

Chapter 4

Employment and Wages¹

In 1999, the average rate of unemployment rose to 8.9 percent, from 8.6 percent in 1998. The rise reflected a gradual increase in the first three quarters of the year, when demand for labor grew slowly while the expansion of the labor supply accelerated. The increase in employment accelerated during the year, and was reflected by a decline in the unemployment rate in the last quarter. Despite higher unemployment, unit labor cost in the business sector rose by 2.1 percent in 1999. The real wage in the business sector went up by 3.4 percent, while that in the public services edged down by 0.3 percent. Towards the end of the year, public service employees received a 4.8 percent wage rise in wage agreements for 1997 and 1998.

As in previous years, the main contribution to the rise in unemployment again came from the construction industry and related industries, but in 1999, for the first time, education-intensive industries also contributed. Despite the rise in unemployment, an increase in the number of workers from the Palestinian Authority and administered areas was evident, with just a small fall in the number of foreign workers.²

Israel's labor market was greatly affected during the 1990s by factors and events unique to Israel, the prime one being the absorption of the influx of immigrants, and also by structural, technology-oriented global trends and the opening of markets. Following a rise in the unemployment rate in 1990–92, GDP and employment started growing rapidly, reflected by a continuous decline in the rate of unemployment between 1993 and 1996. At the end of the decade, falling demand and a change in its composition led to a rise in and deepening of unemployment.

The rate of increase of the real wage in the business sector, which was quite slow in the early 1990s, accelerated from 1997 despite the slack in the labor market. The real wage in the public services, which hardly changed from 1988 to 1993, rose by 20 percent between 1993 and 1996, due to generous wage agreements, and remained more or less steady since then.

¹ This chapter contains a more detailed discussion of employment and wages than in past years, and includes a long-term analysis.

² The Central Bureau of Statistics (CBS) recently updated its estimates of the number of non-Israeli workers, taking into account the data of the manpower survey performed by the

1. MAIN DEVELOPMENTS

The slack in the labor market continued in 1999. In the first three quarters labor demand rose slowly; at the same time the average rate of participation increased gradually, leading to a relatively rapid growth of the labor supply. As a result, the rate of unemployment rose continuously, and reached 9.1 percent in the third quarter. The faster rise in employment in the fourth quarter led to a decline in the unemployment rate, in spite of a sharp increase in the rate of participation.

The number of Israeli employees rose by 3.1 percent in 1999, faster than the increase in the working-age population. The number of non-Israeli employees (foreign workers and workers from the Autonomy and the administered areas) in the business sector rose at a similar rate, so that the share of non-Israeli workers in the total number of business sector employees remained unchanged.

The changes in the labor market did not occur uniformly during the year (Table 4.1): in the first three quarters the slack demand persisted, reflected in the slow rate of increase in employment and labor input, while the rise in the participation rate resulted in more rapid expansion of the civilian labor force. The rise in employment accelerated in the fourth quarter, and the rate of unemployment fell despite the increase in the labor supply. It is still too early, however, to determine to what extent the developments in the last quarter of 1999 signify a change in the trend and the beginning of a recovery from the recession, and to what extent they will persist.

In 1999, the construction industry and related industries again made the major contribution to the rise in unemployment, but unlike in the past, several education-intensive industries, mainly the 'other business activities' industry (legal services, bookkeeping and accountancy, architecture, engineering, etc.) also contributed to the rise of unemployment. The contraction of employment in these industries followed several years when the rapid increase of employment in them had helped to offset the rise in unemployment. Among the industries in which employment expanded rapidly in 1999 were some which are not education intensive, including some which had made a significant contribution to the rise in the unemployment rate in the last few years (textile and clothing, wood and wood products and furniture, transport, storage and communications, and personal services).

Despite the weakness of the labor market and the 1.9 percent fall in productivity (net domestic product per man-hour),³ the real business-sector wage per employee post rose by 3.4 percent. The rise in GDP prices relative to the CPI partially offset the

Palestinian Central Bureau of Statistics. According to the update, the number of workers from the Autonomy and the administered areas is higher than previously thought, while the number of foreign workers is lower than previously estimated. The estimates of various bodies regarding the number of non-Israeli workers in general, and foreign workers in particular differ widely. Other estimates of the number of foreign workers (e.g., that of the Manpower Planning Authority in the Ministry of Labor and Social Affairs) are significantly higher than that of the CBS.

³ In Chapter 2, labor productivity is the *gross* domestic product per man-hour.

The rise in employment accelerated in the fourth quarter, and the rate of unemployment fell despite the increase in the labor supply.

In 1999, education-intensive industries also contributed to the rise in unemployment.

Table 4.1
Principal Labor Market Indicators During 1999

	(percent)							
	Increase or decrease from same quarter of 1998 ^a				Increase or decrease from previous quarter ^b			
	I	II	III	IV	I	II	III	IV
Working-age population	2.6	2.6	2.7	2.9				
<i>of which: Immigrants^c</i>	7.9	27.2	49.2					
Participation rate in civilian labor force ^d : Total	53.3	53.3	54.2	54.5	53.5	53.6	53.7	54.3
Women	46.6	46.8	47.6	48.1	46.7	47.0	47.4	48.0
Men	60.4	60.1	61.2	61.2	60.8	60.6	60.4	61.0
Civilian labor force	2.7	3.0	3.3	4.9	1.1	0.7	1.0	1.9
Israelis employed	2.6	3.3	2.3	4.2	0.6	0.5	0.8	2.1
Business-sector employees	1.7	3.0	2.4	5.1	1.6	0.4	0.7	2.2
General government employees	4.8	4.1	1.9	2.0	-1.4	0.3	1.0	2.0
Part-time employees	4.8	16.5	-3.9	-13.1				
Full-time employees	0.9	-0.6	4.6	12.6				
Average weekly hours worked per business-sector Israeli employee	-1.7	-0.3	0.5	4.0	0.1	1.1	1.2	0.0
Israeli labor input in business sector	0.0	2.8	3.0	9.4	1.7	1.5	1.9	2.2
Unemployment rate	8.4	8.6	9.7	8.8	8.7	8.9	9.1	8.9
Number of unemployed persons	3.5	-0.1	14.2	13.6	7.0	3.6	3.1	0.1
Real wage per employee post – Total	-0.1	1.6	0.6	7.0				
Business sector	1.0	2.6	2.3	7.7				
General government	-2.4	-0.7	-3.4	5.6				

^a Unadjusted data.

^b Seasonally adjusted data.

^c Immigrant who arrived in the period.

^d Actual level, not rates of change.

SOURCE: Central Bureau of Statistics.

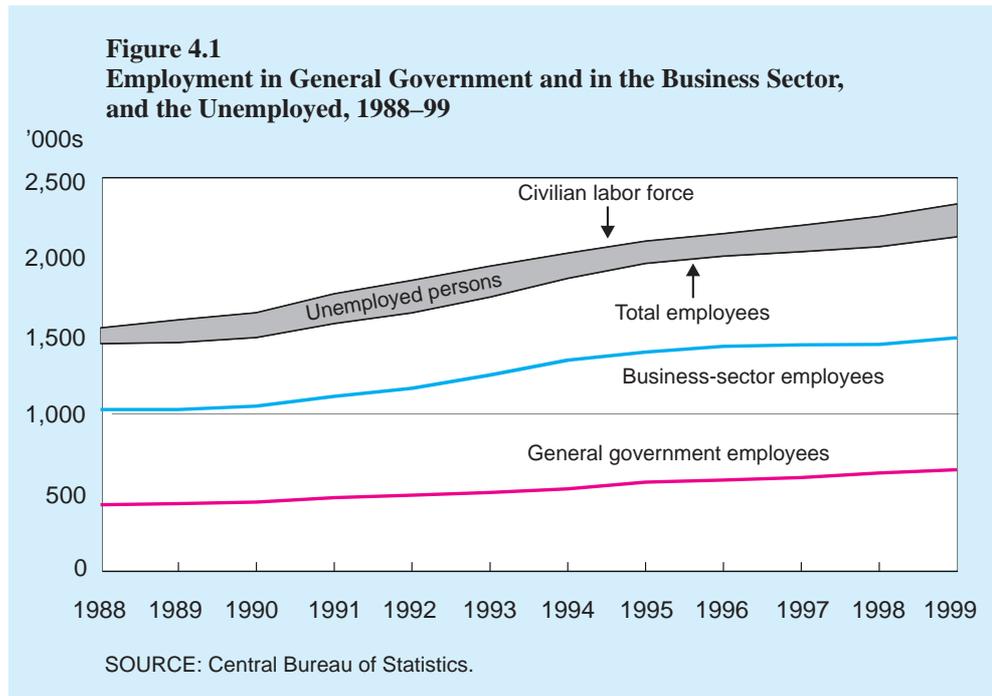
wage rise and the productivity decline, and labor cost went up by 2.1 percent. The real wage per employee post in the public services dipped by 0.3 percent, but towards the end of the year public-sector wage agreements were signed granting employees retroactive wage increases of 4.8 percent. Part of the rise of the real wage may be due to a change in the inter- and intra-industry composition of employment (because of the dismissal of workers, the slowdown in the absorption of new workers, etc.), but it seems reasonable to assume that the rise in the real wage in the last few years, despite the continued slack in the labor market, also reflects various rigidities in the wage-setting mechanism.

Despite the rise in the rate of unemployment, business-sector unit labor cost rose by 2.1 percent.

2. THE BACKGROUND: THE LABOR MARKET IN THE 1990s

The influx of immigrants which began at the beginning of the 1990s and progress in the peace process were the main factors which helped the economy recover from the

recession it was suffering at the end of the 1980s. Nonetheless, despite rapid GDP growth in 1990–92, the rate of unemployment continued to climb, due to a sharp increase in the labor supply. In 1993, the rate of unemployment started falling, and continued to do so until the third quarter of 1996. At the end of 1996 the trend reversed: as a result of the slowdown in demand and its changed composition, Israel's economy entered into a prolonged recession, reflected by a rise in the rate and depth of unemployment.



In the 1990s great changes occurred in Israel's labor market. Demographic changes, starting with the influx of immigrants, caused a major change in the size and composition of the civilian labor force, and also in the structure of demand. The ongoing process of globalization boosted structural and technological change which had started in the 1970s, and brought about a basic change in the composition of labor demand. The organizational and institutional structure of the labor market changed, too: with the contraction of the share in employment of the Histadrut (the General Federation of Labour) and the government, and the rise in the share of employees with personal contracts and those employed via private manpower companies, the bargaining power of factory-based unions grew, and that of non-unionized workers and of national unions fell. Allowing the employment of foreign workers, who initially replaced workers from the Palestinian Autonomy and the administered areas, also contributed to the change in the composition of employment. The importance of collective and country-wide arrangements in the wage-setting mechanism declined, and that of agreements at plant level increased. These changes helped to make the wage-setting mechanism more flexible, and this was expressed *inter alia* in the loosening of the tight connection

which existed in the 1980s between wages in the private and the public sectors. From 1997 onwards, however, when there was a marked slowdown in demand and a rise in the rate of unemployment, a continuous increase in labor cost was evident, which probably indicates rigidities which weaken the link between labor cost and the economic situation.

Table 4.2
The Labor Market, 1988–99

	(change over previous year, percent)						
	1988-89	1990-91	1992-95 ^a	1996 ^b	1997	1998	1999
Population (annual average)	1.7	4.7	2.9	2.5	2.5	2.4	2.5
Working-age population	2.0	5.5	3.3	3.0	2.7	2.7	2.7
Participation rate in civilian labor force ^c	51.7	51.6	53.1	53.6	53.4	53.4	53.8
Civilian labor force	3.6	5.1	4.4	2.2	2.5	2.6	3.5
Total employees	1.7	3.9	5.8	4.3	1.8	1.9	3.1
Israelis	2.0	4.1	5.6	2.4	1.4	1.5	3.1
Non-Israelis	-1.9	0.9	9.2	28.8	6.1	5.3	3.1
General government employees	3.0	4.5	4.0	2.5	2.9	5.1	3.1
General government labor input	3.4	3.8	4.7	2.6	4.2	3.5	4.5
Business-sector employees	1.3	3.7	6.5	5.0	1.4	0.7	3.1
Israelis	1.6	4.0	6.2	2.5	0.7	0.2	3.1
Non-Israelis	-1.7	0.5	10.2	28.9	6.3	5.0	3.1
Non-Israelis' share of total ^c	9.0	8.6	8.8	11.7	12.3	12.8	12.8
Business-sector labor input	1.0	3.3	8.3	6.2	1.5	-0.2	3.2
Israelis	2.5	3.4	7.4	2.7	0.7	-1.1	3.6
Non-Israelis	-12.1	1.4	16.6	35.4	6.2	5.4	0.7
Real wage per employee post	2.3	-2.0	1.6	1.6	2.4	2.2	2.2
Business sector	1.5	-3.3	0.6	1.5	3.5	3.0	3.4
General government	4.9	0.9	4.0	1.9	0.0	0.4	-0.3
(Real) minimum wage	8.1	-0.6	-0.5	2.5	6.1	5.4	2.2
Business-sector unit labor cost	-0.9	-4.6	0.6	2.4	1.9	0.1	2.1
Net business-sector domestic product per man-hour	1.1	4.6	-1.0	-1.3	0.7	2.2	-2.1
Unemployment rate	7.7	10.1	9.0	6.6	7.5	8.6	8.9

^a The Central Bureau of Statistics (CBS) definitions and sample changed in 1995. Data prior to 1995 are according to the old definitions and sample.

^b According to the new CBS definitions and sample. From 1996, the data are based on estimates from the 1995 census and a new method of extrapolation. For 1996 and 1997 these data differ slightly from those in Chapter 2.

^c Actual levels, not rates of change.

SOURCE: Central Bureau of Statistics.

The main force behind economic growth at the beginning of the 1990s derived from the influx of immigrants and their rapid absorption in employment. They affected the composition of demand (a rise in demand for real estate and consumer durables) and the size and composition of the labor supply. Nine hundred and thirty one thousand immigrants arrived in Israel since 1990, of whom 718,000 are of working age. The composition of the latter differs significantly from that of the established population: among the working-age immigrants, youngsters (aged 18–34) constitute a smaller share

The influx of immigrants, which was the main force behind the economy's recovery from the recession at the beginning of the 1990s, had a significant effect on both the demand side and the supply side of the labor market.

than among the established population, while the cohort of those aged 55–64 years was higher among immigrants. The average participation rate among immigrants in most years was above that of the established population (the difference being most pronounced among women), and is rising the longer they are in Israel. The average level of education is higher among immigrants than among the established population, but their specific human capital is lower, as they need retraining to meet the requirements of Israel's labor market.

Most employed immigrants (63.9 percent)⁴ are educated above secondary-school level, but only 24.4 percent are employed in academic, professional or technical positions. The employment situation of immigrants who arrived in 1990–91 is better than the situation of those who immigrated thereafter,⁵ but even so, most immigrants with higher education who arrived in 1990–91 are still employed in occupations which do not require academic qualifications.

The rate of unemployment among immigrants (Table 4.A.4) rose considerably in the years 1997–99. This followed a continuous decline in immigrant unemployment from 1990–96, and occurred at a time when immigration was falling. Unemployment is higher among immigrants than among the established population, but is declining as the time since their arrival in Israel increases.

In most industries, the average wage of immigrants is lower than that of comparable Israelis (regarding age, education, occupation), but their returns on education and age are lower than those of veterans. The CBS Survey of Income⁶ does show, however, that immigrants' average wage rose much faster in the 1990s than did the wage of veterans. The absorption of immigrants in employment at relatively low wages at the beginning of the 1990s initially reduced the real business-sector wage, and thereafter helped to moderate its rate of increase. Since 1997, the real wage in the business sector has accelerated, and this may have been partly due to the high rates of increase of immigrants' wages. Immigrant absorption at the beginning of the decade also affected the wages of established Israelis: their return on education declined temporarily in 1993–95, whereas the return on age for veteran Israeli males rose considerably.⁷ The presence of immigrants in an industry was found to have a significant negative effect on the industry premiums of the established population.

Side by side with immigrant absorption, long-term trends in the labor supply of the established population continued during the 1990s: women's rate of participation rose,

⁴ The data are 1998 averages.

⁵ The improved employment situation of the immigrants who came at the start of the influx may derive from their having different characteristics from those of later arrivals, and not from their acclimatization in Israel.

⁶ The National Insurance Institute, whose data are used as a basis for the analysis of wage developments, does not keep separate records of wages of immigrants and those of the established population, so that the effect of the rise in immigrants' wages on the average wage cannot be quantified.

⁷ See R. Klinov (1999), *Changes in the Wages Structure—Inter- and Intra-Industry Wage Differentials: Israel 1970–1997*, The Institute for Socioeconomic Research, Discussion Paper 4.

together with the continued fall in that of men; as the baby-boom generation⁸ matured, the share of 45–54-year-olds in the population and in the labor force increased, and a rise in the share of those with higher education is also evident.

Women’s rate of participation has risen gradually and continuously over the last thirty years, from about 30 percent in 1969 to about 47 percent in 1999. Men’s participation rate followed a downward trend throughout that period, from 70 percent to 60 percent (Table 4.A.2). The increase in women’s participation rate reflects changing social norms regarding women working, concomitant with the rise both in their level of education and in their age at marriage. Another explanation may be the “extra breadwinner” effect—women’s rate of participation spurted in years when the rate of unemployment rose, as having a husband out of work raised their incentive to join the labor force.

The downward trend in men’s rate of participation is not confined to Israel, and is evident in most of the OECD countries. Nevertheless, the rate of participation of Israeli men is among the lowest in industrialized countries. Berman and Klinov⁹ found that like in the US, the increase in nonparticipation among Israeli males aged 25–54 was partly the result of the rise in the share of those unable to work (mainly due to the more flexible criteria for receipt of disability allowance), and from the greater share of workers who have despaired of finding employment (the “discouraged worker” effect). One uniquely Israeli aspect is the rise in the share of those studying in Talmudical (religious) colleges (Yeshivot), which made a significant contribution to the fall in the participation rate. The share of the population serving in the Israel Defense Force, which increased in the 1970s, declined in the 1980s, and does not seem to have had a great effect on the rate of participation.

During the 1990s, the share in the working-age population of those aged 45–54 years rose markedly, and its share in the civilian labor force went up even faster, due to the rise in the participation rate of women in that age group. These “baby-boomers” currently constitute about 21 percent of the population (up from 15 percent in 1990), while the share in the labor force of those under 45 is declining constantly. The share in the working-age population of those with higher education has risen continuously, partly due to the influx of immigrants, many of whom had such education. The share of those with higher education in the civilian labor force is even more striking, as concurrently with the increase in their share in the population, their participation rate also rose, while the rates of participation of those with lower levels of education have a downward trend. The increase in the share in the labor force of those with higher education served to reduce frictional unemployment and to prevent a sharper rise in the natural rate of unemployment (Box 4.1).

During the 1990s the upward trend in women’s rate of participation and the downward trend in men’s continued.

⁸ Those born after World War II, in the years 1945–50.

⁹ R. Klinov and E. Berman (1997), *Human Capital Investment and Nonparticipation: Evidence from a Sample with Infinite Horizons*, The Maurice Falk Institute, Discussion Paper No. 97.05.

Box 4.1: The Effects of Education on Workers' Performance in the Labor Market

Many studies carried out in Israel and abroad have shown that a worker's level of education has far-reaching effects on his performance in the labor market, his decision whether to participate in the labor force, his chances of finding employment, and the wage he can expect to earn. Due to technological, demographic, and other structural changes, the gap between the performance of those with higher education and those without is constantly widening.

The share of those with higher education in the working-age population in Israel has been increasing steadily, with their participation rate remaining stable, while that of those with lower educational levels has been falling¹ so that the share in the civilian labor force of the higher educated has risen considerably. An analysis of the composition of employment has shown that the share of those with at least thirteen years of education has risen, while the share of those with 11–12 years of schooling has remained constant, and that of workers with lower levels of education has declined. A study by Flug, Kasir, and Ribon² shows that the main change in the composition of employment occurred as a result of skill-biased technological changes—reflected in the increase in the share of those with higher education within industries—while the change in the industry composition during the 1990s had only a limited effect on the composition of employment.

The rates of unemployment in groups with different levels of education were affected mainly by the cyclical factors which reduced unemployment in 1992–96 and raised it thereafter. Nevertheless, a rise in the share of the higher educated in unemployment during the 1990s can be discerned, together with a fall in the share of those with lower or medium levels of education (despite the widening gap between the low rate of unemployment among the higher educated and the high unemployment rate among those with less education). These developments show that the effect of the factors which acted to reduce the labor supply of those with lower levels of education (i.e., the fall in both their share of the population and their rate of participation) was stronger than the effect of factors acting to reduce employment.

The change in the composition of labor demand in Israel was accompanied by a rise in the return on education, as it was in many other countries (leading to

¹ The decline in the participation rate of those with low levels of education derives *inter alia* from those who drop out after despairing of finding employment due to the fact that their qualifications become inappropriate to the requirements of the market, thereby lowering their chances of finding work.

² K. Flug, N. Kasir, and S. Ribon, *Unemployment and Education in Israel: On Business Cycles, Structural Changes, and Technological Changes, 1997–1985*. Not yet published.

the conclusion that the change in the composition of employment arises mainly from a change in the demand structure rather than from a change in the composition of the labor supply). Mealem and Frisch³ found that in the 1980s and 1990s the wage differential between skilled and unskilled workers widened considerably, and that between veteran Israeli workers with higher education and those with a low level of schooling increased by a similar amount. The rise in the return on education and skill is due mainly to the rapid increase in productivity in the advanced industries, and a relatively slow rise in productivity in industries which are not skilled-labor intensive. Another explanation for the differential is the rapid rise of prices of high-tech goods compared with prices of traditional goods. Klinov⁴ points out that the return on education and age rose, and by dividing changes in the return on education into inter- and intra-industry effects it can be seen that the rise in the return on education derived mainly from macroeconomic forces, and not industry-specific ones.

In the light of the considerable rise in inequality and the great effect which the level of education has on performance in the labor market, the chances of different groups obtaining higher education—and thereby their chances of improving their relative position in the labor market and in society—should be examined. Research shows⁵ that despite Israel's progressive system of transfers, the gaps between rates of success of pupils from different socioeconomic strata persists (see Box 5.2 in the Bank of Israel Annual Report, 1998).

³ Y. Mealem and R. Frisch, *The Rise in the Return on Education in Israel, 1976–97*. Bank of Israel Discussion Paper.

⁴ See footnote 7 above.

⁵ V. Lavi, *Endogenous School Resources and Cognitive Achievement in Primary School in Israel*, The Falk Research Institute Discussion Paper No. 95.03.1 (Hebrew).

During the 1990s, the share in the population and in the civilian labor force of residents of development towns rose. Part of this rise may be attributed to the fact that many new immigrants were settled in them. Rates of unemployment in development towns are higher than the national average. The macroeconomic process which contributed to the decline in the average rate of unemployment between 1992 and 1996 had less effect in lowering unemployment in the development towns, and the gap between the average rate of unemployment and the rate in those towns widened. On the other hand, the slowdown in growth at the end of the decade had a less pronounced effect on the development towns, so that the steep rise in the overall average rate of unemployment in the years of the recession was reflected by a narrowing of the gap between them.

As well as the far-reaching changes affecting the labor supply, there were equally significant changes in the structure of demand for workers and in the composition of

The share in the labor force of those with higher education rose constantly, helping to reduce frictional unemployment.

employment. These derived from the changes in the size and composition of domestic demand—mainly due to the influx of immigrants—from the global trends in demand, which had a stronger effect on Israel's economy due to the liberalization process, and from skill-biased technological changes within many industries.

The rise in demand for real estate in the wake of the heavy immigration increased the share of the construction industry and related industries in employment and GDP in the first half of the 1990s, while the relative shares of high-tech and traditional industries remained unchanged. The structural change switched direction in 1997, and reverted to the trends prevailing prior to the influx of immigrants—a rise in the share of advanced industries, commerce, services, and transport and communications, with a marked decline in the shares of manufacturing, agriculture and construction.

In the last few years, employment in education-intensive industries, mainly high-tech, expanded at a faster rate than did the labor force, offsetting some of the rise in rates of unemployment in those years. Employment in commerce and services, too, particularly business services, grew rapidly, also helping to offset some of the higher unemployment. The rapid rise of employment in health and welfare services was prominent among the service industries, and may be due to the higher proportion of the elderly in the population.

As immigration declined, so did demand for labor in the construction industry, parallel to the general slowdown in demand. In 1997–99, the contraction of employment of Israelis in construction and associated industries accounted for the greatest increase in unemployment. The slowdown in demand was also evident in other traditional industries, among them textile and clothing,¹⁰ leather and leather products, and diamonds. Employment in these industries was more affected by the increase in the minimum wage than was employment in other industries, as a result of the large share of their employees who are paid the minimum wage. The relocation of some production to Israel's neighboring countries, made possible by the signing of peace agreements, also played a part in further reducing demand for unskilled Israeli workers in the traditional industries. On the other hand, employment in these industries was less affected by the entry of foreign workers, as only few permits to employ foreign workers were issued to factories in manufacturing.

Within industries, skill-biased technological changes led to higher demand for skilled workers and workers with higher or technological education, and to a sharp decline in the demand for unskilled workers. These changes were the main cause of the widening gap between the rates of unemployment among those with higher education and those without (see Box 4.1).¹¹

¹⁰ In 1999, employment in textile and clothing increased by 5.6 percent, after falling significantly in previous years, the increase apparently due to the rise in foreign demand (exports of this industry rose by 10.8 percent). Nevertheless, the level of employment in textiles is still far below its level at the beginning of the 1990s. The data in Chapter 2, obtained from industry indices, show a slower expansion of employment than the rates quoted in this chapter.

¹¹ In 1999, the gap narrowed considerably. For a more detailed discussion, see the section in this chapter on Unemployment.

The fall in employment in the traditional industries, particularly in construction, was the prime cause of the increase in the rate of unemployment in the last few years.

Several processes were involved in the structural and institutional change in the labor market in the 1990s: the reduction of the government's direct and indirect involvement in the labor market in general and in wage agreements in particular, which served to increase the importance of plant-level agreements at the expense of collective ones; the rapid expansion of the labor supply, side by side with the fall in the share of the government and Histadrut sector and the rise in the share of employees with personal contracts or employed via private employment agencies; the change in the structure of the Cost of Living Allowance (COLA) accord, so that it compensates workers for the unexpected part of price increases, but leaves room for negotiation over compensation for the expected part; the more rigorous criteria determining entitlement to unemployment benefit; allowing the employment of foreign workers, and the increased share of non-Israeli employees. All the above contributed to the greater flexibility of the wage-setting mechanism, and the weakening of the link between wages in different sectors and industries. This greater flexibility is evident in the weakening of the link between the wage in general government and that in the business sector, and the stability of the business-sector real wage in the first half of the 1990s despite the rapid rise in employment¹² and despite the considerable increase in the real wage in the public sector. Nevertheless, a complex system of wage indexation between different industries still exists in Israel, which leads to rigidity in the wage-setting mechanism. Linking the minimum wage to the average wage has a similar effect.

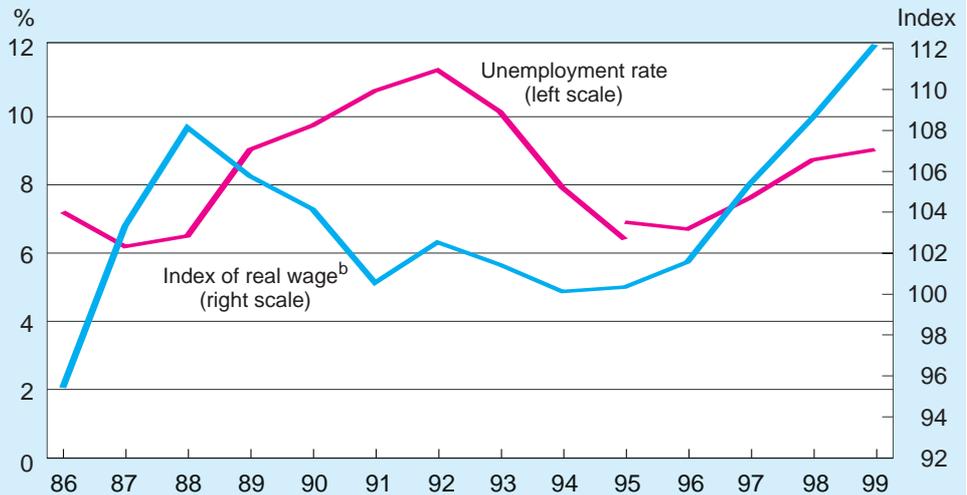
The various rigidities in the wage-setting mechanism are reflected in the continuous rise of the real business-sector wage at a faster rate than the rise in productivity or in GDP prices, parallel to the continuous rise in unemployment (Figure 4.2). During the recession of the last three years, unit labor cost rose by a cumulative 4 percent, apparently making an additional contribution to the contraction of employment and to the rise in the unemployment rate. Part of the increase in the average real wage may be attributed to the method of calculation, which could lead to a rise in the wage just at a time when activity slows down: workers move from industries with a low average wage to those where it is high (or within the industries themselves), low-wage workers are dismissed,¹³ and there is a fall in the share of new workers (who are normally employed at low initial wage levels, due to the slowdown in the growth of employment). As a result of the method of calculation, all these would be reflected in a rise of the average wage. This methodological effect cannot be quantified accurately, but it may be assumed that it does not fully explain the rise in the real wage.

Despite the structural and institutional changes which acted to make the wage-setting mechanism more flexible, many rigidities remained; in the last few years, in spite of the persistent slack in the labor market, these were expressed in a rise in labor cost.

¹² Stability of the real wage in the business sector in those years was also due to the entry of many immigrants at low initial wages.

¹³ If not for the rigidities, the full effect of the change in the composition of employment would be expressed as a rise in productivity, and labor cost would remain unchanged. When the wage is affected by rigidities, a change in the inter- or intra-industry employment structure may result from considerations other than those of efficiency, so that it is only partially reflected in increased productivity.

Figure 4.2
Index of the Business-Sector Real Wage per Employee Post^a and
the Unemployment Rate, 1986–99



^a Excluding workers from the Palestinian Autonomy and the administered areas.

^b 1994 = 100. In 1995, the Central Bureau of Statistics definition changed.

SOURCE: Central Bureau of Statistics.

The delayed and limited reaction of wages to the economic situation is due to three main factors: the fact that wage agreements are signed in advance covering long periods of time, the effect of organizational structure on labor supply, and other structural and institutional factors. Regarding the first factor, some wage agreements may have been signed before the situation regarding the recession and unemployment had become clear. The slowdown in labor demand and the slow rate of growth have not yet been reflected in the wages paid in accordance with these agreements (this applies particularly to the first years of the recession). Also, high inflation expectations at the time the agreements were signed led to higher nominal wages being set in those agreements. The actual rate of inflation, which was lower than expected, contributed to the rise in the real wage. Furthermore, employers may also have signed agreements with the anticipation that productivity (product per man-hour) or GDP prices would rise, so that the decline in productivity resulted in a rise in unit labor cost.

Unionization of workers increases their bargaining power, and enables them to demand a wage higher than that which would be determined under full-employment equilibrium conditions. The rise in the power of industry-specific unions at the expense of nation-wide ones may also have contributed to higher wages being agreed, as national unions take unemployment into account when negotiating, whereas industry-based ones act on behalf of their working members.

In Israel there are country-wide and plant-level arrangements and laws which make the wage-setting mechanism more rigid. Thus, for example, the indexation between wages in different sectors and industries leads to a rise of wages in industries in which it is not economically justified. The indexation of the minimum wage to the average wage has a similar effect (see Box 4.3).

The government's welfare policy has a certain effect on the labor market—on employment and the rate of unemployment, and indirectly, also on the average wage. For example, the amount of unemployment benefit and the period of entitlement have an effect on the intensity of the search for employment by the unemployed, and on the wage they demand as a condition for accepting employment, so that unemployment benefit will also affect the average wage, albeit indirectly. Employment Service and National Insurance Institute data indicate that despite the tightening up of the criteria for the receipt of unemployment benefit during the 1990s (described in Box 4.2), and more rigorous enforcement in the last few years, unemployment benefit has risen gradually and continuously during the decade relative to the average wage, and the share of work-seekers and claimants for unemployment benefit among the unemployed has also risen.

Box 4.2: Unemployment Insurance—an International Perspective

The Unemployment Insurance Law is intended to ensure a minimum income for those involuntarily unemployed, and to allow them a period in which to search for employment, a period in which they can bring their qualifications into line with the requirements of their potential positions, thereby improving long-term employment.

In Israel, the Unemployment Insurance Law was passed in 1973, since when several amendments have been introduced, including some temporary ones in the form of Provisional Directives. The main parameters of the law define, as they do in the laws of other countries, the qualifying period (i.e., the period in which the worker was employed prior to becoming unemployed, and during which he paid unemployment insurance), the replacement ratio (the ratio of the level of unemployment benefit to the wage for which unemployment insurance was paid),¹ and the maximum period of entitlement to unemployment benefit (which depends on the age of the unemployed person and the number of his dependents).

The Economic Arrangements Law passed by the Knesset at the end of December 1999 changed several of the parameters of the Unemployment Benefit Law: the period entitlement to unemployment benefit was reduced for certain of

¹The amount of unemployment benefit is calculated according to the worker's wage prior to becoming unemployed.

the unemployed, and the rules for those repeatedly unemployed were made more stringent, regarding both the period of their entitlement to receive unemployment benefit and the level of the benefit. The maximum period in which unemployment benefit is paid to those aged up to 35 years with at least three dependents was reduced from 175 days to 138 days, and for those without dependents, from 138 days to 100. The group of those entitled to receive benefit up to 175 days was reduced, and after the amendment includes only unemployed persons aged more than 45 years, or more than 35 years with at least three dependents. For those unemployed more than once (in four years) the period of entitlement to unemployment pay was shortened by 20 percent, and the amount of the benefit was cut by 15 percent. These amendments to the Unemployment Insurance Law were intended to reduce the instances of abuse of the system, and to reduce youngsters' incentive to opt for unemployment pay in preference to working for a low wage.

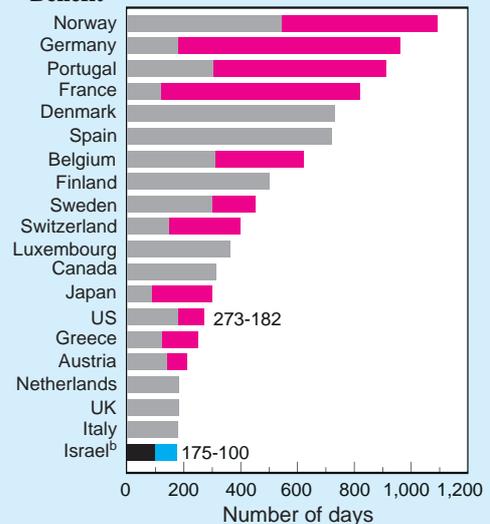
Figures A and B show an international comparison² of the main parameters of employment insurance legislation. The comparison reveals that the replacement

Figure A
Replacement Ratio,^a an International Comparison



^a For countries where the replacement ratio is a range, the middle of the range was taken. For countries where it falls after a particular period of entitlement, the ratio in the first period (at least six months) was taken. For a significant number of countries, minimum and maximum rates of unemployment benefits are also defined.
^b The figure for Israel was calculated as an average weighted by the composition of the unemployed (according to National Insurance Institute data for October–November 1998), and relates to the first period of unemployment in four years.
SOURCE: Social Security Programs Throughout the World, 1999.

Figure B
The Range of the Maximum Period of Entitlement to Receive Unemployment Benefit^a



^a The maximum period of entitlement depends on the qualifying period, and/or the number of dependents, and/or age.
^b In Israel maximum entitlements are: 175 days, if the unemployed person is at least 45 years old, or at least 35 years old if he/she has three or more dependents; 138 days if he/she is at least 35 years old and has fewer than three dependents, or if he/she is less than 35 years old and has at least three dependents; 100 days in every other case.
The above relates to the first period of unemployment in four years.
SOURCE: Social Security Programs Throughout the World, 1999.

² According to the international comparison of the qualifying period, the rule in Israel is similar to the norm in most European countries.

ratio in Israel is slightly lower than the average of the other countries. On the other hand, the period of entitlement to unemployment benefit in Israel is one of the lowest of all the countries examined.

In a comprehensive study on the connection between the institutional structure of the labor market and the rate of unemployment in OECD countries,³ a close connection was found between the “generosity” of unemployment benefit laws (including the amount of unemployment pay and the period of eligibility) and the rate of unemployment. In their conclusions, the authors point out that a central factor in explaining the difference between the rate of unemployment in European countries and that in the US (specifically long-term unemployment) is the difference in the maximum period of entitlement to unemployment benefit. In Israel, the entitlement period was significantly lower than that in the US even before the greater stringency introduced by the Economic Arrangements Law.

The main cause of the rise in the rate of unemployment in the last few years was weak demand for labor, and the recovery evident during 1999 is expected to act to reduce unemployment in the near future. Hence, given that the Unemployment Insurance Law in Israel is relatively strict, it is doubtful whether the introduction of more rigorous conditions holds the key for reducing unemployment. Moreover, such further stringency is likely to interfere with the role of the Law in insuring against a drastic fall in income when a worker involuntarily loses his job, and in enabling a period for job-hunting, intended to improve the employee’s suitability for his next place of work. The problem of abuse of the system must be dealt with by more rigorous enforcement of the Law (including the requirement to accept suitable employment as a condition for receipt of unemployment benefit), and by more actively directing the unemployed to vacant positions, as was done in 1998–99, rather than by further general tightening of the criteria.

² According to the international comparison of the qualifying period, the rule in Israel is similar to the norm in most European countries.

³ S. Nichal and R. Layard (1999) *Labor Market Institutions and Economic Performance*, in *Handbook of Labor Economics*, Edited by O. Ashenfelter and D. Card, Ch. 46, pp. 3029–84.

3. THE ISRAELI LABOR FORCE

In 1999, the working-age population increased by 2.7 percent, reflecting stability of the rate of increase of those of working age, despite the higher number of new immigrants during the year. The rate of participation rose sharply, to an average of 53.8 percent (up from 53.4 percent in 1998), so that the labor force increased by 3.5 percent, significantly

The sharp rise in the average rate of participation caused an acceleration in the rate of increase in the civilian labor force, and the latter rose by 3.5 percent in 1999.

faster than its rate of increase in the last few years. The rise in the rate of participation was due to a significant increase (in excess of the long-term rising trend) in the participation of women aged from 18 to 64 years. The participation rate of men of all ages fell, except for those aged 55–59 years, whose participation rate increased. The significant rise in the rate of participation may also reflect the return to the labor force of workers who had dropped out in the past having despaired of finding work after long and fruitless job-hunting (the “discouraged worker” effect).

In 1999,¹⁴ 51,000 new immigrants arrived in Israel, of whom 40,000 were of working age. This represents an acceleration in immigration after two years of considerable slowdown, and this despite the reduction in the number of potential immigrants due to previous immigration influxes.

4. EMPLOYMENT IN THE PRINCIPAL INDUSTRIES¹⁵

Following two years of slow growth, the number of Israeli employees increased by 3.1 percent, more than the increase in the working-age population.

In 1999, the number of employed persons increased by 3.1 percent. This rise, which exceeded that of the working-age population, comprised an increase of 3.1 percent in the number of business-sector employees, and the same rise in the public services. Due to a rise in the average number of hours worked per employee, labor input increased by even more than this, i.e., by 3.2 percent in the business sector and by 4.5 percent in general government.

Business-sector labor demand did not develop uniformly during the year. In the first quarter, business-sector employment grew relatively quickly, but in the second quarter reached another trough, with the number of business-sector employees remaining almost unchanged, reflecting a significant fall in the number of full-time employees, and a rise in the number of part-time employees. Despite the increase in the number of part-time workers, however, the average number of weekly hours worked per employee rose. In the third quarter, too, the number of employees rose slowly, but labor input

¹⁴ Immigration data in this section are based on the first three quarters of the year.

¹⁵ The industry classification of labor-market data suffers from several problems, so that caution must be exercised in analyzing changes. According to the classification used in the Labour Force Surveys and the data of the National Insurance Institute, all employees in education and health services, including those supplied privately, are included under public services. The classification of workers employed by private employment agencies or contracting companies presents another difficulty. Employment via these companies of workers providing services (e.g., cleaning, security, computer services) to other companies has surged in the last few years. Workers employed in these companies are sometimes classified in the Labour Force Surveys under the business services industry and sometimes under the industries to which they are supplying the service (industries or general government). Data from the National Insurance Institute and industry data, based on employers’ reports, classify these workers according to the companies that employ them—under business services.

expanded faster, as the average number of hours worked per employee increased.¹⁶ In the fourth quarter, business-sector employment accelerated: both the number of Israeli employees and labor input rose by 2.2 percent from their levels in the third quarter.

These developments may indicate that employers were motivated to increase employment significantly by the various indicators suggesting accelerated activity and possible recovery from the recession. Nevertheless, it is too soon to determine whether this positive development will persist.¹⁷

Only part of the change in the industry composition of employment resembled the trends evident in the last few years. As in previous years, moderate labor demand in 1999 was reflected by contraction of employment in the construction industry and associated industries. Unlike in previous years, however, in 1999 demand for workers slowed also in the high-tech industries, after years in which these industries had helped to offset the rise in the rate of unemployment. This was most marked in the “other business services” category (services provided by lawyers, bookkeepers, accountants, architects, engineers, etc.), in which employment fell by 5.3 percent, contributing 0.4 of a percentage point to the rise in the rate of unemployment.

Unlike in previous years, demand for labor accelerated also in the industries which are not education intensive: the number of Israeli employees in textiles grew by 11.9 percent, after contracting rapidly in the last few years; the number of Israelis in the services to households industry surged by 24 percent, serving to offset a significant part of the rise in unemployment; in hotels and catering the number of employees rose by 10 percent (an 11.8 percent rise in the number of Israeli employees, and a more modest increase in the number of foreign workers and workers from the Palestinian Autonomy and the administered areas, who constitute a quarter of total employees in that industry). The number of employees in the transport, storage, and communications industry grew by 10 percent, after two years when employment in the industry was at a standstill.¹⁸ As in previous years, the rate of increase of employment in high-tech industries outstripped that of the civilian labor force, but it contributed less to the moderation of the rise in the unemployment rate than did the other industries which helped to offset it in 1999.

In most industries, the development of labor demand was the result of the changes in domestic and export demand, also reflected in GDP (see Chapter 2). Thus, the

¹⁶ The analysis which follows is largely dependent on seasonally adjusted data relating to average hours worked per employee. There is an essential difference between seasonal adjustment performed on the business-sector average, and the average obtained from weighting of the industry data, when the seasonal adjustment is performed separately for each industry.

¹⁷ Expanded employment in the fourth quarter may have resulted from events which were particular to that period: in communications, the entry of a third operator; in business services, preparations related to the fear of the millennium bug.

¹⁸ The steep rise in the number of employees in communications in 1999 may *inter alia* reflect under-estimates in previous years.

Table 4.3
Principal Labor Market Indicators, 1988–99

	('000s, annual averages)													
	Change from previous year													
	1988-1989	1990-1991	1992-1995 ^a	1996 ^{b,c}	1997	1998	1999	1988-1989	1990-1991	1992-1995 ^a	1996 ^{b,c}	1997	1998	1999
Working-age population	2,991.6	3,314.5	3,770.6	4,021.1	4,130.3	4,242.8	4,358.4	60.1	172.7	118.9	116.7	109.2	112.5	115.6
Civilian labor force	1,523.4	1,710	2,008.3	2,154.5	2,207.4	2,265.8	2,345.1	54.7	83.6	82.5	46.9	52.9	58.4	79.3
Number of unemployed	95.2	172.5	167.2	141.7	166.9	193.4	208.5	26.0	22.4	-13.7	-0.8	25.2	26.5	15.1
Employees - total	1,537.4	1,646.0	1,975.5	2,209.1	2,248.5	2,291.2	2,362.1	26.7	62.1	107.5	91.5	39.4	42.7	70.9
Israelis	1,428.3	1,537.5	1,841.2	2,013.4	2,040.8	2,072.4	2,136.6	28.7	61.2	96.2	47.8	27.4	31.6	64.2
Non-Israelis	109.2	108.5	134.3	195.7	207.7	218.8	225.5	-2.0	0.9	11.3	43.7	12.0	11.1	6.7
From the Palestinian Autonomy and Administered Areas	109.2	102.8	77.9	58.3	74.7	106.6	115.5	-2.0	-3.6	-9.5	-1.7	16.4	31.9	8.9
Foreign workers	0.0	5.8	56.4	137.4	133.0	112.2	110.0	0.0	4.5	20.8	45.4	-4.4	-20.8	-2.2
General government employees ^d	418.7	460.4	529.6	584.6	601.6	632.0	651.8	12.3	19.9	20.0	14.0	17.0	30.4	19.8
Business-sector employees ^d	1,118.8	1,185.6	1,445.9	1,624.5	1,646.9	1,659.2	1,710.3	14.4	42.2	87.5	77.5	22.4	12.3	51.1

^a In 1995 there was a change in the Central Bureau of Statistics (CBS) definition and sample. Data up to 1995 is according to the old sample and the new definition.

^b From this year, according to the new CBS sample and data.

^c From 1995, the data are based on estimates from the 1995 census and a new method of extrapolation.

^d Israelis and non-Israelis.

SOURCE: Central Bureau of Statistics.

contraction of labor demand in the construction industry and associated industries reflected the slump in construction, which was also expressed in the continued decline of the number of building starts; increased employment in textiles followed a rise of 10.8 percent in exports and of 3.2 percent in production; the increase in the number of employees in the service industries and in transport and communications is due to the considerable growth in the product of those industries. In contrast, the decline in employment in other business activities—in which turnover increased by 10.8 percent in 1999—came as a surprise.

Table 4.4
Employment and Labor Input in the Business Sector, by Industry, 1995–99

	Employment								
	Thousands					Rates of change (percent)			
	1995	1996	1997	1998	1999	1996	1997	1998	1999
Total business sector ^a	1,546.9	1,624.5	1,646.9	1,659.2	1,710.3	5.0	1.4	0.7	3.1
Construction	224.8	245.9	249.0	235.4	223.2	9.4	1.3	-5.5	-5.2
Manufacturing	408.7	411.4	406.7	400.7	407.9	0.7	-1.1	-1.5	1.8
Agriculture	77.5	78.3	78.4	82.7	83.6	1.0	0.1	5.5	1.1
Commerce and vehicle repairs	250.3	257.1	264.9	272.5	281.6	2.7	3.0	2.9	3.3
Catering services	96.7	102.6	104.6	109.0	120.2	6.1	1.9	4.2	10.3
Banking, insurance, and finance	70.4	70.2	76.2	75.8	77.7	-0.3	8.5	-0.5	2.5
Business services	186.5	210.0	218.4	229.7	241.7	12.6	4.0	5.2	5.2

	Labor input								
	Thousands					Rates of change (percent)			
	1995	1996	1997	1998	1999	1996	1997	1998	1999
Total business sector ^a	62,970.4	66,899.3	67,883.1	67,770.3	69,906.0	6.2	1.5	-0.2	3.2
Construction	9,776.9	10,898.1	11,011.9	10,271.4	9,651.4	11.5	1.0	-6.7	-6.0
Manufacturing	17,089.1	17,279.9	17,177.4	16,874.0	17,087.6	1.1	-0.6	-1.8	1.3
Agriculture	3,318.8	3,443.2	3,478.7	3,680.0	3,797.1	3.7	1.0	5.8	3.2
Commerce and vehicle repairs	10,337.4	10,669.7	10,887.4	11,063.5	11,517.4	3.2	2.0	1.6	4.1
Catering services	3,891.1	4,283.4	4,367.9	4,494.4	4,926.3	10.1	2.0	2.9	9.6
Banking, insurance, and finance	2,700.0	2,679.0	2,904.0	2,889.0	3,012.6	-0.8	8.4	-0.5	4.3
Business services	7,278.7	8,309.1	8,653.9	8,891.3	9,516.9	14.2	4.1	2.7	7.0

^a Figures may not add due to the exclusion of 'miscellaneous.'

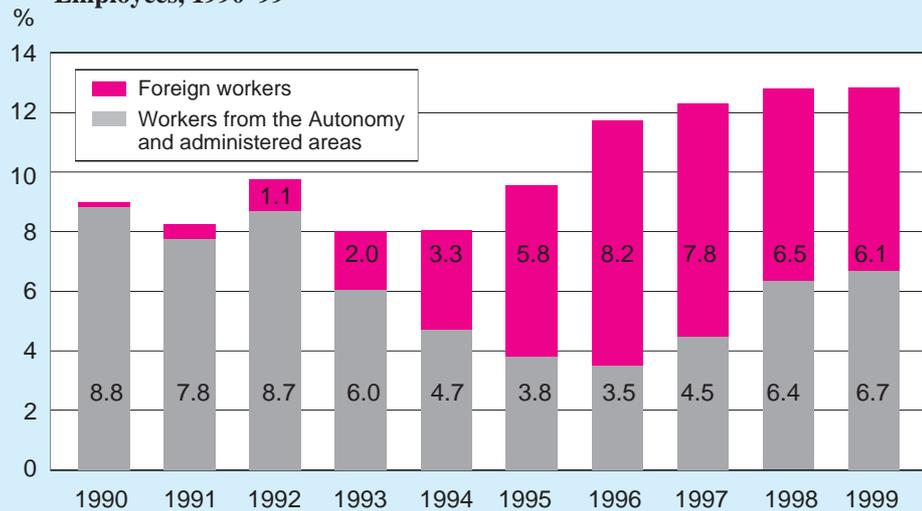
SOURCE: Central Bureau of Statistics.

The number of workers from the Autonomy and the administered areas grew by 8.4 percent in 1999, continuing the significant increase evident in 1998, while the number of foreign workers fell by 2.1 percent. The share of non-Israeli workers in the total number of employed persons in the business sector remained unchanged at 12.8 percent in 1999, after rising continuously since 1993, the year when employment of foreign workers was first permitted (Figure 4.3). The share of non-Israeli workers in the total

The share of foreign workers in the total number of employees in Israel is very high compared with that in other countries.

number of employed persons in Israel is one of the highest in the world, with only Switzerland having a higher share of foreign workers. Their share in agriculture, construction, and the service industries (hotels and catering and household services) is particularly high. The increased share of non-Israeli workers despite the high rate of unemployment is evidence that it is relatively worthwhile to employ them (from the employer's point of view), among other reasons because various laws intended to prevent exploitation are not enforced (the Minimum Wage Law, the Hours of Work and Rest Law, etc.). Taking a broad view, the employment of foreign workers and workers from the Autonomy and the administered areas has serious economic and social implications which must be addressed seriously and in depth (see Chapter 4 of the Bank of Israel Annual Report, 1997).

Figure 4.3
The Share of Workers from the Palestinian Autonomy and Administered Areas, and Foreign Workers,^a in the Total Number of Business-Sector Employees, 1990–99



^a Reported and unreported workers, as estimated by the Central Bureau of Statistics.
SOURCE: Central Bureau of Statistics.

5. UNEMPLOYMENT

The rate of unemployment continued to rise in 1999, and reached an average 8.9 percent, some 208,000 unemployed persons. The increase in the unemployment rate in the first three quarters of the year resulted from the accelerated rise in the labor force due to the higher rate of participation together with continued moderate labor demand in most business-sector industries. In the last quarter of the year employment accelerated and the rate of unemployment fell, despite the rapid rise of the participation rate.

Table 4.5
Contribution to Change in the Unemployment Rate,^a by Industry,
1988–94 and 1996–99

	(change from previous year, percentage points)						
	1988	1989	1990	1991	1992	1993	1994
Total	0.4	2.5	0.7	1.0	0.6	-1.2	-2.2
Business sector	0.5	2.1	0.5	0.8	0.2	-1.5	-2.1
Manufacturing	1.3	1.1	0.0	0.3	0.4	-0.3	-0.4
Agriculture	0.5	0.1	0.5	0.6	0.0	-0.1	0.1
Electricity and water	0.0	0.0	-0.1	0.1	0.2	-0.1	-0.1
Construction	-0.2	0.3	-0.2	-0.8	-0.4	-0.3	0.3
Commerce, catering and hotel services	-0.4	0.1	0.1	0.5	0.3	-0.5	-1.0
Transport, storage and communications	0.0	0.3	0.2	0.1	-0.1	0.1	0.1
Finance and business services	-0.4	0.4	0.0	-0.1	-0.2	-0.2	-0.7
Personal and other services	-0.3	-0.4	0.0	0.2	-0.1	-0.2	-0.3
Public and community services	-0.1	0.4	0.1	0.2	0.4	0.3	-0.1

In 1994, the classification of industries was changed. Data up to 1994 are according to the old classification, and those from 1995 according to the new.

Due to the change, data for the two periods cannot be compared, and are therefore shown as separate series.

	1996	1997	1998	1999
Total	-0.2	1.0	1.0	0.3
Business sector	-0.2	1.1	1.6	0.3
High-skill industries ^b	-0.4	-0.3	-0.4	0.4
<i>of which:</i> Nontradables	-0.2	-0.4	0.1	0.5
Manufacturing	0.0	-0.3	0.5	0.6
Computers	-0.2	-0.1	-0.4	-0.1
Unskilled-labor-intensive industries ^c	0.5	0.7	1.5	0.3
<i>of which:</i> Manufacturing	0.5	0.4	0.8	-0.1
Textile and clothing	0.2	0.3	0.3	-0.1
Construction	-0.3	0.3	0.9	0.7
Catering and hotel services	0.3	0.1	-0.2	-0.3
Other industries (not classified) ^d	-0.3	0.7	0.5	-0.4
<i>of which:</i> Manufacturing	-0.1	0.3	0.2	0.4
General government	0.0	-0.1	-0.6	0.1

^a The contribution to the rise in unemployment was calculated as the difference between the number of Israelis who would be employed if employment had expanded in line with the growth of the civilian labor force and its actual expansion (for by-industry breakdown, see Table 4.A.10).

^b High-skill industries include some manufacturing, computer services, banking, insurance, financial institutions, and other business activities. This classification is different from that in the section on manufacturing in Chapter 2.

^c Unskilled-labor-intensive industries include some manufacturing, construction, commerce and repairs, and catering and hotel services.

^d Other industries (not classified) include agriculture, water and electricity, transport, storage and communications, equipment rentals, employment agencies, security and cleaning, entertainment and other personal services.

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

Together with the rise in unemployment in the first half of the year, the depth of unemployment also increased: the share of unemployed persons seeking jobs for more than half a year went up from 25.7 percent in the last quarter of 1998 to 30.3 percent in the second quarter of 1999. The start of the acceleration in activity evident from the third quarter was expressed in a reduction of the depth of unemployment even before it had a real effect on employment or on the rate of unemployment.

The rise in the rate of unemployment and its greater depth are likely per se to push up the natural rate of unemployment (see Chapter 4 of the Bank of Israel Annual Report, 1998). In Israel, as in the US and Europe, the rate of unemployment is very clearly affected by its level in previous years, so that events or policies which act to raise the rate of unemployment will have a long-term effect, even if they themselves are temporary. The persistence of a high rate of unemployment derives from its negative effect on the chances of unemployed persons finding employment and escaping from the snare of unemployment. A long period spent outside the employment environment erodes the worker's human capital, and reduces his chances of using his previous experience as evidence of his abilities, thereby damaging his chances of finding employment. In addition, prolonged unemployment is likely to make the unemployed despair of finding employment, which lowers the intensity of their search for jobs, and eventually leads to their dropping out of the labor force. Studies in the US and Europe show that less intensive job-hunting is indeed a result of prolonged unemployment.

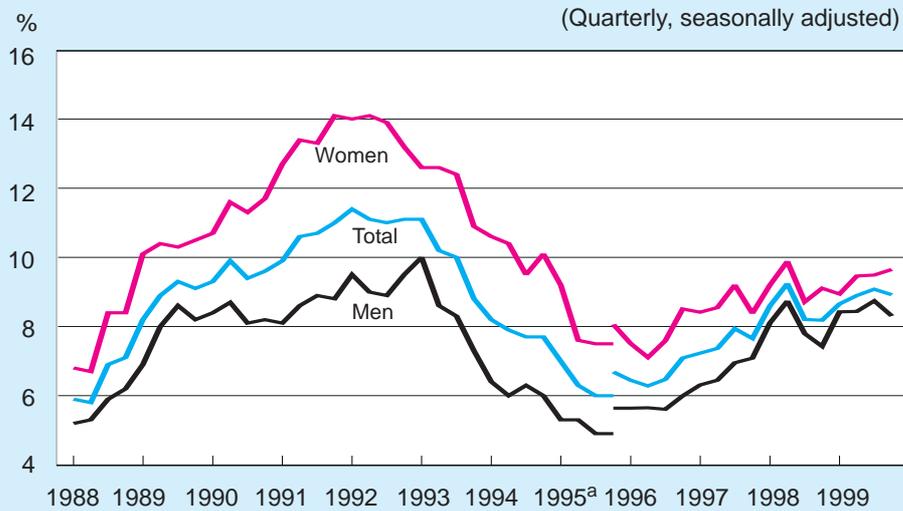
Employers, knowing that a worker's capabilities are eroded the longer the period of his unemployment, will prefer to employ workers unemployed for as short a time as possible. Thus, the longer the period of unemployment, the smaller the chances of the unemployed finding employment and escaping from the 'vicious circle' of unemployment.

Several studies have examined the factors affecting the level of inertia of a high rate of unemployment (i.e., the extent to which the current rate of unemployment is affected by the rates in previous years). Most found that the extent to which high unemployment persisted was significantly dependent on the institutional and organizational structure of the labor market. The existence of strong unions, wage rigidities, and factors resulting in a reduction of the intensity of unemployed workers' search for jobs (e.g., unemployment benefits) or employers' search for workers will increase the degree to which unemployment persists.

The rate of unemployment was lower for men than for women. The gap between the two reached a peak in 1991, since when it has narrowed (Figure 4.4), despite the continued rise in women's participation rate and a fall in that of men. In 1999 the gap between them narrowed again, in spite of women's increased share in the labor force.

The rate of unemployment among those with 13–15 years of education rose sharply in 1999 (Table 4.6), and the gap between their rate of unemployment and that among workers with secondary school education (9–12 years of schooling) narrowed. The rate of unemployment among those with less than eight years of schooling rose in 1999, after rising steeply in the last few years. Since 1997 the rate of unemployment among those with low levels of schooling was higher than that among those with

Figure 4.4
Rate of Unemployment, 1988–99



secondary school education, representing a change from the situation prevailing previously, when unemployment was highest among those with secondary school education, higher than among those with more than twelve years of education and higher than among those with less than eight years of schooling.

Table 4.6
Unemployment Rate, by Years of Education, 1988–99

	(percent)							
	1988-89	1990-92	1992-94	1995	1996	1997	1998	1999
Total	7.7	10.1	9.7	6.8	6.6	7.5	8.6	8.9
Years of education								
0–8	7.9	10.3	11.0	7.5	7.3	10.0	13.0	13.7
9–12	9.7	11.9	11.6	8.7	8.3	9.5	10.7	11.0
13–15	5.5	8.5	7.9	5.6	5.7	6.5	7.2	7.8
16+	3.4	5.0	5.1	3.5	3.7	4.1	4.2	4.4

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

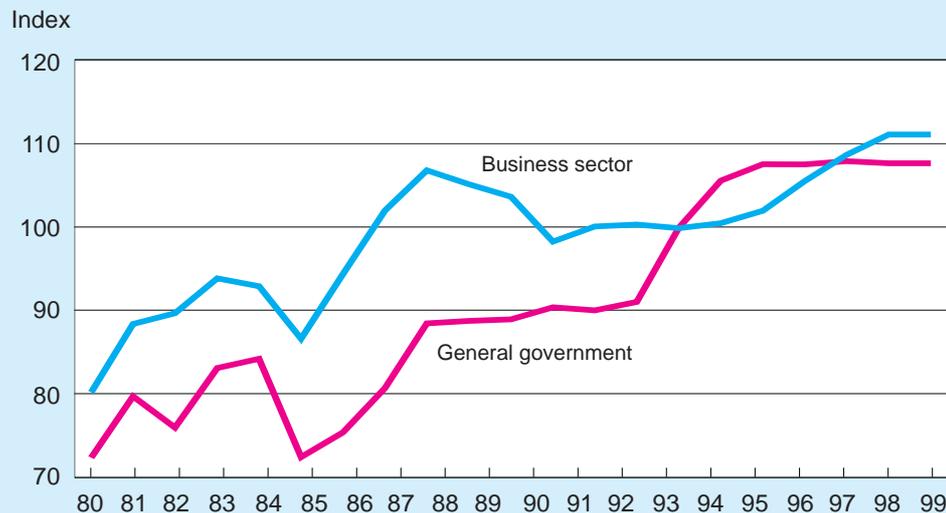
6. WAGES

In 1999, the average wage per employee post¹⁹ rose by 7.6 percent, reflecting a rise of 8.8 percent in the business-sector wage and one of 4.9 percent in the public services. In real terms, the business-sector wage went up by 3.4 percent, and the public-service wage by 0.3 percent.

The number of hours worked per business-sector employee increased by about one percent. Labor productivity (net domestic business-sector product per man-hour, at constant prices) fell by 1.9 percent. The rise in GDP prices relative to the CPI offset part of the effect of the increase in the real hourly wage and the fall in productivity, so that unit labor cost in the business sector rose by 2.1 percent.²⁰

Unit labor cost in the business sector rose by 2.1 percent.

Figure 4.5
Indices of the Real Wage per Employee Post in the Business Sector and in General Government, 1980–99



SOURCE: Central Bureau of Statistics.

¹⁹ The wage per employee post is calculated as the total of wage payments *divided by* the total number of employee posts (not adjusted according to full- or part-time positions). Some of the changes in the wage per employee post are therefore technical, arising from changes in the number of hours worked (switching between full- and part-time employment), in the number of days worked per employee, the mobility of workers between places of employment, the composition of their human capital, etc. Moreover, due to the problem in recording wages paid to foreign workers and workers from the Autonomy and the administered areas, together with their high share in the total number of employees, wage data are biased.

²⁰ Unit labor cost is the ratio of labor cost per hour to product per hour. Labor cost includes the total wage, as per data of the National Insurance Institute, *plus* the CBS estimate of wage-related costs. The total cost (in nominal terms) is divided by the wage-earners' number of hours worked, and the quotient is the hourly labor cost. Output per hour is net domestic product, at current prices, divided by the total number of hours worked by all employees. Unlike wage data, available monthly, labor cost is calculated by the CBS once a year.

As the recession persisted and the disinflation program became more firmly based, the effect of most of the factors which had caused the increase in the real wage in the past was weakened. It is reasonable to assume that most labor contracts currently in force were signed at a time when the extent of the recession and unemployment were known, and that these were taken into account when the nominal wage was set. The gap between inflation expectations and actual inflation is shrinking, as the disinflation process becomes established and confidence in the Bank of Israel's policy and in the inflation target grows. It is estimated that the gap between inflation expectations and the average rate of increase of the CPI can explain no more than half of a percentage point of the rise in the real wage in 1999.

Table 4.7
Change in the Real Wage per Employee Post, by Industry, 1988–99
(percent, at constant prices)

	1988	1989	1990	1991	1992	1993	1994
Old classification							
Total ^b	5.9	-1.3	-1.0	-3.0	1.2	0.6	2.5
General government	9.7	0.3	0.2	1.6	-0.4	1.1	9.8
Business sector ^b	4.8	-1.6	-1.4	-5.2	1.8	0.3	-0.4
Agriculture ^b	4.1	-0.8	-4.6	-12.4	2.2	1.8	3.3
Manufacturing	3.7	0.9	0.0	-3.0	2.0	0.6	-0.4
Electricity and water	5.4	1.6	-1.7	0.9	4.8	-2.6	-0.1
Construction ^b	3.4	-2.2	-4.5	-13.6	9.8	4.7	4.2
Commerce, catering and hotels	5.8	-2.7	-2.4	-2.5	1.3	0.5	-1.8
Transport, storage, and communications	3.5	-3.4	0.1	1.5	0.2	-0.7	-0.5
Finance and business services	8.0	-4.8	-0.9	-5.3	1.1	-0.7	-2.4
	1995	1996	1997	1998	1999		
New classification							
Total ^b	2.2	1.6	2.4	2.2	2.2		
General government	5.7	1.9	0.0	0.4	-0.3		
Business sector ^b	0.6	1.5	3.5	3.0	3.4		
Agriculture ^b	5.5	4.1	3.5	3.1	2.8		
Manufacturing	3.9	2.2	6.2	5.5	4.7		
Electricity and water	5.7	3.5	2.6	2.8	2.2		
Construction ^b	0.0	-3.3	3.7	2.3	3.8		
Commerce and repairs	1.1	1.9	1.6	2.7	0.0		
Catering and hotels	-1.1	1.0	1.4	0.6	1.3		
Transport, storage, and communications	0.1	-1.5	2.9	1.4	0.4		
Financial services	-4.3	5.6	8.3	-2.6	3.6		
Business services	0.2	4.7	4.2	4.2	8.7		

^a In 1994, the classification of industries was changed. Data up to 1994 are according to the old classification, and those from 1995 according to the new.

Due to the change, data for the two periods cannot be compared, and are therefore shown as separate series.

^b Including workers from the Palestinian Autonomy and the administered areas.

SOURCE: Central Bureau of Statistics.

The change in the composition of employment contributed 0.6 of a percentage point to the increase in the business-sector real wage and 0.9 of a percentage point to the rise in the real wage in manufacturing. These are under-estimates of the effect of the change in the composition of employment on the real wage, as they do not include inter-industry changes in the composition of employment resulting from a) the dismissal of low-paid workers, b) the slowdown in the absorption of new workers, and c) the increased demand for workers in relatively well paid occupations.

The relatively rapid rise of immigrants' wages may explain an additional part of the rise in the average wage. Some of the increase in immigrants' wage may represent a correction factor, as in previous years they were employed at initial rates of pay lower than the value of their marginal output, so that the increase in their wage is not accompanied by a similar rise in productivity.

Due to the low share of those earning the minimum wage and the low level of compliance with the Minimum Wage Law, the increase in the minimum wage in April 1999 had relatively little direct effect. Such a rise, however, brings in its wake a chain reaction of wage claims from those at low wage levels, also from those earning more than the new minimum wage, due to the system of wage indexation in the economy and the desire to maintain certain wage differentials between workers at different grades.

Box 4.3: The Minimum Wage

The main objectives of the Minimum Wage Law is to allow workers a reasonable standard of living, in accordance with economic conditions, and to reduce inequality of income. Minimum wage arrangements or laws are the norm in most industrialized countries, and generally cover most workers, as in Israel.

The Minimum Wage Law, which went into effect in 1987, replaced the collective agreement signed in 1972. The Law specified that the minimum wage for a full-time post (200 hours per month) would be 45 percent of the average wage in the economy, and that it would be updated once in two years, (when the collective wage agreements are renewed), and whenever a cost-of-living allowance is paid. In the year when the minimum wage was not adjusted in line with the average wage, it would be updated according to the rise in the CPI. It was also determined that the base for calculating the minimum wage would not include various extra payments to workers, including seniority, reimbursement of travel expenses, certain premiums, etc. The Law was amended in April 1997, so that the minimum wage is now updated every year to 47.5 percent of the average wage.¹ (At the same time, the full-time working month was shortened, for purposes of calculating the minimum wage, to 186 hours.)

¹ The average wage used in the calculation of the minimum wage is the average wage in the whole economy in the last three months for which there are data at the time of the update.

The Minimum Wage Law affects demand for labor, the supply of labor, and the distribution of income. In the short term, a rise in the minimum wage may make the employment of unskilled workers less worthwhile, and lead to a reduction in demand for them.² Some studies also showed that when minimum wage laws or arrangements are in force, employers invest less in professional retraining to improve the skills of their workers receiving the minimum wage, and therefore these workers have low chances of progressing and earning higher wages in the future.³ On the other hand, a minimum wage which enables a reasonable standard of living to be maintained may reduce the drop-out rate from the labor force of those with low levels of schooling.

Those earning a wage equal to or below the minimum wage constituted 13 percent of the total number of Israeli business-sector employees in 1998. This figure hides great variation in the shares of those earning the minimum wage in different industries: that share is especially high in the unskilled-labor-intensive industries—textile and clothing, personal services, and hotels and catering. In analyzing the effects of the minimum wage on the average wage and on the distribution of wages in the economy, however, the fact that the level of compliance with the Law in Israel is very low is highly relevant.⁴

The minimum wage is indexed to the average wage out of recognition of the fact that the concept of standard of living is a dynamic one, affected *inter alia* by the average standard of living in the country; it is intended, among other things, to help narrow the constantly widening economic inequalities. In practice, this automatic indexation may well harm just those weaker sections of the population the Law is intended to protect: indexing the minimum wage to the average wage makes the connection between wages in different industries and occupations more rigid. Due to the indexation mechanism, the minimum wage rises whenever events take place which affect the average wage, even when the relevant event

² Researchers differ in their views on the effect of the minimum wage on employment. A series of papers by Card and Krueger, and responses to them, provide a good illustration as to the divisions over this issue.

³ Opinions differ on this subject, too. Recent studies did not support the claim that a rise in the minimum wage would lower the extent of retraining. See, for example, D. Acemoglu and J.S. Pischke, *Minimum Wages and On the Job Training*, NBER Working Paper # 7184, June 1999.

⁴ Research into the level of compliance with the Law in the business sector is low: K. Flug and N. Kasir, *Compliance with the Minimum Wage Law in the Business Sector*, Bank of Israel Discussion Paper 94.12 (Hebrew); Z. Eckstein, *The Implications of the Minimum Wage Law on Employment and Wages*, The Manpower Planning Authority, December 1998; Yaniv, G. *Enforcement and Monopsonistic Compliance with the Minimum Wage Law*, Southern Economic Journal, 55(2), October 1988, pp 505–09.

Table A
International Comparison of Minimum-Wage Arrangements and Laws^a
In Order of Purchasing Power of Minimum Wage

Country (year the law was first implemented)	Law or arrangement	Not covered by the law	Updating or indexation Procedure	Minimum (hourly) wage in 1997, in terms of purchasing power parity (PPP)	Minimum wage mid-1997 as percentage of median wage per full-time employee post
Spain (1963. In current form, 1976)	National law, monthly wage.	No exceptions	Updated annually taking into account inflation and the economic situation.	2.94	32
Japan (1959. In current form, 1968)	Law for each of the 47 prefectures. Daily and hourly wage.	Apprentices, disabled persons, and employees during a trial period.	Updated taking into account changes in the price index and the rise in the average wage.	3.38	31
Israel (Arrangement, 1972; Law, 1987)	National law. Monthly wage, from which the hourly wage is derived.		Indexed, annually, to 47.5 percent of the average wage.	3.78 ^b	52.8
USA (1938)	Federal law, and state laws. Minimum wage set according to the higher of the minimum federal wage or the minimum wage in the state. Hourly wage.	Managers/directors and specific other small groups.	Discretionary, not automatic, update.	5.15	38
Canada (Women, 1918–30; Men, 1930–59)	Federal and provincial, hourly wage.	Apprentices, contracted employees and managers.	No automatic update	5.33	40
Britain (1999)	National law, hourly wage.	Apprentices, armed forces personnel, fishermen, and 16- 17-year age group.	Discretionary, not automatic, update.	5.44	44
France (1950. In current form, 1970)	National law, hourly wage.	General manage- ment, and some disabled persons.	Indexed to price index or to half the rate of increase in the average wage, whichever is higher.	5.56	57
The Netherlands (1968)	National law. Daily, weekly, or monthly wage.	Covers all workers with contracts of employment.	Related to changes in the average wage, but the indexation may be suspended.	6.00	49
Belgium (1975)	National union agreement. Monthly wage.	General government apprentices, and some disabled persons.	The agreement is discussed every two years. In between, the wage is updated according to the price index.	6.40	50
Australia (1996; and in part, since 1907)	Has legal validity. The minimum wage is different in each sector. Weekly wage.	Several sectors, in which there is a high average wage.	An independent body considers economic factors and the needs of those earning the minimum wage.	6.65	54

^a Data on OECD countries taken from D. Metcalf: *The British Minimum Wage*, March 1999, Centre For Economic Performance, Discussion paper.

^b Purchasing-power-parity (PPP) Israel-US from: *Prices and Earnings Around the Globe*, UBS Economic Research, 1997 edition.

affects only a specific occupation (for example, a shortage of workers in technological jobs, or a rise in productivity in a particular industry). Moreover, an increase in the minimum wage is likely to accelerate just when the share in employment of those on low rates of pay is falling (due to dismissals and/or the contraction of unskilled-labor-intensive, “sunset” industries), as a fall in their share pushes up the average wage.

An international comparison of minimum wage arrangements operating in Organization for Economic Cooperation and Development (OECD) countries shows that not a single one of those countries has a system of full, automatic indexation of the minimum wage to the average wage. France is the only country with partial indexation (i.e., half of the increase in the average wage). In the Netherlands, the minimum wage is linked to the average, but is not updated automatically, and discretion may be exercised to delay its adjustment. In the other OECD countries, increases in the minimum wage are negotiated, or determined after due consideration, a system which makes it possible to make the increase consistent with the economic situation.

Table B
Developments in the Minimum Wage over Time (1986–99)

	Minimum wage (monthly average)	Real minimum wage index (1994=100)	Minimum wage as percentage of average wage		
			Total ^a	Business sector	Unskilled-labor-intensive industries ^b
1986	346.9	72.5	33.3	30.9	30.4
1987 Law enacted	517.4	90.4	38.4	35.6	35.4
1990	984.6	105.3	43.1	40.7	40.2
1991	1,160.8	104.3	44.0	42.5	41.0
1992	1,246.8	100.1	41.7	40.1	38.6
1993	1,360.9	98.4	40.8	39.4	37.8
1994	1,553.5	100	40.5	40.2	39.0
1995	1,749.2	102.3	40.6	40.9	–
1996	1,995.8	104.9	40.9	41.3	48.0
1997 Law amended	2,308.5	111.3	42.4	42.3	49.4
1998	2,563.6	117.3	43.8	43.3	50.8
1999	2,755.5	119.8	43.7	42.8	51.8

^a Including workers from the Palestinian Autonomy and administered areas.

^b For 1986-94, the unskilled-labor-intensive industries include all manufacturing, commerce, and catering services. For 1996-99, they include the unskilled-labor-intensive industries in manufacturing, catering and hotel services, commerce and repairs. The comparisons are based on annual averages of quarterly data.

Since the minimum wage was made into law, an continuous upward trend has been discernible, both in real terms and in relation to the average wage in the economy and in the business sector: in 1993–96 the minimum wage went up as a result of the increase in the real wage in general government (due to the signing of generous wage agreements), while since 1997, it has risen mainly due to the rapid increase in the business-sector real wage, in spite of the economic slowdown and the contraction of employment, which occurred mainly in the cheap-labor-intensive industries. These developments give real expression to some of the difficulty in indexing the minimum wage to the average wage.

The direct effect of an increase in the minimum wage on the real wage and on the wage distribution is negligible, due both to the fact that those earning the minimum wage constitute only a small share in employment, and to the low level of compliance. Nevertheless, it does have a significant effect on wage increases in unskilled-labor-intensive industries, by making unskilled labor—representing a major factor input in these industries—more expensive, as well as by raising the wage of those earning above the minimum wage, via formal and informal wage indexation. An increase in the minimum wage is therefore likely to contribute to reduced employment in those industries where a high proportion of wage earners receive the minimum wage,⁵ and to provide a greater incentive for employers to employ foreign workers or to transfer production to neighboring countries. In this way, an increase will mainly harm just the population it is intended to protect—those whose position is at the bottom of the scale in the labor market, and who are in need of the legislators' protection to be able to earn an honorable wage. It can be seen from this that in setting the minimum wage, a balance must be struck between determining a fair wage and reducing social inequality, on the one hand, and harming employment on the other, taking into consideration the whole gamut of arrangements and laws in the economy (taxation, unemployment benefit, income support, etc.).

⁵ Flug, Kasir, and Rubinstein found that a rise in the minimum wage in Israel had a negative effect on employment in the unskilled-labor-intensive tradables industries (textile and clothing), as in the tradables industries employers cannot translate higher costs of production into higher prices, and so they cut back on production and employment. In the nontradables industries most of the rise in labor costs is translated into higher prices, and a rise in the minimum wage did not affect employment. Similar findings were reported in studies of other countries (K. Flug, N. Kasir (Kaliner), and Y. Rubinstein, *The Effect of the Minimum Wage on Employment in Unskilled-Labor-Intensive Industries In Israel*. Not yet Published).

The decline in the average wage in general government was entirely due to the change in the industrial composition; were it not for this change, the average wage in this sector would have risen by about half a percent. Negotiations regarding the wage increments for public service employees, covering the last quarter of 1997 and the year 1998, were concluded in November 1999. According to the agreement, employees received a retroactive increment of 4.8 percent. Negotiations regarding a wage agreement for 1999 have not yet started.

Labor and wage conflicts in general government are expected to erupt in 2000 from several sources: from wage claims by organizations which have not yet signed agreements for 1997–98 (doctors and teachers), from employees in various offices demanding certain special increments, and from employees in publicly owned enterprises attempting to prevent privatization or competition from workers who are not employed under the terms of collective agreements (port workers, vehicle licensing examiners and driving license testers, etc.).

The current system, under which wages in the public sector are determined by modest collective wage agreements together with supplementary wage drift (by means of grades, seniority, and special increments) is problematic at a time of a slowdown in inflation, as any nominal wage increase is immediately translated into a significant real increase. The existing wage mechanisms, mainly the wage-drift mechanism, solved the problem of unexpected wage erosion at a time of rapid inflation, but currently create serious difficulties in the area of wage and personnel management by granting real wage increases even in the absence of agreements, and do not allow outstanding employees to be granted special increases, a situation likely to create tension in the field of labor relations.

