CHAPTER IV

EMPLOYMENT AND WAGES

The labor market weakened considerably in 1985. The downward trend in domestic demand, which had set in at the end of 1983 and had already in 1984 caused the labor market to slacken, reached a low in the second half of 1985, with the launching of the economic stabilization program. Domestic demand was sharply curtailed and in the second half of the year reduced the gross domestic product by 5 percent. This had the result that employment shrank, the unemployment rate rose, the labor force participation rate declined, and labor productivity fell. The number of employed persons fell by 1 percent by comparison with the first half of 1985, and the rate of unemployment rose from 6.2 percent in the first half of the year to 7.2 percent in the second half. However, the second half of the year should be divided into subperiods: the sharp contraction of economic activity occurred in the third quarter, when the number of employed persons fell by 20,000 and the rate of unemployment rose to 7.8 percent. In the last quarter, by contrast, there was some recovery: the number of employed persons rose again by 20,000, and the unemployment rate fell back to 6.6 percent. This recovery did not continue into the first quarter of 1986, and the rate of unemployment rose back to 7.2 percent.

In the year under review the increasing slack in the demand for labor decreased the propensity to look for work, and in the second half of the year the labor force participation of the population of working age fell sharply — by 0.8 percentage points. This halt in the growth of the civilian labor force moderated the rise in unemployment due to the slack in demand. In the second half of 1985 the GDP per man-hour (labor productivity) in the business sector fell by 5 percent. This decline in labor productivity reflects the gap between the sharp contraction of the GDP and the slower decline in the number of employed persons. It should, however, be pointed out that the decline in the second half of the year followed a cyclical increase of 5 percent in the first half of the year.

As stated, the weakening of the labor market had already become noticeable in the previous year. In the year under review, the number of employed persons grew by less than 1 percent, after having risen by 3.2 and 1.5 percent in 1983 and 1984, respectively. The civilian labor force increased by 1.6 percent in 1985 following growth rates of 2.6 and 3 percent, respectively, in the two preceding years. The unemployment rate rose to 6.7 percent in 1985, having stood at 4.5 and 5.9 percent, respectively, in 1983 and 1984. Labor productivity rose on average for the year by 3.7 percent, following a declining trend that has persisted since 1982.

Real wages had already begun to fall in 1984; the stabilization program adopted in July 1985 by agreement between the government, the Histadrut, and the employ-

Table IV-1

POPULATION, EMPLOYMENT, AND WAGE PER EMPLOYEE POST, 1979-85

(percent change over preceding period)

	1979	1980	1981	1982	1983	1984	1985 Jan.–Dec.	1985 Jan.–June[a]	1985 July–Dec.[a]
Working-age (14+) population	2.6	2.5	1.8	1.8	2.0	2.2	2.2	1.1	1.1
Civilian labor force	1.6	3.2	2.3	1.3	2.6	3.0	1.6	0.5	0.1
Israeli employed persons									
Number	2.3	1.1	2.0	1.4	3.2	1.5	0.7	0.4	−1.0
Man-hours	4.0	−1.1	2.6	0.0	2.3	1.7			0.8
Residents of Judea-Samaria and the Gaza District employed in Israel	8.7	−3.0	1.0	4.2	8.4	2.8	−1.3	0.7	−1.3
Total employed in Israel									
Number	2.6	0.8	2.0	1.6	3.5	1.5	0.6	0.4	−1.0
Man-hours	4.4	−1.3	2.6	0.3	2.6	1.9			0.3
Real wage per employee post[b]									
Estimate A	8.5	−3.4	11.1	−0.9	4.7	−2.5	−6.9	−3.1	−12.1
Estimate B	10.1	−3.1	10.5	−0.4	5.9	−0.4	−9.2	−2.9	−17.4

[a] Rates of change are from July–December 1984 to January–June 1985 and from January–June to July–December 1985.

[b] Both estimates are CBS data based on employers' returns to the National Insurance Institute, deflated monthly by the Consumer Price Index. Since wages are on average paid at the end of the month, deflation by the average CPI for the month biases the real wage upwards at times of inflation. Estimate A is corrected for this 2-week timing discrepancy (the deflator for month t is the geometric mean of the indexes for t, t−1) and estimate B is not corrected.

SOURCE: Central Bureau of Statistics (labor force surveys, family surveys for Judea-Samaria and Gaza District) and Bank of Israel calculations.

ers temporarily froze nominal wages. In the second half of the year this resulted in a precipitous fall in the purchasing power of wages: by comparison with the first half of the year, real wages per employee shrank by 12 percent — 11 percent in the business sector and 16 percent in the public services.[1] On an annual average, real wages fell in 1985 by 7 percent, following a 3 percent decline in 1984. The movement of wages viewed as income differed widely from that of labor cost to the employer, since consumers and employers face different sets of prices. In the year under review, the government cut subsidies, sharply increased the burden of net indirect taxation, and thereby raised consumer prices steeply. A considerable increase in the price of imports relative to the price of the domestic product and higher charges for various public services further contributed to the price rise. These measures raised consumer prices and reduced the purchasing power of wages, but reduced the prices faced by employers (the price of business sector product at factor cost). There was therefore no decline in the business sector's real labor costs. Moreover, the fall in real wages viewed as income which began this year was less than warranted by the measures mentioned earlier.[2] Labor cost per man-hour therefore rose by 10.5 (8.0)[3] percent, while real wages fell by 3.7 percent. Labor productivity rose by 3.7 percent in 1985 so that unit labor costs rose by 6.6 (4.1) percent compared with 5.9 (3.6) percent in the preceding year (see Table IV–2)[4] This average annual increase in labor costs reflects a rise of 3.0 (3.3) percent in the first half of the year and of 6.5 (1.4) percent in the second half (each half-year compared with the preceding one). These half-yearly changes were affected by cyclical fluctuations in labor productivity: in the first half of the year labor costs would have risen much more if it had not been for the cyclical upturn of labor productivity. In the second half of the year there would have been no rise in labor cost if labor productivity had not fallen cyclically.

[1] In the conventional calculation of real wages, nominal wages — which are usually paid at the beginning of the month — are deflated by the consumer price index, which approximately reflects the price level in the middle of the preceding month. This difference of half a month causes the conventional estimate of real wages to be upward-biased to a degree which depends on the inflation rate. In order to correct for this bias, we have deflated nominal wages by a synthetic price index — the geometric average of two consecutive price indexes — which approximates the price level at the beginning of the month.

[2] These effects are reflected in the change in relative prices, P_c/P_y, the ratio of the CPI to the implicit price index of business sector NDP at factor cost. In 1985, this ratio rose by 19.7 percent (see Table IV–2). About two-thirds of this increase is the result of higher indirect taxes, subsidy cuts, and higher charges for public services. The remainder is mainly the result of higher relative import prices.

[3] It has been suggested that inflation may bias the real product estimates as well as the estimate of real wages (see note 1). The entire set of these effects has not yet been researched. The present chapter therefore presents real wages and labor costs in two ways: corrected for the inflation bias and not corrected. The latter variant is here shown in parentheses (it is variant B in the tables).

[4] Annual changes in wages and real labor cost and so on are usually calculated from annual nominal data. Under inflation, this method gives greater weight to changes occurring at the end of the year than to those occurring at its beginning, and this leads to a substantial bias in a year such as 1985 when these magnitudes behaved very differently in the two halves of the year. Accordingly, the 1985 change in wages and real labor cost were corrected for the bias as follows: the change was calculated from a geometric mean of the change in each quarter over the corresponding quarter of 1984. The corrected figures are 4½ percentage points below the uncorrected figures.

Table IV-2

BUSINESS SECTOR LABOR COSTS, 1976-85[a]

(percent change over preceding period)

	Wages per man-hour, w/P_c		Labor cost per man-hour, w/P_y		Real labor cost, $w/P_y y$		Relative price, P_y/P_c	Labor productivity, y
	Gross[b]	Net[b]	A	B	A	B		
1976	8.7	7.4	11.6	12.2	11.6	12.2	−2.6	0.0
1977	8.5	7.4	2.8	2.9	2.8	2.9	5.6	0.0
1978	6.1	4.0	5.7	5.9	5.5	5.7	0.4	0.2
1979	1.8	−3.4	4.8	6.6	3.9	5.7	−3.2	0.9
1980	−2.3	−3.5	−3.4	−3.0	−9.2	−8.8	1.1	5.6
1981	10.7	14.3	1.4	0.8	−1.0	−1.6	9.2	2.5
1982	3.2	1.1	4.9	5.5	5.6	6.1	−1.6	−1.5
1983	0.9	1.9	1.6	2.7	2.1	3.2	−0.7	−0.5
1984	−4.1	−6.7	−7.2	−5.0	−5.9	−3.6	3.1	−1.4
1985								
January-December	−3.7	−0.1	10.5[c]	8.0[c]	6.6[c]	4.1[c]	−19.7	3.7
January-June[d]	−0.1	3.5	8.2	8.6	3.0	3.3	−8.3	5.0
July-December[d]	−10.6	−5.8	1.3	−3.6	6.4	1.4	−12.0	−5.0

[a] Symbols are as follows: w is compensation of employees per man-hour, y is labor productivity (real business sector NDP at factor cost per man-hour), P_c is the Consumer price Index. and P_y is the implicit price index of y. Thus w/P_c and w/P_y are real wages viewed as income and labor cost, respectively. Real labor cost (identical with the distributive share of labor in value added) is then given by

$$\frac{w}{P_y y} = \underbrace{\frac{w}{P_c}}_{\text{wages}} \times \underbrace{\frac{P_c}{P_y}}_{\text{relative prices}} \div \underbrace{y}_{\text{labor productivity}}.$$

For the explanation of variants A and B, see note b to Table IV-1 (the two w/P_c columns are both estimate A).

[b] Estimated as explained in Chapter V, but here corrected to conform to the conventional definition of compensation of employees. The net figure is net of income tax and (employer and employee) contributions to national insurance.

[c] See note 4 in the text.

[d] See note a to Table IV-1.

SOURCE: Based on data of the Central Bureau of Statistics.

Table IV-3

SECTORAL COMPOSITION OF EMPLOYMENT, 1970-85

(percent)

	Total	Public services	Business sector Total	Business sector Financial and business services	Business sector Industry
Composition					
1970	100.0	23.9	76.1	5.2	24.2
1975	100.0	26.9	73.1	6.9	24.4
1979	100.0	29.2	70.8	7.8	24.0
1983	100.0	29.3	70.7	9.4	22.7
1984	100.0	29.3	70.7	9.5	22.9
1985	100.0	29.6	70.4	9.6	22.9
Average annual rate of change					
1970-75	2.7	5.2	1.9	8.8	2.9
1975-79	3.0	5.1	2.2	6.3	2.7
1979-85	1.6	1.9	1.5	5.3	0.8

SOURCE: Central Bureau of Statistics, labor force surveys.

The real labor cost to employers is defined as the distributive share of compensation of employees in value added (i.e., in business sector NDP at factor cost). When labor costs rise, returns to capital fall and production tends to become less profitable. Real labor cost therefore affects growth and employment and the country's competitiveness in foreign trade.[5]

The recorded changes in real labor cost are averages for the business sector as a whole. In the year under review they are the result of different trends in the various subsectors (the export sector versus the sector producing for the domestic market, or the goods sector versus the financial sector). The contraction of demand this year mainly affected the sector producing for the domestic market; the export sector, by contrast, continued to expand. Estimates of real wages and of industrial output in terms of the effective exchange rate show that in 1985 the share of labor costs in output for exports was 9 percent lower than in 1984. However, at the beginning of 1986 it rose again to a level 3 percent above that of 1984.[6] It follows that the average rise in the real labor costs of the business sector this year reflects a substantial decline in profitability of production for the domestic market while the profitability of exports rose. The sharp rise of real interest rates may have increased profits in the financial sector at the expense of the domestically oriented sector (the export sector enjoys preferential credit terms and therefore suffered less from the rise in real interest rates).

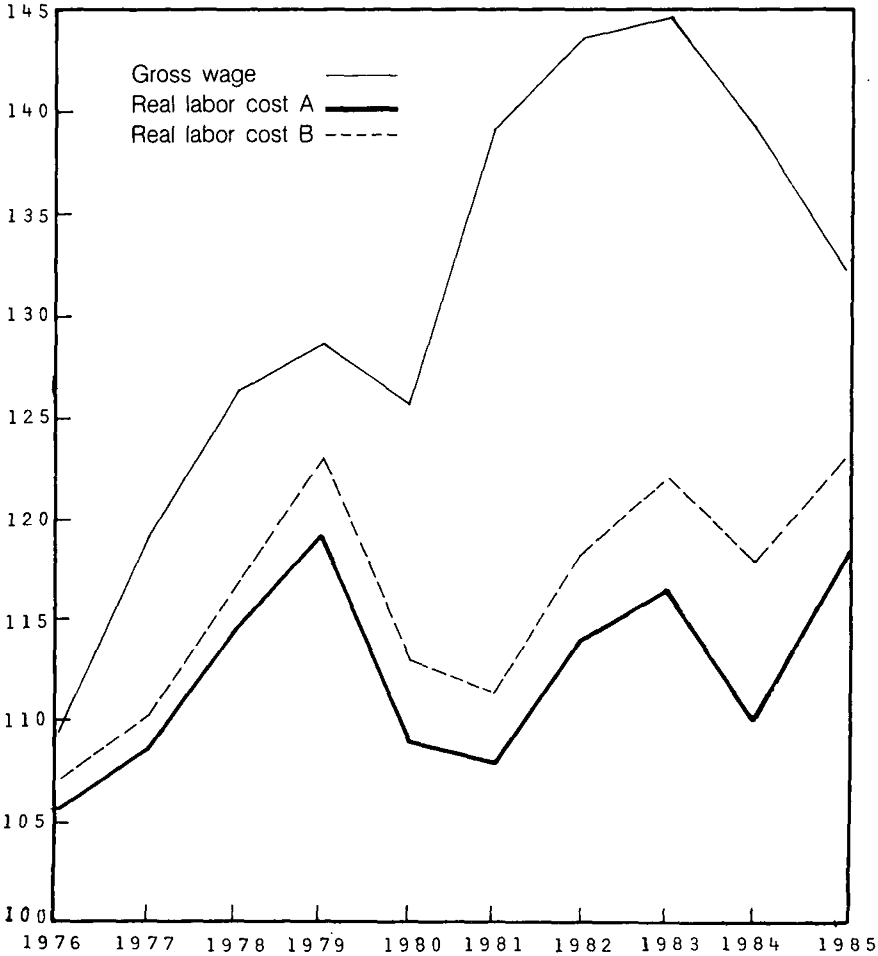
[5] A change in real labor costs affects the supply side of business sector product; the level of economic activity is of course also determined by factors on the demand side.

[6] The data indicate that the profitability of exports rose in 1985 and shrank in early 1986, since input prices of exports did not increase relative to output prices. The estimates of real wages presented here are adjusted for inflation bias (see note 1). For a more detailed discussion of export profitability, see Chapters VI and VII.

Figure IV-1

REAL WAGES PER MAN-HOUR AND REAL LABOR COST, BUSINESS SECTOR, 1975-85

(index, average 1971-75=100)



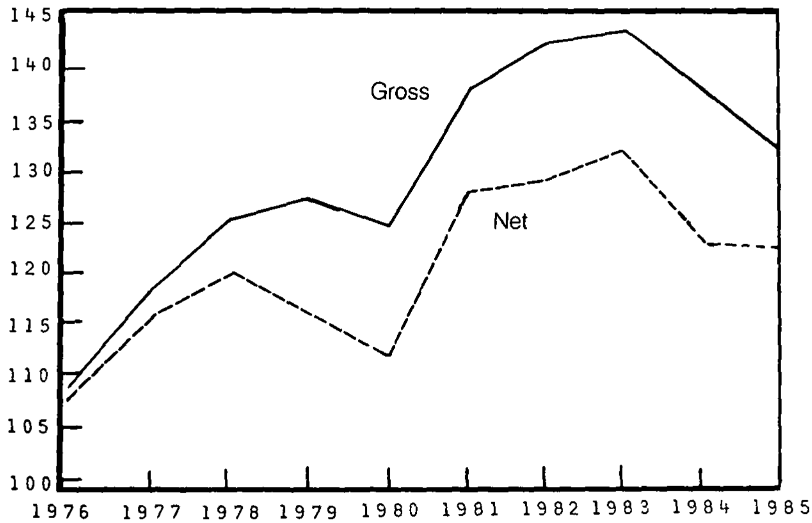
SOURCE: Table IV-2.

It is, however, the long-term trend of labor costs that is mainly of interest, since it reveals the basic processes at work in the labor market (see Figures IV-1 and IV-2). In the second half of the 1970s and again in 1982, real labor cost rose considerably above the level of the first half of the 1970s. This trend, which indicates falling profitability, is linked to the stagnation of business sector product since the beginning of the 1980s. Since 1981, business sector product (with an annual average growth rate of 1.9 percent) has lagged behind working-age population and civilian labor force, both of which grew at a rate of 2.1 percent, while labor productivity failed to rise.

Figure IV-2

REAL WAGES PER MAN-HOUR, BUSINESS ECTOR, 1975-85

(index, 1975 = 100)



SOURCE: Table IV-2.

Government policy contributed to the rise in labor cost: a long-run trend of fiscal expansion increased the public sector's demand for labor while increasing the tax burden, thus reinforcing the upward pressure on wages in the business sector. At the same time, government policy was designed to prevent unemployment and accommodated itself to market pressures: whenever wage demands were accepted and increased the upward pressure on labor cost, the government rescued the business sector by devaluing the currency and through subsidies—thus increasing the budget deficit and the foreign debt. This compensated employers *ex post* for excessive wage increases which they had paid in reliance on this government policy. Policy therefore both encouraged wage demands and weakened the resistance to them. The result was that inflation was accelerated, the link between wages and productivity was weakened, and labor cost rose as profitability declined.

The stabilization program succeeded in halting this trend by a reduction in real wages accompanied by a cut in the public sector deficit and a restrictive monetary policy. These measures eliminated the need for further inflationary erosion of wages and created the conditions for stabilizing the exchange rate and the price level. Nevertheless, the long-term maintenance of these conditions has not been guaranteed; the program provided for wages to rise at the beginning of 1986 to a level which is incompatible with the preceding year's rise in the burden of net indirect taxation. An excessive rise in real wages jeopardizes economic stability: it makes it tempting to prevent the expected rise in unemployment by adopting an accommodating policy of fiscal expansion and devaluation, which would lead to resumption of inflation and to an increase in the balance-of-payments deficit.

Since the government encountered difficulties in reducing its direct demand, its chief means of reducing the budget deficit was to raise indirect taxes. An indirect result of the higher taxes (and higher import prices) was that labor costs rose, because the purchasing power of wages in fact fell by less than implied by the fiscal measures. This suggests that the use of taxation as the main instrument for reducing the deficit interferes with the attainment of policy objectives. Resumption of growth and structural change require a level of labor costs moderate enough to make the business sector more competitive and to promote growth. A heavy tax burden runs counter to the achievement of these aims, and so long as it remains necessary, wage restraint must be stressed. To that end, the government must continue to restrain public sector employment and wages since these affect business sector wages. The government must therefore refrain from an accommodating policy of compensating employers for excessive wage increases, even at the cost of a temporary rise in unemployment. Strengthening the link between wages and productive effort will raise labor productivity and reduce labor costs.

In October 1985, a new cost-of-living agreement came into effect under the stabilization program. This provided 80 percent compensation for inflation once in three months or whenever price rises amounted to 4 percent. Once inflation had settled down at a lower rate, the compensation for price increase was further reduced, and the cost-of-living agreement signed in May 1986 put the threshold at a price increase of 7 percent. At the same time a scale depending on the rate of inflation was introduced: compensation was set at 80, 75, and 70 percent of the stipulated 7 percent increase, depending on whether it had taken one month, two months, or more than two months to occur.

The processes operating in the labor market are illustrated by the development of the labor force participation and employment rate,[7] corrected for changes in the composition of population.[8] Figure IV-3 shows that employment, which has been slack since the beginning of the decade, dropped further in 1985, especially in the third quarter, as implementation of the stabilization program depressed domestic demand sharply. In the last quarter employment picked up slightly. Most of the decline was in the business sector; as employment weakened, labor force participation declined, that is, there is a decline in the propensity to seek work (the discouraged worker effect). Figure IV-3 illustrates how unemployment rises as employment (adjusted for the decline in participation) falls. Thus in 1985, unemployment

[7] The employment rate (the ratio of employed persons to working age population) in the 1980s was as follows (percent):

1980	48.6	1984	47.6
1981	48.5	1985 Jan.-Dec.	46.6
1982	48.0	Jan.-June	47.0
1983	48.2	July-Dec.	46.1

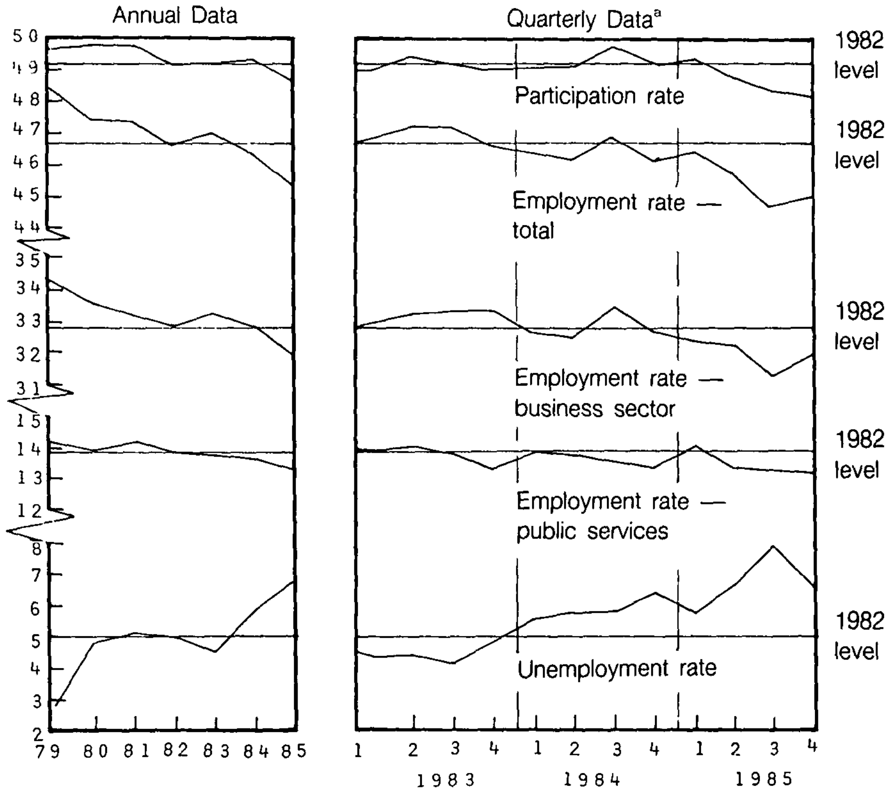
(standardization based on 1985). Sectoral employment rates are shown in Figure IV-3; they are defined as the ratio of persons employed in the sector to total working-age population.

[8] Labor force participation is determined primarily by personal characteristics (age, sex, educational level), whereas the specific participation rates for each category are determined by cyclical economic developments. To estimate the effect of the latter one must eliminate the effect of changes in the age, sex, and educational composition of population. The method of standardization used here holds specific participation rates constant. For the formal presentation, see Bank of Israel, *Annual Report 1980*, p. 76.

Figure IV-3

LABOR FORCE PARTICIPATION AND EMPLOYMENT RATES ADJUSTED FOR EFFECT OF CHANGES IN AGE, EDUCATION, AND SEX COMPOSITION OF THE POPULATION, AND THE UNEMPLOYMENT RATE, 1979-85

(percent)



[a] Seasonally adjusted.

SOURCE: Central Bureau of Statistics, labor force surveys, and Bank of Israel calculations.

rose while employment declined, particularly in the third quarter; in the last quarter, employment picked up, and unemployment declined somewhat.

The first stage of the stabilization program included, as stated, a sharp contraction of domestic demand which reduced business sector product. It is therefore hardly surprising that the business sector's share of employment declined in 1985; it has not yet recovered, as it should eventually do under the stabilization program. Employment fell most sharply in construction, transport and trade. The share of industry remained unchanged. The number of persons employed by the central government and in government enterprises declined by 2 percent — evidence of restraint under the stabilization program. The evidence on public services employment as a whole is conflicting. The Labour Force Surveys show an increase of 1.7 percent, while the National Insurance Institute's data on employee posts show a decline of 1 percent from 1984 to 1985 (annual average) or 2 percent from the second half of 1984 to the second half of 1985.