# *Chapter 2*
# *Output and Demand*

## 1. MAIN DEVELOPMENTS

In 1992 business-sector product continued to expand rapidly, as it has since 1990, while the unemployment rate rose and the inflation rate dropped substantially. The growth in business output in 1992 was due principally to an increase in exports and to the continued growth of domestic demand, although the latter rose more moderately than in 1991. The rapid expansion of consumption and inventory investment continued, but a slight dip in housing construction and an only moderate rise in nondwelling investment (which had risen substantially in 1990–91) meant that the growth rate of domestic use of resources fell, from 12 percent in 1991 to 7 percent (Table 2.1). Since the growth rate of domestic use of resources was similar to that of GDP, the civilian import surplus/GDP ratio did not change significantly. The relative prices of imports and exports to business-sector product (which are indicators of the real exchange rate) fell slightly on annual average (i.e., there was real appreciation). The direction of movement of the real exchange rate switched during the course of the year, however, and in the second half there was real depreciation (Figure 2.1).

GDP rose in real terms by 6.6 percent, and business-sector product by 7.9 percent; both were similar to the growth rates of 1990–91.[1] Per capita business-sector product rose by 4.3 percent from an annual average of 2.7 percent in 1990–91. Expansion in 1992 was due to the faster growth rate of capital stock and of labor inputs. This was reflected primarily by the lack of growth of total and labor productivity, after the sharp rise of 1990–91 (Table 2.3). Output growth was not uniform across all industries; it was above average in the tradables sector (manufacturing, agriculture, tourism, and international freight), where productivity growth rose, and below average in the nontradables sector (particularly construction) where it fell.

Although the quantity of labor inputs rose appreciably, the level of employment of Israelis went up by only 4 percent. The rest of the growth was due to an increase in hours per employee and in the employment of residents of the administered areas. The

[1] In most of this chapter, business-sector product is based on national accounts figures and is measured in terms of use of resources (Tables 2.1 and 2.3). According to indicators of business-sector product by industry (Table 2.2)—which are less reliable statistically—the growth rate was significantly higher in 1992.

**Table 2.1**
**Resources and Use of Resources, 1981–92**

(annual rate of change, percent)

| | NIS million 1992 | Quantity | | | | | | | Price | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 | 1991 | 1992 |
| Resources | | | | | | | | | | |
| Gross domestic product | 161,279 | 2.9 | 5.1 | 2.2 | 6.2 | 5.8 | 6.2 | 6.6 | 21.3 | 11.6 |
| Imports of goods and services[a] | 72,352 | 3.6 | 14.0 | –4.0 | 11.6 | 9.0 | 16.1 | 9.8 | 9.7 | 7.7 |
| *of which* Civilian | 67,652 | 4.4 | 13.5 | 0.1 | 12.2 | 8.3 | 15.4 | 13.0 | 9.0 | 7.5 |
| Total resources | 233,631 | 3.2 | 8.3 | –0.1 | 7.9 | 6.9 | 9.3 | 7.7 | 17.4 | 10.3 |
| **Use of resources** | | | | | | | | | | |
| Private consumption | 98,513 | 4.4 | 11.7 | 2.3 | 7.0 | 5.3 | 7.4 | 8.3 | 17.7 | 10.7 |
| Public consumption | | | | | | | | | | |
| Total | 45,180 | 1.1 | 3.4 | –5.0 | 2.7 | 4.6 | 4.2 | –0.7 | 20.8 | 13.2 |
| Excl. direct defense imports | 40,480 | 1.6 | 0.8 | 2.4 | 2.5 | 2.7 | 1.5 | 3.3 | 21.5 | 12.9 |
| Gross domestic investment | | | | | | | | | | |
| Total | 39,814 | –0.2 | 6.7 | –2.0 | 24.6 | 26.2 | 42.4 | 7.6 | 15.9 | 9.4 |
| Fixed | 37,580 | 0.2 | 6.6 | –2.1 | 21.6 | 22.4 | 40.1 | 4.9 | 15.7 | 10.0 |
| Domestic use of resources[b] | 178,807 | 2.7 | 8.0 | 1.6 | 9.1 | 8.1 | 12.2 | 7.0 | 18.1 | 10.9 |
| Exports[a] | 50,124 | 5.0 | 8.4 | 1.1 | 4.9 | 2.5 | –1.5 | 14.4 | 15.1 | 7.9 |
| Use of resources | | | | | | | | | | |
| Excl. direct defense imports | **228,931** | **3.4** | **8.0** | **1.5** | **8.0** | **6.6** | **8.9** | **8.6** | **17.5** | **10.2** |
| Total | **233,631** | **3.2** | **8.3** | **–0.1** | **7.9** | **6.9** | **9.3** | **7.7** | **17.4** | **10.3** |
| Net factor payments to abroad | 3,157 | | | | | | | | | |
| GNP at market prices | 158,122 | | | | | | | | | |
| Gross product of business sector[c] | 111,964 | 3.4 | 7.3 | 2.1 | 7.6 | 7.2 | 7.6 | 7.9 | 19.7 | 11.2 |

[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 direct defense imports.
[c] GNP *less* gross product of public services and ownership of dwellings. At market prices.
SOURCE: Central Bureau of Statistics.

rapid entry of new immigrants into the labor market was reflected by a 4.7 percent increase in the labor force, and unemployment rose to 11.2 percent. The high unemployment rate acted to reduce real hourly wages (from the perspective of both employers and employees), though by only 1 percent. Again, the trend was not uniform across all industries; in the tradables sector real wages fell and productivity rose, while the opposite occurred in the nontradables sector. The rate of return on capital remained unchanged in the business sector as a whole, after rising in 1989–91 (Table 2.9).

The rate of inflation fell significantly. Price increases, in annual average terms, ranged from 9 to 12 percent, depending on the index used. During the course of 1992 the slowdown was even greater. This trend had begun in 1990, but was interrupted in 1991 due to the exceptional growth of domestic demand, focused in the construction industry.

* * *

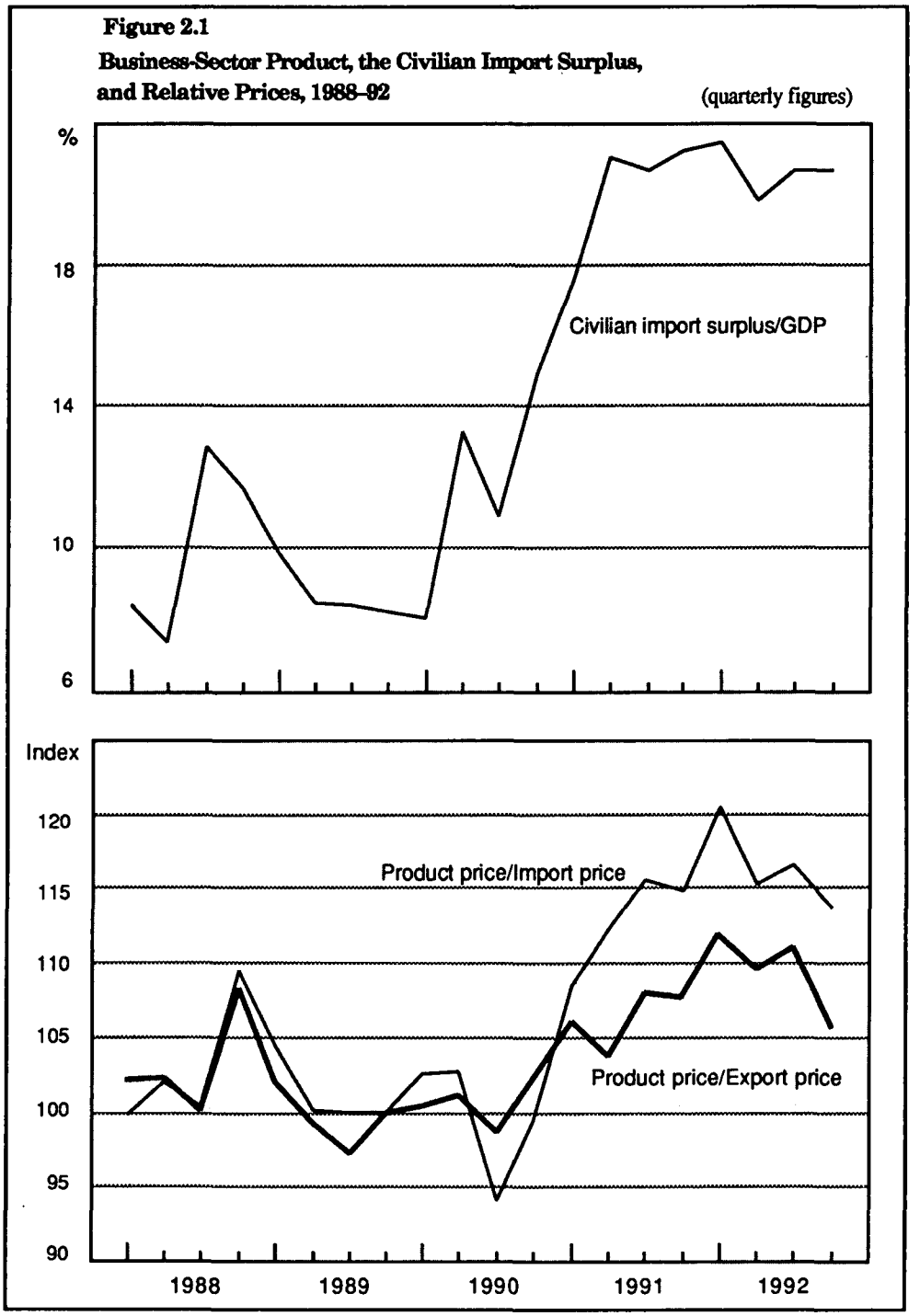
Business-sector product grew in 1992 in response to the expansion of aggregate—and particularly foreign—demand. The growth of output was made possible by the expansion of potential supply and the utilization of excess capacity which had accumulated in the tradables sector since 1990. The increase in foreign demand reflected a natural recovery from the depressing effects of the Gulf war, the growth of international trade, and perhaps the penetration of new markets. The stability of the import surplus/GDP ratio shows that the growth of demand for and supply of business-sector product was balanced, while the real appreciation (annual average) is not consistent with this, and requires clarification (see below). Developments in 1992 contrast with those in 1991, when the rise in aggregate demand was caused entirely by a surge in domestic demand (mainly for housing); in 1991 supply grew less than demand, and as a result the relative prices of business-sector product to imports and to exports rose (i.e., there was real appreciation), and the import surplus/GDP ratio also increased.

The composition of supply and demand changed. Supply of and demand for tradables rose. Growth of product and the use of resources in the tradables sector increased by similar rates, and the same trend was evident in the nontradables sector (Tables 2.4, 2.5). The ability of the economy to divert production to tradables was due to several factors: the existence of excess capacity in that sector; the excess supply of labor, which was often better suited to the tradables than the nontradables sector; the vast growth of investment in 1990–91, which had increased the capital stock; the freeing of resources as the government cut back on construction; and the reduction in the relative cost of imported intermediates, which improved the terms of trade of the tradables sector.[2]

The (annual average) real appreciation in 1992 was far lower than in 1991, and developments were uneven during the course of the year. The appreciation of 1991 continued at the beginning of the year, but was then followed by depreciation from the start

[2] Assuming that the average share of imported intermediates in the output of the tradables sector (mainly industry) is greater than it is in the business sector in general.

**Figure 2.1**
**Business-Sector Product, the Civilian Import Surplus, and Relative Prices, 1988–92**




SOURCE : Based on Central Bureau of Statistics data.

tinued at the beginning of the year, but was then followed by depreciation from the star of the second quarter (Figure 2.1), as construction activity contracted. The annua average overall appreciation in 1992 was due to the fall in world prices of imports an exports (deflated by the currency basket); because of rigidity in the rate of increase o nontradables prices, the unexpected fall in world prices led to persistent rea appreciation. In 1991, by contrast, the appreciation was caused by excess demand.[3]

The real appreciations of both 1991 and 1992 were quite different from those of th years following the 1985 economic stabilization program (ESP). From 1986 to 1988 th nominal exchange rate was the primary policy tool for reducing inflation, while at th same time real wages soared.The nontradables sector was able to offset these increase in labor costs by raising prices, but the tradables sector was constrained by foreig competition. The profitability of the tradables sector was hard-hit by the resultin appreciation. (That the rise in relative prices in the nontradables sector was due to risin wage costs and not excess demand is clear from the fact that the growth rates of outpu of and demand for nontradables were similar.)

The considerable increase in the demand for Israel's exports in 1992 should hav reduced the import surplus/GDP ratio. In practice, the rise in production of tradable (Tables 2.4, 2.5), was offset by the diversion of some domestic demand for local good to imports, so that the import surplus/GDP ratio remained unchanged. The shift t imports in 1992 was not the result of excess demand, but of two other factors. First there had been a large fall in the relative price of imports in 1991, which continued to much lesser extent in 1992, caused by the unforeseen reduction in foreign prices (a weighted by the currency basket). Second, there was a steep rise in domestic demand fo what may be regarded as nonfinancial assets (e.g., white goods, Table 2.9), due t factors other than income and the real exchange rate, i.e., demographic shifts, changes i tax rates, and portfolio-adjustment arising from budgetary and monetary policy. Sinc most of these goods are not manufactured in Israel, imports soared. The reduction o import tariffs may also have helped to divert some demand to imports.

The reduction of activity in the construction sector and the fall in its relative pric started from extremely high levels. The contraction was gradual, so that the annua average shows an increase in construction without any significant change in its relativ price. This is consistent with the balanced growth of aggregate supply and deman described earlier.

In 1992, then, Israel's economy was more open and grew rapidly. Its expansion wa rooted in a sharp increase in exports and greater profitability in the tradables sector Although profitability in the business sector as a whole did not change, gains in recen years (as measured by the rate of return on capital) restored average profitability in 199 and 1992 to the level prevailing before the ESP.

[3] Thus, this appreciation is consistent with the claim that an increase in the supply and demand o business-sector product is balanced, for example, provided supply responds more slowly than demand t unexpected developments (e.g., a fall in world prices).

While some of the causes of growth in the tradables sector were undoubtedly temporary—such as the recovery of exports after the Gulf war and the freeing of resources by the construction sector—it seems that there was a definite increase in potential output, evident mainly from the capital stock. In 1992 the capital stock of the business sector grew by 4.4 percent, compared with only 2.9 percent in 1991. The 1992 increase was the result of strong investment in 1990 and 1991, although this moderated in 1992 (Tables 2.6, 2.7). While the current level of investment is consistent with an expected annual growth rate of 7 percent and productivity growth of 2.5 percent in the next few years, it is not enough to bring about a rapid reduction of unemployment.

The fall in the real wage due to the high level of unemployment pointed to a certain amount of flexibility in the labor market. The extent of the fall in the real wage was not enough, however, to prevent a further rise in unemployment. The high unemployment rate reflects joblessness among both the established population and new immigrants. While unemployment among new immigrants can be at least partly ascribed to temporary mismatch as they adjust to the needs of the Israeli economy, this cannot account for unemployment among the established population.

The adoption at the end of 1991 of a continually changing midpoint rate, according to a predetermined path, was the principal change in exchange-rate policy. It presumably reduced exporters' uncertainty regarding the expected exchange rate, and thus contributed to the expansion of exports.

The mass immigration which began at the end of 1989 continued in 1992, though in far smaller numbers than in 1990–91, and amounted to 77,000 immigrants (200,000 in 1990 and 176,000 in 1991). The fall in immigration acted directly to depress domestic demand, in particular for housing construction. This was a turning point, after two years in which the clearest impact of the immigration was to increase aggregate demand. In contrast, the positive effect on the labor supply was still evident in 1992. The rapid entry of new immigrants into the civilian labor force was the main factor behind both the rise in unemployment and greater downward pressure on the business-sector real wage. Immigration has contributed greatly to the increase of aggregate supply since 1990.

It is now clear that fiscal policy in 1992 was contractionary, in contrast to 1990 and 1991, when it was strongly expansionary. The current-account budget deficit/GNP ratio fell from 3 percent in 1991 to less than 1 percent in 1992, reflecting both a reduction in the share of expenditure and an equivalent increase in that of tax revenues. (The effect of an increase in the share of income is less contractionary than is a rise in the share of expenditure.) The government's direct and indirect influence on investment was also contractionary, with only a 5 percent rise in public-sector nondwelling investment (public services and roads, Table 2.7), and a 9 percent reduction in investment in government-initiated residential construction (which is in itself a welcome development in view of the previous excessive construction). Thus, total government investment (public services, roads, and residential construction) fell by 4 percent. Investment in roads rose by only 7 percent, despite the great increase in traffic congestion in the last ten years. The contractionary fiscal policy is also partly explained by the fall in immigration.

**Table 2.2**
**Product and Productivity of the Business Sector, by Industry, 1981–92[a]**

(percen

| | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|
| **GROSS PRODUCT** | | | | | | | |
| **Industrial composition** | | | | | | | |
| Agriculture | 4.9 | 4.9 | 4.8 | 4.8 | 5.3 | 4.6 | 4.7 |
| Industry | 31.7 | 32.8 | 32.1 | 31.4 | 31.6 | 31.3 | 31.3 |
| Transport & communications | 14.6 | 14.8 | 14.7 | 14.7 | 14.7 | 14.6 | 14.7 |
| Water and electricity | 4.3 | 4.4 | 4.3 | 4.2 | 4.2 | 4.2 | 4.2 |
| Construction | 12.6 | 10.3 | 10.6 | 12.5 | 11.2 | 13.4 | 12.9 |
| Trade and services | 31.8 | 32.9 | 33.5 | 32.4 | 33.0 | 31.9 | 32.2 |
| Total business sector | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| **Real annual change** | | | | | | | |
| Agriculture | 5.6 | 5.8 | 1.1 | 6.5 | 15.3 | –7.5 | 11.7 |
| Industry | 3.7 | 6.4 | 0.2 | 6.8 | 5.2 | 6.1 | 9.2 |
| Transport & communications | 4.2 | 5.1 | 1.8 | 7.2 | 5.8 | 6.1 | 9.8 |
| Water and electricity | 3.1 | 6.3 | 1.0 | 7.3 | 6.0 | 6.0 | 10.0 |
| Construction | –3.2 | 4.7 | 3.0 | 14.8 | 11.8 | 27.6 | 5.0 |
| Trade and services | 4.1 | 7.4 | 2.7 | 6.2 | 4.9 | 3.6 | 10.1 |
| Total business sector | 3.0 | 6.3 | 1.6 | 7.5 | 6.4 | 7.0 | 9.2 |
| *of which*: excl. construction | 4.0 | 6.5 | 1.5 | 6.6 | 5.8 | 4.4 | 9.8 |
| **PRODUCTIVITY** | | | | | | | |
| **Labor productivity** | | | | | | | |
| Agriculture | 4.8 | 5.6 | 6.0 | 14.1 | 28.9 | 3.5 | 9.9 |
| Industry | 2.4 | 3.3 | 2.7 | 2.9 | 4.2 | 1.4 | 3.0 |
| Transport & communications | 4.4 | 1.1 | 2.3 | 2.5 | 3.1 | 3.1 | 1.4 |
| Water and electricity | 6.4 | 1.0 | –4.7 | 7.7 | –7.8 | 8.0 | 23.0 |
| Construction | –3.5 | 3.3 | 2.9 | –1.5 | 0.0 | 8.9 | –13.6 |
| Trade and services | 0.5 | 3.1 | –2.4 | 1.6 | 3.1 | 0.0 | 1.8 |
| Total business sector | 1.4 | 3.2 | 0.8 | 2.2 | 4.0 | 2.2 | 0.4 |
| *of which*: excl. construction | 2.0 | 3.0 | 0.4 | 3.2 | 5.0 | 1.6 | 2.9 |
| **Total productivity** | | | | | | | |
| Agriculture | 4.0 | 5.5 | 4.4 | 11.5 | 23.1 | 0.3 | 11.0 |
| Industry | 1.2 | 3.0 | 0.7 | 3.2 | 3.9 | 2.1 | 3.7 |
| Transport & communications | 3.7 | 1.8 | 1.0 | 3.1 | 3.6 | 3.3 | 2.4 |
| Water and electricity | 2.6 | 2.1 | –4.0 | 4.8 | –4.3 | 4.5 | 14.0 |
| Construction | –3.3 | 4.5 | 3.0 | –0.4 | 2.5 | 12.9 | –16.5 |
| Trade and services | –0.2 | 3.0 | –2.2 | 1.9 | 2.8 | –0.1 | 3.1 |
| Total business sector | 0.7 | 3.4 | 0.1 | 3.1 | 4.5 | 3.0 | 1.8 |
| *of which*: excl. construction | 1.5 | 3.3 | –0.2 | 3.4 | 4.7 | 1.6 | 3.9 |

[a] At 1990 prices. See note 1 in text.

TABLE 2.3

**Business-Sector Product, Factors of Production, and Productivity, 1961–92**

(percent change)

| | Annual average | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1961–72 | 1973–80 | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 |
| Product[a] | | | | | | | | | |
| Total | 10.0 | 3.1 | 3.4 | 8.1 | 2.1 | 7.6 | 7.2 | 7.7 | 7.9 |
| Excl. construction | | | 4.4 | 8.5 | 2.0 | 6.9 | 6.9 | 5.5 | 8.3 |
| Labor input | | | | | | | | | |
| Total | 3.6 | 0.8 | 1.4 | 3.0 | 0.9 | 5.1 | 2.3 | 4.5 | 8.7 |
| Excl. construction | | | 2.0 | 3.4 | 1.1 | 3.4 | 0.7 | 2.7 | 6.7 |
| Capital stock[b] | | | | | | | | | |
| Gross | 8.7 | 6.1 | 3.4 | 2.5 | 2.9 | 2.9 | 1.6 | 2.8 | 4.3 |
| Net | 8.0 | 5.0 | 2.4 | 1.0 | 2.1 | 3.2 | 0.3 | 3.2 | 6.2 |
| Gross, excl. construction | | | 3.5 | 2.7 | 2.9 | 2.9 | 1.7 | 2.9 | 4.1 |
| Labor productivity[c] | | | | | | | | | |
| Total | 6.3 | 2.3 | 2.1 | 5.0 | 1.2 | 2.4 | 5.0 | 3.0 | –0.7 |
| Excl. construction | | | 2.4 | 4.9 | 1.0 | 3.4 | 6.2 | 2.7 | 1.4 |
| Capital stock per man-hour | | | | | | | | | |
| Gross | 5.0 | 5.3 | 2.0 | –0.4 | 1.9 | –3.5 | –0.7 | –1.6 | –4.0 |
| Net | 4.2 | 4.2 | 1.1 | –2.0 | 1.2 | –1.9 | –2.0 | –1.3 | –2.3 |
| Gross, excl. construction | | | 1.5 | –0.7 | 1.9 | –0.4 | 1.0 | 0.1 | –2.4 |
| Total productivity | | | | | | | | | |
| Total[d] | 4.5 | 0.6 | 1.4 | 5.1 | 0.5 | 3.0 | 5.0 | 3.5 | 0.5 |
| Excl. construction[e] | | | 1.8 | 5.2 | 0.3 | 3.6 | 5.8 | 2.6 | 2.3 |
| Capital/GDP ratio | | | | | | | | | |
| Total | 2.14 | 2.22 | 2.29 | 2.11 | 2.07 | 1.90 | 1.97 | 1.89 | 1.82 |
| Excl. construction | | | 2.55 | 2.29 | 2.26 | 2.10 | 2.16 | 2.11 | 2.03 |

[a] National accounts figures; calculated from the demand side. [b] At 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 0.65, and capital stock by 0.35.

SOURCE: Based on Central Bureau of Statistics data.

## 2. ECONOMIC GROWTH SINCE THE ESP

The pattern of growth in 1990–92 was determined chiefly by immigration, thougl underlying it was the process of recovery and restructuring that followed the 1985 ESP In 1988 and 1989 this process provided the basis for the growth that materialized as result of the mass immigration. This section provides a brief review of development since the ESP and their effect on the economy in 1992.

**Table 2.4**
**Tradables and Nontradables: Demand for Business-Sector Product, 1981–92[a]**

(annual change, percent

| | Annual average | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 |
| Business sector | | | | | | | |
| Use of resources | 3.9 | 9.7 | 1.4 | 9.3 | 7.3 | 10.5 | 10.1 |
| Product | 3.4 | 7.3 | 2.1 | 7.6 | 7.2 | 7.7 | 7.9 |
| Tradables | | | | | | | |
| Use of resources | 5.1 | 10.4 | 0.9 | 8.6 | 7.1 | 6.3 | 12.4 |
| Product | 4.5 | 6.0 | 0.9 | 6.8 | 6.3 | 3.1 | 11.0 |
| Nontradables | | | | | | | |
| Use of resources | –0.6 | 6.8 | 3.5 | 11.7 | 8.1 | 22.9 | 4.0 |
| Product | 2.7 | 8.2 | 3.2 | 8.2 | 7.9 | 11.0 | 5.7 |

[a] Tradables are estimated from the product of the nondwelling industries and include that of industry agriculture, sea and air freight (out of transport and communications), and tourism (out of the services) nontradables are the residual.

Since the ESP, the exchange rate has served as the main nominal anchor in the attemp to reduce inflation. In order to protect foreign-currency balances a sharply restrictiv monetary policy of high interest rates was adopted. The substantial erosion of th purchasing power of wages in 1985 exerted pressure on employers to raise real wages and in 1986 the real wage and domestic demand rose, temporarily boosting business sector output. Part of the increase in real wages apparently reflected expectations o higher inflation than actually transpired, giving rise to higher nominal wage increases. I addition, once the error in forecasting the inflation rate had become evident, labor-marke rigidities prevented the downward adjustment of real wages. The nontradables secto could continue to remain profitable while wages and prices rose because domesti demand for nontradables soared. Profitability was hard hit in the tradables sector however, as its ability to increase prices is limited by foreign competition. Employers especially in the tradables sector, may have thought initially that the government' commitment to employment would force it to counteract the rise in the real wage b devaluation. Since the exchange rate was the principal instrument for reducing inflation however, the government's ability to devalue was restricted, and in the event the deval-

**Table 2.5**
**Tradables and Nontradables: Use of Resources, 1981–92[a]**

(real annual rate of change, percent)

| | 1990–92[b] | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|
| Domestic use of resources | 71.2 | 3.4 | 10.7 | 1.6 | 11.3 | 0.0 | 9.7 | 15.8 | 8.4 |
| Nontradables[c] | 26.5 | –0.6 | 6.8 | 3.5 | 11.7 | 2.8 | 8.1 | 22.9 | 4.0 |
| Construction | 11.2 | –5.4 | 3.4 | 3.4 | 22.3 | 4.6 | 15.5 | 49.2 | 2.3 |
| Other | 15.3 | 4.4 | 9.9 | 3.6 | 5.7 | 1.9 | 4.1 | 7.5 | 5.5 |
| Tradables[d] | 44.7 | 5.5 | 12.4 | 0.8 | 11.1 | –1.2 | 10.4 | 11.7 | 11.2 |
| Exports | 28.8 | 5.2 | 8.4 | 1.1 | 5.1 | 3.6 | 2.5 | –1.5 | 14.4 |
| Total tradables[e] | 73.5 | 5.1 | 10.4 | 0.9 | 8.6 | 0.7 | 7.1 | 6.3 | 12.4 |
| **Total use of resources** | 100.0 | 3.9 | 9.7 | 1.4 | 9.3 | 1.2 | 7.3 | 10.5 | 10.1 |

[a] Excluding public services and dwelling services.
[b] Composition of resource use.
[c] Consumption of other services *less* domestic consumption by nonresidents, *plus* investment in construction and earthworks.
[d] The difference between total domestic resource use and nontradables resource use.
[e] Exports *plus* domestic use of resources in tradables.
SOURCE: Based on Central Bureau of Statistics data.

ılation was insufficient to offset the wage increase. The profitability (rate of return on apital) of the tradables sector consequently plummeted in 1986 and remained at a low evel in 1987 (Table 2.10). As a result, economic activity, especially in the tradables ector, was depressed in 1988–89 (Tables 2.4 and 2.8). Employment growth stagnated nd the unemployment rate rose to 9 percent. The recession spurred a streamlining rocess, reflected in a fall in the real wage and rise in productivity, while real interest ates were lowered significantly. The result was that profitability recovered. The ationalization process prepared the ground for future business-sector growth; this came o fruition in 1990 and after, when the influx of immigrants raised domestic demand harply. The mass immigration caused an expansion in the labor supply (especially in nd after 1991), a steep rise in the unemployment rate, and thus downward pressure on nit labor costs. The business sector responded by increasing its demand for labor, and mployment rose by an annual 5.3 percent in 1990 and 1991. By comparison, a similar rowth rate of the business sector in 1986 and 1987 saw an annual increase of only 3.3 ercent in employment. (The comparison with the 1960s is even more striking.) Despite he acceleration of the pace at which employment has risen, the unemployment rate is still igh, and it has actually increased among the established population. It seems, therefore, hat although some of the unemployment among the new immigrants is structural, a urther decline in real wages will enable employment to expand more.

**Table 2.6**
**Gross Domestic Investment, by Type of Asset, 1981–92**

(percent)

| | At current prices (NIS million) | Change in quantity | | | | | | | Change in price | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 | 1991 | 1992 |
| Nondwelling and other construction | 6,265 | –3.5 | 9.4 | 2.0 | 12.9 | 11.7 | 16.1 | 11.0 | 18.8 | 10.9 |
| *of which* Nondwelling | 2,755 | –2.3 | 1.9 | 3.6 | 6.4 | 6.0 | 11.7 | 1.8 | 19.8 | 9.9 |
| Other | 3,510 | –5.0 | 19.1 | 0.3 | 19.3 | 18.1 | 20.5 | 19.5 | 17.9 | 11.9 |
| Plant and equipment | 12,666 | 8.0 | 3.2 | –2.8 | 16.6 | 24.0 | 19.7 | 6.8 | 14.9 | 10.4 |
| *of which* Imports | 7,665 | 6.9 | –0.7 | –3.1 | 17.6 | 26.7 | 28.2 | 0.2 | 14.9 | 10.8 |
| Domestic production | 5,001 | 9.0 | 9.2 | –2.4 | 15.1 | 20.0 | 6.9 | 18.6 | 14.8 | 9.8 |
| Transport equipment | 3,977 | 0.0 | 28.6 | –12.3 | 30.6 | 20.8 | 54.5 | 19.5 | 11.0 | 8.1 |
| Nondwelling investment excl. shipping and aviation | 22,908 | 3.4 | 7.4 | –3.2 | 17.8 | 20.4 | 23.4 | 10.0 | 15.2 | 10.1 |
| Shipping and aviation | 262 | | | | | | | | | |
| Gross domestic nondwelling investment | 23,169 | 3.4 | 8.8 | –4.5 | 18.6 | 23.8 | 23.8 | 8.8 | 15.1 | 10.1 |
| Dwelling construction | 14,411 | –5.2 | 1.5 | 4.5 | 27.2 | 19.1 | 74.2 | –0.9 | 16.7 | 10.0 |
| *of which* Private | 7,516 | –1.7 | 4.1 | 4.8 | 5.2 | –0.7 | 8.1 | 8.5 | 18.0 | 9.9 |
| Public | 6,894 | –17.3 | –14.8 | 1.7 | 116.7 | 192.5 | 283.6 | –9.3 | 15.5 | 9.9 |
| Gross domestic investment in fixed assets | 37,580 | 0.2 | 6.6 | –2.1 | 21.6 | 22.4 | 40.1 | 4.9 | 15.7 | 10.0 |
| Inventories | 2,234 | | | | | | | | | |
| Gross domestic investment | 39,814 | –0.2 | 6.7 | –2.0 | 24.6 | 26.2 | 42.4 | 7.6 | 15.9 | 9.4 |

SOURCE: Central Bureau of Statistics.

**Table 2.7**
**Capital Stock, by Industry, 1981–93[a]**

(percent change)

| | Total | | | | | Equipment | | | | | Buildings | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1981–85 | 1986–89 | 1990–92 | 1992 | 1993 | 1981–85 | 1986–89 | 1990–92 | 1992 | 1993 | 1981–85 | 1986–89 | 1990–92 | 1992 | 1993 |
| Agriculture | 2.4 | 0.3 | –1.4 | –1.5 | –1.4 | 3.2 | 0.6 | –2.8 | –3.2 | –3.0 | 2.1 | 0.2 | –1.0 | –1.0 | –0.9 |
| Waterworks | 2.9 | 0.5 | –0.3 | –0.5 | –0.1 | 6.1 | 2.0 | 1.5 | 1.2 | 2.2 | 2.6 | 0.3 | –0.6 | –0.7 | –0.4 |
| Industry | 4.6 | 3.6 | 3.2 | 4.7 | 4.8 | 5.6 | 4.5 | 4.1 | 5.7 | 5.6 | 1.8 | –0.0 | –0.3 | –0.1 | 0.9 |
| Construction equipment | –1.4 | –4.6 | 6.1 | 21.5 | 11.3 | –1.4 | –4.6 | 6.1 | 21.5 | 11.3 | | | | | |
| Electricity | 6.7 | 4.4 | 7.6 | 7.4 | 8.5 | 8.6 | 5.2 | 9.4 | 9.4 | 10.6 | 4.4 | 3.3 | 4.8 | 4.0 | 4.8 |
| Transport & communications | 1.8 | 2.6 | 2.9 | 5.2 | 6.7 | 1.3 | 2.3 | 1.7 | 5.1 | 7.9 | 2.5 | 2.9 | 4.2 | 5.2 | 5.4 |
| *of which* Excl. transport equipment | 2.4 | 4.0 | 5.4 | 6.6 | 7.6 | 1.9 | 10.1 | 10.5 | 12.7 | 16.9 | 2.5 | 2.9 | 4.2 | 5.2 | 5.4 |
| Private services | 5.9 | 4.4 | 3.9 | 4.4 | 4.0 | 8.2 | 6.8 | 5.0 | 5.6 | 4.5 | 3.7 | 1.8 | 2.4 | 2.7 | 3.2 |
| Total business sector | 3.4 | 2.7 | 2.9 | 4.3 | 4.9 | 4.1 | 3.6 | 3.6 | 5.8 | 6.4 | 2.6 | 1.5 | 2.0 | 2.4 | 2.8 |
| Public services | 3.8 | 3.6 | 3.5 | 3.7 | 3.7 | 2.4 | 5.8 | 3.2 | 2.9 | 2.3 | 4.0 | 3.3 | 3.5 | 3.9 | 3.9 |
| Total principal industries | 3.5 | 2.9 | 3.1 | 4.2 | 4.6 | 4.0 | 3.7 | 3.6 | 5.6 | 6.2 | 3.1 | 2.2 | 2.6 | 3.0 | 3.3 |
| *of which* Excl. transport equipment | 3.8 | 3.2 | 3.5 | 4.3 | 4.5 | 5.1 | 4.7 | 4.8 | 6.3 | 6.4 | 3.1 | 2.2 | 2.6 | 3.0 | 3.3 |
| Residential construction | 5.1 | 3.1 | 4.4 | 6.5 | 5.9 | | | | | | 5.1 | 3.1 | 4.4 | 6.5 | 5.9 |
| Total fixed assets | 4.2 | 3.0 | 3.7 | 5.2 | 5.2 | 4.0 | 3.7 | 3.6 | 5.6 | 6.2 | 4.3 | 2.8 | 3.7 | 5.1 | 4.9 |

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

SOURCE: Based on Central Bureau of Statistics data.

**Table 2.8**
**Tradables and Nontradables: Final Business-Sector Product, 1981–92**

(percent change)

| | Annual average | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 |
| *Index = 1990* | | | | | | | |
| Business-sector product | | | | | | | |
| Tradables | | | | | | | |
| Industry | 3.7 | 6.4 | 0.2 | 6.8 | 5.2 | 6.1 | 9.2 |
| Other | 5.4 | 5.7 | 1.8 | 6.8 | 8.0 | –1.9 | 14.3 |
| Total | 4.5 | 6.0 | 0.9 | 6.8 | 6.3 | 3.1 | 11.0 |
| Nontradables | 2.7 | 8.2 | 3.2 | 8.2 | 7.9 | 11.0 | 5.7 |
| Total | 3.4 | 7.3 | 2.1 | 7.6 | 7.2 | 7.7 | 7.9 |
| Tradables as percent of business-sector product | 42.2 | 44.3 | 44.5 | 42.1 | 44.3 | 40.3 | 41.5 |
| Contribution of construction demand[a] | | | | | 1.8 | 4.0 | 1.3 |

[a] Contribution to increase in business-sector product, i.e., 15 percent (annual average) in 1990–92.

## 3. INVESTMENT AND THE CAPITAL STOCK[4]

Business-sector investment should reflect the process whereby the capital stock is adjusted so as to allow expected growth to occur, and it is in this context that the level and development of investment should be examined.

The influx of immigrants created expectations of accelerated economic growth (based on past experience) with increased productivity and lower real wages in the interim. These expectations should have been reflected by a higher rate of return on capital and hence by a greater desire on the part of firms to expand and invest. The government also encouraged investment, expanding credit available to firms and sharing business risks by extending guarantees (for details see Bank of Israel, *Annual Report, 1991*, Chapter 2), and by raising the depreciation allowance on plant and equipment to 100 percent. Monetary policy also contributed; the expansion of the discount-window loan resulted in lower real interest rates on short-term credit from the producers' perspective (Table 2.10). Growth did in fact accelerate in 1990 and 1991, with a rise in profitability and a considerable increase in business-sector investment (despite the time taken to implement investment decisions). Investment growth moderated in 1992, and its current level will enable the capital stock to grow at an average annual rate of 5 percent in 1993–94. This rate of growth of factor inputs, together with a reasonable increase in total factor prod-

[4] For a more detailed account of dwelling construction, see Section 6.

**Table 2.9**
**Demand for Business-Sector Product, 1991–92**

(percent real change)

| | 1991 | 1992 |
|---|---|---|
| Total demand for business-sector product[a] | 10.6 | 9.9 |
| *of which* Total demand *less* largely non-financial assets[b] | 7.7 | 8.8 |
| Exports | –1.5 | 14.4 |
| Domestic consumption | 12.6 | 6.2 |
| Construction | (53.2) | (2.4) |
| Other | (5.4) | (7.2) |

[a] Total use of resources, excluding direct defense imports, public services, and housing services.
[b] Nonfinancial assets, mainly imported, include consumer durables and investment in stock, motor vehicles, and imported equipment.

uctivity (for example, at the 1990–92 average),[5] enables business-sector product to continue expanding by an annual 7 percent. The current rate of immigration guarantees a 4 percent increase in the civilian labor force. Producers' behavior indicates that they regard this growth rate as plausible, or even relatively rapid, since it implies annual growth in output per capita of 3 percent. The faster growth rate needed, at least in the short run, to bring unemployment down more rapidly requires government intervention to raise profitability, such as further cuts in taxes on profits and labor costs.

Several factors account for the reduced growth of investment in 1992. The tax allowance for accelerated capital depreciation was abolished, bringing investment forward from 1992 to 1991. The uncertainty surrounding the receipt of the US loan guarantees raised doubts about the future growth rate of the economy. The knowledge that the composition of demand and supply would change as the construction industry contracted also created uncertainty. (The contention that uncertainty about future growth affected producers is corroborated by the fact that they increased the hours worked by their employees rather than hiring new workers: it is easier to reduce overtime than to fire employees if demand turns out to be weaker than expected.) Finally, there was no further improvement in profitability, and effective tax rates actually rose. Given all these explanations for reduced investment growth in 1992, the primary cause was that outlined above: producers' expectations that business-sector product would continue to grow by about 7 percent annually.

[5] The increase in productivity has furthered extensive investment in equipment in the last three years, with the introduction of new technologies. It is also reasonable to assume that the productivity of the employed immigrants will increase appreciably once their absorption and retraining is completed.

**Table 2.10**
**Indicators of Business-Sector Profitability and Investment, 1982–92[a]**

| | 1982–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|
| *Index, 1986 = 100* | | | | | | | |
| Labor cost per man-hour | | | | | | | |
| Total | 92.1 | 104.7 | 116.2 | 116.5 | 119.0 | 116.2 | 114.4 |
| Industry | 88.4 | 101.7 | 98.3 | 106.7 | 107.1 | 107.0 | 106.0 |
| Unit labor cost | | | | | | | |
| Total | 99.5 | 102.6 | 109.0 | 103.0 | 106.6 | 101.5 | 101.0 |
| Industry | 93.6 | 99.3 | 99.2 | 96.0 | 98.4 | 96.2 | 93.5 |
| *Percent* | | | | | | | |
| Gross rate of return on capital | | | | | | | |
| Total | 12.2 | 10.6 | 9.5 | 12.2 | 10.5 | 12.8 | 13.2 |
| Industry | 17.3 | 13.6 | 13.7 | 15.1 | 13.7 | 15.0 | 16.8 |
| 3-month Eurodollar interest[b,c] | 10.2[b] | 6.9 | 8.5 | 5.9 | 8.1 | 5.8 | 3.7 |
| Real interest on overdrafts[d] | | | | | | | |
| Current year | 39.6 | 34.9 | 19.0 | 11.1 | 16.0 | 5.5 | 11.9 |
| Moving 3-year average | 24.6 | 59.6 | 27.9 | 13.9 | 18.0 | 12.7 | 11.1 |
| Yield to maturity of 10-year bonds[d] | 3.4 | 5.8 | 3.5 | 2.5 | 1.9 | 2.9 | 2.6 |
| Tax rates | | | | | | | |
| Nonwage income, A | 25.2 | 32.5 | 28.8 | 24.6 | 25.4 | 23.8 | 24.6 |
| Nonwage income, B[e] | 13.6 | 26.0 | 23.7 | 20.3 | 20.9 | 19.6 | 20.3 |
| Statutory company tax | 61.0 | 53.0 | 45.0 | 41.5 | 43.5 | 41.0 | 40.0 |
| Investment | | | | | | | |
| Investment/product ratio | 16.7 | 14.5 | 13.8 | 17.3 | 15.5 | 18.1 | 18.4 |
| Average age of equipment (years) | 5.9 | 6.1 | 6.3 | 6.4 | 6.4 | 6.4 | 6.3 |

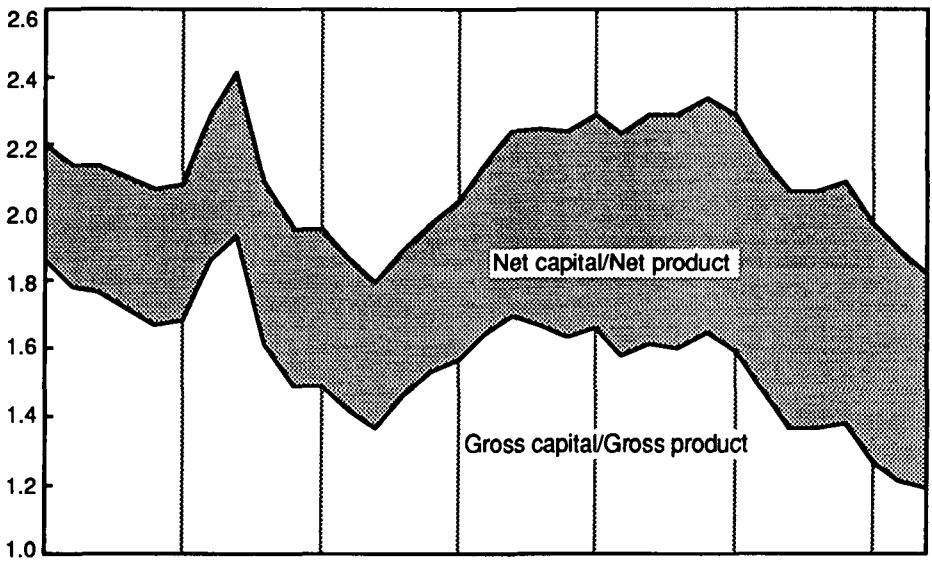
[a] The data are calculated from the income-originating side.
[b] 1983–85.
[c] In dollar terms.
[d] Ex post; deflated by producer prices at factor cost.
[e] Variant B is Variant A *less* credit concessions and capital grants to firms; it includes tax on managerial salaries.

SOURCE: Based on Central Bureau of Statistics data.

## 4. PRIVATE CONSUMPTION AND SAVING

Per capita private consumption grew faster in 1992, by 4.6 percent, after increasing by 5.4 percent from 1986 to 1989, and 1.6 percent (annual average) in 1990 and 1991. Per capita consumption excluding durables (a proxy for current consumption) followed a similar trend, rising by 2.8 percent after increases of 0.4 percent in 1990 and 1991 and 4.5 percent from 1986 to 1989. Per capita disposable income from wages and current transfers also rose by 3 percent, after an annual average increase of 1.5 percent in 1990

**Figure 2.2**
**Capital/Output Ratio in the Business Sector, 1960–92**




SOURCE: Based on Central Bureau of Statistics data.

and 1991 and 7 percent in 1986–89. This accounts for most of the increase in private consumption in recent years. Changes in disposable income from wages provide a better explanation for the rise in consumption in the 1980s than does total disposable income (Figure 2.3), because the former reflects more accurately the actual disposable income of households. (Total disposable income includes, for example, companies' undistributed profits.) During the 1980s sharp fluctuations in economic activity and inflation affected firms' profits, causing fluctuations in the private saving rate. Since disposable wage income represents individuals' human capital only, the explanation for changes in consumption must also include other (financial and physical) assets,[6] whose effects are sometimes highly significant (as occurred in 1983–85). In 1992, as a result of the unexpected growth in the value of financial assets held by the public (due to large capital gains from the stockmarket), portfolios were adjusted, leading to the substantial growth in investment in consumer durables. The liquidity of financial assets enabled consumers to put into practice their desire to raise consumption. New immigrants also increased their purchases of consumer durables (particularly cars) as they feared that their tax allowances on these imports would be withdrawn in the future.

[6] These variables do not really distinguish households from firms either, and should therefore be regarded as proxies. In addition, other variables, such as the private sector's financial assets—most of which belong to households—should also be examined.

**Table 2.11**
**Nondwelling Investment by Sector, 1981–92**

(percent)

| | NIS millions[a] | Change[b] | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1992 | 1981–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 |
| Buildings and earthworks | | | | | | | | |
| Public sector[c] | 3,728 | –3.1 | 19.6 | 2.6 | 11.2 | 7.2 | 19.9 | 7.1 |
| Public-sector corporations[d] | 1,618 | –6.9 | 9.7 | 2.2 | 18.6 | 27.2 | 11.4 | 17.8 |
| Total | 5,346 | –4.3 | 16.7 | 2.5 | 13.3 | 12.6 | 17.3 | 10.2 |
| Private sector | 919 | –1.4 | –8.7 | 0.1 | 11.8 | 10.2 | 9.5 | 15.7 |
| **Total** | **6,265** | **–3.6** | **10.8** | **2.1** | **13.1** | **12.2** | **16.2** | **10.9** |
| Equipment | | | | | | | | |
| Public sector[c] | 1,154 | 7.4 | 5.5 | –2.3 | 4.7 | 4.8 | 8.0 | 1.6 |
| Public-sector corporations[d] | 4,147 | 0.6 | –1.4 | 4.6 | 23.1 | 35.9 | 14.1 | 20.3 |
| Total | 5,301 | 2.8 | 0.8 | 2.3 | 18.0 | 26.3 | 12.6 | 15.7 |
| Private sector | 7,366 | 10.9 | 4.0 | –5.6 | 15.5 | 22.1 | 24.6 | 1.2 |
| **Total** | **12,667** | **8.0** | **2.8** | **–2.6** | **16.5** | **23.8** | **19.7** | **6.8** |
| Structures and equipment | | | | | | | | |
| Public sector[c] | 4,882 | 0.2 | 14.1 | 1.2 | 9.5 | 6.5 | 16.7 | 5.7 |
| Public-sector corporations[d] | 5,765 | –2.0 | 1.1 | 3.9 | 21.8 | 33.3 | 13.3 | 19.6 |
| Total | 10,647 | –0.9 | 7.4 | 2.4 | 15.6 | 19.1 | 14.9 | 12.9 |
| Private sector | 8,285 | 8.9 | 2.5 | –5.0 | 15.1 | 20.7 | 23.0 | 2.6 |
| **Total** | **18,932** | **4.0** | **4.9** | **–1.1** | **15.4** | **19.8** | **18.5** | **8.1** |
| Transport equipment[e] | 4,239 | –1.1 | 36.8 | –19.9 | 36.3 | 48.5 | 52.8 | 11.5 |
| **Grand total** | **23,171** | **3.4** | **9.2** | **–4.2** | **18.5** | **23.5** | **23.8** | **8.7** |

[a] At current prices.

[b] At 1990 prices.

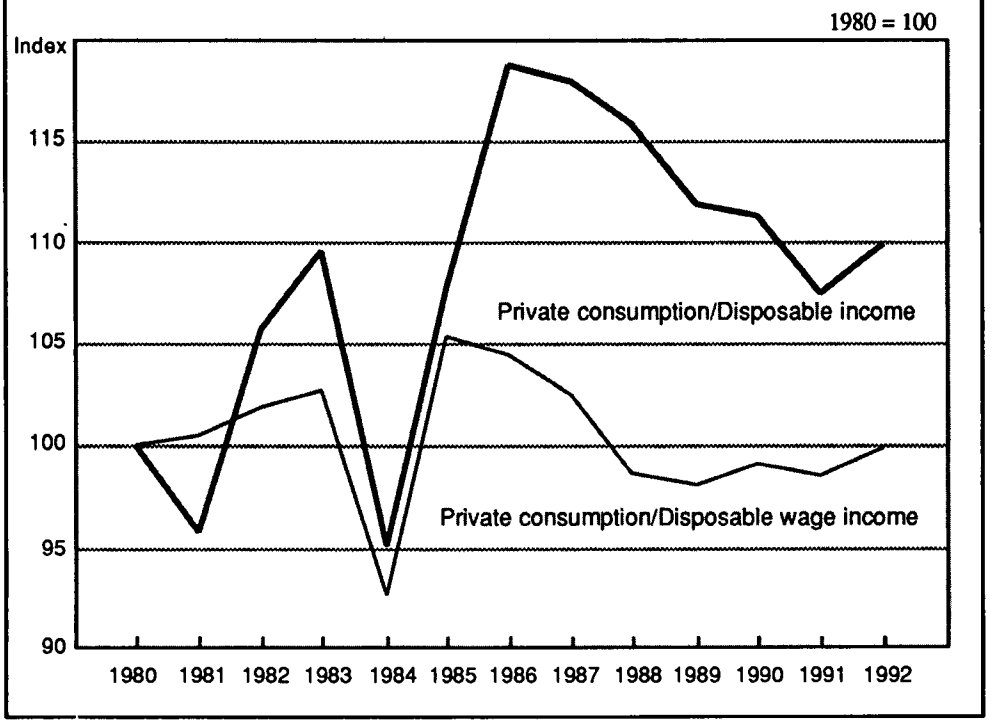
[c] Including investment in public services, roads, afforestation and earthworks.

[d] 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.

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

SOURCE: Based on Central Bureau of Statistics data.

**Figure 2.3**
**The Private Consumption Rate and Disposable Wage Income, 1980–92**




SOURCE: Based on Central Bureau of Statistics data.

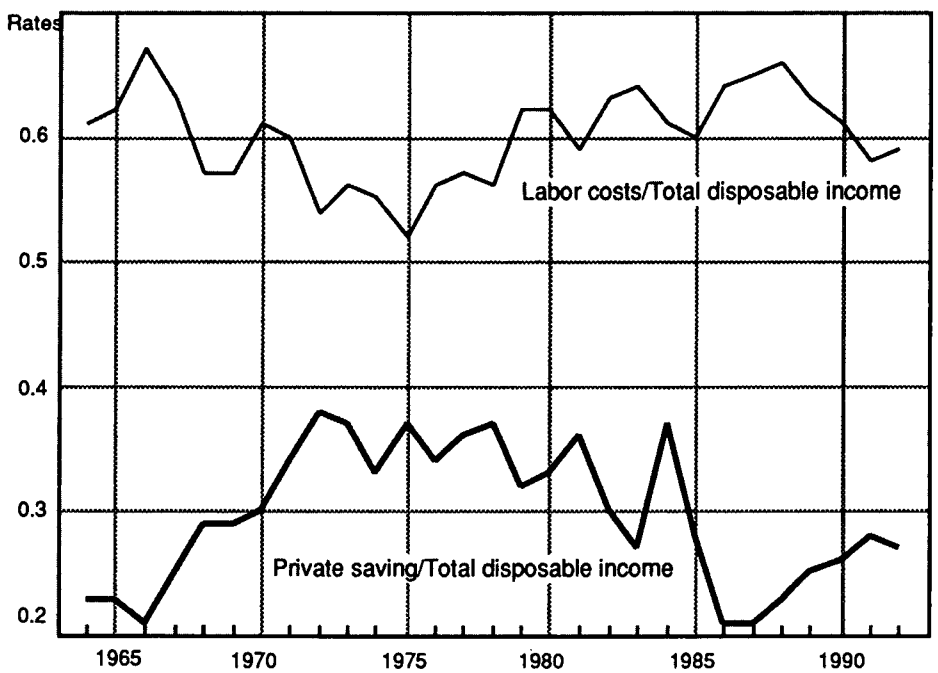
The private saving rate fell in 1992 (Table 2.12), reflecting reduced saving by households after an increase in 1991 (which itself was caused by the growth in firms' profits). Overall, fluctuations in the savings ratio of total private disposable income in the last few years have been relatively small, the average rate varying around 25 percent, after its rise following the low levels of the recession of 1985–88 (Figure 2.4).

## 5. THE CURRENT ACCOUNT, SAVING, AND INVESTMENT

In 1992 there was a surplus of about $ 150 million on the balance of payments of the current account. There was, therefore, no significant change in the level of external debt, even though this was a period of mass immigration, when the external debt/GDP ratio could have been expected to rise. The question arises whether this was due to lower investment or higher savings. Comparing the 1990–92 period, when immigrant absorption gave rise to increased economic activity, with the 1986–89 period

shows that the proportion of GDP devoted to investment rose appreciably, by 4.2 percentage points (Table 2.13). Average annual investment rose by $6.7 billion (44 percent of which was allocated to housing), reflecting both increased GDP growth and a rise in the investment/GDP ratio. This increase was funded by a $6 billion (annual average) rise in savings, which surpassed the growth rate of the economy as a whole as there was a 2.4 percent increase in the saving rate.

**Figure 2.4**
**Private Saving and Labor Costs as Proportion of Disposable Income, 1964–92**




SOURCE: Based on Central Bureau of Statistics data.

The rise in total savings was due to the increase in the private saving rate. The public sector saving rate fell. The rise in private savings is partly due to the decline in the wage income/total disposable income ratio since 1989, given that the propensity to consume out of wage income is higher than the propensity to consume out of other forms of income. The decline in the wage income/disposable income ratio stems from the steep rise in the labor supply due to mass immigration, making the return on human capital lower than that on physical capital. Thus, the increase in savings, which financed some 90 percent of the rise in investment, partly reflects an endogenous process of the effect of immigration on income-distribution and on the saving rate.

**Table 2.12**
**Disposable Private Income, Private Consumption, and Private Saving, 1988–92**

(percent change)

| | At current prices (NIS millions) | | | | | Real change[a] | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1988 | 1989 | 1990 | 1991 | 1992 | 1989 | 1990 | 1991 | 1992 |
| National income | 50,745 | 60,973 | 74,367 | 97,852 | 114,831 | –0.5 | 5.1 | 11.8 | 6.0 |
| General government domestic income from assets | 760 | 1,203 | 2,100 | 2,366 | 3,047 | 31.1 | 50.5 | –4.2 | 16.3 |
| Depreciation[b] | 9,313 | 11,730 | 14,308 | 16,936 | 20,928 | 4.3 | 5.1 | 0.6 | 11.6 |
| Gross private income from economic activity | 59,299 | 71,501 | 86,577 | 112,423 | 132,712 | –0.1 | 4.4 | 10.4 | 6.6 |
| Total direct taxes[c] | 14,937 | 16,574 | 19,430 | 23,289 | 28,207 | –8.1 | 1.1 | 1.9 | 9.4 |
| Net current transfer payments | 5,765 | 7,433 | 9,812 | 12,747 | 14,839 | 6.8 | 13.8 | 10.4 | 5.2 |
| Interest on internal debt | 4,437 | 5,642 | 6,987 | 8,279 | 9,033 | 5.3 | 6.7 | 0.7 | –1.4 |
| Gross disposable income from domestic sources | 54,564 | 68,002 | 83,946 | 110,160 | 128,377 | 3.2 | 6.4 | 11.5 | 5.3 |
| Private transfers from abroad | 2,363 | 3,398 | 3,815 | 4,682 | 6,231 | 19.1 | –3.2 | 4.3 | 20.2 |
| **Total disposable income** | 56,926 | 71,399 | 87,759 | 114,841 | 134,608 | 3.9 | 6.0 | 11.2 | 5.9 |
| *Percent* | | | | | | | | | |
| Saving rate on income from domestic sources | 19.5 | 21.7 | 22.5 | 25.4 | 23.3 | | | | |
| **Total saving rate** | **22.8** | **25.4** | **25.9** | **28.4** | **26.8** | | | | |

[a] Deflated by CPI.
[b] Private sector.
[c] Direct taxes include income tax, national insurance payments, and compulsory loans.
SOURCE: Based on Central Bureau of Statistics data.

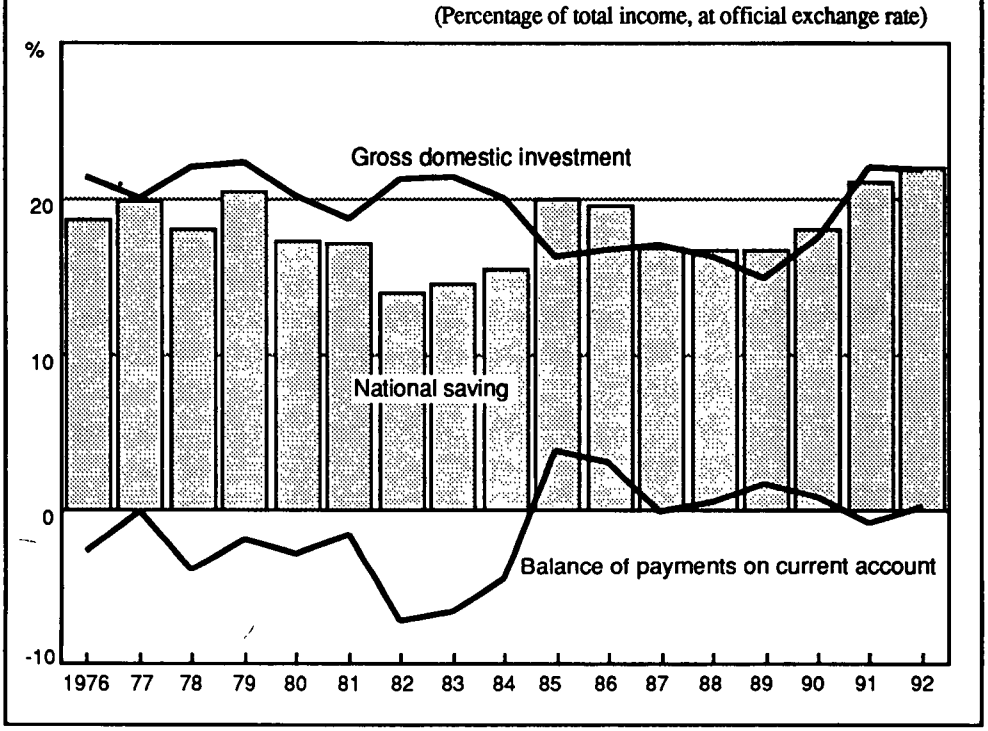
**Table 2.13**
**National Saving, Investment, and the Current Account, 1980–92[a]**

(percent)

| | All domestic income | | | | | | | Annual average ($ million) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1980–85 | 1986–87 | 1986–89 | 1990–92 | 1990 | 1991 | 1992 | 1986–89 | 1990–92 | Change |
| **Gross saving** | | | | | | | | | | |
| General government[b] | –6.3 | 3.3 | 1.1 | 0.0 | –1.6 | –0.5 | 2.0 | 316.0 | 77.0 | –239.1 |
| Private[b] | 23.4 | 14.6 | 16.2 | 20.1 | 19.3 | 21.2 | 19.8 | 7,183.0 | 13,425.1 | 6,242.1 |
| Total | **17.0** | **17.9** | **17.3** | **20.1** | **17.7** | **20.8** | **21.8** | **7,499.0** | **13,502.0** | **6,003.0** |
| **Gross investment** | | | | | | | | | | |
| Inventories | 0.4 | 0.7 | 0.3 | 0.8 | 0.3 | 0.8 | 1.2 | 112.9 | 553.8 | 440.9 |
| Fixed nondwelling | 12.1 | 11.8 | 11.3 | 12.3 | 11.6 | 12.6 | 12.7 | 4,923.2 | 8,217.5 | 3,294.3 |
| Dwellings | 6.9 | 4.3 | 4.5 | 7.4 | 5.5 | 8.6 | 7.9 | 1,991.9 | 4,962.8 | 2,971.0 |
| Total | **19.4** | **16.8** | **16.2** | **20.4** | **17.5** | **22.0** | **21.9** | **7,027.9** | **13,734.2** | **6,706.2** |
| Capital transfers | 0.7 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 173.6 | 244.8 | 71.2 |
| **Current account** (saving *less* investment, *plus* capital transfers) | | | | | | | | | | |
| Civilian import surplus[c] | 6.5 | 4.6 | 4.1 | 6.1 | 5.3 | 6.8 | 6.3 | 1,750.8 | 4,114.9 | 2,364.1 |
| Civilian unilateral transfers[d] | 4.8 | 6.1 | 5.6 | 6.2 | 6.0 | 5.9 | 6.6 | 2,395.5 | 4,127.6 | 1,732.0 |
| Total | **–1.7** | **1.5** | **1.5** | **0.0** | **0.7** | **–0.9** | **0.3** | **644.7** | **12.7** | **–632.0** |

[a] The denominator is GNP *plus* unilateral transfers (converted to NIS at the official exchange rate).
[b] The saving figures are based on nominal interest payments.
[c] The civilian import surplus includes net payments to factors of production abroad.
[d] 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 2.5**
**Rate of Saving, Investment and the Current Account, 1976–92**




SOURCE: Based on Central Bureau of Statistics data.

## 6. PRINCIPAL INDUSTRIES[7]

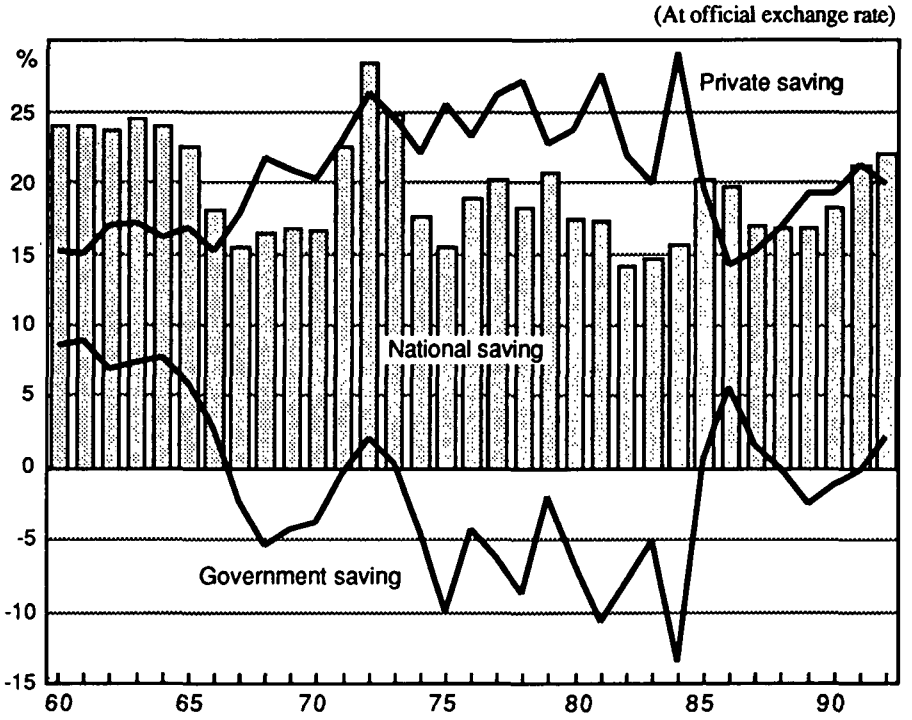
### Agriculture

Farmers did relatively well in 1992. Their real income rose significantly, largely due to the steep increase in product (11.7 percent) and output, and despite the continued decline in the ratio of purchased input prices to output prices.

The positive developments in agriculture are especially notable in comparison with 1991, which was a particularly bad year by most criteria. Whereas agricultural output fell by 5 percent in 1991, it rose by some 6 percent in 1992 (Table 2.14). Output in field crops rose more, as a result of extreme weather conditions in the winter of 1991/92, but remained the same in livestock, while egg and dairy production slowed. The water shor-

[7] The current *Annual Report* is the first to contain a separate section on private-sector services, data for which did not enable serious analysis in the past. This industry appears in the by-industry tables (Tables 2.2, 2.22) under its traditional rubric, 'Trade and services.'

**Figure 2.6**
**Gross National Saving Rate**
**as Percentage of Total Income, by Sector, 1960–92**




SOURCE: Based on Central Bureau of Statistics data.

tage ended due to plentiful precipitation. The benefit of this was particularly evident in field crops, where output had dropped in 1991 due to the drought and massive cuts in water quotas. Biennial bearing made a positive contribution to the output of certain crops (e.g., avocados) in 1992.

Population growth and higher real per capita income should have increased demand for fresh agricultural produce by an estimated 4–5 percent, but the data on agricultural produce—especially field crops—marketed domestically indicate a slight increase in surplus supply, although relative prices (annual average) remained stable. Nonetheless, due to the weather, loss of harvests, and marketing difficulties, crops differed in their supply responses at various seasons.

The decline in the relative price of output sold to industry moderated from 13 percent in 1991 to 2 percent in 1992. The relation between prices of output, regardless of destination, and those of purchased inputs fell by 2.7 percent in 1992, similar to the decline in 1991 and to the period average for 1987–90. Most of the reduction of relative prices in 1992 was due to the decline in producer prices of agricultural exports.

**Table 2.14**
**Indicators of Agricultural Production, 1987–92[a]**

(real annual change, percent)

| | 1987–1990 | 1990 | 1991 | 1992 |
|---|---|---|---|---|
| **Output** | | | | |
| Total output[b] | 3.2 | 7.4 | –5.1 | 5.6 |
| Inputs | 0.2 | 0.9 | –2.8 | 0.6 |
| Gross product | 6.6 | 15.3 | –7.5 | 11.7 |
| Total farm income[c] | –3.5 | 2.6 | –17.3 | 7.5 |
| **Factor input** | | | | |
| Labor[d] | –4.6 | –10.7 | –10.6 | 1.3 |
| Gross capital stock[e] | –0.3 | –1.3 | –1.3 | –1.5 |
| Capital-labor ratio | 4.4 | 10.5 | 10.4 | –2.8 |
| **Productivity** | | | | |
| Product-labor ratio | 11.7 | 29.1 | 3.5 | 10.3 |
| Total productivity[f] | 9.7 | 23.7 | –0.8 | 11.6 |
| **Exports[g]** | | | | |
| Citrus | –4.5 | 34.3 | –22.7 | –12.8 |
| Other | –1.6 | 6.1 | 8.0 | 1.3 |
| Total | –2.5 | 13.0 | –0.9 | –1.9 |
| **Prices** | | | | |
| Output | 11.0 | 7.1 | 9.6 | 7.3 |
| Purchased inputs | 14.5 | 7.9 | 13.0 | 10.3 |
| Terms of trade[h] | –3.1 | –0.7 | –3.0 | –2.7 |

[a] Calendar years after 1987 (except for citrus, avocados, bananas, and flowers). 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.

[c] At fixed prices, deflated by CPI.

[d] Million man-hours; and data from Labour Force Surveys and family surveys in the administered areas.

[e] Beginning of year stock at fixed prices; from 1987 at 1990 prices.

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

[g] Based on data in 1986 dollars (foreign-trade statistics). Excluding exports to the administered areas.

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

SOURCE: Based on Central Bureau of Statistics data.

The decline in relative prices is particularly evident in agricultural output, where it was 6.9 percent (deflated by total GDP prices). In 1990, 1991, and the 1987–90 average, the decline was 12.6, 8.4, and 10.1 percent respectively. This fall, which is a worldwide phenomenon, has a far-reaching effect on agricultural output, productivity, employment, and income (for a more detailed discussion, see Bank of Israel, *Annual Report, 1991*).

There has been a persistent fall in the proportion of agricultural output exported, and this was only 17 percent in 1992. Although export production rose by 2 percent, the 4 percent fall in prices reduced its overall share in producers' income compared with 1991.

There was a notable increase in the volume of cotton and avocados exported, and a decline in that of flowers. Citrus production for export steadied, but was adversely affected by plummeting prices resulting from its inferior quality (caused by bad weather), the recession in Europe, the increasing strength of competitors (mainly Spain and Morocco) and, apparently, change in the organization of exports (formerly dealt with by the Citrus Marketing Board), which generated competition between Israeli exporters. Competition in citrus exports is not perfect at present as far as producers are concerned, since it is dominated by the contractors who comprised the Board, and entry to new members is barred. The decline in local-currency prices of production for export (mainly to Europe) was moderated in 1992 as a result of real devaluation of over 4 percent (annual average), as against appreciation of 1–2 percent in 1991, taking into account the agricultural export currency basket, the rates of inflation in Israel and Europe, and changes in the exchange-rate insurance premium. Exports recorded in the balance of payments for the calendar year do not correspond exactly with that year's imputed export production, and it is therefore difficult to gauge the effect of devaluation on the price to farmers of production for export.

Thus, while agricultural product rose by 11.7 percent in 1992, the share of agriculture in GNP (at current prices) bottomed out at only 2.6 percent, and its share in business-sector product (at factor cost) was 3.8 percent compared with an average of 5.4 percent in 1987–90.

Agricultural investment rose by a real 11 percent in 1992, continuing the trend prevailing since 1990. Its level at constant prices resembled that of the early 1970s, however, and did not exceed 72 percent of annual discards. This reflects pessimistic assessments of the expected average profitability of agriculture as well as, apparently, limited access to credit. The latter is due to difficulties in putting up collateral and the rural sector's inability to recover from its debt crisis. Difficulties have arisen in implementing the various debt-restructuring arrangements, partly because of expectations that their terms will be made easier and that further legislation will reduce the debt burden. Gross capital stock thus continued to contract, and although this process has persisted since 1988, it is evident solely in agriculture and waterworks.

There was a turnaround in labor input in 1992 and, after a protracted and notable decline, it rose by 1.3 percent. Agriculture's share of employment remained unchanged at 3.5 percent. The number of employees (from Israel and the administered areas) rose by 1.6 percent, reaching 68,300. Labor input from the administered areas (14.3 of all labor input in 1992) fell by more than 10 percent but was replaced by Israeli labor input, which increased by 3.5 percent.

The number of Israelis employed in agriculture rose appreciably (by 12.5 percent), replacing employees from the administered areas, whose number fell to 10,400 (annual average) compared with 16,600 in 1988. The government's participation in labor costs apparently served as an incentive for this change. The number of farm workers who are not employees steadied, as did their labor input, after falling in recent years. This appears to be due to the extent of unemployment outside agriculture, the replacement of

labor input from the administered areas in family farms, and increased water quotas. Overall, the downward trend in the number of farmers appears to be continuing.

The effect of the constraint regarding water for irrigation moderated in 1992, and the relatively heavy rainfall of 1992 improved the hydrological situation of the aquifers. At the same time, water consumption in agriculture rose by 6 percent, after shrinking by some 25 percent in 1991. However, the water-utilization and conservation policy, incorporating an efficient price policy, must be based on expected annual rainfall.

Purchased intermediates rose slightly in 1992, despite the increase in output, and the relative price of this aggregate fell by some 1.5 percent (deflated by the CPI), principally because the relative price of fodder, which accounts for more than a third of purchased intermediates, fell (by about 5.5. percent).

As a result of these changes in output and inputs, labor productivity rose considerably in 1992 (not an unusual event in agriculture) and total productivity jumped by 11.6 percent. Naturally, in agriculture, productivity figures for one year have limited significance, shifts in output being subject to the vagaries of the weather.

Total farm income (including compensation—which rose in real terms—for damage due to natural disasters), went up by 7.5 percent in 1992, after falling by 17.3 percent in 1991. Total wages increased by a real 6 percent, with a 2.6 percent rise in the hourly wage (deflated by the CPI). This is apparently due to the change in the composition of the labor force described earlier.

Real income from self-employed labor, entrepreneurship, and capital (including financing costs), increased by 8.4 percent in 1992, after a steep 25 percent drop in 1991, so that farm earnings (of self-employed farmers) rose by 8 percent. Since 1989, however, there has been a 14–15 percent decline in the return on self-employed labor, capital, and entrepreneurship, while the cumulative return to farmers rose by 7–8 percent. During this period the number of self-employed farmers increased by over 20 percent.

In developed countries the subsidization of the agricultural sector, through the national budget and consumer prices, has reached mammoth proportions. Subsidies have generally increased in inverse proportion to agriculture's weight in the economy and the proportion of the population engaged in farming. The object of subsidization is to serve economic, social, and political aims, subject to fairly powerful pressure groups. Studies show that these objectives are not attained and that subsidization causes damage and intensifies distortions. In addition, the subsidization of agriculture retards inevitable structural change.[8] Policy changes introduced in order to reduce the level of subsidization have not usually succeeded.

In Israel, too, significant policy changes have been made in the last few years with the object of reducing subsidies and government involvement in agriculture. Among the most prominent are the abolition of directed and subsidized credit (although the scope of

[8] In 1991 the rate of subsidy (presented as a percentage of an adjusted value of production) was 49 percent in the EC, 30 percent in the US, 66 percent in Japan, and 80 percent in Switzerland and Scandinavia. Subsidies calculated here also include export subsidies and tariffs on competing imports.

investment grants has been extended), the almost complete removal of direct subsidies on domestic prices, and the reduction or effective moderation of production quotas—as well as of central planning for several branches of agriculture. Note that there is usually interdependence between a production-quota regime and government subsidization of agricultural output. Steps were also taken to liberalize exports and imports of intermediates.

The price of water for agriculture went up in 1992, reducing the current account water subsidy; the latter is only one element in the water subsidy, however, and does not include the subsidy on the capital costs of waterworks. Administrative measures were introduced in 1992 designed to rationalize water-pricing. Protective tariffs on competing imports of fresh produce remained in place.

As stated, the budgeted subsidy for prices of agricultural produce has been declining in recent years, and in 1992 it was a negligible proportion of GDP, amounting to 2.4 percent of agricultural production (according to national accounts data)—mainly in subsidies to poultry farmers in Galilee. When various other subsidies—such as the direct subsidization of water and insurance against natural disasters—are taken into account, subsidies amounted to 6–7 percent of agricultural production in 1992, compared with 30 percent at the beginning—and 14 percent at the end—of the 1980s.

Data limitations make international comparisons difficult. Capital stock subsidization of waterworks comes to 8–9 percent of 1992 agricultural production, while the subsidy on exports and tariffs which protect domestic production add another 20 percent.[9] To these should be added subsidization of R&D, advisory services, investment grants, and debts written off, while the subsidy on input through protective tariffs, as well as part of the direct subsidy of water which, because of the public monopoly of water and electricity, apparently makes water more expensive, should be subtracted.

Most of the measures introduced in 1992 serve to further structural and social changes in the rural sector.

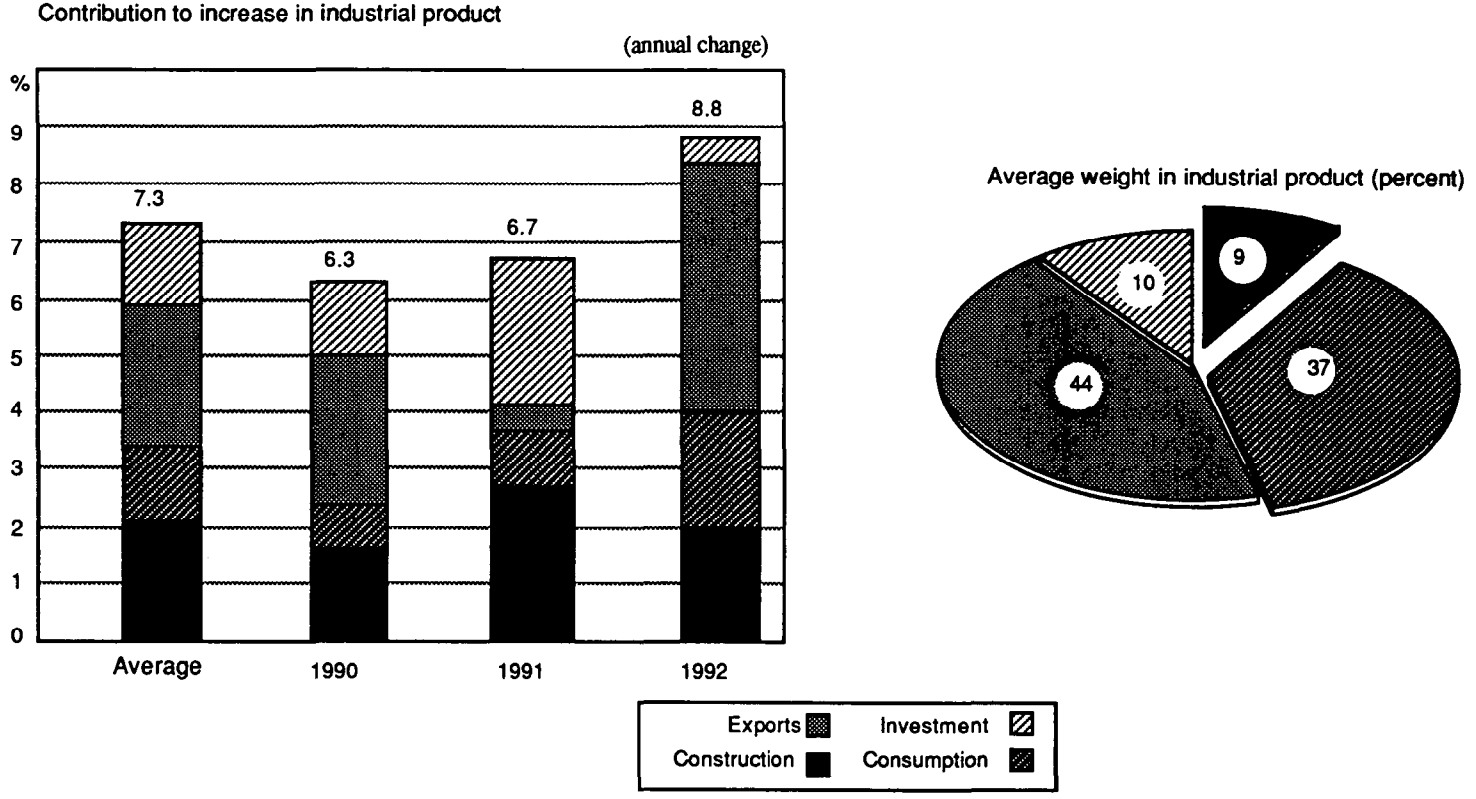
## Industry

Industrial production rose by 8.8 percent in 1992, the highest annual rate since 1972[10] (Table 2.15); since 1990, when mass immigration began, it has increased by over 23 percent. Labor, capital stock, and productivity all rose in 1992. The rise in production across industries was fairly uniform, increasing in all of them, except for foods, at an annual rate of between 7 and 13 percent.

[9] Capital subsidy of waterworks at a capital rebate coefficient of 3 percent for 30 years. The protection of domestic production is estimated on the basis of data from the economic department of the Agricultural Center of the Histadrut, and working papers of the Foreign Trade Department of the Ministry of Agriculture.

[10] Diamonds are not included in these data.

**Figure 2.7**
**Contribution to Growth, 1990-92**[a]




[a] Contribution to growth compared with average weight in industrial product.

SOURCE: Based on Central Bureau of Statistics data.

Industrial exports increased by 10.9 percent, after stagnating in 1991 because of the Gulf war. In some industries, such as foods, minerals, and metals, exports actually declined, while in others, such as electronics, they increased by 20 percent. Industrial exports rose at an average annual 6 percent in 1990–92, similar to the rate of the late 1980s.

Industry profits rose, maintaining the trend which began after four years of low profitability in 1986–89 (Table 2.15). Real unit labor costs fell by 3 percent, while total productivity grew by 3 percent.The return on gross capital increased to 17 percent, while the return on net capital rose to 20 percent in 1992.[11]

The factors contributing to growth in 1990–92 have varied from year to year. While domestic demand, and especially the sharp increase in government-initiated construction, was largely responsible for the increase in business-sector product in 1991, much of the growth in 1992 can be attributed to exports (Figure 2.7).

In the four years prior to the mass immigration, the export industries—especially electronics and transport equipment—were in recession. In fact, the large increase in construction demand in 1990–92 caused concern that the capacity for future expansion in those industries may have decreased further. In order to determine whether the expansion of the tradables sector continued to slow after 1989 as it had in earlier years, we divided industrial production not associated with construction into three groups on the basis of market—export, mixed, and domestic—and examined shifts in output, employment, and capital stock in each.

In 1990–92, output excluding the share of industries associated with construction grew by an annual average of 4.5 percent in the export industries, 8 percent in the mixed, and 5.6 percent in the domestic. In 1992 the corresponding figures were 5.3, 12.8, and 7 percent respectively.[12] Indeed, the mixed industries, affected by both domestic and foreign demand, led growth. The export industries, which slumped in 1986–89, appear to have experienced a turnaround in 1990–92, when output increased by an annual average of 2.5 percent.

Since construction demand is expected to fall in future years, the continued growth of industrial production at an annual rate of 6–7 percent hinges largely on the continued expansion of industrial exports, which account for about half of industrial output. Such an increase, while contingent in part on the expansion of foreign demand for Israel's product, requires that production costs decrease. Such savings would arise if labor costs could be reduced. Expansion of the transport and communications infrastructure could also lower production costs. Privatization of government corporations will help reduce the relative cost of inputs in industry as well. Too little was done in these areas in 1992. The implementation of the government's decision to remove trade barriers gradually has contributed to increased profitability (see Chapter 7).

[11] Estimates of the return on capital are based on the 1990 industry survey and annual industry indexes of the Central Bureau of Statistics.

[12] Some 70 percent of the output of industries associated with construction is manufactured by domestic industries, 20 percent by the mixed group, and only 10 percent by export industries.

**Table 2.15**
**Industrial Indices, 1980–92[a]**

(percent)

| | 1980–85 | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|
| **Industrial accounts** | | | | | | | |
| **Output and exports** | | | | | | | |
| Gross value added | 2.6 | 4.3 | -2.4 | 7.3 | 6.3 | 6.7 | 8.8 |
| Real industrial exports | 9.2 | 7.5 | 6.5 | 5.9 | 6.2 | 0.8 | 10.9 |
| **Labor and capital inputs** | | | | | | | |
| Labor input (hours) | 0.5 | 1.0 | -5.2 | 3.3 | -1.1 | 4.4 | 6.7 |
| Number of employees | 0.5 | 1.5 | -4.9 | 2.4 | -0.8 | 4.1 | 4.1 |
| Gross capital stock[b,c] | 4.8 | 4.0 | 3.1 | 3.3 | 2.1 | 3.1 | 4.7 |
| Real gross investment[b] | 5.7 | 2.4 | -6.4 | 15.0 | 16.6 | 23.1 | 5.2 |
| **Productivity** | | | | | | | |
| Gross value-added per man-hour | 2.1 | 3.3 | 2.9 | 3.9 | 7.5 | 2.2 | 2.0 |
| Total productivity | 0.9 | 2.4 | 0.6 | 3.9 | 6.5 | 2.6 | 2.5 |
| **Profitability** | | | | | | | |
| **Relative prices** | | | | | | | |
| Unit labor cost[d] | 92 | 99 | 99 | 96 | 98 | 96 | 93 |
| Input/output prices[d] | 100 | 99 | 97 | 95 | 97 | 94 | 93 |
| **Rate of return** | | | | | | | |
| Gross capital[e] | 18 | 14 | 14 | 15 | 14 | 15 | 17 |
| Net capital[f] | 23 | 13 | 14 | 17 | 14 | 17 | 20 |
| Real interest | 34 | 35 | 19 | 11 | 16 | 5 | 12 |
| Industrial share price index[d] | 103 | 113 | 85 | 193 | 120 | 184 | 276 |

[a] Excluding diamonds.
[b] Excluding motor vehicles.
[c] Real gross capital stock at beginning of year.
[d] Index 1986 = 100.
[e] Calculated as the ratio of gross value-added *less* labor costs to capital stock.
[f] Calculated as the ratio of gross value-added *less* depreciation and labor costs to depreciated capital stock.

SOURCE: Based on Central Bureau of Statistics data.

The government provides a wide array of incentives whose stated intent is to stimulate business-sector activity; these include subsidies for new firms, capital investments, R&D, and marketing. It is not clear whether the benefits of the various programs (and the Encouragement of Capital Investments Law, in particular) outweigh the costs.

Industrial share prices rose by 70 percent in real terms. If capital markets are indeed efficient, this means that expected future profits are greater now than in the past (Table 2.15).

**Table 2.16**
**Industrial Production, Exports, and Investment, 1986–92**

(percent)

| | Average annual change | | | Annual change | | | Weight |
|---|---|---|---|---|---|---|---|
| | 1986–87 | 1988–89 | 1990–92 | 1990 | 1991 | 1992 | 1992 |
| **Production** | | | | | | | |
| Food, beverages, & tobacco | 13 | –1 | 2 | 1 | 2 | 3 | 11 |
| Textiles, clothing, & leather | 7 | –8 | 8 | 8 | 7 | 9 | 9 |
| Wood, paper, & printing | 11 | –1 | 6 | 6 | 3 | 10 | 10 |
| Rubber, plastics, chemicals, & oil | 7 | 1 | 9 | 7 | 6 | 13 | 16 |
| Mining, etc.[a] | 8 | –3 | 15 | 13 | 21 | 12 | 8 |
| Basic metals, etc.[b] | 3 | –3 | 7 | 6 | 9 | 7 | 17 |
| Electrical equipment, etc.[c] | –4 | –3 | 7 | 6 | 6 | 9 | 30 |
| Weighted average | 4.3 | –2.4 | 7.3 | 6.3 | 6.7 | 8.8 | 100 |
| Weighted standard deviation | 7.0 | 3.0 | 3.3 | 2.7 | 4.5 | 2.8 | |
| **Exports** | | | | | | | |
| Food, beverages, & tobacco | 7 | 1 | –1 | 7 | –8 | –4 | 7 |
| Textiles, clothing, & leather | 10 | –4 | 10 | 14 | 4 | 12 | 11 |
| Wood, paper, & printing | 11 | 0 | 8 | 10 | 6 | 8 | 1 |
| Rubber, plastics, chemicals, & oil | 12 | 6 | 7 | 7 | 3 | 11 | 23 |
| Mining, etc.[a] | 3 | –4 | –3 | –4 | –2 | –4 | 3 |
| Basic metals, etc.[b] | 2 | 8 | –2 | 4 | –5 | –5 | 12 |
| Electrical equipment, etc.[c] | 8 | 12 | 9 | 5 | 2 | 20 | 44 |
| Weighted average | 7.5 | 6.5 | 5.9 | 6.2 | 0.8 | 10.9 | 100 |
| Weighted standard deviation | 5.7 | 7.7 | 6.2 | 3.4 | 3.9 | 11.3 | |
| **Investment** | | | | | | | |
| Food, beverages, & tobacco | 9 | –8 | 18 | –7 | 24 | 36 | 9 |
| Textiles, clothing, & leather | 7 | –23 | 24 | 26 | –5 | 52 | 7 |
| Wood, paper, & printing | 19 | –18 | 26 | 24 | 67 | –14 | 6 |
| Rubber, plastics, chemicals, & oil | 18 | 7 | 10 | 15 | –9 | 25 | 29 |
| Mining, etc.[a] | 19 | –13 | 28 | 18 | 83 | –16 | 9 |
| Basic metals, etc.[b] | –8 | –21 | 13 | 15 | 42 | –19 | 10 |
| Electrical equipment, etc.[c] | –11 | 0 | 18 | 23 | 35 | –2 | 30 |
| Weighted average | 2.4 | –6.4 | 15.0 | 16.6 | 23.1 | 5.2 | 100 |
| Weighted standard deviation | 22.7 | 22.1 | 25.5 | 13.7 | 35.3 | 27.5 | |

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

Concurrent with the rise in share prices, there was a 320 percent increase in public issues by industrial firms listed on the Tel Aviv Stock Exchange, and a 135 percent increase of those listed on US stock exchanges. Public issues by industrial firms, including stock offers by current shareholders, were almost NIS 3 billion, NIS 2 billion

of it in Tel Aviv and NIS 1 billion in New York. Industrial firms accounted for half the capital raised through public issues in Israel, compared with less than 40 percent in 1991. As in 1990–91, the only Israeli companies which issued shares in the US were industrial firms, principally in electronics.

In 1991–92 public offerings consisted almost entirely of equity rather than debt, which accounted for only 3 percent of capital raised. In 1990 and the late 1980s, however, debt and equity were more evenly distributed.

## Construction

Construction continued to expand in 1992, surpassing the particularly high level of 1991. The 3 percent increase in output was low in comparison with the 41 percent of 1991, but the industry still accounted for a far higher share of GDP (13 percent) than in the period before the mass immigration. During the year a shift became evident, and this will reduce future economic activity to a considerable extent. The share in output of the final stages of construction rose steeply, and that of starts plunged. The residential component went down by about 1 percent, while the other components increased by 8

**Figure 2.8**
**Government-Initiated Residential Construction as Proportion of Total Residential Construction, 1980–92**

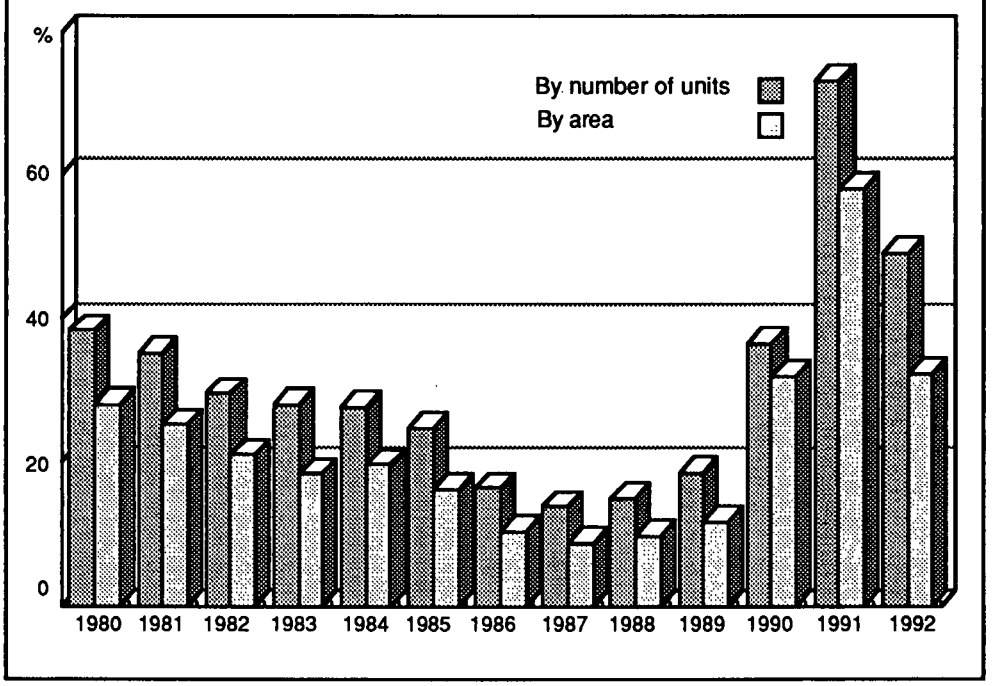


**Table 2.17**
**Indicators of Construction Activity, 1972–92[a]**

| | Absolute figures | | Annual change, percent | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1991 | 1992 | 1972–79 | 1979–86 | 1986–92 | 1990 | 1991 | 1992 |
| **Output** (millions of 1986 NIS) | | | | | | | | |
| Residential | 5,344 | 5,282 | –2.6 | –3.4 | 19.8 | 19.1 | 77.4 | –1.2 |
| Other structures | 2,005 | 2,199 | –2.4 | –3.5 | 11.5 | 12.4 | 16.3 | 9.7 |
| Other construction output[b] | 1,751 | 1,855 | 2.0 | 1.8 | 4.2 | 5.8 | 0.6 | 6.0 |
| Total | 9,101 | 9,336 | –1.6 | –2.1 | 13.7 | 13.5 | 40.5 | 2.6 |
| **Starts** | | | | | | | | |
| Residential (thousand sq. m.) | 8,740 | 5,450 | –5.8 | –6.4 | 14.8 | 88.3 | 55.8 | –37.6 |
| Other structures (thousand sq. m.) | 1,510 | 1,860 | –5.1 | –6.5 | 13.3 | 44.9 | 6.3 | 23.2 |
| Total | **10,250** | **7,310** | **–5.6** | **–6.4** | **14.4** | **77.5** | **45.8** | **–28.7** |
| **Residential** (thousand units) | | | | | | | | |
| Starts | 83 | 43 | –8.0 | –9.6 | 18.2 | 88.5 | 129.6 | –47.9 |
| Completions | 43 | 70 | –6.5 | –4.7 | 26.5 | –8.8 | 113.6 | 64.8 |
| **Construction time**[c] (months) | 20 | 21 | 3.5 | 3.0 | –2.7 | –4.7 | –1.5 | 3.0 |
| **Employment** (thousands) | | | | | | | | |
| Israelis | 96 | 107 | –2.6 | –4.0 | 11.6 | 6.3 | 26.3 | 11.3 |
| From administered territories | 67 | 87 | 3.9 | 3.9 | 12.7 | 14.5 | 4.4 | 29.3 |
| Total | **163** | **194** | **–1.0** | **–1.2** | **12.1** | **9.9** | **16.3** | **18.7** |
| **Stock of construction equipment**[d] (millions of 1986 NIS) | 1,052 | 1,279 | 4.1 | –0.6 | 0.9 | –3.7 | 2.0 | 21.6 |
| Index of input prices (residential construction) | 4,662 | 5,170 | 42.7 | 153.1 | 21.8 | 16.3 | 16.4 | 10.9 |

[a] Calculated from less rounded 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.

percent. Government involvement in construction remained high, both on the supply side and by affecting demand. In view of the slowdown in immigration, the new government changed the policy in the middle of the year, drastically reducing its direct involvement in supply.

Particularly notable is the very large number of apartments—some 70,000—that were completed in 1992 (43,000 in 1991), in addition to the 25,000 mobile homes and prefabricated units put up in 1991–92. The number of second-hand apartments on the market also rose in 1992, as it became less worthwhile to hold on to them for speculative purposes. Demand for apartments rose by less than their supply, reflected by the increased proportion of unsold units (public and private construction) and the decline in relative prices (deflated by the CPI). Concurrently, the number of transactions rose as a result of the greater availability of mortgages for eligible persons, and their imputed subsidy. According to several indicators, housing transactions increased in the last quarter of 1992.

Employment continued to rise. The moderate increase in output and substantial rise of labor input (22 percent) were reflected by a 12 percent decline in labor productivity, compared with a steep rise in 1991. These data raise doubts regarding the accuracy of the data on the annual distribution of construction output since 1990.

In the five years prior to the influx of immigrants, 1985–89, building starts averaged an annual 4.2 million square meters. Immigration and extensive government involvement led to a rapid increase in starts, which reached a peak of 10.3 million square meters in 1991, falling by 29 percent in 1992. The decline in government-initiated residential construction was greater, but was offset by a moderate increase in area of private residential construction starts and a steep rise in nonresidential starts. The increase in nonresidential construction stems from accelerated economic activity and firms' revenues, as well as from lower interest rates. Firms and households regarded real estate as an alternative investment channel which became more profitable as the yield on indexed financial assets declined.

The high level of output in 1992 was largely the result of government intervention in residential construction in 1990–91. During 1991 it became clear that fewer immigrants than predicted were arriving, that apartments which had previously been standing empty were coming onto the market, and that some of the new units were remaining vacant. Nonetheless, the government did not hasten to adapt its policy to the changing situation and needs. Only in August 1992, after the new government was installed, was the decision made to cut government-initiated construction drastically, and increase the budget for nonresidential construction and infrastructure investment. This turnabout received only partial expression in 1992, so that there were some 21,000 government-initiated starts, and the share in output of structures and completions from previous years was high.

Housing demand, which has been expanding since 1989 and peaked in mid-1991, steadied in 1992 as a result of the reduction in immigration, the slow rate at which immigrants' apartment-purchases rose (because of immigrants' employment difficulties),

**Table 2.18**
**Housing Construction by Initiating Sector, 1970–92[a]**

(thousand units, period average)

| | Starts | | | Completions | | |
|---|---|---|---|---|---|---|
| | Total | Private | Public | Total | Private | Public |
| 1970–75 | 56.4 | 30.2 | 26.2 | 46.8 | 26.9 | 19.9 |
| 1976–78 | 31.0 | 22.5 | 8.4 | 44.6 | 24.0 | 20.6 |
| 1979–86 | 28.2 | 19.3 | 8.9 | 29.0 | 19.6 | 9.5 |
| 1987–89 | 20.9 | 17.6 | 3.3 | 20.5 | 17.0 | 3.5 |
| 1987 | 21.7 | 18.7 | 3.0 | 19.9 | 16.4 | 3.5 |
| 1988 | 21.8 | 18.6 | 3.3 | 19.7 | 16.5 | 3.2 |
| 1989 | 19.3 | 15.7 | 3.6 | 21.9 | 18.2 | 3.7 |
| 1990 | 36.3 | 23.0 | 13.3 | 20.0 | 16.7 | 3.3 |
| 1991 | 83.3 | 22.5 | 60.8 | 42.6 | 19.7 | 22.9 |
| 1992 | 43.4 | 22.1 | 21.3 | 70.3 | 21.9 | 48.3 |
| 1990 | | | | | | |
| I | 8.8 | 5.3 | 3.5 | 4.6 | 4.2 | 0.5 |
| II | 7.8 | 5.0 | 2.8 | 4.8 | 4.1 | 0.6 |
| III | 11.0 | 6.2 | 4.9 | 5.1 | 4.1 | 1.0 |
| IV | 14.8 | 6.6 | 8.2 | 5.5 | 4.3 | 1.2 |
| 1991 | | | | | | |
| I | 18.4 | 4.8 | 13.6 | 6.7 | 4.2 | 2.5 |
| II | 22.6 | 6.1 | 16.5 | 7.8 | 4.3 | 3.5 |
| III | 23.2 | 5.6 | 17.6 | 12.3 | 4.8 | 7.5 |
| IV | 19.1 | 5.9 | 13.2 | 15.8 | 6.4 | 9.4 |
| 1992 | | | | | | |
| I | 10.2 | 4.4 | 5.8 | 15.0 | 5.0 | 10.0 |
| II | 14.0 | 5.7 | 8.3 | 19.3 | 5.9 | 13.3 |
| III | 11.5 | 6.3 | 5.2 | 20.4 | 5.5 | 14.9 |
| IV | 7.8 | 5.8 | 2.0 | 15.6 | 5.5 | 10.1 |

[a] Calculated from less rounded figures.

SOURCE: Based on Central Bureau of Statistics data.

unemployment, and the decline in the real wage. The supply of completed apartments increased rapidly, and after the third quarter of 1991 the steep rise in their prices levelled off. Only in the fourth quarter of 1992 did prices (according to the CBS survey) increase—by 6.6 percent—among other things due to the strengthening of the dollar.

Some 77,000 immigrants arrived in 1992, and 460,000 have come in the current influx, influencing demand. In 1985–89 the number of building starts was lower than in the preceding years, and the number of transactions appears to have lagged behind demographic changes. This backlog, together with increased demand for investment purposes, the improved terms of mortgages, and immigration forecasts in the second

half of the year, sent prices up in 1989. Excess demand was particularly great in 199( and the first half of 1991, steadying in the second half of 1991 and throughout 1992.

About one quarter of the immigrants from the former USSR had purchased apartment by February 1993. These purchases were made by some 32 percent of those who ha( come at the beginning of the influx (1989–90) and by only 10 percent of those who ha( arrived in 1991. The relatively low rate of purchases was also affected by th( employment situation (see Chapter 4). There were 189,000 building starts in 1989–92 When the share of mobile homes and prefabricated units is taken into account, as well a: the many thousands of vacant private apartments estimated to have come onto th( market, there is excess supply at present. Units in outlying areas remain unused, so tha there may be excess supply in some places and a dearth (causing prices to rise) in others

In July 1991 the system of granting mortgages to young couples was changed causing demand to rise. At the beginning of 1992 further benefits were introduce( through legislation. Subsidization of the group with greatest eligibility went up to 2! percent, while the share of the purchase price financed rose to 64 percent. When regiona loans are considered, the subsidy and financing are far higher. The transition to partia indexation of the principal made subsidization subject to the inflation rate, slowing of th( latter leading to a reduction of the former.

Government activity, the extensive effects of which were evident in 1992, is nov known to have been based on an overestimate of the number of immigrants arriving, an( an underestimate of both their readiness to accept overcrowding and the number o apartments which would be available for rent or sale. On the basis of these estimates i was decided that hundreds of thousands of new units were urgently needed, and th( government acted in various ways to speed up their construction. These measure: substantially shortened the time needed for government-initiated construction an( increased the supply of apartments. Thus, there were 128,000 government-initiate( starts (on both permanent and temporary housing) in 1990–92, compared with 9,000 ir 1987–89. The number of private-sector units also rose—to some 66,000 in 1990–92 The fact that units were built in outlying areas, where unemployment was high, turne( out to be an expensive mistake. New immigrants and young couples preferred area: where employment prospects were better, so that many apartments and mobile homes ir outlying areas remained empty—a situation which may prevail for a long time.

The slowdown in government-initiated starts began in the last quarter of 1991, an( was more pronounced in 1992. Building starts dropped steeply, from 61,000 in 1991 t( 21,000 in 1992, the rate in the last quarter of 1992 being equivalent to an annual averag( of only 8,000 units. In order to reduce the cost of maintaining its stock of apartments the government began to sell them off in November 1992, reducing prices and offerin( regional loans on advantageous terms. By the end of 1992 some 2,000 units had beer sold within this framework. The price-reductions may have an adverse effect on th( value of older apartments and contractors' stock.

Although the budget for government-initiated construction has been reduced, th( government still has an appreciable effect on housing construction, through decision:

concerning the release of land, its use, the preparation of blueprints for roads and new settlements, building densities, and mortgage policy.

The large supply of apartments and relatively moderate demand for them led to some reduction in their relative price in 1992. Nonetheless, relative prices are still 23 percent higher than in the decade preceding the influx of immigrants (1980–89). The fact that apartment prices began to rise in the last quarter of 1992 is somewhat surprising in view of the large increase in the supply of unsold apartments. The price increases seem to be a result of the discrepancy between the location of the demand and supply (as well as of the increased strength of the dollar at the end of 1992).

The rent item in the CPI—which continued to rise by a real 10 percent in 1992—was affected by the dearth of rental units, increased demand by immigrants who had postponed purchasing an apartment, and a rise in the number of persons eligible for rent allowance (instead of receiving government-initiated housing). In order to encourage purchases, the government decided that the rent allowance would not be stopped for eligible persons who bought an apartment during their period of eligibility.

Construction output rose by 2.6 percent in 1992—above the particularly high level of 1991—as a result of a 1 percent reduction in residential construction and an average 8 percent increase in nonresidential and other construction.[13]

Residential construction was affected by the continuation and completion of a large number of apartments (70,000), while the contribution of starts (43,000) was lower than in 1991. The length of time of government-initiated construction, which was cut drastically in 1990–91, was expected to increase because of the cessation of government incentives and the slowdown in the completion of unsold apartments.

Average employment in construction continued to rise, reaching 193,000, and the number of man-hours increased by 22 percent.[14] The proportion of employees in construction rose from 8 percent to an unprecedented 11 percent in 1992, and began to fall in the second half of the year. It seems reasonable to assume that jobs will be shed in construction-allied industries and services.

Construction is intrinsically labor-intensive. Moreover, because of the large supply of relatively cheap labor from the administered areas, the industry managed with little physical capital and simple technologies. The serious disruption of activity and the losses incurred as a result of the closure of the territories at the beginning of both 1991 and 1993 made the modernization of construction processes more worthwhile. The gross capital stock of construction equipment rose by 22 and 11 percent in 1991 and 1992 respectively, after declining for many years; some of it is intended for earthworks, road-building, and infrastructure.[15]

In 1992 prices of construction output and apartments rose at a similar rate to those of inputs, so that profitability did not continue to rise (after soaring in 1990–91). The object

[13] Other construction comprises military construction and home improvements (according to Bank of Israel estimates).

[14] Data do not include foreign workers.

[15] The net capital stock of construction equipment began rising in 1990.

of releasing large tracts of state-owned land and reducing land prices to contractors was to moderate increases in the prices of homes and of privately-owned land. Prices of apartments built on the land sold at a reduction by the State Lands Administration were not lower than those of units built on other land, as demand was the dominant factor in determining price, so that the contractors benefited from economic rent.

## Transport and communications[16]

Total gross product rose by 10 percent in 1992 (6 percent in 1991 and an annual average of 4 percent in 1986–90), labor productivity contributing about a third of the increase (Table 2.19). The rise reflects chiefly the accelerated growth of both communications and shipping and ports, and the recovery of civil aviation. Price-increases[17] in 1992 were 5 percent lower than the CPI, with communications showing a particularly moderate rise; dollar-indexation of some rates was partly responsible for this. Even though the hourly wage rate was high to begin with, it rose by 2 percent more than the general wage-increase. The severe shortage of roads worsened, and congestion continued to increase, taking a heavy toll. Investment in roads nonetheless rose by only 7 percent, so that congestion is expected to persist and the level of service to deteriorate still further until the large-scale road-building program currently being introduced is completed. Not enough has been done to encourage wider utilization of public transport which is essential for reducing pressure on the roads. Measures—whether legislative or administrative—for facilitating road-building have not been introduced.

Activity in the industry accelerated, even though demand in general slowed to some extent as the effect of mass immigration moderated and the rise in construction dropped. This was due to the impressive increase in tourism, which pushed civil aviation output up while also contributing to road transportation; the continued expansion of demand for—and supply of—communications also played a part.

Investment in transport and communications rose by only 16 percent in 1992, after soaring by a cumulative 91 percent in 1990–91. Communications investment remained high, though its increase slowed; the slowdown in transport was greater (a rise of 15 percent in 1992 compared with 45 percent in 1991). Investment in communications as a proportion of all domestic use of resources rose, passing the high rate of the early 1970s, while the proportion invested in transport trailed far behind (Figure 2.9). The low rise in road investment—despite the urgent need for more and better roads—is particularly disturbing, since the tremendous backlog in investment led to severe conges-

[16] The weighted increase in the output of the sub-industries, used to measure the increase in output in this industry, is based on the real growth in output (i.e., revenue). Since no data are available for trucks, taxis, fuel, gas, and other pipelines, output is derived for them from demand with an input/output coefficient. The increase in truck output since 1990 was calculated on the basis of weights taken from the 1990 survey of trucks, which is more up-to-date than the input/output tables.

[17] Price indexes are of output.

**Table 2.19**
**Output of Transport and Communications, 1986–92[a]**

| | Percent of total, 1991 | | Annual percent change | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Real output | | | Price, relative to CPI | | |
| | Product | Income | 1986–90 | 1991 | 1992 | 1986–90 | 1991 | 1992 |
| **Land transport** | **46.5** | **32.0** | **1.0** | **8.8** | **8.9** | **1.4** | **–5.2** | **–3.4** |
| Buses | 10.9 | 8.1 | –6.7 | –0.8 | 11.2 | 7.9 | 1.4 | –0.5 |
| Taxis | 4.6 | 3.1 | 2.8 | 4.4 | 9.2 | 4.6 | –0.8 | –1.1 |
| Road haulage[b] | 28.8 | 20.1 | 4.5 | 11.3 | 8.0 | –0.9 | –7.1 | –4.5 |
| Railways | 1.3 | 0.7 | 2.3 | 9.4 | 7.0 | –3.0 | –1.1 | –15.7 |
| Oil and gas pipelines[c] | 1.0 | 0.0 | 4.2 | 7.5 | 7.1 | | | |
| **Shipping and ports** | **15.3** | **21.2** | **6.0** | **7.1** | **10.5** | **–8.6** | **–4.8** | **–3.5** |
| Shipping | 10.2 | 15.8 | 5.4 | 4.7 | 10.0 | –9.9 | –5.7 | –4.1 |
| Ports | 5.1 | 5.4 | 8.7 | 15.4 | 12.0 | –3.8 | –1.5 | –1.9 |
| **Civil aviation & airports** | **13.5** | **16.0** | **4.6** | **–0.5** | **9.3** | **–5.1** | **3.3** | **–4.5** |
| Civil aviation | 10.0 | 14.3 | 4.4 | 0.9 | 7.5 | –5.2 | 4.4 | –4.6 |
| Airports | 3.5 | 1.8 | 6.7 | –13.2 | 23.7 | –4.8 | –0.5 | –7.2 |
| **Communications** | **12.2** | **14.8** | **10.3** | **9.8** | **11.8** | **–1.5** | **1.9** | **–6.7** |
| **Other[c,d]** | **12.5** | **15.9** | **1.7** | **4.4** | **8.6** | | | |
| Total output | | **100.0** | 5.0 | 7.2 | 9.7 | –2.6 | –2.5 | –4.6 |
| Total gross product | **100.0** | | 4.0 | 6.0 | 9.8 | | | |
| Gross fixed investment[e] | | | 12.6 | 39.9 | 15.8 | | | |
| Gross capital stock[f] | | | 2.2 | 2.5 | 5.2 | | | |
| Employed persons[g] | | | 1.8 | 2.1 | 5.9 | | | |
| Labor input[g] | | | 0.9 | 0.6 | 6.4 | | | |
| Labor productivity[h] | | | 3.1 | 5.4 | 3.2 | | | |
| Total productivity[i] | | | 2.6 | 4.7 | 3.9 | | | |

[a] Output and product at 1982/83 market prices.

[b] Estimated changes in the composition of demand, weighted according to the 1990 road haulage survey of the Central Bureau of Statistics.

[c] Estimated from the input-output table.

[d] Storage, refrigeration, parking lots, etc., and services n.e.s.

[e] The 1986–90 figure gives the change over the preceding five years (annual rate). The year-to-year change during 1986–90 averaged 1 per cent per year.

[f] At beginning of year.

[g] Data on communications are for Bezeq and the Postal Authority only.

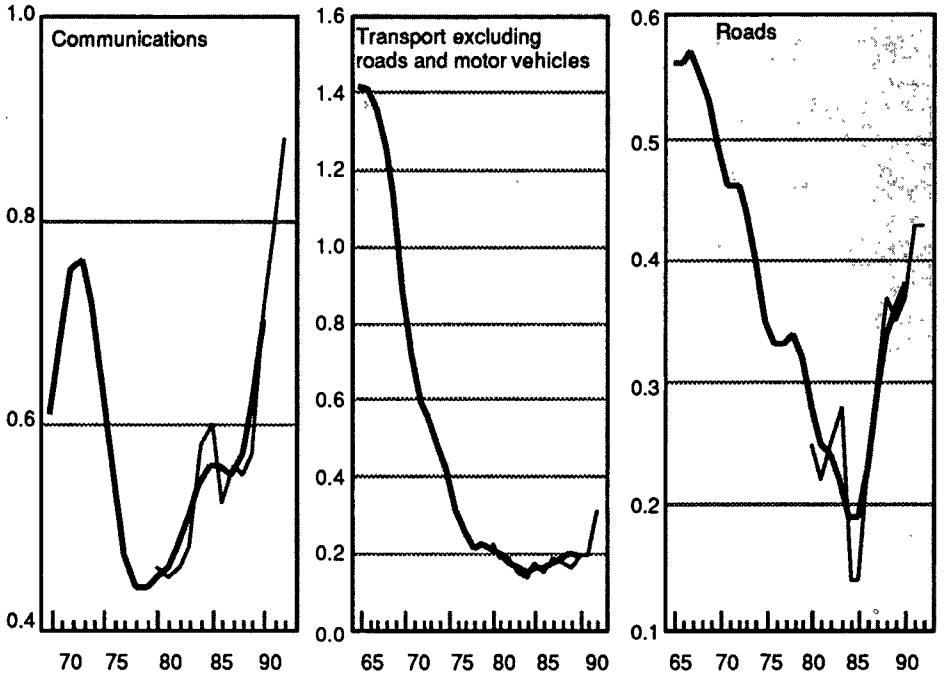
[h] Output per labor limit.

[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.

tion as road use soared. Congestion, which was extremely bad in 1991, increased by another 2–6 percent in 1992 (according to different indexes). Blueprints for future projects were not prepared, and legislation to cut planning and approval procedures (though not at the expense of quality) and to settle the construction of Route 6 (Trans-Israel) was neglected. The planning of the land transport system suffers from a lack of coordination between the various authorities. Expenditure on road maintenance rose, checking a protracted process of neglect.

**Figure 2.9**
**Proportion of Resources Invested in Infrastructure, 1965-92**[a,b]
(percent)




[a] The thick line represents the moving average, the thin line the original data. The calculations are at current prices.

[b] Calculations based on data at current prices.

SOURCE: Based on Central Bureau of Statistics data.

The economy incurred heavy damage from growing road congestion. We do not have data for traffic speed at peak hours, and use average congestion (the ratio of kilometers per vehicle to road area) and the ratio of kilometers traveled to road capital stock as an index of it. Kilometers traveled rose by 8 percent, while capital stock went up by 5.2

percent and road surface by only 1.2 percent. Thus, average congestion rose by another 2–6 percent. The effects of congestion are greater than the data indicate; as it increases, its detrimental effect rises exponentially, and the cost of reducing it grows.

Investment must increase sharply[18] in order to ease congestion, yet in 1992 it rose by only 7 percent in real terms (NIS 1 billion), after going up by 25 percent in 1991. The share of domestic resources invested in roads, which was far less than in 1965–75, declined still further. Investment in the railways has risen substantially since 1990, but has not yet borne fruit and there is as yet no increase in the number of passenger-kilometers.

Because of the pressing need to develop roads, the delay in introducing legislation to cut the red tape associated with their planning and approval—which generally takes several years—and of Route 6 in particular, is especially serious. The Public Works Department claims that the delays have set construction back by a year.

Expenditure on maintenance of inter-urban routes and highways—which suffered serious neglect for many years, when too few resources were allocated to them and maximum load restrictions were not enforced—rose considerably in 1992. The Public Works Department, which estimates that NIS 2 billion is required to bring the road system up to European standards, spent NIS 270 million on road maintenance in 1992.

Competition, which is sorely needed to improve efficiency, was not promoted sufficiently despite the recommendations of expert committees; nothing was done in public transport, and very little in communications.

## Private-sector services

Private-sector services, which currently account for some 45 percent of business-sector product, cover a wide range of economic activity—trade, financial services, catering and hotel services, business and legal services, private education and health services, and personal services. They encompass human-capital-intensive professional services such as programming and consultancy, as well as unskilled personal services, such as home help; some, e.g. health services, are physical-capital-intensive, while others require no such capital. Their common denominator is that they produce no physical goods, i.e., their product is intangible. These services are usually consumed at the point of production, and are not transferable. Much of the activity in this industry is undertaken in relatively small business units, with all the advantages this brings. It is extremely difficult to measure activity in this industry, and the characteristics listed here explain the low statistical reliability of the output and product estimates. It is not yet possible, therefore, to undertake an extensive analysis of developments,[19] though a preliminary overview can be presented.

[18] Investment requirements for the coming years are estimated at an annual NIS 1.8 billion, at 1992 prices, to absorb the immigrants and overcome the shortfall.

[19] The situation is similar all over the world. Public services are not included in this category in the present analysis, though in other countries they are.

The tables and the analysis given here are based on a detailed set of data for 1988 included in the Central Bureau of Statistics' Survey of Trade and Services, with supplementary information from the statistics on the principal industries (from VAT data).[20] The changes in the industry in the last few years can be best understood by examining its role in the process of economic growth over a relatively long period.

In the last thirty years the share of private-sector services in business-sector product (at current prices) has risen from 31 to 45 percent. At constant prices, however, it has hardly changed at all, remaining more or less stable for long periods (Table 2.20),[21] and in this it is consistent with world trends.

**Table 2.20**
**Private-Sector Services: Share of Product and Factor Input in Business Sector, 1960–92**

(percent)

| | 1960–62 | 1970–72 | 1980–82 | 1990–92 |
|---|---|---|---|---|
| Value added | | | | |
| Current prices | 31 | 30 | 42 | 45 |
| Constant prices[a] | 34 | 29 | 31 | 32 |
| Labor input | 32 | 32 | 35 | 41 |
| Capital[b] | 6 | 9 | 10 | 11 |

[a] Based on the by-industry distribution of product in the mid-1970s in national accounts data.
[b] At constant prices; capital also includes the buildings and equipment of non-business public services.

As far as main inputs are concerned, developments have not been uniform. The share of labor and capital in business-sector inputs has been rising continuously, matching the long-term trend in many countries. This presumably reflects the greater share of labor-intensive (relative to physical- and human-capital-intensive) industries, where total productivity is relatively low. An example is provided by the retail trade, which accounts for some 20 percent of services employment but for only 13 percent of its product. As economies expand, the share of trade has been growing in most of the countries for which we have comparable figures. However, the decline in the relative productivity of private services may merely reflect measurement difficulties.

Private-sector services are not physical-capital-intensive (Table 2.20), and their capital stock averages only 9 percent of business-sector capital, compared with 32 percent of output and over a third of labor input. The capital consists mainly of buildings, computers, and medical equipment; the industry is undergoing rapid automation, however, and this now accounts for twice as much of its equipment as it did thirty years ago.

[20] A new series developed by the CBS. Further data have been taken from the CBS Labour Force Surveys and surveys of hotels. Data on the financial institutions was obtained from the Banking Supervision Department of the Bank of Israel.

[21] Thus, the relative price of private-sector services has risen in the long term, as is borne out by the relevant components of the CPI by Economic Branch. Note that the decline in the share of services in the early 1970s reflects a particularly steep rise in industrial production after 1968.

Private-sector services are not human-capital-intensive either, and generally contain few technicians and members of the liberal and scientific professions (Table 2.21). The sub-industries differ widely from one another: financial and business institutions (accountancy, law, consultancy, etc.) are provided by graduates, while most of the employees in trade, restaurants, and household services have relatively little schooling. The marked rise in the level of education in the industry in the last decade matches the increase in the level of human capital throughout the business sector.

**Table 2.21**
**Human Capital[a] in Private-Sector Services, 1980–90**

(percent)

| | 1980 | | 1990 | |
|---|---|---|---|---|
| | 16+ | 13+ | 16+ | 13+ |
| Trade, catering and hotels | 5 | 14 | 7 | 20 |
| Financial and business | 22 | 40 | 28 | 50 |
| Personal, etc. | 5 | 16 | 8 | 23 |
| Total private-sector services | 10 | 23 | 14 | 30 |
| All industries | 12 | 27 | 17 | 35 |

[a] Proportion of employed persons with 13+ or 16+ years of schooling.

SOURCE: Labour Force Surveys, 1980, 1990.

Most of the services product is not tradable, 60 percent of it being intended directly or indirectly for private consumption, and about 25 percent for export. The principal long-term structural change in the composition of product is in the share destined for export, which rose from 14 percent in 1965 to 26 percent at the beginning of the 1980s. Many services which contribute to exports, such as financial, marketing, and legal services, insurance, etc., grew rapidly. Direct exports are concentrated in tourism—hotels, restaurants, travel agents, personal services for tourists—and there are wide annual fluctuations in its level of activity. Exports of computer services—especially software, which has developed rapidly in the last few years—are also notable, but are still on a relatively small scale. The share of the industry's value added contributed by data processing services for domestic and foreign markets is 2–3 percent.

Private-sector services have relatively high value added, mainly in wages or the income of self-employed persons. In this, too, there is wide variability between different services; in education, value added accounted for some 82 percent of output, 75 percent of it wages, for garages it was only 40 percent, and for personal services it was some 63 percent. Home help is totally value added, i.e., wages.

Banking is the only private-sector service where employment and labor input fell significantly between 1988 and 1992, while its product and productivity rose, partly because of computerization. There is an undoubted connection between the decline in labor input and increased productivity in banking, on the one hand, and the reduction of inflation in both the short and the long run, on the other.

**Table 2.22**
**Principal Trade and Services Indicators, 1988–92**

(percent change)

| | | | | | Average | |
|---|---|---|---|---|---|---|
| | 1989 | 1990 | 1991 | 1992 | 1988–90 | 1991–92 |
| Product | 1.4 | 4.9 | 3.6 | 10.2 | 3.2 | 6.9 |
| Labor input | 4.3 | 2.2 | 2.7 | 8.4 | 3.3 | 5.6 |
| Capital stock | 3.2 | 4.1 | 4.9 | 4.3 | 3.6 | 4.6 |
| Labor productivity | –2.8 | 2.7 | 0.9 | 1.7 | –0.1 | 1.3 |
| Total factor productivity[a] | –2.5 | 2.2 | 0.3 | 3.0 | –0.2 | 1.6 |
| Employed persons | 2.9 | 2.8 | 2.9 | 5.4 | 2.9 | 4.2 |
| Average hours per employee | 1.2 | –0.3 | 1.4 | 3.0 | 0.5 | 2.2 |
| Real hourly wage[b] | –5.4 | –1.4 | –3.6 | –2.4 | –3.4 | –3.0 |
| Relative price[c] | 1.6 | 2.3 | 1.8 | –0.3 | 2.0 | 0.8 |
| Exports[d] | 3.9 | 4.6 | –4.7 | 17.7 | 4.3 | 6.5 |
| Investment in fixed assets | –3.7 | 19.6 | 41.8 | 3.8 | 8.0 | 22.8 |

[a] Input weighting is 70 percent labor and 30 percent capital (on the basis of the 1982–88 input-output tables).

[b] Wages per employee post at constant prices (deflated by CPI).

[c] Annual change in the price of private-sector services to consumers relative to CPI excluding housing.

[d] Estimate based on 1982/83 input-output table.

In 1992 the product and labor input of the industry as a whole rose by 10 and 8 percent respectively, rates which are twice the annual averages of the three preceding years (Tables 2.22, 2.23). Particularly notable is the rise in tourism services due to the increase in the number of tourists from abroad and their expenditure in Israel, bringing the real product of hotels and exported tourism services back to its 1987 peak. In 1992 the growth rate of each private-sector service[22] was higher than the long-term average, because most of the activity in these industries is associated with private consumption and depends on income-elasticity and increased disposable income. Services which constitute input depend on international trade and the growth of the business sector in general.

The persistent real growth of product in the industry, together with the decline in the real wage, may indicate an increase in profits, and perhaps in profitability too. The latter, together with the impetus provided by the need to absorb the mass immigration, may be one of the reasons for the increase in investment in 1990 and 1991, and its stability at a relatively high level in 1992.

[22] With the exception of insurance and real estate, which are estimated by proxies, so that annual changes can be assumed to be unreliable. In most other services the change in product is measured on the basis of revenue (at constant prices) registered for VAT, and these data have been processed by the CBS (see notes to Table 2.23).

**Table 2.23**
**Private-Sector Services Product, 1988–92[a]**

(percent)

| | Share in product 1992 | Real change 1989 | 1990 | 1991 | 1992 | Average 1988–92 |
|---|---|---|---|---|---|---|
| Wholesale trade | 14.6 | –2.6 | 7.0 | 5.3 | 10.8 | 5.1 |
| Retail trade | 11.8 | –1.0 | 9.0 | 2.9 | 8.6 | 4.9 |
| Catering | 2.7 | –6.9 | 3.7 | 4.9 | 9.4 | 2.8 |
| Hotels | 2.7 | –1.0 | –3.7 | –8.0 | 23.3 | 2.7 |
| Total | | –2.2 | 6.6 | 3.3 | 10.7 | 4.6 |
| Business and legal | 20.4 | –0.4 | 8.3 | 1.9 | 13.5 | 5.8 |
| *of which* Programming | (3.0) | | | | | |
| Banks | 22.6 | 3.8 | –0.1 | 5.8 | 7.9 | 4.4 |
| Insurance and real estate | 9.4 | 6.2 | 6.5 | 6.0 | 6.2 | 6.2 |
| Total | | 4.5 | 1.8 | 5.9 | 7.4 | 4.9 |
| Education services | 2.0 | | | | | |
| Health services[b] | 3.3 | 1.7 | 6.9 | 0.1 | 11.5 | 5.1 |
| Personal services[c] | 4.0 | 1.2 | 10.9 | –1,8 | 12.3 | 5.7 |
| Household services | 3.8 | 16.2 | –3.2 | 9.7 | 8.8 | 7.9 |
| Garages | 2.7 | 2.6 | 1.2 | –0.4 | 10.8 | 3.6 |
| Total | | 7.0 | 2.8 | 2.8 | 10.5 | 5.8 |
| Total private-sector services | 100.0 | 1.4 | 4.9 | 3.6 | 10.2 | 5.0 |

[a] The data on trade and catering, business, legal, education, health, and personal services, and garages was estimated from VAT returns at constant prices; the data on hotels is from hotel income and tourist bed-nights. The data on banks is from number of debits, labor costs, and active financial assets; the data on insurance and real estate is from the number of employed persons, part-time jobs, and business-sector product; the data on household services is from hours worked.

[b] Real change is for both education and health services.

[c] Entertainment, etc.

Along with the 5 percent increase in the number of persons employed in the industry, which was similar to the 1991 growth rate, there was a 3 percent rise in hours worked per employee (Table 2.22). This may reflect the caution adopted by employers, who feared that the increase in product was temporary and would anyway be subject to wide annual fluctuations (e.g., hotels,[23] insurance, real estate, and even some financial institutions). It also takes time to train new employees, particularly in technologically-advanced areas. Obviously, business and garage services depend on overall economic growth. The decline in the real hourly wage[24]—at an annual average of 3 percent for the

[23] Beyond the customary seasonal fluctuations in employment.

[24] Real wages are deflated here by both the CPI and labor costs, as there is little difference between the price indexes available for this industry and the total index (see also 'relative price,' in Table 2.22).

fourth successive year—is evident throughout the economy, and this industry, which serves it, is no exception. The industry's close association with the wider economy is also partly responsible for the consistency between the price-increases in different private-sector services, and between them and those in the economy as a whole.