

# HAS THE DUTCH MIRACLE COME TO AN END?

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CESIFO WORKING PAPER NO. 917

CATEGORY 4: LABOUR MARKETS

APRIL 2003

Presented at CESifo Conference on Unemployment in Europe,  
December 2002

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## Abstract

In the past decades unemployment in the Netherlands has gone down substantially. The main suspects responsible for this decline are the growth of part-time labor, the reform of the benefit system and wage moderation. Nevertheless, in 2002 the unemployment rate in the Netherlands has increased somewhat. However, since the huge decline in unemployment was due to structural improvements in the functioning of the labor market there is not a lot of reason to worry about the recent rise in unemployment. The current structure of the labor market is a lot 'healthier' than it was in the early 1980s. Therefore, the upward movement of the unemployment rate is bound to be a mild one.

JEL Code: J3, J5, J6.

Keywords: unemployment, employment.

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The author would like to thank participants of the December 2002 CESifo/YJS conference in München on "Unemployment in Europe: Reasons and Remedies" for helpful comments on a preliminary version of the paper.

# 1 Introduction

In the early 1980s the Dutch labor market was in a bad shape with circumstances labeled as the Dutch disease. While unemployment rates in the 1960s and 1970s were below the European average, in 1982-83 the unemployment was 12%, well above the European average. One of the surprising events in the Dutch labor market of the past decades is the rapid decline in unemployment. Whereas the unemployment rate was still as high as 8% in 1992, it was down to 1.8% in 2001, a development labeled the ‘Dutch miracle’. Recently however, the unemployment rate has gone up to a level of 2.7% by the end of 2002. Figure 1 shows these recent events in more detail. Though unemployment is still quite low it is striking that whereas in the Spring of 2000 and 2001 unemployment went down a bit it did not go down in the Spring of 2002.

This paper is intended to assess the current situation in the Dutch labor market and give an answer to the question whether or not there has come an end to the Dutch miracle.<sup>1</sup> The set-up of the paper is as follows. Section 2 contains a general overview of the Dutch labor market focussing on unemployment, employment, vacancies, productivity and wages. Section 3 discusses details concerning unions and wage bargaining, unemployment benefits, active labor market policies and disability insurance. Section 4 brings the pieces of the Dutch puzzle together. Section 5 concludes. Appendix 1 gives the full text of the Wassenaar agreement. Appendix 2 presents peculiarities of the Dutch labor market in more detail.

## 2 The Dutch labor market

### 2.1 General overview

In the development of the Dutch labor market, several periods may be distinguished (see for example Hartog (1999) and Nickell and Van Ours (2000)). The 1960s saw the establishment of the welfare state. In 1963 the Law on Child Allowances was introduced, in 1965 the General Social Assistance Law, in 1966 the Law on Sickness Benefits and in 1967 the Law on Disability Benefits. The first major shock to the Dutch labor market was caused by the oil crisis of 1973. Unemployment started to increase. The Dutch government introduced an expansionary policy, financed by the abundant revenues from natural gas. The 1970s is the decade of the Dutch

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<sup>1</sup>In fact, the term ‘miracle’ is somewhat misleading because it would refer to events that cannot be explained rationally, while there are clear explanations for the decline in Dutch unemployment.

disease, characterized by inflation, expanding government expenditures and sharply declining profits. The second oil crisis of 1979 fuelled a deterioration of the Dutch labor market and unemployment rose at an unprecedented speed. The year 1982 is considered by many to be a turning point. In that year, under the pressure of the seemingly endless rise in unemployment, a Central Agreement was reached between the labor unions and the employers' federation. This agreement was reached in Wassenaar, a village near The Hague, in the home of the chairman of the employers' federation. In this so-called Wassenaar agreement employers agreed with working time reduction while unions agreed to give in price indexation of wages and to moderate wage claims. It was also agreed that obstacles to temporary work would be removed. Persons with part-time jobs would get full social security coverage (including after 6 months the accumulation of pension rights), while their wages would depend on the amount of work they actually provided. More specific unions agreed that working time reduction and part-time labor should not increase labor cost or reduce operating hours of firms. Although the agreement was bilateral between unions and employers, at the same time the government agreed to get its budget under control and reform social security.

The Wassenaar Agreement marks a change in labor relations, from a period of frictions and ideological differences of opinion towards a more consensus approach in labor relations. Although the actual meaning is sometimes questioned in hindsight the Wassenaar agreement is sometimes considered as the start of the period of the 'Dutch miracle'. Many detailed agreements between unions and employers were established with respect to training, the functioning of the labor market and the labor market position of specific groups. In the Wassenaar agreement and other agreements that were established at the same time, there were arrangements concerning wage restraint, reduction in working hours, restoration of profit levels of firms, labor market flexibility, early retirement and the creation of jobs. At the same time the government agreed to get its budget under control, reform social security and reduce taxes. In the course of the 1980s many of these agreements were implemented. In the next sections these developments will be discussed in more detail.

## **2.2 Unemployment**

Long-term developments in the unemployment rate in the Netherlands are shown in Figure 2. Unemployment rate in the 1960s is 1 to 2% and increases to about 6% at the end of the 1970s. In the beginning of the 1980s the unemployment rate doubles

Figure 1 Monthly unemployment rates; 2000-2002 (%)

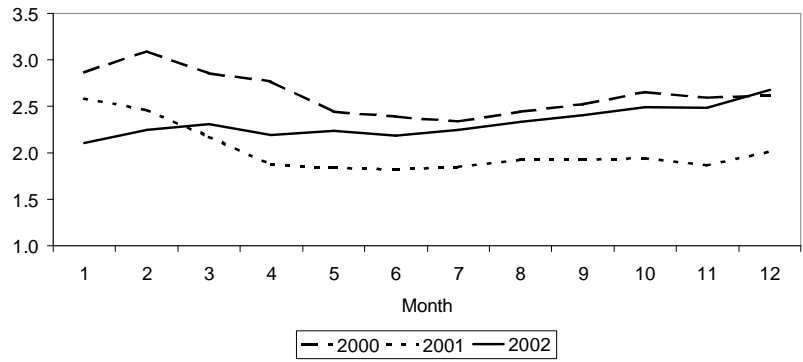
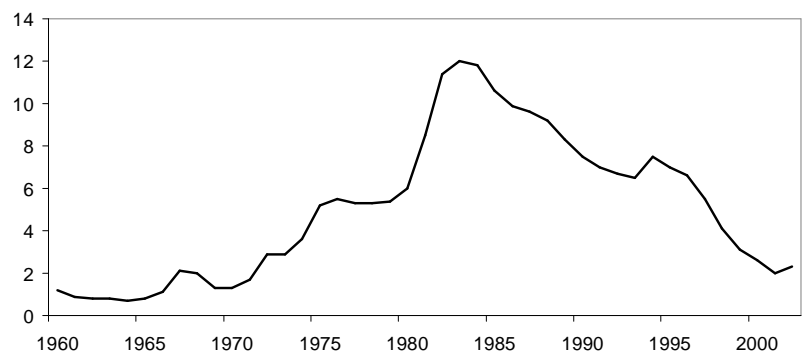


Figure 2 Unemployment rates; 1960-2002 (%)



in the time span of a couple of years to 12% in 1984. Then, apart from 1995 there is a steady decrease in unemployment to a low 2% in 2001 and an increase to 2.3% in 2002.

Table 1 shows the developments in the unemployment rates in more detail by distinguishing by sex, age group and education. As shown, unemployment for men in the Netherlands has always been lower than for women but the difference is becoming smaller over time. In 1979 the difference was 5.8 %-points, in 2000 it was 0.7 %-points. For males unemployment rates for elderly workers (55+ years) in the 1990 and 1995 were lower than the unemployment rates of prime age workers (25-54 years), whereas in 2000 the difference was very small with prime age males workers having an unemployment rate just below that of elderly workers. For females the same age pattern emerges except for the year 2000 where the unemployment rate of prime age workers is just above the unemployment rate of elderly workers. For both males and females there is a clear inverse relationship between unemployment rate and level of education. This relationship is stable over time. While in 1985 higher educated male workers had an unemployment rate of about 5% male workers with only primary education had an unemployment rate of almost 23%. In the year 2000 the unemployment rate of higher educated male workers was down to 1.4%, while the unemployment rate of males with only primary education was still 7.4%. For females a similar pattern is shown in Table 1.

Unemployment rates are very important but from the perspective of international comparisons they may not tell the whole story because some countries systematically shift people out of unemployment into other non-working categories, notably disability and early retirement. This suggests that we should also look at non-employment rates that refer to the percentage of the population of working age who are not employed. These figures basically capture unemployment, disability, early retirement, full-time education and other elements of non-participation, notably married women involved in childcare. Table 1 also gives an overview of non-employment rates by sex, age group and education. As shown average non-employment rate in the Netherlands went down from 48% in 1985 to 34% in 2000. This decline is largely due to the decline in the non-employment rate among females. Whereas the non-employment rate among males in 1979 with 24.5% was very similar to the non-employment rate in 2000 with 24.3% among females there was a decline over the same period from 68% to 45%. It is mainly the increase in part-time employment, which will be discussed in more detail below, that is responsible for this decline.

**Table 1 Unemployment rates and non-employment rates<sup>a)</sup>**

		Unemployment rates (%)					Non-employment rates (%)				
		1979	1985	1990	1995	2000	1979	1985	1990	1995	2000
<b>Total</b>		6.2	12.8	5.9	6.9	2.5	46.1	47.7	44.8	40.6	34.4
<b>Age</b>	25-54	4.7	10.8	5.6	6.8	2.6	38.1	37.2	33.9	30.2	23.5
	55-64	6.6	13.2	3.2	3.4	2.9	64.8	72.6	74.2	74.2	66.0
<b>Educ</b>	Higher	3.2	6.3	4.2	4.7	1.6	16.5	18.4	22.8	24.4	18.3
	Intermediate	3.7	7.6	3.6	5.5	1.9	23.4	27.4	35.5	33.6	28.3
	Lower	5.0	14.0	6.8	9.0	3.6	39.3	44.6	53.0	53.1	46.9
	Primary	9.1	24.1	15.2	17.2	7.6	56.7	63.6	68.5	68.5	62.0
<b>Male</b>		4.5	11.2	5.4	6.3	2.2	24.5	31.3	28.9	28.5	24.3
<b>Age</b>	25-54	3.2	9.2	5.2	6.2	2.2	8.7	15.0	12.9	12.8	9.1
	55-64	5.9	13.1	3.1	3.1	2.8	39.9	55.2	58.4	61.2	52.0
<b>Educ</b>	Higher	2.2	4.8	3.3	4.1	1.4	4.9	8.9	13.4	17.9	12.9
	Intermediate	2.3	6.2	3.0	4.5	1.5	6.4	12.2	23.1	22.1	17.9
	Lower	3.4	12.6	5.9	8.0	2.7	10.2	20.6	33.3	34.6	29.2
	Primary	7.5	22.7	15.7	16.2	7.4	24.3	40.7	51.1	52.6	46.6
<b>Female</b>		10.3	15.7	6.8	7.9	2.9	68.3	64.4	61.2	53.2	44.9
<b>Age</b>	25-54	8.8	14.3	6.6	8.0	3.2	68.8	60.5	55.9	48.2	38.3
	55-64	9.5	13.6	3.6	4.0	3.1	87.5	88.4	89.1	87.0	80.1
<b>Educ</b>	Higher	5.9	9.1	5.7	5.6	1.8	37.5	31.9	35.0	32.9	24.8
	Intermediate	7.1	10.2	4.7	7.0	2.5	48.6	45.9	50.3	46.5	39.5
	Lower	6.1	16.3	8.3	10.6	4.8	63.5	63.3	69.5	68.4	62.4
	Primary	13.3	27.0	13.7	19.6	8.1	80.2	80.1	83.2	82.5	75.9

<sup>a)</sup> The unemployment definition changed in 1987. The figures before and after 1987 are not fully comparable. Non-employment figures differ from OECD numbers because the Dutch employment definition is referring to jobs of at least 12 hours of work per week (OECD - 1 hour per week). In 1979 and 1985 in the population outside the labor force there are many persons of which the educational level is unknown; source: Central Bureau of Statistics.

The ‘action’ in the non-employment rates is mostly in the prime age category since among elderly workers nothing much happened between 1985 and 1995. As in many countries non-employment rates for elderly males are high because of early retirement and disability, while they are low for elderly females because of a cohort effect. Only in the period 1995-2000 there was a remarkable decline in non-employment rates of elderly workers among males (61 to 52%) as well as among females (87 to 80%). This decline in non-employment rate may also be related to the shift from the pay-as-you-go early retirement schemes (VUT) to capital funded schemes (pre-pensions) which increased the retirement age.<sup>2</sup>

There is also an inverse relationship between non-employment rates and level of education. Whereas among males the non-employment rate of higher educated workers is 13%, it is 47% among workers with only primary education. For females this is 25% for higher educated workers and 76% for workers with only primary education.

Finally, the labor market position of immigrants has improved.<sup>3</sup> The immigration of the past decades originates from two rather different processes: the decolonisation and the hiring of immigrant workers because of cyclical labor shortages (Van Ours and Veenman, 2003). Current labor market problems are to some extent related to the shift in immigration from a business cycle phenomenon to a structural process. In the 1960s immigrant workers were hired because the Dutch labor market was booming. The immigrant workers got jobs in industries with low paid labor. Since these industries were particularly hit by the economic recession of the 1980s, many immigrant workers lost their jobs to become long-term unemployed. The labor market position of many immigrant workers is weak because of their low educational level and lack of Dutch language skills. Therefore, it is remarkable that the unemployment rate among immigrant groups has also gone down substantially since 1995. The unemployment rate among for example Turks went down from 31%

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<sup>2</sup>The number of workers on an early retirement scheme reduced from 152,000 in 1995 to 113,000 in 2000. In the same period the number of workers on a pre-pension scheme increased from 23,000 to 66,000.

<sup>3</sup>At the beginning of the new millennium about 2.7 million people live in the Netherlands, who by their own birthplace or that of at least one of their parents are considered to be immigrants. Together they comprise about 17% of the total population. As counted in 1999, the largest groups of immigrants are Turks (300,000), Surinamese (297,000), Moroccan (250,000), Antilleans (99,000) and people from (former) Yugoslavia (63,000). Immigrants from the southern European countries comprise about 90,000 people, who have different nationalities. Even more diversity of nationality is found among the political refugees, who comprise about 180,000 people. January 1, 2002 there were 1.4 million second-generation immigrants, that is children of immigrants.



in 1995 to 8% in 2001, the unemployment rate of Moroccans went down from 32% in 1995 to 10% in 2001. Also in terms of non-employment rates there was a substantial improvement of the labor market position of immigrants. The non-employment rates among Turks went down from 70% in 1995 to 52% in 2001, while for Moroccans these numbers are 71% and 52%. Although there is still a distance both in terms of unemployment rates and non-employment rates among native Dutch and immigrants it is clear that also immigrants have benefitted a lot from the Dutch miracle.

### **2.3 Employment**

Employment can be measured in different ways: the number of jobs, the number of labor years where part-time jobs are expressed in terms of full-time equivalents and the number of working hours. As shown in Table 2 the total number of jobs has increased a lot over the past decades. The increase in the number of jobs was lowest in the 1980s with 393,000 and highest in the 1990s when employment increased with 1.6 million jobs. To a large extent the increase in employment concerned jobs for employees and among these jobs the part-time jobs contributed most. In the 1980s for example the number of full-time jobs decreased with 66,000 while the number of part-time jobs increased with more than 700,000. Over the 1990s 900,000 additional part-time jobs were created, but also the number of full-time jobs increased a lot, close to 500,000.

Because the increase in the number of jobs is mainly due to part-time jobs the evolution of the number of labor years is less spectacular, but even in terms of labor years employment increased with almost 1 million in the 1990s. Table 2 also shows that the number of working hours of a standard full-time job has decreased substantially over the past decades. Whereas the number of annual working hours for a full-time job was 2240 in 1960 it was 1740 by 1990. This decline is due to an increase in the length of the holidays and the introduction of so called ‘shorter working hours’ days, which are non-working days the worker can choose to have throughout the year. Of course the sharp decline in the number of working hours per full-time equivalent also implies that the total number of working in the Netherlands did not increase as spectacular as the numbers of jobs or labor years. As Figure 3 shows that the total number of working hours increased in the 1960s but declined afterwards to reach a level of 7.4 billion in 1984, which was the same number of hours as in 1958. After 1984 there is an almost steady increase in the total number of working hours but it lasted until 1987 before the 7.6 billion working hours of 1960

**Table 2 Employment<sup>a)</sup>**

	1960	1970	1980	1990 old	1990 new	2000	60-70	70-80	80-90	90-00
<b>Jobs (1000)</b>										
<b>Part-time empl.</b>	–	854	1225	1934	2250	3150	–	371	709	900
<b>Full-time empl.</b>	–	3742	3846	3780	3648	4134	–	104	–66	486
<b>All employees</b>	–	4596	5071	5714	5898	7284	–	475	643	1386
<b>All workers</b>	4506	5469	5862	6559	7017	8582	963	393	697	1565
<b>Labor years (1000)</b>										
<b>Employees</b>	3403	4115	4383	4702	4779	5665	712	268	319	886
<b>All workers</b>	4155	4763	4932	5257	5441	6426	608	169	325	985
<b>Working time (hours)</b>										
<b>Full-time year</b>	2241	2007	1839	1741	1741	1723	–234	–168	–98	–18
<b>Working hours (million)</b>	7626	8257	8061	8185	–	9846	631	–196	124	1386

<sup>a)</sup> In 1995 there was a revision of the employment numbers. This revision was also applied to earlier years. Therefore there are two numbers for 1990. For the total number of working hours the ‘new’ 1990 number is unavailable. For 1995 the ‘old’ number was 8405, the ‘new’ number is 8680. This difference has been taken into account when calculating the change over the period 1990-2000. See also Figure 3. Source: Central Bureau of Statistics.

was reached and it lasted until 1991 until the 8.3 billion working hours of 1970 was reached. In 2001 a level of almost 10 billion working hours was reached.

The huge increase of part-time labor is a combination of several developments. For a long time labor market participation of Dutch females has been rather low compared to other European countries. The increase in female participation is partly a catch-up effect. Furthermore, barriers for part-time employment have been removed. Until the Wassenaar agreement part-time jobs were clearly inferior to full-time jobs in terms of employment rights and benefits. After the unions gave up their resistance to part-time jobs there has been a positive interaction between supply and demand.<sup>4</sup> For employers part-time jobs are useful because they give flexibility to allocate more labor towards weekly peak hours in production (for example in retailing) and because it attracts new labor supply. Females that withdrew from the labor market for family reasons return to take up part-time jobs and females that would otherwise have left the labor market are now staying in part-time jobs. So, the effective labor supply has increased. For females part-time jobs are valuable because they allow them to combine paid work with childcare.

In the aftermath of the Wassenaar agreement shorter working hours were introduced in a variety of ways different from part-time labor: shorter working weeks, extra holidays, early retirement. Growth of part-time labor was also stimulated by the implementation of laws that made part-time work more attractive. In 1993 the statutory exemption of jobs of less than one-third of the normal working week from application of the legal minimum wage and related social security entitlements were abolished. Currently, most taxes are neutral and social security benefits are usual pro rata. Also since 1993 unions and employers representatives have recommended that employers grant workers' request to work part-time unless there are compelling business reasons for rejection. In 1995 unions and employers signed the first proper collective agreement for temporary workers. In 2000 a right to part-time work law was introduced (see Tijdens, 2002 for more details).

The increase in part-time jobs has had a positive effect on employment growth. Because effective labor supply increased many firms could expand their business. Part-time labor is not just a redistribution of a fixed amount of labor over a larger number of workers (the 'lump of labor fallacy') as is shown in Figure 3 and confirmed in a study by Van Lomwel and Van Ours (2003) in which it is argued that the growth

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<sup>4</sup>In 1981, the main federation of union (FNV) emphasized the inferiority of employment rights, wages, fringe benefits, and career prospects in part-time jobs and the lack of union membership were highlighted. The federation did not want to help create a secondary job market and demanded first an improvement in statutory protection for part-time workers (Visser and Hemerijck, 1997).

Figure 3 Number of working hours; 1960-2001 (mln)

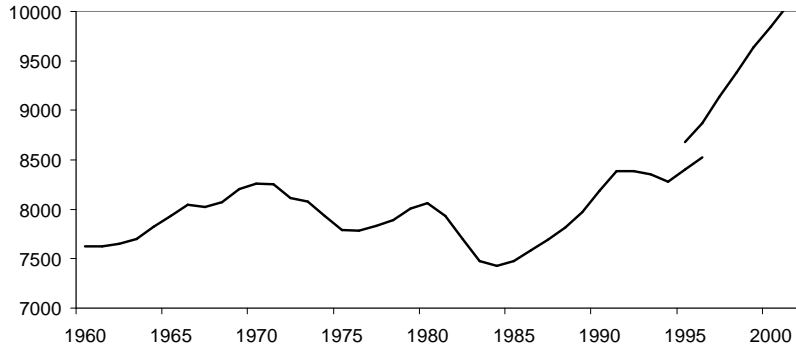
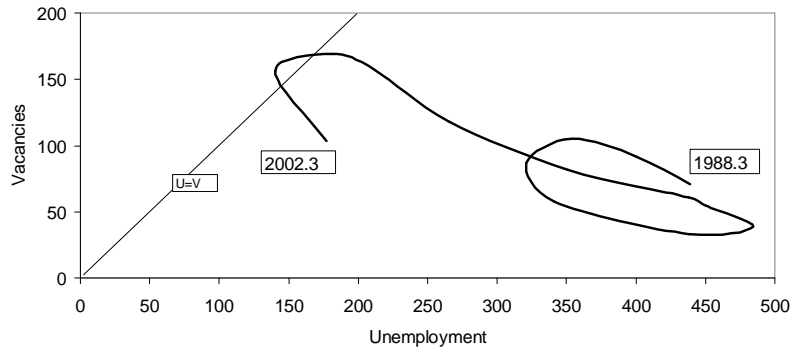


Figure 4 The Beveridge curve; 1988-2002 (third quarters)



of part-time labor even had positive effects on the growth of full-time labor.

## 2.4 The Beveridge curve

The relationship between unemployment and vacancies, i.e. the Beveridge curve is shown in Figure 4. The data concern the third quarter of every year in the period 1988-2002. The number of unemployed in the third quarter of 1988 was equal to 440,000 with 70,000 vacancies. Up to 1991 there was an increase in the number of vacancies and a decrease in the number of unemployed. Then, between 1991 and 1994 there was a decline of the number of vacancies. From 1995 onwards the number of vacancies increased to a maximum of 170,000 in the third quarter of 2000 while the unemployment declined to 140,000 in 2001. In the third quarter of 2002 the number of vacancies had fallen to 100,000 while the number of unemployed had increased to 175,000. The Beveridge curve shows one full and one partial counter-clockwise loop where the first turning point is at unemployment equals to 350,000 and the number of vacancies equal to 100,000 and the most recent turning point is close to the  $U=V$  line at 150,000. Overall, there was a clear inward shift of the Beveridge curve indicating that the functioning of the Dutch labor market has improved.<sup>5</sup>

## 2.5 Productivity and wages

Table 3 shows the evolution of productivity in terms of GDP per hour since 1960. Whereas in the 1960s and 1970s there was a substantial productivity growth, respectively with 4.4% per year and 2.5% per year, in the 1980s and 1990s the average increase of GDP per hour was only about 1% per year. Conditional on GDP per hour the evolution of GDP per capita depends on changes in working time and change in employment-population rates. In the 1960s and 1970s the increase in employment-participation rate was not sufficient to balance the reduction in working time. In the 1980s and 1990s the increase in the employment-population rates was substantially larger than the reduction of working time. As a result of this the increase in GDP per capita in the 1980s was about the same as in the 1970s, while the increase in GDP per capita in the 1990s was even 0.5%-point per year larger than it was in the 1970s.<sup>6</sup>

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<sup>5</sup>Note that over the period presented the labor force increased substantially. A Beveridge curve with unemployment and vacancies as a percentage of the labor force would have shown an even larger inward shift.

<sup>6</sup>Also in international perspective the increase in the Dutch employment-population rate was an important component of GDP per capita growth. From Scarpetta et al. (2000) it appears for

**Table 3 GDP growth and growth of real wages; 1963-2000 (%/year)**

	<b>1960-73</b>	<b>1973-80</b>	<b>1980-90</b>	<b>1990-00</b>
<b>GDP per hour</b>	4.4	2.5	0.9	1.1
<b>Change in working time</b>	-1.2	-1.2	-1.0	-0.5
<b>Change in participation</b>	0.3	0.4	1.8	1.6
<b>GDP per capita</b>	3.5	1.7	1.6	2.2
<b>Gross real wage</b>	-	2.7	0.5	0.6

Source: Authors' calculations on the basis of the Groningen Growth and Development Centre (GGDC) Total Economy Database (GDP) and CPB Netherlands Bureau for Economic Policy Analysis (real wage)

The real wage in the Netherlands increased about 50% in the 1970s. In the 1980s there is hardly any increase. On the contrary, in the first half of the 1980s there was a clear decline. This was due to the disappearance of the cost-of-living clauses due to the ‘Wassenaar agreement’ In the second half of the 1990s the real wage increases again. As Table 3 shows on average in the 1980s and 1990s real wages increased with only about 0.5% per year.<sup>7</sup>

### 3 The pieces of the puzzle

#### 3.1 Unions and wage bargaining

In 2000 there were about 2 million union members in the Netherlands, with union density about 27%.<sup>8</sup> As shown in Table 4 union density declined over the past decades since it was around 35% in 1980. The most common opinion about the improvement of labour market performance in the Netherlands is that it has to do with the cooperative nature of the unions.<sup>9</sup> As Hartog (1998) puts it: ‘If there is anything like a Dutch model, it is the Dutch brand of corporatism, with consultation, coordination and bargaining over all important issues of socioeconomic policy between union federations, employer federations and the government. The Dutch example shows that corporatist institutions are not synonymous with suffocating rigidity’. The cooperative nature of Dutch unions is also present in the changing laws concerning employment protection. In 1996 unions and employers agreed on a relaxation of statutory dismissal protection for regular employment contracts in exchange for an improvement of the rights of temporary workers. New legislation removing constraints on shop opening hours, business licenses, temporary job agencies, working time, dismissal and so on, consolidate the development towards

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example that compared to the EU-average GDP per working hour in the Netherlands has declined. Whereas in 1985 GDP per hour worked was 19% higher than the EU-average, in 1998 this was reduced to a difference of 10%. However, whereas GDP per capita in the Netherlands was only 4% higher than the EU-average in 1985 it was 11% higher than the EU-average in 1998.

<sup>7</sup>Wage moderation had an important effect on the relative labor costs of Dutch industry as compared to for example the German industry. If the ratio of real labor costs of Netherlands and Germany are indexed to 100 in 1980, this index is 62 in 1995 and 75 in 2000 (source: authors’ calculations on the basis of CPB Netherlands Bureau for Economic Policy Analysis).

<sup>8</sup>Of the union members almost 350,000 were non-employed, of which about 200,000 were older than 65 years. Visser and Hemerijck (1997) present an excellent overview of the Dutch miracle and the peculiarities of Dutch industrial relations. See Checci and Lucifora (2002) for a recent overview of the way labor unions affect the functioning of labor markets.

<sup>9</sup>In 2000 there were about 200 industry-specific collective agreements and about 800 firm-specific collective agreements.

flexibility. As Table 4 shows the index indicating the strictness of employment protection decreased since 1980. A new law on working hours permitted longer working hours and work during the weekend and evening hours, if agreed between employers and their workers (Visser and Hemerijck, 1997).

The economic downturn in 1993 was mild and the recovery much stronger than in the rest of Europe. This is probably also why unions were modest and passive. As discussed before, there was wage moderation. This too may have been related to the restructuring of the benefit system. This wage moderation may also have been responsible for the boost in part-time employment. Average earnings per family increased much more than wages did.

### **3.2 Unemployment benefits and labor taxes**

The current unemployment law dates from January 1, 1987. A worker losing his job in the Netherlands is entitled to unemployment benefits, provided some conditions are fulfilled. Those who fulfil these conditions are entitled to initial benefits of 70% of the wage in the last job before unemployment. The maximum duration of these benefits ranges from 6 months to 5 years, depending on the employment history of the unemployed. Depending on their work history some workers are entitled to one year of extended benefits, equal to 70% of the minimum wage. If, after the expiration of the unemployment insurance benefits, the unemployed individual has not found a job, the individual may receive social assistance benefits, which are means-tested and related to what is considered to be the social minimum income.

Table 5 gives an overview of the number of unemployment benefits by age groups and gender. For each age group the number of unemployment benefits is higher for females than it is for males. Concerning social assistance benefits there is not a lot of difference between females and males with the exception of the elderly workers, where the number of social assistance benefits is substantially higher for males than it is for females. Apart from the youngest age group there are not a lot of differences in the share of the population collecting unemployment benefits. For social assistance this youngest and the oldest age groups are exceptions. Of the females in the oldest age group 2.4% collecting social assistance benefits, for males this is 6.0%.

Table 4 shows that the average unemployment benefit replacement rate has gone down in the past decades from about 71% in 1980 to 56% in 2000. The decline in replacement rate had a clear effect on unemployment. Broersma, Koeman and Teulings (2000) for example find that the lowering of the replacement rate since the



**Table 4 Labor market institutions 1970-2000**

	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
<b>Union density (%)</b>	33.2	35.3	28.9	27.1
<b>Employment protection (index)</b>	1.35	1.35	1.25	1.10
<b>Replacement rate (%)</b>	72.0	70.7	61.0	55.9
<b>Labor taxes (% of labor costs)</b>	33.6	42.5	41.9	40.0
<b>Minimum wages (% of average wage)</b>	58	61	52	47
<b>Active labor market policies</b>				
<b>Expenditures (% of GDP)</b>	–	–	1.3	1.6
<b>Participant inflow (% of labor force)</b>	–	–	3.1	6.9

Sources: Union density: Central Bureau of Statistics (CBS); replacement rate, labor taxes: CPB Netherlands Bureau for Economic Policy Analysis (see Stegeman, 2002); minimum wage: OECD; Active labor market policies: OECD, Employment Outlooks; employment protection: Nickell (2003). The employment protection number for 2000 refers to 1998.

**Table 5 Benefits by age groups and gender (June 2001)**

	Females			Males		
	Unempl benefits	Social assistance	Disability benefits	Unempl benefits	Social assistance	Disability benefits
<b>Age</b>	<i>(1000)</i>					
<b>15-24</b>	16	4	15	10	3	16
<b>25-34</b>	45	18	62	30	12	41
<b>35-44</b>	52	18	91	37	15	84
<b>45-54</b>	42	17	122	32	17	168
<b>55-64</b>	36	19	124	27	48	241
<b>Total</b>	191	76	414	136	95	550
<b>Age</b>	<i>% of population</i>					
<b>15-24</b>	1.7	0.4	1.6	1.1	0.3	1.7
<b>25-34</b>	3.7	1.5	5.2	2.5	1.0	3.4
<b>35-44</b>	4.1	1.4	7.2	2.9	1.2	6.7
<b>45-54</b>	3.7	1.5	10.7	2.8	1.5	14.7
<b>55-64</b>	4.5	2.4	15.4	3.4	6.0	29.9
<b>Total</b>	3.6	1.4	7.7	2.5	1.8	10.3

Source: Central Bureau of Statistics

mid 1980s has contributed to the decline in unemployment both directly through its effect on search behavior and indirectly through its effect on wages. Broer, Draper and Huizinga (1999) also find that the replacement rate (in addition to tax rate and the real interest rate) is a major determinant of the Dutch unemployment rate.

Despite the fact that average replacement rates have gone down, many unemployed workers face an incentive problem. A single unemployed worker who would accept a job at the minimum wage level would lose on average 225 Euro per year (Ministerie van Sociale Zaken en Werkgelegenheid, 2002). A single individual that would accept a job at the minimum wage level would have lost 7% of its net income in 2000 (2% in 2001). A single earner that would accept a job at 130% of the minimum wage would have lost 5% of the net income in 2000 (1% in 2001).

In August 1996 a new law on benefit sanctions was introduced. Under this law people who receive benefits may get a reduction of their benefits if they don't follow the rules related to the benefits (not giving proper information, lack of effort of keeping a job, refusing job offers et cetera). Sometimes people have to pay back (part of) their benefits if they got them for the wrong reasons. Sometimes people have to pay a penalty. Figure 5 shows the evolution of unemployment benefits and benefit sanctions as a percentage of unemployment benefits. For many years the sanction percentage was between 10 and 15%. Since 1996 this number increased to about 35% to go down from 1999 onwards.

From recent micro studies on the effect of benefit sanctions in the Dutch labor market we know that a reduction of unemployment benefits may have a substantial effect on the outflow from unemployment to a job.<sup>10</sup> In addition to that the presence of a system of benefit sanctions may stimulate workers to search more intensive even before they get a benefit sanction imposed (Boone and Van Ours, 1999). Therefore, the restructuring of the benefit system, including the introduction of a system of benefit sanctions may be one of the main policy measures responsible for the 'Dutch miracle'.

In 2002 there was another reform of the social security system where the collecting of social security contributions and the payment of benefits is still under public

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<sup>10</sup> Abbring, Van den Berg and Van Ours (1997) study the effect of financial incentives by comparing the unemployment duration of individuals that have faced a benefit reduction with similar individuals that have not been penalized. They find that the job finding rates double after a sanction has been imposed. Van den Berg, Van der Klaauw and Van Ours (1998) perform a similar study for welfare recipients in the city of Rotterdam. Although this group of unemployed has a labor market position that is often considered to be very weak they too find that the job finding rate doubles at the imposition of a sanction.

Figure 5 Unemployment benefits and sanctions; 1987-2000

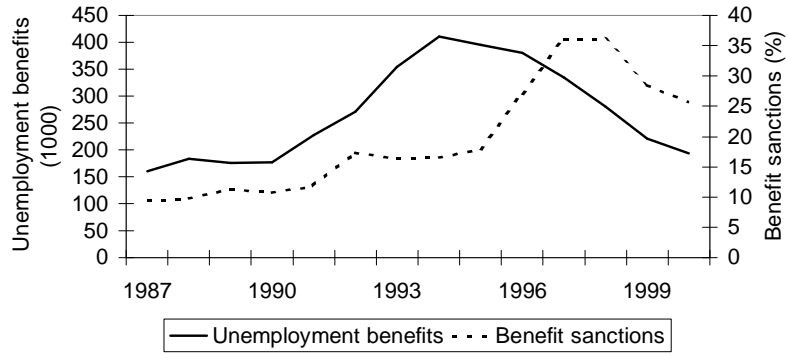
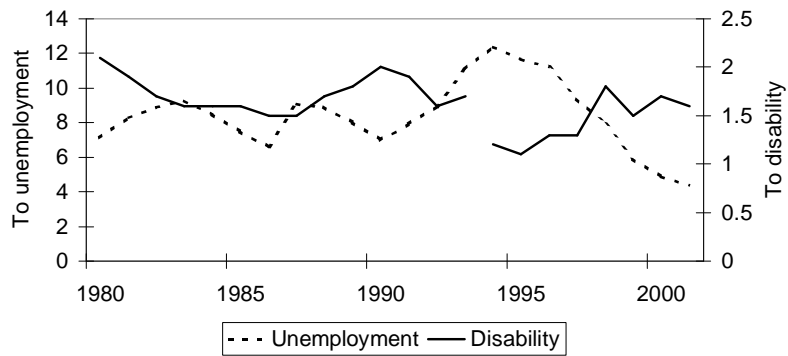


Figure 6 Outflow rates; 1980-2001 (% of employment)



control but the reintegration of unemployed and disabled workers is privatized.

As shown in Table 4 other work incentives increased too. Labor taxes as a percentage of labor costs have gone down since 1980. The minimum wage as a percentage of average wage has gone down from 61% in 1980 to 47% in 2000.

### **3.3 Active labor market programs**

Table 4 indicates that in the course of the 1990s active labor market programs have expanded. The expenditures as a % of GDP increased from 1.3 to 1.6, the inflow into the programs as a % of the labor force increased from 3.1 to 6.9. By the end of the 1990s there was a variety of programs ranging from limited subsidies to sheltered jobs.

Among the limited subsidy schemes there was the VLW-scheme intended to help long-term unemployed workers to find a job through lowering their costs at and just above the minimum wage. The maximum subsidy for employers was 2,215 Euro for maximum 4 years. Another scheme was SPAK, which targeted at low-skilled workers. Employers could get a maximum fiscal allowance of 1,924 Euro for workers that did not earn more than 115% of the minimum wage (in a job of 36 hours per week).

Among the larger wage subsidies was the WIW-subsidy, which targeted at creation of jobs for long-term unemployed through the mediation of the municipality or through subsidizing of temporary jobs at regular firms. In 2000 about 40,000 WIW-subsidies were provided of 8,485 Euro for a maximum of 1 year. There were also ID-jobs that targeted at creating employment for long-term unemployed in the non-profit sector and supply useful public services. The ID-jobs were administered by local municipalities and concern jobs with a pay up to 130% of the minimum wage. The average subsidy was between 16,790 and 20,875 Euro. In 2000 about 45,000 jobs were created under this scheme.

Finally, there are sheltered jobs (WSW) for people who because of physical or mental reasons cannot work in regular jobs. In 2001 there were about 90,000 workers involved in WSW-jobs.

Although wage subsidies were successful in terms of bringing back long-term unemployed to work their success in terms of bringing back long-term unemployed to regular jobs is doubted. In a recent evaluation study it was concluded that workers tend to get locked in into subsidized jobs so there is insufficient outflow from subsidized job to regular jobs (IBO, 2001).

### 3.4 Disability

The use of disability benefits in the Netherlands is remarkably high. In 2001 almost 1 million individuals collected disability benefits.<sup>11</sup> The story of the increasing disability starts in 1967 when the comprehensive disability insurance for employees (WAO) was introduced. Under the terms of this law workers were insured against wage loss due to long-term disability. From then on if a worker became ill, he was allowed to claim a benefit under the illness scheme for a maximum period of one year. After that he could claim a disability benefit. Workers were entitled to disability benefits after a so-called disability examination, which consisted not only of a medical examination but also of an investigation of the labour market position of the worker. A worker could be considered disabled if there was no suitable job for him at his own educational level in his previous occupation. Furthermore, unemployment was ‘internalized’, which means that those workers who were considered to be partially (more than 15%) disabled, could collect full disability benefits because it was assumed that partially disabled were doomed to remain unemployed. The benefit had a maximum of 80% of the wage in the last job. Disability benefits could be collected until age 65. Since the introduction of comprehensive disability insurance the number of workers collecting disability benefits has increased massively. This huge increase in the numbers on disability benefits induced the government to adjust some elements of the disability benefit system on several occasions. In 1985 the maximum replacement rate was reduced from 80% to 70%. In 1987 there was a major restructuring of the disability benefit system of which the main objective was to reduce the inflow into disability. The most important change was the abolition of the ‘internalization of unemployment’ rules. Partially disabled workers were considered as such and were expected to find a job or claim unemployment benefits for their remaining work capacity. The reform of the disability insurance was very important. Empirical studies find that before the 1987 reform of the disability benefit system up to 50% of the disability enrolment was related to redundancy of workers. Hassink, Van Ours and Ridder (1997) show that at the end of the 1980s employers in the still used disability enrolment as an alternative to dismissals. They find that about 10% of the transitions into disability are due to redundancy of the worker. An implication of this result is that even after the social security reform of 1987, some employers and employees used disability enrolment to avoid dismissals. Figure

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<sup>11</sup>Note that persons collecting disability benefits may be part-time disabled and may have a (part-time) job as well. For example in July 2002 there were 975,000 persons collecting disability benefits of which 245,000 had a job and 730,000 did not have a job.

6 shows outflow rates from employment to unemployment and from employment to disability. The outflow rates to unemployment vary between 4 and 12%, while the outflow rates to disability range between 1 and 2%. Despite the difference in level of outflow rates it seems as if the two rates are mirror images. This could have to do with the fact that work absence - the first stage of the process that ends in unemployment - is countercyclical.

In the early 1990s there were some further changes. The disability insurance premium was experience rated, the disability examination no longer took the availability of suitable jobs with respect to education and previous occupation into consideration, the duration of the benefit was limited to five years after which a re-examination had to take place and, all disabled workers younger than 50 years had to be re-examined.

Table 5 shows the numbers of disability benefits distinguished by age and gender. As shown most of the people collecting disability benefits are above age 44. Nevertheless there is a substantial number below age 45 as well. In the age range 15 to 24 years there are 30,000 individuals collecting disability benefits, in the age range 25 to 34 years there are 100,000 individuals collecting disability benefits, a number which is 175,000 for the age group 35 to 44 years. In the lower age categories more females than males collect disability benefits. From 45 years onwards the number of male disability benefit recipients is larger than the number of female disability benefit recipients. In the age group 55-64 15% of the all females collect disability benefits while 30% of all males in this age group collect disability benefits.

In 2002 the so called 'gatekeeper' model in which employers and workers carry more responsibility was extended. Now, the employer has to provide a plan for reintegration within 13 weeks after his worker became ill. This has to be done to make sure that workers and their employers try to prevent workers from entering the disability benefit system. If an application is made for a disability benefit a reintegration report has to be submitted. If there is insufficient proof of reintegration activities the worker may not get a disability benefit after one year of illness. In that case the employer may be obliged to pay the wage for another year and the worker faces the risk of receiving a lower disability benefit or no disability benefit at all. At this moment there is insufficient information available to assess the effectiveness of the 'gatekeeper' model.

## 4 Bringing the pieces of the puzzle together

Now that the pieces of the puzzle are presented they can be brought together. There are several explanations for the recent events in the Dutch labor market. As the OECD (1998) puts it: ‘Confronted with a deeper crisis than most other European countries, the Netherlands started its reform process earlier, with a greater scope for improvement’. According to Visser and Hemerijck (1997) three policy shifts are responsible for the ‘Dutch miracle’. First, there was wage moderation which started in the early 1980s and was concluded in negotiations between unions and employers in 1982. Because of this the competitiveness of the Dutch industry increased a lot. Second, there was of reform of the social security system, starting with a freezing of benefits in 1983 and an overhaul of unemployment insurance in 1987. The major reforms in social security took place in the early 1990s when disability insurance and sickness leave schemes were reformed. The third policy shift concerns the innovation of labor market policies and the emphasis on activating measures of various kinds. Nickell and Van Ours (2000) conclude that the unemployment rate in the Netherlands went down because of a significant reduction of the equilibrium unemployment rate since the early 1980s. Responsible for this are wage moderation, the popularity of part-time work and the re-enforcement of financial incentives for work for unemployed workers collecting benefits.

In assessing the current situation in the Dutch labor market I use the equilibrium unemployment framework in which changes in institutions are the main determinants of the Dutch labor market success.<sup>12</sup> Table 6 gives a summary representation of the main policy changes and their effect on the unemployment rate and the employment population rate. There are three major and three minor changes in labor market institutions that generated the employment miracle. The three major changes are the removal of the barriers for part-time labor, changing incentives with respect to unemployment benefits and the cooperative relations between employers and unions. The three (relatively) minor changes concern employment protection, disability insurance and active labor market policies.

The first component of the Dutch success story is part-time labor. The main institutional change here is the removal of institutional barriers. After the barriers were removed part-time jobs were no longer inferior in terms of taxes and social security benefits and part-time employment grew very rapidly. This increased em-

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<sup>12</sup>See Layard and Nickell (1999) for an overview and Nickell (2003) for a recent application. See also Belot and Van Ours (1999) for a cross-national comparison of the effects of labor market institutions on unemployment.



Table 6 Bringing the pieces of the puzzle together

Topic	Policy 1980s-90s	U-rate	EP-rate	Remarks
<b>Part-time labor</b>	Barriers removed	-	++	Also legal barriers
<b>Unempl. benefits</b>				
Replacement rate	Reduced	-	+	For some groups still no incentives to look for a job
Entitlement period	Experience rated	-	+	
Benefits sanctions	Introduced	-	+	
<b>Wage negotiations</b>	Central agreements	-	+	Cooperative unions
<b>Empl. protection</b>	More flexibility	<b>0</b>	+	
<b>Disability insurance</b>	Attempts to reform	-	-	No political consensus
<b>ALMPs</b>				
Subsidized jobs	Increased	-	<b>0</b>	Locking-in effects
Sheltered labor	Mild expansion	-	<b>0</b>	
Matching	Reorganizations	-	+	Privatizations

ployment not only in terms of jobs but also in terms of overall working hours. Rather than being created at the expense of full-time jobs they stimulated the creation of full-time jobs. So, the stimulation of part-time jobs both reduced unemployment and stimulated employment.

The second component concerns the changes in the system of unemployment benefits. Incentives to search and find a job were improved by lowering of replacement rates, relating entitlement periods to past employment experience and by introducing a system of benefit sanctions. These changes reduced unemployment and because effective labor supply increased the changes also stimulated employment.

The third component concerns the structure of wage bargaining. The Wassenaar agreement was the central agreement between unions and employers' organizations that triggered off a number of other central agreements that stimulated wage moderation. Wage moderation is not only due to the structure of wage bargaining but is also related to the decline of the benefit replacement rates. Furthermore, the growth of part-time labor stimulated effective labor supply, which supported wage moderation. So, part-time labor stimulated total employment both directly and indirectly. The central agreements stimulated employment and because of this they reduced unemployment.

In addition to the three main institutional changes there are three smaller changes that influenced the improvement in the functioning of the Dutch labor market. Reduced employment protection created a more flexible labor market, which may not have had a direct negative effect on unemployment but stimulated employment. Reforms of the disability insurance system changed incentives but largely failed to bring the inflow into disability down. If anything the disability benefit policy has been one of muddling through. Perhaps the new 'gatekeeper' model will improve matters but as yet it is too early to draw any conclusions on this. Therefore, both unemployment and employment were negatively affected. Finally a number of active labor market policies were introduced or expanded and the organization of the public employment services was changed with a negative effect on the unemployment rate.

When assessing the current situation in the Dutch labor market it is necessary to distinguish between actual unemployment and equilibrium unemployment. The inward shift of the Beveridge curve shows that in the 1990s the functioning of the labor market has improved. Equilibrium unemployment has gone down due to changes in labor market institutions. Nevertheless, in the late 1990s actual unemployment may have been below the equilibrium unemployment, causing wages to rise and actual

unemployment to increase. So, part of the recent rise in unemployment has to do with an equilibrium adjustment. Another part of the recent rise may be related to the business cycle. All in all, there does not seem to be a lot of reason to worry a lot about the recent rise in unemployment. That does not mean that all labor market problems are solved. The main problems facing the Netherlands in the near future are the large number of workers collecting disability benefits and the low employment rate among elderly workers. Since the first problem is around for decades and the second problem is a consequence of the 1980s-policy that intended to reduce unemployment through early retirement it will not be easy to find solutions. What will happen in the labor market in the near future is to some extent dependent on the political arena. Nevertheless, since the Netherlands is a coalition country where there is never one party in power no big changes are expected to occur. Coalitions of the same parties that were responsible first for the Dutch disease and then for the Dutch miracle are still in power at the start of the 21<sup>st</sup> century.<sup>13</sup>

## 5 Conclusions

In the past decades unemployment in the Netherlands has gone down substantially. The main suspects responsible for this decline are the growth of part-time labor, the reform of the benefit system and wage moderation. Nevertheless, in recent years the unemployment rate in the Netherlands has increased somewhat. This increase is partly a response to the low unemployment rate and the accompanying rise in wages and partly business cycle related, that is due to the recession that has hit many European countries. Since the huge decline in unemployment was due to structural improvements in the functioning of the labor market there is not a lot of reason to worry about the recent increase. The current structure of the labor market is a lot 'healthier' than it was in the early 1980s. Therefore, the upward movement of the unemployment rate is bound to be a mild one.

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<sup>13</sup>The three main political parties responsible for the change in institutions in the 1980s and 1990s are the Christen Democrats (CDA), the liberals (VVD) and the Social Democrats (PvdA). They have ruled the Netherlands in various combinations. There was a shock to the political system when the leader of a new political party - Pim Fortuyn - was killed just before the elections of May 2002. In the aftermath of the assassination Fortuyn's party won many seats in Dutch parliament. A coalition with Fortuyn's new party as one of its members started August 2002 but already collapsed October 2002. In January 2003 there were new elections as a result of which an old-style coalition will again be in power.

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## **Appendix 1: ‘Wassenaar’ agreement**

The national employers’ associations and trade union confederations, represented in the Labour Foundation, considering that

- the following factors are essential for the structural improvement of employment: recovery of economic growth, stable price levels, improved competitiveness of enterprises and, in connection therewith, improved returns;
- a long-term social and economic policy, intended to achieve the above, is necessary;
- even if economic growth recovers, it will not be possible in the medium term to assist the entire existing labour force and the growth in the labour force in finding paid employment in the near future;
- in connection with the aforementioned policy, it would be advisable to introduce a long-term approach aimed at re-distributing existing employment more effectively; i.e. an approach which encompasses several methods of re-distributing employment, such as working time reduction, part-time work, and efforts to reduce unemployment among young people;
- in connection with the agreements to be made by the collective bargaining partners regarding the form, phasing and employment effects, one of the premises must be that –in view of the weak financial position of enterprises – a better distribution of existing employment should not result in higher costs, and
- efforts must be made to make a start with the implementation of this policy in 1983, with the collective bargaining partners having the exclusive right to re-negotiate between them wage agreements already set out in collective bargaining agreements;

I. call upon the collective bargaining partners to create the conditions required to introduce a policy along these lines as quickly as possible;

II. give it as their view that there are also reasons to have consultations with one another in the Labour Foundation on a number of aspects related to the redistribution of work and efforts to reduce unemployment among young people, in order to arrive at a set of recommendations on these issues before 1 January 1983;

III. express the desirability –while respecting one another’s opinions and feelings regarding the new Cabinet’s policy intentions– that the collective bargaining rounds for 1983 will start shortly in enterprises and sectors of industry, based on the considerations and policy intentions described above, and urge the Cabinet to do everything possible to enable the collective bargaining partners to negotiate freely with one another on the basis of the above recommendations. They declare their willingness in that regard to inform the Cabinet about the actual developments and results of the collective bargaining rounds in the Spring of 1983.

The Hague, 24 November 1982

## Appendix 2: Some peculiarities of the Dutch labor market

### 2.1 Measuring unemployment

To measure unemployment various definitions used:

- Registered unemployment (Central Bureau of Statistics - CBS): Individuals registered at a public employment office who do not work or work for less than 12 hours per week and who are available to work 12 hours per week or more.
- Unemployed labor force (Netherlands Bureau of Policy Analysis - CPB): Individuals that indicate wanting to work for at least 12 hours per week, who are available and were active to search for a job of at least 12 hours per week.
- Want to work for 12 hours or more per week: individuals that indicate that they want to work for at least 12 hours per week, without restrictions concerning active search behavior or availability.

The schedule below gives an overview of the different measurements of unemployment for 2001 (1000 workers).

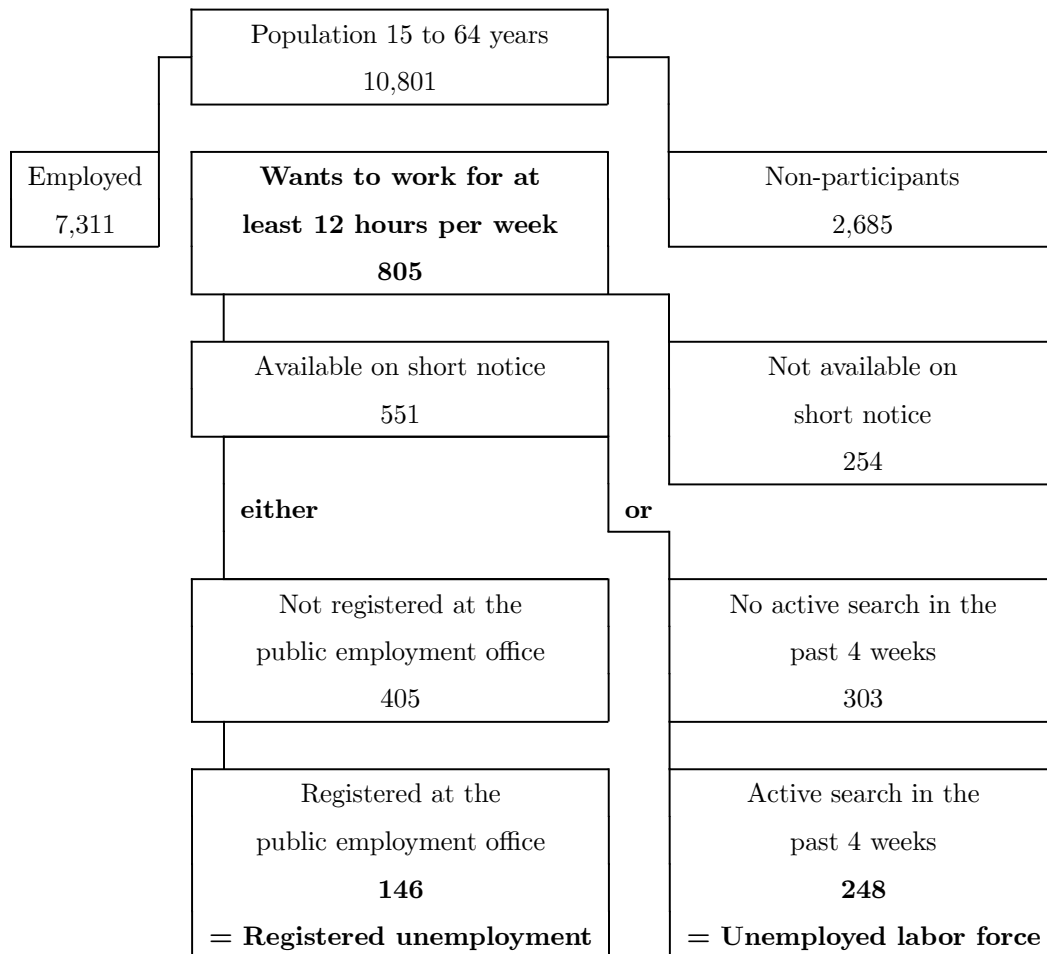


Figure 7 gives an overview of the evolution of these three indicators over the period 1992-2002. As shown the level of the three indicators is quite different but the evolution is remarkably the same.

## **2.2 Measuring employment**

Table 2 contains information with respect to a variety of employment indicators. Figures 8, 9 and 10 give information in graphical form. As shown in Figure 8 the growth in the total number of employee jobs is mainly due to the increase in the number of part-time jobs from less than 1 million in 1970 to almost 3 million in 2001. The number of full-time jobs did not change much over the period of three decades. Since 1995 the numbers of both part-time jobs and full-time jobs are increasing. Because the increases in the number of jobs is mainly due to part-time jobs the evolution of the number of labor years is less spectacular. As Figure 9 shows the number of labor years increases from about 4 million in 1960 to 6.5 million in 2001. Figure 10 shows that the number of working hours of a standard full-time job has decreased substantially over the past decades although the decline over the 1990s is rather small.

## **2.3 Wages**

Figure 11 shows that the real wage in the Netherlands increased about 50% in the 1970s. In the 1980s there is hardly any increase. On the contrary, in the first half of the 1980s there is a clear decline. This was due to the disappearance of the cost-of-living clauses due to the 'Wassenaar agreement' In the second half of the 1990s the real wage increases again to a level of 170 (index 1970=100).

Figure 12 gives an indication of the impact of the wage moderation on the labor costs in the Dutch industry as compared to the German industry. From the early 1980s onwards there has been a relative decrease in Dutch labor costs up to the mid-1990s. From then on labor costs in Dutch industry increased compared to those in German industry.

## **2.4 Disability**

Figure 13 shows the evolution of the number of individuals collecting disability benefits. Apart from the mid 1990s there is an almost steady increase in this number from 650,000 in 1980 to almost 1 million in 2001. Flows into and out of unemployment are shown in Figure 14.

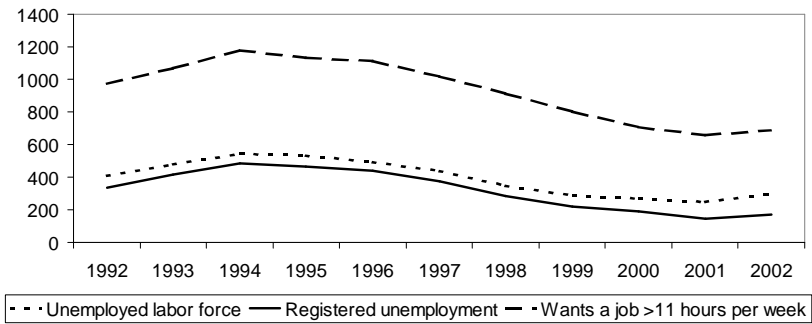
## **2.5 Indicators of labor market institutions**



The developments in union density are shown in Figure 15. In the 1970s union density first increased and then decreased, a decrease that is continued until the beginning of the 1990s. In the beginning of the 1990s there is again an increase, but in the second half of the 1990s union density increases again. Up to the mid 1990s a lot of the fluctuation in union density are related to fluctuations in the numbers of union workers. The decline in union density after 1995 has mostly to do with employment growing fast while the number of union members remained fairly constant.

Figure 16 shows that the average unemployment benefit replacement ratio has gone down in the past decades, especially since the mid 1980s. Figure 17 shows the evolution of labor taxes. In the beginning of the 1970s the tax rate as a percentage of labor costs went up from 34 to 43%. Then, it remain almost stable until the beginning of the 1980s when it again increased to reach a peak in 1983 of 46%. Since then, there are fluctuations around a downward trend until in 2001 the tax rate was 36%. Figure 18 shows the evolution of the minimum wage as a percentage of average wage. The relative minium wage has gone down since mid 1970s. This implies that a lot of benefits for which the minimum wage is a reference point have also gone down in a relative sense.

**Figure 7 Various definitions of unemployment  
1992-2002 (1000)**



**Figure 8 Full-time jobs and part-time jobs, employees  
1970-2001 (1000)**

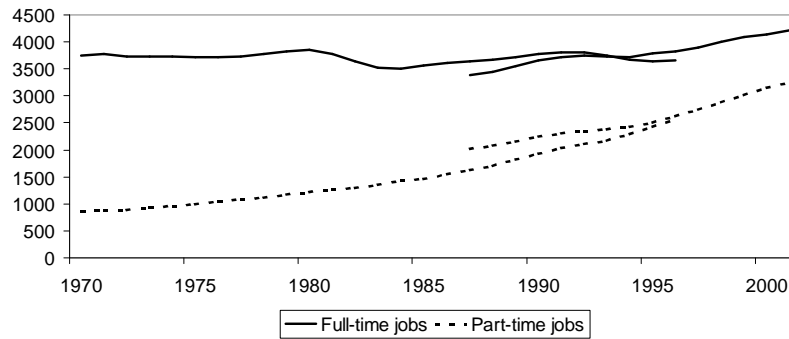


Figure 9 Labor years; 1960-2001 (1000)

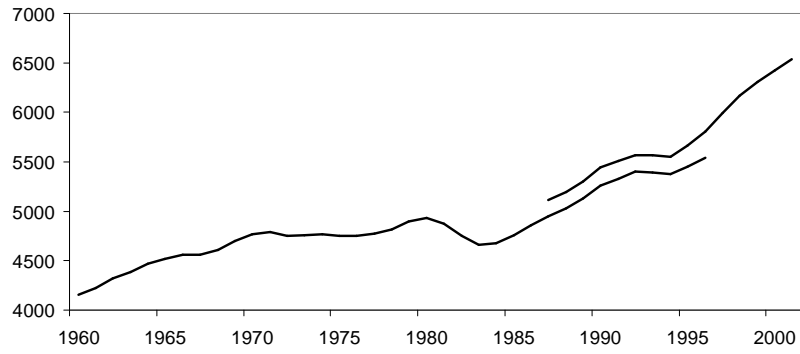


Figure 10 Duration of a fulltime labor year  
1960-2000 (hours)

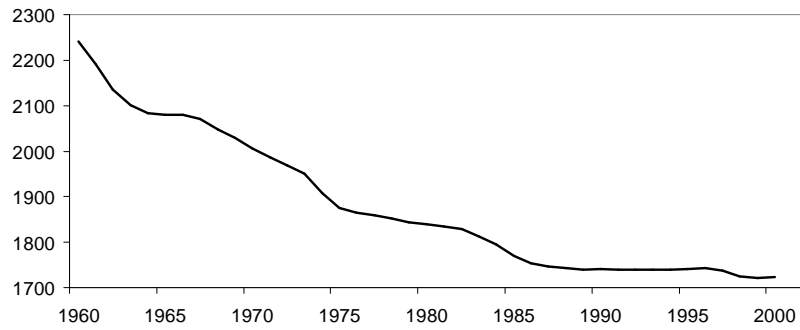


Figure 11 Development real wage  
1970-2001 (1970=100)

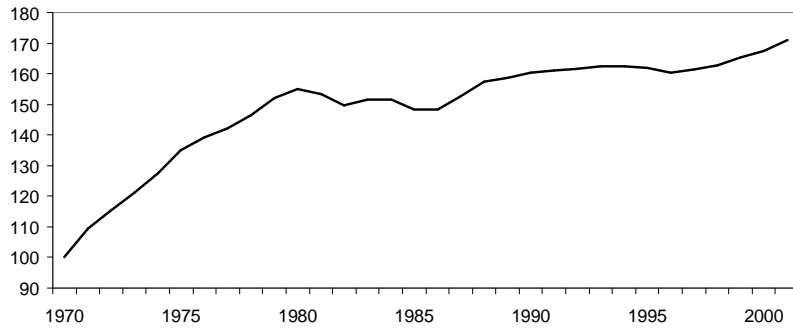


Figure 12 Labor costs industry Netherlands/Germany  
1976-2001 (1976=1)

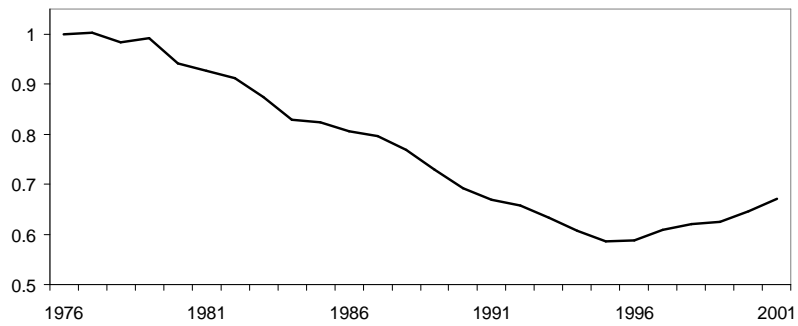


Figure 13 Number of disabled persons  
1980-2001 (1000)

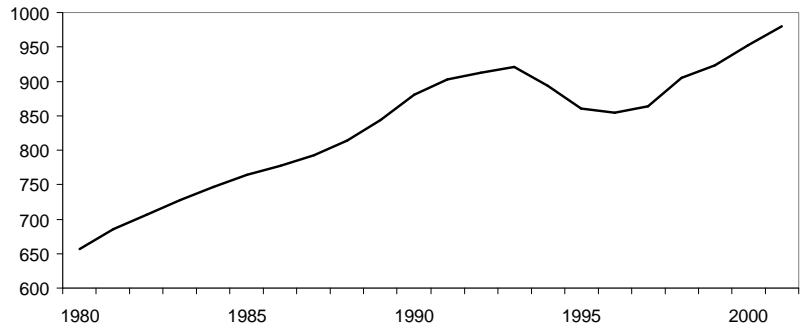


Figure 14 Inflow into and outflow from disability  
1980-2001 (1000)

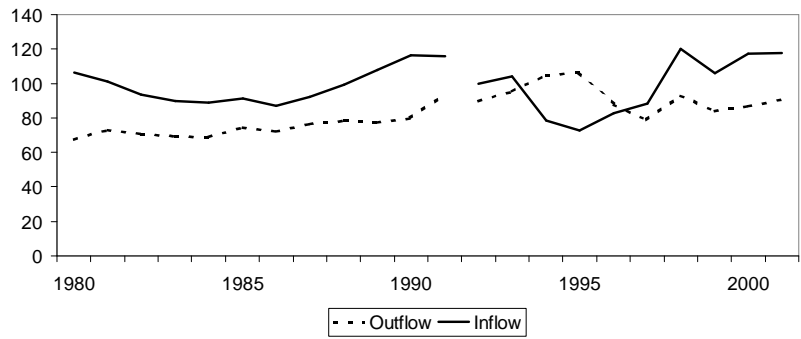


Figure 15 Union density 1970-2001 (% of workers)

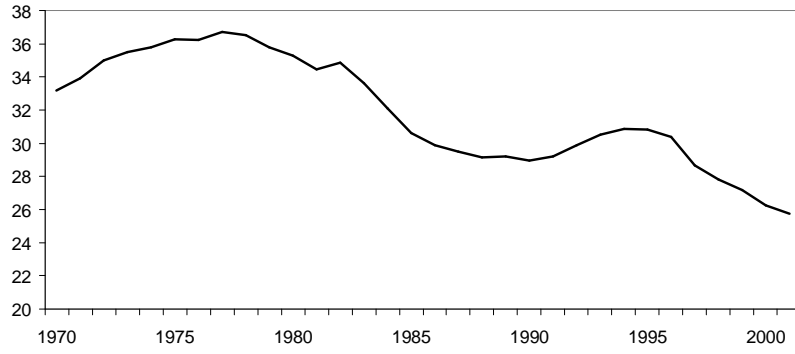


Figure 16 Average replacement rates 1970-2001 (%)

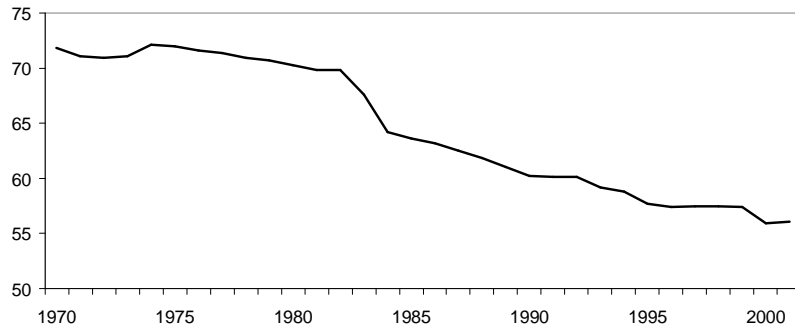


Figure 17 Labor taxes 1970-2001 (% of labor costs)

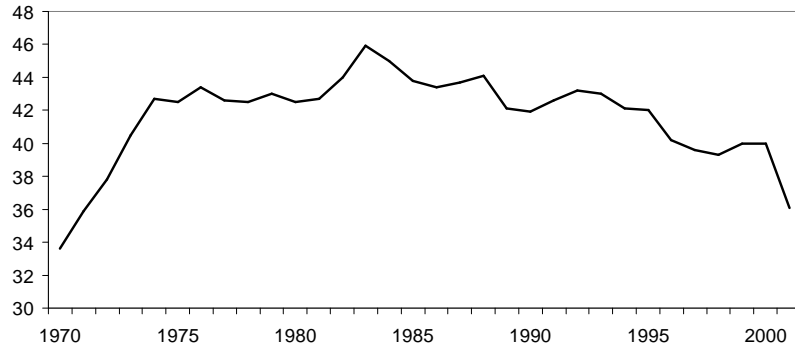
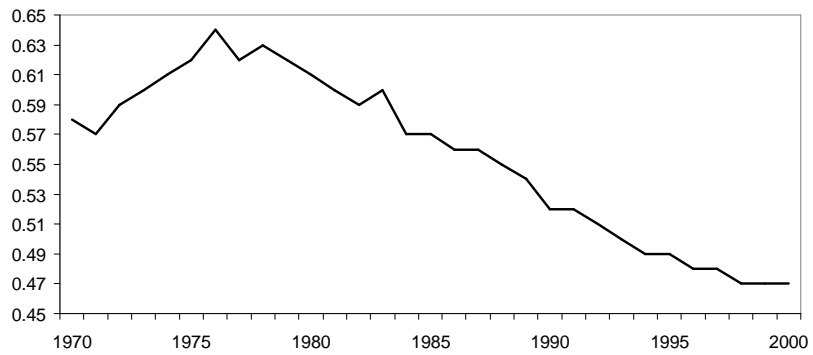


Figure 18 Minimum wage 1970-2000 (% of average wage)



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