering services to tourists, which rose by 7 percent, but most is indirect, taking the form of services to other exporting industries. The expansion of banking, business and legal services, and trade played a prominent role in the growth of these services.

Table 2.22
Private-Sector Services Product, 1989-94[a]

(percent)

	Share in product 1994[b]	Product per employee 1993[c]	Real wage per employee post 1994[d]	Real change in product 1993	Real change in product 1994	Average 1989–94
Wholesale trade	14.6	62	–0.2	8.0	13.4	7.0
Retail trade	12.6	29	1.8	11.0	15.6	7.9
Catering	3.4	26	3.1	9.1	9.1	5.1
Hotels	2.0	31	1.6	7.8	2.9	1.0
Total	32.6	36	1.3	9.2	13.1	6.7
Business and legal	18.7	46	2.4	11.9	16.6	8.5
Banks	20.1	155	–1.8	10.3	3.7	5.3
Insurance and real estate	8.2	93	–3.1	7.0	5.6	6.3
Total	47.0	77	–1.4	10.3	8.8	6.7
Education services	3.3	43		9.2	15.9	11.3
Health services	5.0	65		12.1	22.2	8.9
Total	8.3	54		10.9	19.6	9.8
Personal services	5.1	28	8.1	23.6	28.7	12.0
Household services	4.4	25	7.5	13.3	11.9	9.6
Garages	2.7	22	6.9	1.8	14.4	4.9
Total	12.1	25	7.4	12.9	16.5	9.3
Total private-sector trade andservices	76,602	47	0.7	10.4	12.2	7.2

[a] The data on trade, catering, business, legal, education, health, personal and household services, and garages is estimated from VAT returns at constant prices; the data on hotels is from hotel income and the number of bed-nights. The data on banks is 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 is from the number of employed persons, part-time jobs, and business-sector product.

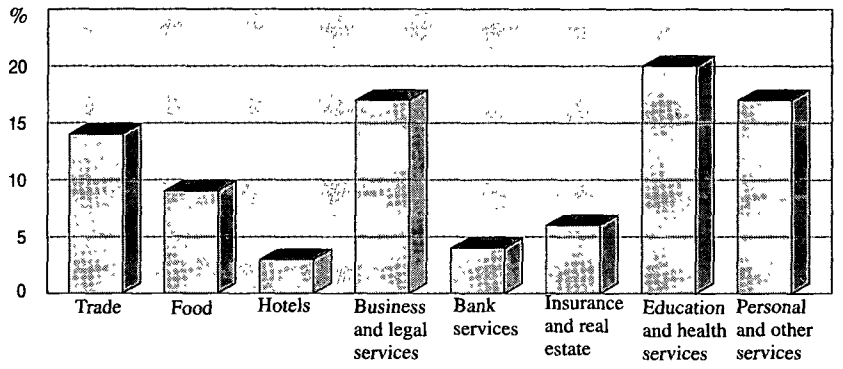
[b] At current prices.

[c] NIS thousands, at 1988 prices.

[d] Annual change. Adjusted by the price index of business services.

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

Figure 2.8
Growth of the Two-Digit Trade and Services Industries, 1994



Some 62 percent of the demand which spurred the growth of trade and services product derived from the increase in private consumption. Public consumption also made a sizable contribution (21 percent), while exports accounted for a more modest 8 percent.

The various segments of the industry developed unevenly (Figure 2.8) due to their heterogeneity. They include domestic cleaning, education, health, legal and business services, e.g., advertising and computerization, and even private employment agencies.[43] Although some segments of the industry expanded relatively moderately, such as banks, insurance, real estate (4 percent, Table 2.22), and hotels (3 percent), others grew rapidly, such as business and legal services (17 percent), education and health (20 percent), and personal services (29 percent). The last segment, which accounts for 12 percent of the industry's product, has been expanding rapidly for several years, far outstripping the industry rate of increase, the same applies to education and health.

Investment in the industry soared by 32 percent in 1994, far faster than in previous years, surpassing the increase in total business-sector investment, and its capital stock grew by 9 percent. This indicates that the rise in demand is perceived as permanent. There was considerable investment in buildings in hotels, businesses, and offices, and in equipment it surged by almost 30 percent, a result of the fall in investment in trade and the rapid increase in other areas, mainly business and legal services, hotels and catering, personal services, garages, and other repair services.

The industry is far less capital-intense than the economy in general,[44] and its capital structure is also different—with a relatively high ratio of equipment to buildings.

[43] Workers placed by private employment agencies are counted as being employed by them, not by the companies they work for.

[44] See Bank of Israel *Annual Report, 1992*, Table 2.17.