Chapter 4

Employment and Wages

1. MAIN DEVELOPMENTS

In 1991 employment expanded, the labor force grew appreciably, and the unemployment rate rose. Real wages declined in most business-sector industries and increased in the public services.

About 180,000 immigrants arrived in Israel in 1991, and by the end of the year 400,000 immigrants, constituting 8 percent of the population, had come in the recent influx. The massive immigration has had a permanent effect on the labor market, and dominated it in 1991; the moderating effect of the Gulf War, evident primarily in the first quarter of the year, was temporary.

Domestic demand expanded for the second consecutive year, manifested in a 5.2 increase in GNP, together with a steep 6.1 percent increase in the number of employed persons—5.9 percent in the business sector and 6.6 percent in the public services, compared with only 2 percent in both sectors in 1990. Most of the increase in employment was in construction and industry, but also in education and health services.

Due to the gap between the immigrants' arrival and their entry into the labor market, their direct effect on the labor force in 1990 was negligible. The immigrants who arrived in 1990 and 1991 entered the labor force during 1991, contributing significantly to the 7.3 increase in the civilian labor force. This further increased unemployment, which reached 10.6 percent despite the growth in employment. In 1991, however, the number of unemployed established residents did not rise, and in fact went down slightly. The increase in unemployment is concentrated among the immigrants, whose unemployment rate is 39 percent.

Along with the increase in both employment and unemployment, there was a 2 percent nationwide decline in real wages (deflated by the Consumer Price Index—CPI). The reduction of real business-sector wages accelerated, reaching 3.8 percent in 1991. This reflects a drop in real wages in both the tradables and the nontradables sectors which encompassed most industries, including construction, industry, agriculture and services. Real wages rose, however, in electricity, water, and transport and communications; these industries, which are monopolistic in structure, are controlled by public sector corporations and have strong trade unions.

Table 4.1
Principal Labor Market Indicators, 1981–91[a]

	Average				
	1981–84	1985–88	1989	1990	1991
Percent change over preceding year					
Permanent population	1.7	1.6	1.9	5.7	4.8
Migration balance, thousands	4.6	-1.3	11.7	187.6	155.5
Israeli employed persons	2.0	2.0	0.5	2.1	6.1
Business sector	2.0	2.3	0.0	2.1	5.9
Public services	2.0	1.5	1.9	2.3	6.6
Labor input, business sector	3.9	1.6	1.4	2.3	4.6
Wages per employee post[b]	3.8	2.9	-1.3	--1.0	-2.0
Business sector	3.7	3.7	-1.7	-1.6	-3.8
Public services	3.9	1.2	0.3	0.2	1.6
Minimum wage	14.4	5.6	2.4	-0.1	-0.1
Daily wage of residents of administered areas	1.1	13.5	-5.3	-7.9	0.6
Unit labor cost, business sector[c]	1.3	3.4	-2.3	-1.4	-6.9
Labor productivity, business sector	0.9	2.3	0.7	3.8	1.6
Ratio[d]					
Labor-force participation rate	49.9	50.8	52.0	51.5	51.7
Unemployment rate	5.1	6.6	8.9	9.6	10.6

[a] Wages and labor cost are in real terms.
[b] Deflated by CPI; the wage data for 1991 do not include residents of the administered areas.
[c] Based on net product at factor cost.
[d] Participation rate, percent of working-age population; unemployment rate, percent of labor force.
SOURCE: Based on Central Bureau of Statistics data.

In general, the decline in the average real wage could be due to either a change in the composition of employment (towards industries where wages are lower than average), or a decline in wages in all industries, or both. A rough decomposition of the change into these two elements shows that only a small part of it is due to a change in the industry composition of employment. The general decline in wages can be ascribed to two factors: the flexibility of the labor market in coping with the exogenous growth of the working-age population (by reducing the wages of all employed persons or by keeping the wages of the established population unchanged and paying a relatively low wage to new employees at the same quality of performance), and qualitative differences between new and established employees, reflected in the relatively low wage of new immigrant employees. A simple calculation shows that the reduction in the wages of the established population explains more than 70 percent of the total decline. Thus the decline in wages—the steepest for many years—indicates that the business sector is responding rationally to labor-market developments, and above all to the huge and uneven growth in the labor force. The decline is in part also a retreat from the exceptional increase in real wages in 1986 and 1987.

Table 4.2
Sources of Growth of Population, 1985–91

	1985	1986	1987	1988	1989	1990	1991[a]
Thousands							
Beginning-of-year *de jure* population	4,199.7	4,266.2	4,331.3	4,406.5	4,476.8	4,559.6	4,821.7
Natural increase	71.2	69.9	69.7	70.9	72.1	74.6	74.8
Migration balance	–5.3	–4.8	5.5	–0.6	10.7	187.5	155.5
Gross immigration[b]	*12.2*	*12.3*	*15.6*	*16.0*	*26.8*	*201.5*	*176.5*
less Israelis abroad[c]	*17.5*	*17.1*	*10.1*	*16.6*	*16.1*	*14.0*	*21.0*
Total increase	65.9	65.1	75.2	70.3	82.8	262.1	230.3
End-of-year *de jure* population	4,265.6	4,331.3	4,406.5	4,476.8	4,559.6	4,821.7	5,052.0
Rate per thousand							
Total natural increase	17.1	16.4	15.9	16.0	16.0	15.9	15.2
Jews	14.5	14.0	13.1	13.0	*12.6*	*12.5*	*11.7*
Non-Jews	29.3	28.7	29.2	29.4	30.4	30.7	30.9

[a] Provisional.
[b] Immigrants and persons entering for reunion of families (including from East Jerusalem), etc.
[c] Israelis abroad more than 12 months *less* returning residents, potential immigrants, and Israelis who have not returned from a visit to Jordan.
SOURCE: Central Bureau of Statistics.

In the public services, real wages rose by 1.6 percent, continuing the moderate increase of the last two years and conflicting with needs at a time of high unemployment.

Real labor costs (deflated by producer prices) also fell nationwide but, in contrast to real wages (deflated by the CPI), there is a marked difference in the trend of change between nontradables industries—where they dropped sharply—and tradables industries—where they rose slightly. The difference in labor costs chiefly reflects real appreciation (i.e. the fact that prices of nontradables rose more than those of tradables).

Unit labor costs in the business sector fell by 7 percent in 1991, after trending downwards slightly in 1990. This index takes the increase in labor productivity, producer prices, and nominal labor costs into account, and essentially measures the distributive share of labor.

The massive immigration expanded both domestic demand and the labor force. The increase in demand pushed employment beyond its growth rate in the past, though the rise in the labor supply was crucial; thus while real wages rose by less, the unemployment rate rose too.

Table 4.3
Israeli Labor Force, Selected Data, 1976–91

(annual change, percent)

	Absolute figures							
	1990	1991	1976–1979	1979–1985	1985–1988	1989	1990	1991
Total								
Thousands								
Mean population	4,660.2	4,942.8	2.3	1.9	1.6	1.7	3.1	6.1
Working-age population	3,201.6	3,427.4	2.2	2.1	1.9	2.0	3.9	7.1
Civilian labor force	1,649.9	1,770.3	3.0	2.3	2.4	3.2	2.9	7.3
Employed persons	1,491.9	1,583.1	3.3	1.6	2.5	0.5	2.1	6.1
Unemployed	158.0	187.2						
Percent								
Participation rate	51.5	51.7						
Standardized participation rate[a]	51.0	49.5						
Unemployment rate	9.6	10.6						
Employment rate[b]	46.1	46.2						
Men								
Thousands								
Working-age population	1,573.0	1,678.9	2.1	2.1	1.9	2.1	3.7	6.7
Civilian labor force	979.9	1042.7	1.8	1.7	1.7	1.9	2.5	6.4
Employed persons	897.7	952.8	2.0	1.0	1.9	–0.6	2.0	6.1
Unemployed	82.2	89.9						
Percent								
Participation rate	62.3	62.1						
Unemployment rate	8.4	8.6						
Women								
Thousands								
Working-age population	1,628.1	1,748.9	2.3	2.1	2.0	2.0	3.9	7.4
Civilian labor force	669.5	727.9	5.3	3.3	3.6	5.4	3.4	8.7
Employed persons	593.8	630.4	5.7	2.7	3.4	2.3	2.2	6.2
Unemployed	75.7	97.5						
Percent								
Participation rate	41.1	41.6						
Unemployment rate	11.3	13.4						
Employed from administered areas (thousands)	107.7	97.7	4.6	3.1	5.9	–4.1	2.7	–9.3

[a] Age and schooling held constant (1984).
[b] Employment as percent of working-age population; age, sex, and schooling held constant (1984).

SOURCE: Central Bureau of Statistics, Labour Force Surveys, and Family Expenditure Surveys in the administered areas.

Despite the high unemployment rate, real wages declined only moderately, due to a combination of factors. First, differences between the established population and immigrants in the quality and definition of occupations, as well as practical difficulties with the language, mean that immigrants and established residents are not perfect substitutes—especially in the liberal professions. Second, there are labor-market rigidities, some of them due to institutional factors obtaining in Israel, others stemming from the advantages to both employer and employee of long-term employment, particularly in occupations which are intensive in job-specific human capital.

Table 4.4
Incremental Employment, by Sector, 1970–91[a]

(annual average change, thousands)

	1970–1973	1973–1976	1977–1979	1980–1983	1984–1988	1989	1990	1991
Total population								
Total increment	**53.6**	**15.0**	**39.1**	**34.0**	**47.5**	**45.8**	**49.4**	**110.5**
Business sector[b]	44.9	–1.7	24.3	20.1	17.5	–5.6	26.4	54.1
Public services, employees	11.7	12.5	16.8	6.6	6.4	8.8	7.5	27.0
Israeli unemployed	–2.9	4.2	–1.9	6.6	7.8	42.6	15.5	29.4
Men	**35.1**	**3.9**	**17.0**	**18.1**	18.5	**12.9**	**26.7**	**52.9**
Business sector[b]	34.1	–1.3	14.2	13.6	3.6	–11.5	19.6	40.7
Public services, employees	2.9	3.3	4.3	0.7	1.0	2.1	0.6	4.5
Israeli unemployed	–1.9	1.9	–1.5	3.9	3.9	22.3	6.5	7.7
Women	**18.5**	**11.1**	**22.1**	**21.2**	**19.6**	**33.0**	**21.8**	**58.4**
Business sector[b]	10.8	–0.4	10.0	7.3	10.3	6.1	6.0	14.1
Public services, employees	8.8	9.2	12.5	6.0	6.6	6.7	6.9	22.5
Israeli unemployed	–1.0	2.3	–0.4	2.7	3.9	20.2	8.9	21.7

[a] Figures may not add due to rounding.
[b] Includes self-employed in public services.
SOURCE: Based on Central Bureau of Statistics data.

Mass immigration often goes hand in hand with high unemployment among immigrants for the first year or two because they find it difficult to adapt to a new labor market. The limited extent of the steps taken to foster adjustment, whether directly or by creating the appropriate conditions in the business sector is, however, a source of some concern. If the labor market is to recover, the government must undertake a series of measures.[1] These should include some which are exogenous to the labor market, such as the stimulation of demand by creating the conditions which make it possible to expand

[1] For the general strategy and the government's role in immigrant absorption—especially in employment—see Chapter 1.

investment, as well as others associated directly with the labor market (and implemented in association with the employers and employees), such as introducing basic reforms of the wage-linkage arrangements between occupations, industries, and sectors. This will make it possible to alter wage differentials, reduce minimum wages, remove barriers to labor mobility, and lower taxes on employment. Failure to do enough towards these ends could prolong the period of unemployment and further delay the arrival of additional immigrants.

2. EMPLOYMENT AND LABOR INPUT

The number of employed Israelis rose by 6.1 percent in 1991, while the number of man-hours (labor input) increased by 5.8 percent (Table 4.5). Total employment rose by less, reflecting the drop in the number of employed persons from the administered areas (who are employed principally in the business sector). Employment of immigrants rose appreciably, and by end-1991 they accounted for 5 percent of all employed Israelis, compared with less than 1 percent at end-1990. Employment and labor input fell in the first quarter of 1991 in the wake of the Gulf War, but rallied rapidly, starting in the second quarter and continuing to the end of the year.

Table 4.5
Employment and Labor Input, by Sector, 1987–91

(percent change over preceding year)

	Absolute figures						
	1990	1991	1987	1988	1989	1990	1991
Employed persons (thousands)							
Israelis	1,491.9	1,583.1	2.6	3.5	0.5	2.1	6.1
From administered areas	107.7	97.7	11.9	0.4	–4.1	2.7	–9.3
Public services	444.7	471.9	–0.1	4.0	1.9	2.3	6.1
Business sector[a]	1,154.9	1,208.9	4.5	3.0	–0.4	2.1	4.7
Total	1,599.6	1,680.8	3.2	3.3	0.2	2.2	5.1
Labor input (mill. man-hours)[a]							
Israelis	53.9	57.0	2.3	3.5	1.7	1.8	5.8
From administered areas	4.0	3.7	9.7	–23.8	1.6	6.1	–8.3
Public services	13.8	14.6	0.2	3.8	2.4	1.6	5.7
Business sector[b]	44.1	46.1	3.8	0.3	1.4	2.3	4.6
Total	57.8	60.6	2.9	1.1	1.6	2.1	4.8

[a] Weekly average.
[b] Calculated as total *less* public services.
SOURCE: Based on Central Bureau of Statistics data.

Public services employment and labor input rose. The upward trend persisted in health and education, rising by 6.8 and 9 percent respectively, primarily to meet the immediate needs of the additional population. Labor input rose somewhat more slowly than employment, as has been the case for several years.

Table 4.6
Business-Sector Employment and Labor Input, by Industry, 1987–91[a]

(percent change over preceding year)

	Absolute figures						
	1990	1991	1987	1988	1989	1990	1991
Employed persons (thousands)							
Business sector	1,154.9	1,208.9	4.5	3.0	–0.4	2.1	4.7
Construction	139.9	163.1	7.3	8.9	–0.2	9.6	16.6
Industry	333.4	347.2	2.7	–2.8	–3.2	1.8	4.1
Agriculture	74.3	67.2	2.8	–5.0	–1.9	–9.2	–9.6
Transport	92.5	96.6	5.7	3.5	–1.8	–0.6	4.4
Trade, personal services, business services[b]	421.8	443.1	1.8	12.3	3.3	2.6	5.0
Financial services	62.6	63.1	–2.3	3.2	–3.2	–0.2	0.8
Public utilities	16.6	16.8	9.7	6.6	–0.7	15.2	1.2
Not known	8.7	10.4					
Labor input (mill. man-hours)							
Business sector[c]	44.1	46.1	3.8	0.3	1.4	2.3	4.6
Construction	5.5	6.4	7.7	–4.6	5.1	11.8	17.1
Industry	13.0	13.6	1.5	–4.3	–0.5	0.9	4.6
Agriculture	2.8	2.5	1.9	–8.4	–1.0	–10.5	–10.6
Transport	3.7	3.8	7.5	1.4	–2.3	2.7	2.9
Trade, personal services, business services[b]	15.9	16.8	–4.5	6.9	5.1	1.9	5.8
Financial services	2.3	2.3	–3.7	2.9	–1.4	0.4	0.8
Public utilities	0.7	0.7	0.4	14.5	–1.4	15.0	–1.8

[a] Employment figures are annual averages; labor input figures are weekly averages.
[b] Industries 50–59, 90–99, 73; includes 'other employees from the administered areas except for those employed in public services.'
[c] Includes 'not known.'
SOURCE: Based on Central Bureau of Statistics data.

The increase in business-sector employment and labor input varied between industries, the principal expansion being in construction, which accounted directly for 43 percent of the increment—far more than its total share of employment. Furthermore, 50 percent of incremental industrial employment (13 percent of the total increment) was in construction-related industries. Industrial employment rose by 4.2 percent altogether, about the same as total business-sector employment.

The number of employed persons from the administered areas fell by 9.2 percent, chiefly as a result of the Gulf War, but also—albeit to a lesser extent—of the entry of new immigrants into the labor force. After a steep drop in the first quarter, the number and proportion of employed persons from the administered areas began to rise in the second quarter, reaching the same point in the fourth quarter of 1991 as in the third quarter of 1990. (The effect of the Gulf crisis on the employment of workers from the administered areas began to be felt in 1990:IV). Both the Gulf crisis and the need to obtain work permits had an effect on the workers from the administered areas, especially in the first quarter of 1991, while the entry of immigrants into the labor force affected the industrial distribution of workers from the administered areas rather than their number (Table 4.8). Thus, some 60 percent of workers from the administered areas were employed in construction in 1990, accounting for about 45 percent of all employees in the industry. In the first quarter of 1991 their number and proportion in this industry declined, though it returned to the 1990 level at the end of the year, and in fact rose.

Table 4.7
Industrial Composition of Employment, 1980–91

(percent)

	1980–84	1986–87	1988–89	1990–91
Tradables[a]				
Industry	23.2	23.5	21.8	21.5
Agriculture	4.4	3.8	3.5	2.8
Shipping and aviation	2.3	2.2	2.1	2.2
Total	29.9	29.5	27.5	26.5
Nontradables[a]				
Trade, restaurants, hotels	12.2	13.4	14.4	14.3
Financial and business services	9.0	9.8	10.0	10.1
Water and electricity	1.0	0.9	1.0	1.1
Construction	6.2	4.7	5.0	5.6
Transport, storage, communications	4.4	4.2	4.3	4.0
Personal and other services	6.1	6.4	7.0	7.3
Public services	29.7	29.3	29.2	29.5
Agriculture	1.7	1.2	1.0	1.0
Total	**70.1**	**69.9**	**71.9**	**72.9**
Not known				
Total	100	100	100	100
Composition of incremental employment				
Tradables			–10.3	8.6
Nontradables			110.3	91.4

[a] Owing to data limitations, the tradable/nontradable classification is only a rough one. In particular, agriculture includes subindustries belonging to both categories, while trade, restaurants & hotels, and financial & business services include tradable elements.

SOURCE: Based on Central Bureau of Statistics data.

Table 4.8
Employment of Immigrants and Residents of the Administered Areas,[a] 1990–91[b]

(thousands, quarterly average)

	Total	Agriculture	Industry	Con-struction	Trade & hotels	Public services	Other
1990[c]							
I							
Total employed persons	1,571.0	78.2	324.8	131.6	217.1	445.5	373.8
Administered areas	6.6	17.3	3.5	44.3	4.4	1.4	1.3
II							
Total employed persons	1,597.6	76.1	345.5	134.2	224.4	433.6	383.8
Administered areas	6.7	16.3	3.2	46.7	5.1	1.3	1.1
III							
Total employed persons	1,611.9	71.3	327.4	149.3	235.0	445.4	383.5
Administered areas	7.1	18.0	3.6	46.2	4.6	1.3	1.0
IV							
Total employed persons	1,616.4	72.0	335.3	145.5	229.2	454.5	379.9
Administered areas	6.5	16.3	3.2	45.4	3.8	1.0	1.0
1991							
I							
Total employed persons	1,609.3	71.4	343.2	142.8	210.9	464.8	376.2
Administered areas	5.0	17.8	2.0	36.8	1.6	0.6	0.6
Immigrants	2.1		3.3	3.1		1.2	
II							
Total employed persons	1,673.1	64.4	356.7	153.4	222.8	474.4	401.4
Administered areas	5.4	19.1	2.2	37.7	2.4	0.9	0.6
Immigrants	3.2		5.7	3.5	3.4	2.0	
III							
Total employed persons	1,706.6	62.8	340.4	173.1	240.0	476.6	413.7
Administered areas	6.2	16.2	2.3	42.7	2.5	0.9	0.8
Immigrants	4.0		7.2	3.5	4.0	2.6	
IV							
Total employed persons	1,735.1	70.4	348.8	182.5	242.6	471.0	419.8
Administered areas	6.6	16.3	2.2	45.6	2.4	0.7	0.8
Immigrants	4.9		9.5	2.8	4.9	3.2	

[a] As percentage of all employed persons.
[b] Seasonally adjusted data.
[c] There are no data on the distribution of immigrants in 1990 because of their low representation in the labor market.
SOURCE: Based on Central Bureau of Statistics data.

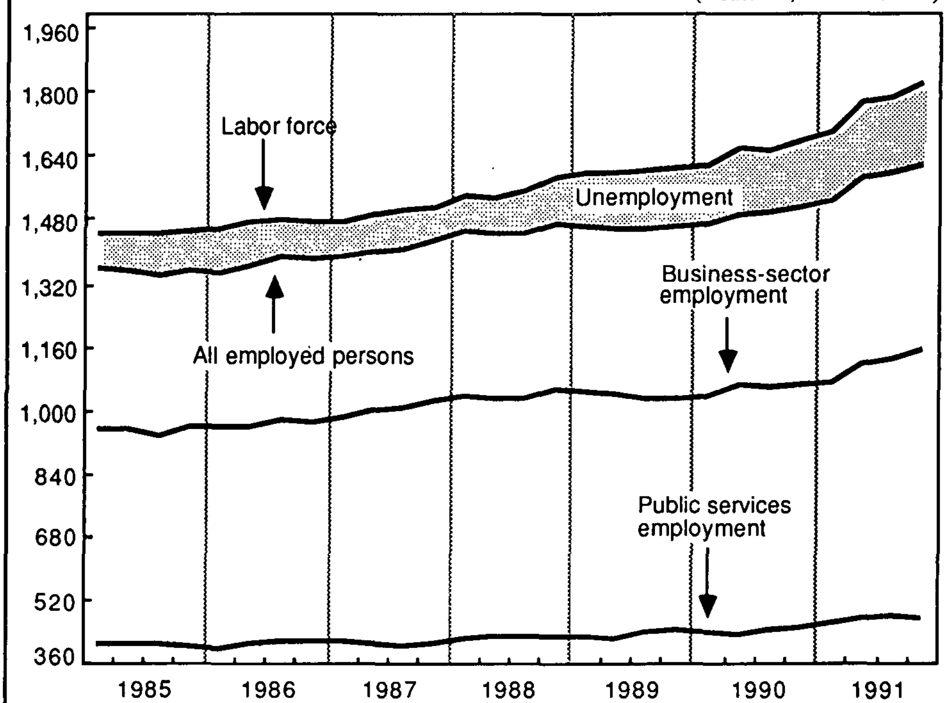
The proportion of workers from the administered areas employed in the trade and hotels industry and the public services fell drastically in 1991:I, steadying during the year at a level which was slightly higher level than in 1991:I, though lower than in 1990.

During the Gulf crisis the number of workers from the administered areas declined in all industries, and they were in part replaced by Israelis and new immigrants. After the war the construction industry continued expanding and workers from the administered areas returned to work.

The total number of man-hours in the business sector remained unchanged. Labor input per employee rose in construction and industry, but fell in transport and electricity and water. The picture provided by the labor input data (Tables 4.5, 4.6, and 4.8) is similar to that given by the employment data.

Figure 4.1
The Labor Force, Employment, and Unemployment, 1985–91

(thousands, deseasonalized)



SOURCE: Labour Force Surveys.

Nontradables continued to expand faster than tradables (Table 4.7), over 90 percent of additional employment being in nontradables (chiefly construction). The proportion of employment in the tradables sector fell in 1988 and 1989, principally because of the streamlining process in industry, reflected in the drop in the number employed. The decline in employment in the tradables sector in the last two years is explained partly by the shift in demand towards nontradables, and dwelling construction in particular, with the concomitant real appreciation.

There is a clear trend of rising employment in industries where employment is impermanent, such as construction and allied industries, as well as in those catering primarily to domestic demand. Even if the latter expand, they will not be able to absorb the entire increase in the labor supply. It is necessary, therefore, to create the appropriate conditions for the development of export industries, thoroughly reform the labor market,[2] provide immigrants with vocational training, and bring forward the necessary infrastructure investment. Failure to take these steps could well result in a higher unemployment rate once construction activity declines, as it is expected to do, in which case much of the immigrants' human capital would be lost.

3. UNEMPLOYMENT

Unemployment increased, reaching an annual average of 10.6 percent—some 187,000 out of work. The entire increase in unemployment—approximately 29,000—can be attributed to the immigrants, among whom the number of unemployed rose from 5,000 in 1990 to 38,000 in 1991 (Tables 4.3 and 4.13). The number of unemployed in the established population fell. If the number of jobs created as a result of immigration-induced demand is higher than the number of immigrants in employment, immigration has helped to to reduce the unemployment rate of the established population.

The proportion of graduates among the unemployed has increased appreciably. This reflects both the high proportion of graduates among the immigrants (whose unemployment rate is above the national average) and the fact that the substitutability of immigrants and established residents is lower among the highly educated than among the unskilled (at least in the short run). The unemployment rate for the 35–65 age-group has also soared, reflecting both the relatively high proportion of immigrants in this age-group, with their high average unemployment rate, and the fact that it is easier for young immigrants to find work, so that their unemployment rate is only slightly higher than that of the established population. The unemployment rate of men rose slightly, reaching an average of 8.6 percent, while for women it went up sharply, reaching 13.4 percent. Data for 1991 on the depth of unemployment are difficult to interpret because immigrants, who account for a large proportion of the unemployed, have not been in the labor force for very long.

4. WAGES

The decline in business-sector wages accelerated, while public-services wages continued to rise (Table 4.9). The 3.8 percent decline in real average business-sector wages[3] reflects the response of the labor market to the exogenous increase in the working-age

[2] Private employment agencies were permitted to operate this year, the criteria for unemployment benefit were made more stringent, and the rules governing shift-work were made more flexible.

[3] Average real wages per employee post (deflated by the CPI, not including workers from the administered areas). When workers from the administered areas are included, the decline is steeper.

Table 4.9
Real Wages per Employee Post, 1981–91[a]

(percent change)

	Over preceding year						1991[b]			1985-1991[b]	
	1985	1986	1987	1988	1989	1990	A	B	1981–85	A	B
Deflated by CPI											
Public services	–14.2	4.1	7.1	9.8	0.3	0.2	1.6		0.3	7.1	
Business sector	–6.5	9.1	8.0	4.7	–1.7	–1.6	–5.4	(–3.8)	–10.2	5.6	(7.4)
Agriculture	–9.3	9.9	9.4	4.2	–0.8	–4.6	–12.4	(–5.7)	1.8	–5.8	(1.5)
Industry	–7.4	7.0	7.1	3.7	0.9	0.0	–3.2		13.8	7.4	
Water & electricity	–7.3	0.3	13.4	5.5	1.6	–1.8	0.8		7.5	11.9	
Construction	–9.8	12.8	16.3	3.4	–2.2	–4.5	–13.7	(–3.6)	–1.9	–1.4	(10.2)
Trade, restaurants, hotels	–1.9	11.5	7.8	5.5	–2.6	–2.4	–3.2		15.5	14.5	
Transport, etc.[c]	–7.3	9.2	10.1	3.5	–3.4	0.1	1.4		4.0	13.2	
Financial & business services	–4.7	11.2	5.1	8.1	–4.8	–0.9	–5.5		3.4	7.3	
Personal & other services	–9.6	17.6	14.5	6.5	–5.2	–3.4	–3.0		3.0	15.0	
Total	–9.0	7.8	7.9	6.0	–1.3	–1.0	–3.2	(–2.0)	5.9	6.1	(7.5)
Real disposable income per employee post[d]	–1.9	4.6	2.5	5.0	–0.7	1.2	–3.5		2.4	5.7	

[a] Central Bureau of Statistics data, from employer's returns to the National Insurance Institution, deflated by the CPI.

[b] Column B does not include residents of the administered areas.

[c] Transport, storage & communications.

[d] Adjusted for changes in direct taxes (income tax and national insurance contributions deducted from employees' salaries). The estimate is based on an approximation (see Table 5.9 for the estimating method).

SOURCE: Based on Central Bureau of Statistics data.

population stemming from immigration. The drop in the average wage can be ex-plained in theory by the change in the composition of employment—an increase in the share of industries with below-average wages and the decline in wages (in all indus-tries). A rough decomposition of the change shows that slightly less than half is due to a change in the composition of employment. The decline in the average wage reflects employers' response to the uneven increase in the supply of labor of a given quality—a response expressed either as lower wages for all employees or as lower wages for new employees with no change for the rest. It also reflects possible quality differences between new and established employees. It emerges that the reduction in wages of the established population explains more than 70 percent of the decline in wages,[4] indicating that the reaction of the business sector to changes in labor supply has been at least partly in accordance with economic considerations. Note, however, that the decline in wages also reflects partial retreat from the exceptional increases of 1986 and 1987.

Table 4.10
Gross Hourly Wage, 1984–91[a]

(percent change over preceding period)

	1984	1985	1986	1987	1988	1989	1990	1991
CPI (1)	335.4	336.1	56.6	20.0	16.2	20.2	17.1	19.0
COLA as percent of CPI, (3) ÷ (1)	71.7	58.4	68.6	54.0	61.7	43.1	49.7	52.6
Change in wage due to								
COLA (2)	240.6	196.2	38.8	10.8	10.0	8.7	8.5	10.0
COLA and nationwide agreements (3)	295.7	226.7	42.0	16.6	10.6	8.7	8.5	10.0
Total gross wage (4)	336.8	285.5	68.4	32.1	20.0	14.9	15.9	16.1
Rate of actual to 'agreed' wage increase (line 3)[b]	10.4	18.0	18.6	13.3	8.5	5.6	6.8	5.5
Real change[c]								
Line (2)[d]	–21.9	–31.5	–12.4	–7.6	–5.3	–9.6	–7.4	–7.5
Line (3)[d]	–9.2	–24.5	–10.3	–2.8	–4.9	–9.6	–7.4	–7.5
Line (4)	–2.5	–9.1	8.9	10.1	3.3	–4.5	–1.2	–2.6

[a] Lines 1, 2, 3, 4 = geometric mean of: the change from month *i* in the preceding year to month *i* in the current year (*i* = 1, 2, ..., 12).

[b] {[100 + (4)] / [100 + (3)] – 1}100.

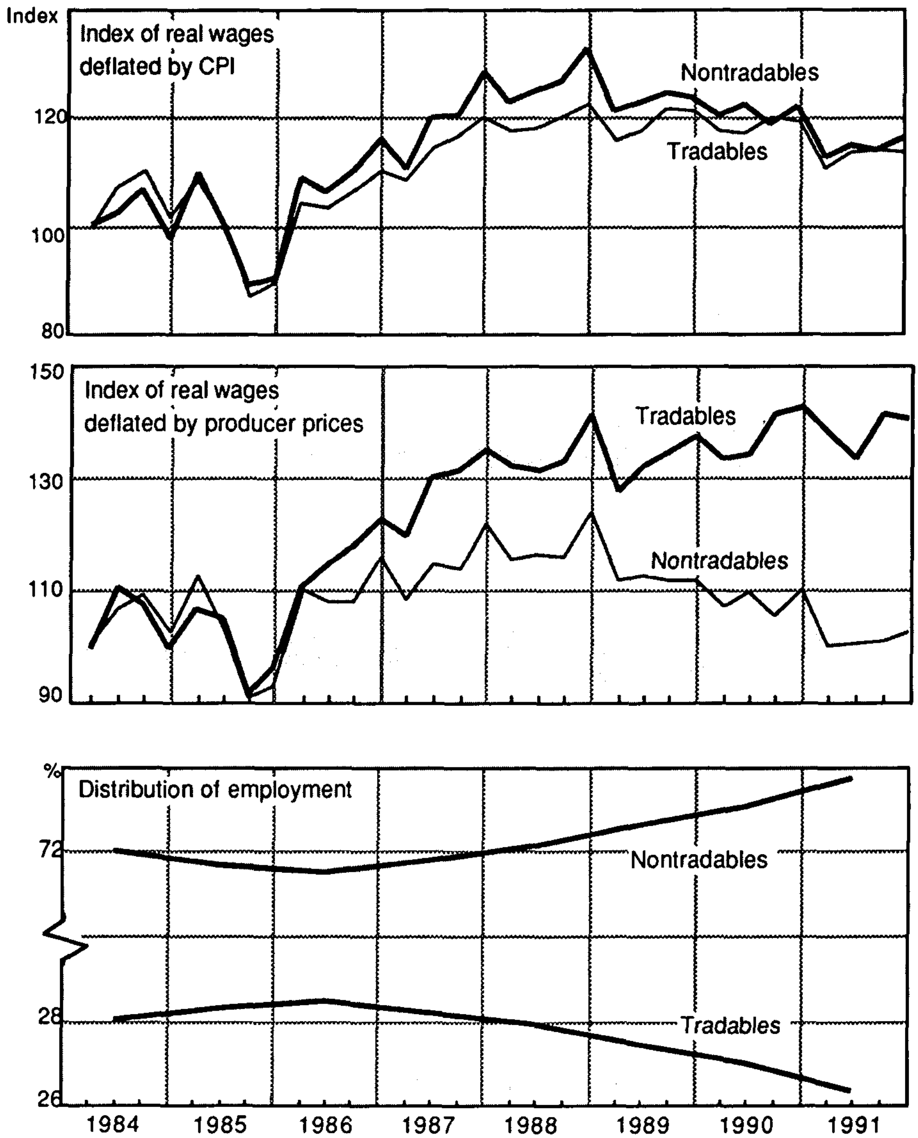
[c] Annual average of real monthly changes.

[d] Does not include the effect of changes in the minimum wage.

SOURCE: Data of the Institute for Economic and Social Research of the Histadrut (National Federation of Labour).

[4] Using the available data, it is impossible to distinguish precisely what part of the wage-decline is due to the reduction for all employees and what arises from the entry of immigrants at lower wages. Our test rejects the hypothesis that the decline in business-sector wages is due entirely to the employment of immigrants at low wages. In the extreme case, with all immigrants earning the minimum wage, real wages would have to drop by 2.6 percent for the established population for the total wage-decline to be what it is. Since some immigrants earn a wage which is higher than the minimum, the decline in the wage paid to the established population explains over 70 percent of the fall in overall wages.

Figure 4.2
Real Wages and Employed Persons, 1984–91[a]



[a] For the tradables and nontradables classification, see note a, Table 4.11
SOURCE: Based on Central Bureau of Statistics data.

Real wages fell in construction, agriculture, financial and personal services, industry, and trade, but rose in electricity, water, transport, and communications—which are monopolistic public-sector corporations, and have strong unions.

The most substantial change was in industry, where real wages (deflated by the CPI) fell for the first time since 1985. Wages declined throughout industry, with the exception of transport equipment; the latter consists primarily of the Israel Aircraft Industries, where there is an extremely powerful union. Data on two-digit industries shows that slightly more than half of the drop in the average wage was due to the decline in wages, and the rest to a change in the composition of employment.

There was a shortage of workers in construction, causing the government to sign a new wage agreement giving a 10 percent wage rise. In view of this, the decline in real wages in the industry is surprising, and may be due to the skill-mix of construction workers.

Inter-industry differences in the rates of change of wages reflect the different economic conditions confronting each industry, and the fact that there are inter-industry differences in the response of wages. The difference in basic economic conditions stems from asymmetrical increases in demand, on the one hand, and in the labor supply, on the other. The latter is due to the extent to which the human capital of the immigrants corresponds with industry's requirements. In industries which use job-specific human capital, the change in the effective supply is smaller than in industries which rely heavily on unskilled workers or on workers with high but unspecific human capital.

The rise in public-services wages, contrary to what is expected in a period of such high unemployment, indicates that in this sector wages have not responded in accordance with economic considerations to the labor-force developments of the last few years. This has been the case in the last three years, in each of which real business-sector wages fell. Most of the increases (three-year average) were in the health services, local authorities administration, and sanitation, with a slight rise in education and a steep drop in the welfare services.

The increase in real public-services wages affects the intersectoral allocation of manpower, as well as the fiscal burden of wages, at a time when public-services employment is expected to expand considerably. It could be argued that the increase in real public-services wages moderated the decline in real business-sector wages. The abolition of wage-linkages between public-sector corporations and the public services should diminish this effect to some extent. Beyond its direct effect, it is important as a precedent, increasing the likelihood that other wage-linkages, which hamper the efficient functioning of the labor market, will be cancelled.

Real wages declined at similar rates in the tradables and nontradables (excluding public services) sectors. In terms of real labor costs, there is a large intersectoral difference in their rate of change, because prices of nontradables rose faster than those of tradables in 1991 (Table 4.11, Figure 4.2). Since the economic stabilization program (ESP) of 1985, real labor costs have risen steeply in the tradables sector but have declined in nontradables, even though nominal wages increased by slightly less in the

Table 4.11
Real Wages, by Industries, 1985–91[a]

(percent change)

	Over preceding year						1991		1985–1987	1988–91[b]		1985–91[b]	
	1985	1986	1987	1988	1989	1990	A	B		A	B	A	B
Deflated by CPI													
Nontradables	–4.2	13.2	8.6	6.1	–3.0	–2.1	–5.4	(–3.0)	17.8	–4.5	(–2.1)	12.5	(15.4)
Tradables	–8.1	9.0	8.5	4.0	–0.3	–0.7	–4.5	(–3.4)	8.6	–2.0	(–0.8)	7.0	(8.3)
Public services	–14.4	4.6	6.9	9.7	0.4	0.6	1.6		–4.2	12.0		7.2	
Deflated by producer prices													
Nontradables	–4.6	10.7	4.0	2.8	–5.0	–3.7	–6.5	(–4.0)	9.8	–15.5	(–10.1)	–3.4	(–0.9)
Tradables	–5.5	16.2	10.6	5.7	0.4	5.1	0.9	(2.1)	21.5	12.3	(14.3)	38.2	(38.6)
Industry	–4.5	17.6	11.0	4.1	–2.4	5.2	1.2		24.7	6.9		33.3	
Agriculture	–9.5	4.7	5.1	6.7	11.7	1.7	–6.1	(4.9)	–0.5	14.5	(27.9)	12.4	(25.5)
Water & electricity	–13.9	13.1	22.6	9.5	–3.6	–7.8	–3.0		19.4	–4.8		13.6	
Construction	–7.2	34.8	19.9	1.5	–12.4	–16.4	–23.5	(–10.3)	50.0	–43.5	(–33.7)	–15.2	(–0.6)
Trade, restaurants, hotels	5.0	11.9	0.9	0.3	–2.5	4.5	2.1		18.6	4.9		24.0	
Transport, etc.[c]	–21.5	10.1	13.2	10.9	–3.9	–0.7	–1.3		–2.2	4.3		2.0	
Financial & business services	–4.0	–8.7	–6.2	2.5	–6.9	–2.2	–4.2		–17.8	–10.3		–26.3	
Personal & other services	0.5	–4.0	–7.9	–1.2	–3.5	–0.4	1.8		–11.2	–3.5		–14.3	

[a] Tradable industries comprise industry, part of agriculture, and shipping & aviation.
[b] Column B does not include residents of the administered areas.
[c] Transport, storage & communications.
SOURCE: Based on Central Bureau of Statistics data.

former. The similar rates of change of nominal wages over time in both sectors, despite the large difference in the movement of producer prices, are explained partly by such institutional factors as wage linkages and wage agreements.

Since 1986 the minimum wage has risen continuously as a proportion of the average wage, and this trend persisted in 1991. This hampers the expansion of employment to some extent in industries where a relatively large share of workers receive the minimum wage.

Unit labor costs in the business sector (the distributive share of labor) declined slightly in 1990 and fell by 7 percent in 1991. This decline reflects a 1.6 percent rise in labor productivity, a relatively steep increase (22 percent) in producer prices, and a 15 percent increase in nominal labor costs per man-hour. Among other things, the latter reflects the relative slackness of nominal wage-increases and exogenous changes arising from government policy. In June 1991 employers' contributions to National Insurance were reduced by two percentage points, and employers' tax by one percentage point.

The labor market will recover only if wage policy includes basic reforms of the linkage arrangements between occupations, industries, and sectors, and if the basic wage rates of some occupations are reduced.

5. IMMIGRATION

About 180,000 immigrants arrived in 1991, some 80 percent of them from the former Soviet Union and 10 percent from Ethiopia. Since the beginning of 1990 about 380,000

Table 4.12
Participation Rate and Unemployment, by Length of Residence, 1991[a]

(percent)

Length of residence (months)	Unemployment rate	Participation rate
0–6	47.0	30.0
6–12	44.0	50.0
12+	27.0	60.0
18+	17.0	60.0

[a] Annual average (approximation).
SOURCE: Central Bureau of Statistics.

immigrants have arrived, and by the end of 1991 the immigrants of 1990–91 constituted 7.5 percent of the Israeli population. About 42 percent of the immigrants who came in 1991 arrived in the second quarter, while the rate of immigration remained more or less steady in the other three. The immigrants referred to in this section are the 1990–91 arrivals. The participation rate of the immigrants (45 percent) is positively correlated with length of stay in Israel, and remained stable throughout the year (Table 4.12).

The unemployment rate among immigrants reached an annual average of about 39 percent, which is considerably above the nationwide unemployment rate. The longer immigrants are in Israel, the lower their unemployment rate, and this relationship remained quite stable throughout the year (Table 4.12). The unemployment rate for men was 29 percent, and for women 53 percent.

Table 4.13
Immigrants in the Labor Market, Principal Indicators, 1991

	Annual average	1991 I	1991 II	1991 III	1991 IV
Thousands					
Total	316	238	310	343	375
of which Of working age	215	160	200	240	260
In labor market	98	59	88	113	133
Percentage					
Participation rate					
Total	45	37	44	47	51
Men	56	50	57	54	61
Women	35	25	33	40	42
Thousands					
Total employed	60	34	54	68	85
Unemployed	38	25	33	44	48
Percent					
Unemployment rate	39	42	38	39	36
Men	29	30	27	30	27
Women	53	60	54	51	47
Proportion of immigrants in					
Population	6.3	4.9	6.2	6.8	7.5
Working-age population	6.3	4.8	5.9	6.9	7.4
Labor force	5.5	3.5	5.0	6.3	7.3
Employed persons	3.5	2	3	4	5
Unemployed	19.5	15	18	21	24

SOURCE: Central Bureau of Statistics.

Although immigrants of working age constituted 6.3 percent of the working-age population and 5.5 percent of the civilian labor force, they accounted for about 20 percent of the unemployed and for only 3.5 percent of all employed persons in 1991. The proportion of immigrants in employment rose during 1991. The concurrent increase in the employment and unemployment rates reflects the distribution of immigration over time, the rate at which immigrants join the labor force, and increase in the proportion of immigrants of working age.

The immigrants are older than the established population, have a higher level of education, and a higher proportion of graduates. There are relatively fewer young people and more old people, and the higher proportion of immigrants of working age accounts for their high participation rate. A greater proportion of the immigrants have scientific and academic training or belong to the liberal and technical professions, while fewer of them have experience in clerical, sales, and services occupations.

There is a lower proportion of scientists, members of the liberal and technical professions—especially physicians, whose ratio dropped from 6.2 to 4.2 percent—among the immigrants who came in 1991 than among those who came in 1990. This shift in the occupational distribution persists, even when the Ethiopians who immigrated to Israel in 1991, and among whom the proportion with scientific or technical training is very low, are excluded.

Table 4.14
Age Structure of Israelis and Russian Immigrants

(percent)

	Israelis	Immigrants		
	1990	1990	1991	1990–91
Age group				
0–19	40.4	30.1	31.3	30.7
20–44	35.8	40.4	37.4	39.0
45–64	14.7	17.6	18.8	18.1
65+	9.1	11.9	12.5	12.2
Total	100.0	100.0	100.0	100.0

SOURCE: Central Bureau of Statistics.

The difference in occupational distribution between the immigrants and the established population has both long- and short-term implications for employment. Because of the large number of immigrants in certain occupations—particularly engineering and medicine—they account for a large proportion of the labor force in these occupations. Thus, while 9,800 physicians immigrated, there were 16,400 physicians in the established population. Even allowing for differences in standards and definitions of occupations, during 1991 there was already excess supply in these occupations, with considerable unemployment and occupational change among the immigrants.

The occupational distribution of immigrants, which indicates the extent to which their human capital is being preserved and utilized, shows a consistent rise in the proportion employed in scientific, technical, and liberal professions in the first three quarters of 1991 (from 16 percent of employed immigrants in 1991:I to 23 percent in 1991:III), levelling off in 1991:IV. This proportion is significantly lower than the immigrants' pre-immigration occupational distribution (Table 4.15). A comparison with Israelis shows a very similar proportion employed in scientific, technical and liberal professions. Thus, the employment of immigrants reflects the structure of the economy, and there is as yet no evidence of any structural change which will adapt it to their high human capital.

Table 4.15
Occupational Distribution and Education Indicators of Immigrants and Israelis, 1990–91[a]

(percent)

	Immigrants			Israelis
	1990	1991	1990-91	1990
Scientific workers	38.4	34.5	36.6	8.5
of which Physicians	6.2	4.2	5.3	1.1
Engineers	24.6	22.0	23.4	2.0
Other professional, technical, and related workers	34.2	32.3	33.3	16.4
Managers	0.4	0.3	0.3	5.2
Clerical etc.	4.1	4.3	4.2	16.9
Sales, etc.	2.5	2.6	2.6	8.7
Service	3.9	4.1	4.0	13.0
Skilled, in industry	12.6	14.2	13.4	3.8
Unskilled, in industry	2.8	4.7	3.7	23.5
Other	0.5	3.0	1.6	4.0
Total	100.0	100.0	100.0	100.0
Thousands				
Total	100.7	84.7	185.4	1,491.9
Years of education				
9–12	31.4	32.5	31.9	48.3
13+	55.2	48.5	52.1	35.5

[a] As declared by the immigrant upon arrival.
SOURCE: Central Bureau of Statistics.

The industrial distribution (Table 4.7) shows that a much higher proportion of immigrants than Israelis—36 percent—was employed in industry. A smaller proportion was employed in construction, which expanded more than any other industry in 1991. A lower proportion of immigrants than Israelis—18 percent—was employed in the public services, but this trend may change if unemployment rises among the immigrants.

Table 4.16
Employed Immigrants, by Occupation in Israel, 1991

(percent)

	1991				Israelis
	I	II	III	IV	1990
Scientific, academic, and liberal professions	16	20	23	22	25
Skilled workers in industry and construction	35	37	31	31	24
Service workers	25	23	25	23	13
Other	24	20	21	24	38

SOURCE: Labour Force Surveys of the Central Bureau of Statistics.