Research Memorandum

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Institutions at work
Commitment and flexibility
on the German and Dutch labour markets

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1 Introduction[1]

Dutch policy makers praise the German labour market for the high skill level and internal flexibility of its workers. From a German perspective, the large share of part-time and temporary employment in the Netherlands stands out. These and other differences in labour market performance cannot be fully explained by differences in wealth, macro-economic shocks or preferences, but point to differences in labour market institutions.

The central objective of this Research Memorandum is to find out to what extent differences in institutional arrangements between Germany and the Netherlands contribute to differences in labour market performance. To this aim, labour market institutions are broadly defined as arrangements that create a framework for individual labour relations. They govern labour relations between employers and employees, managers and employees, and affect the position of outsiders[2] and insiders. Indicators of labour market performance are activity and quality. Activity refers to labour market participation, whereas quality concerns the availability of human capital and the efficiency of its use. Both aspects codetermine the attractiveness of a country as an investment site as well as the living standards of its inhabitants, referring to income, job quality and the extent of unemployment.

The Research Memorandum is part of a broader project in which CPB Netherlands Bureau for Economic Policy Analysis compares the German and Dutch economies. The aim of this project is to learn from the strengths and weaknesses of the institutional set-up of both countries. Lessons from experiences abroad can support policy adjustments that improve the quality of institutions, with the paramount objective to enhance economic performance. Although it is impossible to transfer entire institutional systems across countries, insight in the successful and fruitless directions of institutional change is useful.

This approach is not new. Prominent examples in the field of labour market institutions are Freeman (1994, ed) or Hartog and Theeuwes (1993, eds). This Research Memorandum contributes to the existing literature by presenting a detailed comparison of labour market institutions in two similar economies. The choice of Germany as the reference country may on the one hand reduce the scope to learn, because many institutional characteristics are alike. Hence, to put the comparison into a broader perspective, the American labour market has been chosen as a

[1] This paper benefitted from many useful comments on previous versions by A.L. Bovenberg, G.M.M. Gelauff, A.H.M. de Jong, G.J.H.C. Wiggers and J.J. Graafland. A. den Ouden skilfully constructed the figures. Finally, I would like to thank L.T. Damshuizer, G.A.M. Janssen and A.E.M. Meershoek-Horbowiec of the CPB library.

[2] Here, outsiders are defined as unemployed.

benchmark. On the other hand, the practical value of lessons may be larger, since implementing lessons from similar countries is easier to accomplish.

The organisation of the Research Memorandum is straightforward. **Section 2** gives a broad outline of the analytical framework that is used to clarify the links between institutions and performance. Subsequently, **section 3** presents some facts on performance of the German and Dutch labour markets. Next, **section 4 and 5** compare two types of labour market institutions: labour market regulations and collective bargaining institutions[3]. For both types of institutions, the relevant section starts with an overview of the theoretical impact of various institutional characteristics and proceeds with a comparison of the actual German and Dutch institutional arrangements. Based on these two elements, strong and weak elements come to the fore. Finally, **section 6** gives an overall assessment of the strengths and weaknesses of the German and the Dutch institutions at work.

[3] Other CPB papers deal with co-determination (Gelauff and Den Broeder, 1996: 93-105), social security (Vossers, 1996) and education (De Jager, 1996 and Den Broeder, 1995). Therefore, this Research Memorandum does not address these institutions in detail.

2 Analytical framework

2.1 Two models

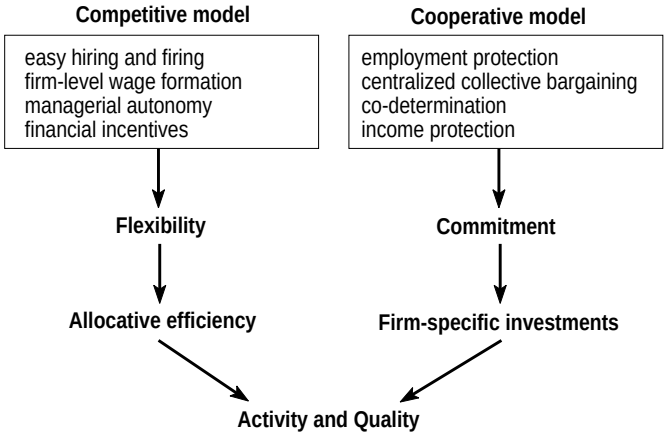
What does economic theory say on the links between various labour market institutions and performance? That is the question this section tries to answer. It provides an overview, as details will be discussed in the relevant sections later on. Basically, the argument runs as follows. Two arche-typical models of labour market institutions are distinguished: the *competitive model*, which can be associated with the American labour market, and the *cooperative model*, which can be associated with labour relations in Germany (Box 1). The Dutch labour market occupies an intermediate position between both extremes.

The competitive model relies on external *flexibility* to promote the allocative efficiency of the labour market by allowing ample freedom to act for individual employers at a decentralized level. Dismissal protection hardly exists, employers set wages in individual labour contracts or bargain at the firm level, and workers do not exert a strong influence on management decisions. Moreover, limited unemployment benefits and corresponding low social security costs provide incentives for individuals to participate, search and accept a job. This enhances job flows from inactivity to activity or from unemployment to employment and may increase effort on the job.

The cooperative model, in contrast, relies on *commitment* between employers and employees to support firm-specific investments in the quality of labour relations. These investments require that both parties share the initial costs and the future benefits. Joint investments give both parties an incentive to continue the labour relation in order to capture their share of the returns (Hashimoto, 1981). However, due to bounded rationality and asymmetric information, labour contracts cannot fully specify the size and nature of firm-specific investments and how the future returns to these investments will be shared. This makes employers and workers vulnerable to opportunistic behaviour of the other party (Gelauff and Den Broeder, 1996: 25).

Institutions of the cooperative model strengthen the commitment of both parties to keep to implicit agreements in labour relations. Employment protection, centralized collective bargaining and a voice of workers at the work floor provide a countervailing power to workers against unilateral actions of employers, such as sudden dismissals, wage reductions or reorganisations. Centralized wage formation gives employers a tool to prevent worker threats to quit unless they receive higher wages. For the outsiders of this system, social security benefits guarantee a minimum income level. This safety net gives workers an incentive to invest in firm-specific skills, because they are insured against shocks that affect their value.

Box 1 Institutional models, behaviour and performance



Definitions of the main concepts in the figure:
***(External) flexibility** is defined as the extent to which individual employers can adjust employment, working hours or wages to output fluctuations. Employment flexibility takes place through hiring and firing or the termination of flexible contracts. Flexibility in working hours results from irregular work patterns or from variability in the daily actual working time of individual employees. Wage flexibility concerns the scope for employers to adjust wages to changes in demand and supply conditions.*
***Commitment** implies that employers and workers keep to their agreements, for instance the way returns to firm-specific investments will be shared. Both parties do not opportunistically exploit the other party's cooperative stance, since this would undermine future cooperation (Marsden, 1995).*
***Activity** concerns the participation of the available human resources in the production process, expressed in the number of working hours per head. Other indicators of activity are gross and net participation, expressed either in persons or in working hours. Gross participation is defined as employment and unemployment divided by the working-age population. Net participation is employment divided by the working-age population.*
***Quality** is defined as the efficiency with which workers perform their tasks. This depends on both human capital and the efficiency of its use. Hence, quality encompasses both general and firm-specific human capital, but also efficient information flows, effort, efficient managerial decision-making and **internal flexibility** of workers; i.e. their ability to switch to new tasks or to implement new technologies within firms.*

2.2 Balancing strengths and weaknesses

Both the extreme flexibility of the competitive model and the complete reliance on cooperative long-term labour relations in the cooperative model frustrate performance. In the competitive model, a lack of commitment hampers firm-specific investments in worker quality. Employers and employees are vulnerable to possible exploitation by the other party once they have invested in their labour relation[4]. They fear that the other party "grasps the fruits of the first party's cooperative stance" (Marsden, 1995), since they have little means to enforce commitment. For instance, workers may threaten to quit unless they receive higher wages. Likewise, employers may fire workers who have invested in relationship-specific assets, or to lower their wages once the investment has been made. Moreover, limited social security provides only little insurance to workers who have invested in firm-specific skills. This encourages employees to invest in general rather than firm-specific skills. As a result, investments in labour relations are curbed.

In the cooperative model, in contrast, restrictions on flexibility frustrate the allocative efficiency of the labour market. The lack of flexibility may reduce employment because it hampers wage adjustments to firm-specific shocks. In addition, it discourages re-allocation of labour from low to high productivity jobs. Moreover, the generous benefit system may create disincentives for individuals to participate, search and accept a job. Inefficient allocation also hampers quality. Limited labour mobility reduces the diffusion of knowledge embodied in workers through the economy. In addition, by diminishing the labour market access of outsiders, for instance school-leavers with up to date qualifications, human capital is not optimally used. Moreover, the institutions of this model may hamper effort at work. Centralized wage formation constrains employers in using wage premia as a way to stimulate effort. Job security and income protection may reduce incentives for effort at work.

This points at a trade-off between (external) flexibility and commitment. Excessive emphasis on flexibility deteriorates the basis for investments in firm-specific human capital, internal flexibility and improvements of managerial decision making through co-determination (Nickell, 1995). Lagging behind in labour quality lowers labour productivity and output quality. This may eventually result in a lower activity level, when the economy becomes unattractive as an investment site for knowledge-intensive production activities. Too much emphasis on commitment,

[4] Some specifications in labour contracts enforce commitment. For instance, contract specifications may forbid workers to transfer particular assets such as client-networks to other employers. However, due to transaction costs contract specifications alone cannot prevent opportunistic behaviour (see also Gelauff and Den Broeder, 1996).

however, makes labour markets rigid and yields an inefficient allocation of labour across firms. Because labour is not smoothly reallocated to its most productive use, rigidities eventually frustrate labour market activity and quality.

Accordingly, institutions should strike a balance between flexibility and commitment in order to combine the strong points of both models (Box 2). Strengthening employer commitment creates an incentive for workers to invest in firm-specific human capital, until employer commitment becomes so strong that workers lose the incentive to put effort in their labour relationship because their position is too secure. Too strong a commitment of employers may also curb investments of employers in firm-specific assets, as employers fear that employees will use their secure position to capture the rents.

Box 2 Strengths of the two models

This box summarizes the main strengths of both models, as explained in the analytical framework.

The cooperative model is better in accumulating firm-specific assets. Job security, centralized bargaining and co-determination enable workers and employers to consider their labour relation from a long-term perspective. Income protection of the cooperative model moreover insures workers against future losses of firm-specific human capital and supports outsiders during their search for a high quality job match. In addition, income security improves equity, by reducing the gap in income between outsiders and insiders.

The competitive model scores better at using human resources efficiently. Limited job security and decentralized wage formation allow swift adjustments to economic shocks. This improves the diffusion of knowledge embodied in workers and the allocation of general human capital. Limited income protection may provide incentives to participate, search and accept a job and may prevent workers from shirking. Workers invest in general human capital, as an insurance against the consequences of economic fluctuations.

The strengths of both models clarify the main trade-offs: commitment versus flexibility, and, related to this, insurance and equity versus incentives.

The optimal balance is not constant over time and across countries, industries or firms, but depends on the specific economic environment. Increasing knowledge intensity of production increases the need for commitment to support firm-specific investments in worker quality. At the same time, labour market flexibility is required to enhance an efficient allocation of human resources. Increasing volatility of demand and supply conditions continuously alters the identity of high and low productivity locations. This strengthens the need for flexible re-allocation processes.

Both factors enhance the need for an optimal mix between commitment and flexibility. The remainder of this section briefly describes how features of labour market institutions, i.e. employment protection, collective bargaining institutions, co-determination arrangements and income protection affect this balance.

2.3 Institutions

Employment protection

Two channels of employment protection, i.e. firing regulations and co-determination arrangements, secure the position of insiders and reduce employment flexibility. Their impact on labour market performance is ambiguous. One the one hand, costly dismissals raise adjustment costs, which augments labour costs and may make employers more cautious to hire (Gelauff and Graafland, 1994). Moreover, the reduced access of outsiders and the lower mobility of labour hamper the diffusion of human resources and knowledge embodied in workers through the economy. On the other hand, strong employment protection fosters strategies of labour hoarding, which preserves employment during economic downturns.

In addition, job security strengthens the commitment of employers to the labour relations with their employees. This stimulates workers to take a long-term perspective and invest in relationship-specific assets, because they are likely to benefit from the long-term returns to these investments. Analogously, the semi-fixed character of core employment increases the need for enterprises to invest in worker quality. However, excessive employment protection may weaken the incentives of workers to invest in firm-specific quality, because workers have insufficient incentives to put effort in their labour relation.

The overall impact of employment protection on labour market performance depends on the size of firing costs, the existence of alternative ways to introduce labour market flexibility, the knowledge-intensity and the volatility of production. **section 4** addresses these issues in more detail.

Collective bargaining

The degree of centralisation of collective bargaining influences to what extent collective bargaining promotes flexible wage formation and supports cooperative labour relations. A decentralized system, for instance collective bargaining at the firm level, enables flexible wage adjustments to local shocks. Downward wage flexibility may sustain employment in case of negative regional or firm-specific shocks. Likewise, upward wage flexibility improves the re-allocation of labour to firms with strong growth perspectives. Moreover, employers may use wage formation as a tool to enhance effort or to discourage quits by paying a wage that

exceeds marginal productivity.

Centralisation, in contrast, delegates bargaining power to a higher level of aggregation than the individual firm. This hampers wage flexibility by restricting the scope for individual employers to set wages individually, but strengthens commitment of employers and workers to implicit agreements about the division of rents. This prevents confrontational labour relations at a decentralized level. Individual workers and employers cannot use changes in their ex post bargaining power to change wages, because they have delegated wage formation to a higher level of aggregation.

This points at a trade-off between, one the one hand, the high degree of wage flexibility in a decentralized system and, on the other hand, the support of commitment in a centralized system. **Section 5** analyzes this trade-off and related issues in more detail.

Co-determination

Co-determination, i.e. the institutionalized participation of workers in decision-making by management, gives workers a tool to monitor and influence management[5]. Because co-determination is a form of employment protection, it gives workers an incentive to consider their labour relation from a long-term perspective and invest in firm-specific human capital, efficient information flows and internal flexibility. Moreover, co-determination is a tool to improve managerial decision-making. Worker representatives often support the implementation of management decisions such as reorganisations, because they see this as a way to preserve the employment level (Jacobi *et al.*, 1992). Moreover, the quality of managerial decision-making may improve, because managers cannot opportunistically pursue their own goals without considering the interest of workers. The protection of worker representatives against dismissals supports the efficacy of legal co-determination rights, because worker representatives are not inclined to raise their voice without long-term job security (Levine and Tyson, 1990).

Co-determination arrangements also suffer from disadvantages, however, because they make decision-making and the employment level less flexible. Consensus-building at the work-place is time-consuming. It may slow down decision-making or even result in a deadlock, which lowers labour quality within the firm instead of improving it. If worker-representatives become too influential, they may behave opportunistically, instead of participating in effective cooperation. This hampers firm-specific investments by employers.

[5] See Gelauff and Den Broeder (1996) for a comparison of the Dutch and German co-determination institutions.

Box 3 Occupational pensions and profit-related pay

Occupational pensions and profit-related pay support commitment and incentives to put effort in the labour relation.

In particular, long vesting periods, limited indexation of pension rights for those who end participation before retiring, and linking benefits to the final wage binds workers to firms and motivates workers not to shirk, by increasing the terrors of loosing a job. Limited portability of occupational pensions comes at a price in that it reduces labour mobility across firms. Moreover, these pension schemes leave workers exposed to human-capital and job-mobility risk. This reduces insurance and worsens income disparities. Indeed, a lack of insurance against job-mobility risk enhances effort but reduces flexibility. Occupation pensions illustrate the trade-off between insurance and incentives: they enhance incentives by reducing insurance.

Also profit-related pay illustrates this trade-off. These arrangements enhance work incentives and the commitment of workers to the firm. However, they leave workers vulnerable to firm-specific shocks.

Income protection

Income protection protects individuals against income decline during periods of inactivity[6]. This improves the opportunities for unemployed to invest in skills and job-search in order to improve the quality of a future job match, thereby enhancing labour quality and flexible flows of employment between jobs (Blank, 1994, ed). Moreover, it insures workers against the loss of their firm-specific assets, for instance through firings or bankruptcies. This encourages workers to take the risk to invest in firm-specific worker quality.

However, generous social security may also weaken incentives for activity and effort. Generous unemployment benefits, characterized by a high instant replacement rate, a long benefit duration, limited benefit entitlement conditions and low monitoring activities, reduce the "terrors of unemployment" (Jackman *et al*., 1995). Therefore, they may reduce the search intensity of unemployed and the probability that a job offer is accepted (Gelauff and Graafland, 1994). Moreover, the generosity of benefits may weaken the effort of workers in their current labour relation, because insurance against job loss reduces the disutility of losing a job.

These effects, however, not only depend on the generosity of income support, but also on the quality of a job (offer), the values attached to being employed and the

[6] See Vossers (1996) for a comparison of the Dutch and German social security systems.

impact of related institutions on commitment and flexibility. In particular, employers may try to improve worker effort and worker commitment through occupational pensions and performance-pay schemes (Box 3).

The effects of income protection illustrate the trade-off between adequate market incentives for activity and worker effort, versus acceptable living standards and insurance of investments in the quality of current and future job matches. Cutting benefits may increase the incentives for search, acceptance and effort, but may lead to unacceptable poverty, underinvestments in firm-specific assets and inadequate job search (OECD, 1996b: 52).

3 Performance

3.1 Introduction

What are the main similarities and differences in labour market performance between Germany and the Netherlands? From a broad international perspective, both labour markets share many features. Labour market participation is low, and both countries face high costs of inactivity. From a qualitative point of view, they are characterized by a similarly high enrolment in education. At a closer look, however, many differences come to the fore. Overall activity expressed in working hours differs, and trends in participation, unemployment and working time vary. With respect to labour force quality, a sizable discrepancy in the level of educational attainment stands out.

This section briefly presents some information on the current situation, revealing the strengths and weaknesses facing both labour markets. Moreover, it sketches the main underlying trends over the period 1960-1995. The multitude of possible performance indicators are structured under the headings activity and quality. To put the similarities and differences between German and Dutch labour market performance into perspective, the United States, United Kingdom and Sweden are chosen as countries of reference[7].

3.2 Activity

Two observations come to the fore. First, labour market activity, expressed as the number of working hours per head, differs considerably across countries (**Tabel I**). The age structure of the population, preferences for leisure or informal activity, enrolment in education, sickness and disability, as well as non-participation of discouraged job-seekers and the unemployment level determine activity at a given point in time. Hence, it is impossible to assess performance by looking at total activity alone. Rather, information on participation rates, working patterns and types of inactivity sheds light on labour market performance. For instance, the current Dutch net participation rate[8] approximately equals its level in 1960, but corresponds with a much higher unemployment rate and a higher dependency on social security schemes (WRR, 1990). Second, unemployment levels vary substantially and persistently across countries. A certain level of short-term unemployment seems inevitable, as it is related to labour market flows, directing the allocation of labour to its most productive use (Jackman *et al.*, 1995). Nevertheless, the large and persistent

[7] OECD, WRR, Eurostat and CBS are the main sources of information for this section.

[8] Defined as employment divided by the working-age population (15-64).

international differences in unemployment rates cannot be satisfactory explained by different experiences concerning economic shocks, but are related to institutions that influence hiring and firing, search and job acceptance.

Tabel I *Indicators of labour market activity, 1994*

	US	UK	Ger	Neth	Swe
	in %				
potential labour force[a]	65.3	64.8	68.6	68.7	63.7
gross participation[b]	77.9	73.5	68.3	66.5	76.4
unemployment[c]	6.0	9.5	8.4	6.8	8.0
net participation[d]	73.2	66.5	62.6	62.0	70.3
	in hours per year				
working hours per employee[e]	1747	1683	1590	1447	1544
working hours per head[f]	1279	1119	995	897	1085

[a] 1993. Share of population aged 15-64 (mid-year estimates). Data for Germany refer to total Germany. Source: OECD (1995a).
[b] Sum of total employment and standardized unemployment as a share of the potential labour force.
[c] Standardized unemployment rate.
[d] Total employment divided by the population 15-64. Source: OECD (1995b: 204), for the Netherlands: CPB (1996). Data for Germany refer to total Germany.
[e] Yearly actual working time per employee (in Sweden per person in employment) in 1994. Sources: For UK, Ger and Neth.: Eurostat (1996), Unpublished updates of "Working time in the European Union - Estimated annual working time", For US and Swe: OECD (1995b: 208).
[f] Yearly actual working time per head 15-64.

Demography

To compare German and Dutch labour market activity, demography is the first factor of interest. A relatively young population implies a large potential supply of labour and an influx of young people with up to date stocks of human capital. Currently, the share of the working-age population is approximately equal in both countries (**Tabel I**). However, this masks a different age structure. The Dutch population is relatively young, as the process of ageing is less far progressed than in Germany. The number of youngsters (younger than 15) amounts to 26.7% of the working-age population, compared to only 23.9% in Germany. In contrast, the share of people over 65 amounts to 22.1% in Germany and 19.0% in the Netherlands (in 1993, Eurostat, 1995: 58).

The process of ageing will eventually lower the future share of the active population in both countries, but the Dutch population will remain younger than its German counterpart. This follows from different underlying developments of the young and old-age dependency ratio of the population. According to the United Nations World Population Prospects (UN, 1995), the young-age dependency ratio remains higher in the Netherlands throughout the entire projection period, i.e. until 2040[9]. The assumption of a higher Dutch fertility rate, as well as the currently younger population causes this difference. If the assumption of a relatively high number of relatively young immigrants to Germany is relaxed, the age structure would differ even more between both countries. Hence, the comparative advantage of the Netherlands will persist, but the extent of this advantage depends on the demographic assumptions (see De Jager, 1996 for a more extensive comparison).

Net participation

Besides the age structure of the population, net participation rates determine activity. At present, the total net participation is approximately equal in both countries. Dutch females still participate less (57%) than their German counterparts (61%), but Dutch males participate slightly more: 80% compared to 78% in Germany (in 1994, OECD, 1996a: 34). From a broader international perspective, however, net participation is still at a comparatively low level in both countries (**Tabel I**).

[9] The old-age dependency ratio will strongly rise in both countries and will reach a similar value for a large part of the projection period, i.e. until 2040. It rises faster in the Netherlands, implying a convergence to the German value. By the end of the projection period, however, this ratio is again at a lower value in the Netherlands (UN, 1995).

Box 4 The puzzling low participation of Dutch women

Nobody really understands the exceptionally low labour market participation of Dutch women" (Pott-Buter, 1993). Neither the late Dutch industrialisation process nor the different war experiences constitute satisfactory explanations. Dutch female participation in agriculture as well as in the upcoming manufacturing industries was comparatively low. The lack of a "war-economy" in the Netherlands cannot explain why Dutch women to a lesser extent took part in labour market activities than their German counterparts, since the wars did not cause a persistent rise in German female participation.

Explanations for the low level of Dutch female participation and the late start of the catching-up process, which is still less impressing in terms of working hours, can be found by looking at long-term historical trends in ideology, wealth and fertility. Before World War II, the image of the married woman at home was a sign of health and prosperity in many countries, and married women mainly worked for reasons of poverty. Ideology regarding female work in the Netherlands as well as in Germany stressed the role of women in providing family care at home, and regulations hampering female participation existed in both countries. However, this view on the position of married women could be more easily translated into day-to-day practices in the Netherlands. The relative prosperity in the Netherlands at the turn of the century stimulated the early consumption of the luxury good "own home and child care". Moreover, the "pillarization" or "compartmentalization" of Dutch society implied a strong influence of pillars with a similar ideology on the role of women in actual family-life. On top or maybe because of that, Dutch fertility rates were relatively high until the 1970s.

After World War II, general ideas regarding female participation gradually altered, but it wasn't until 1960 that the participation of Dutch married women started to rise and the gap with their German counterparts narrowed.

Sources: Plantenga (1993) and Pott-Buter (1993).

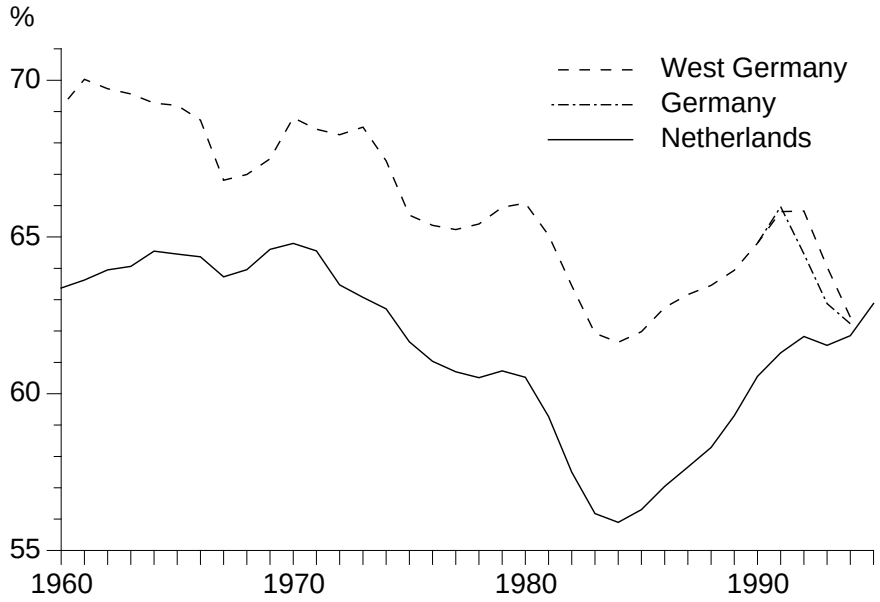
Participation of married females

	1900	1930	1950	1960	1970	1980	1990
	% of married women aged 15-64						
Germany	12	30	28	36	40	47	54
The Netherlands	5	7	11	7	17	32	47

Source: Pott-Buter, 1993: 201

The underlying trends between 1960 and 1995 are a rising participation of women and a decreasing participation of men. Both trends were more profound in the Netherlands (OECD, 1995b: 204). Dutch women entered the labour market in large numbers during this period. This is not surprising since they had a high catching-up potential: they lagged behind their German counterparts with an extremely high participation gap of 23 percent-points in 1960 (OECD figures, see also Box 4). In 1960, almost all men of working age participated on the labour market. Since then they more often withdrew from the labour market before reaching the age of 65, because of a growing number of early retirements and a rising participation in disability schemes (WRR, 1990, Delsen, 1993). Especially the more widespread use of disability schemes in the Netherlands causes the lower participation of older men (Einerhand *et al.*, 1995: 140). In both countries, participation of younger men decreased as well, because of an increasing educational enrolment.

Figure 2 *Net participation*



Source: Statistisches Bundesamt, CPB (1996; Wildcat & CEP96), CBS

The trends in male and female net participation result in a convergence of total Dutch and German net participation. Between 1960 and the beginning of the 1980s, the drop of male participation outnumbered the rise of female participation in both countries. Hence, total net participation declined (Figure 2). Since the beginning of the 1980s, the rise of female participation became more forceful, and the slow-down of male participation came to a halt. As a consequence, net participation started to

rise. In the Netherlands, job growth over the last decade stands out from an international perspective (OECD, 1996b: 3). Net participation rose strongly and reached approximately the same level as in 1960. In Germany, it is still somewhat lower as in 1960. By consequence, the net participation gap with Germany has disappeared[10].

Working time

The picture of equal activity rates strongly alters when working time is considered. Equal net participation rates mask differing working-time patterns. Between 1960 and 1995, both countries experienced a trend towards a reduced number of yearly working hours per employee. A shorter full-time work week as well as more part-time work contributed to this trend. This resulted in a small number of hours worked from a European perspective, whereas the European average is in turn lower than that in the United States (**Tabel I**). Hence, the difference in activity between the United States and Europe is greater when adjusted for hours worked. Dutch employees work even less hours than their German counterparts. Since participation rates expressed in persons are approximately equal in both countries, this points at a much lower activity-level in the Netherlands.

The stronger development of part-time employment explains the shorter working time of the Dutch employee. (Bosch *et al.*, 1993, eds, and CBS). Until 1970, part-time employment gradually gained importance in both countries: it rose from approximately 5% in 1960 to 11% in 1970 in the Netherlands[11] and from 3.9% to 11.4% in Germany. Since then, it continued to rise in the Netherlands up to the current level of almost one third of total employment (in 1995, CBS). In contrast, German part-time work only slightly increased to a level of 16% (in 1995, OECD, 1996b, 192). At present, the average size of a part-time job (823 actual yearly working hours in the Netherlands compared to 846 in Germany) or of a full-time job (1798 and 1743 hours respectively) differs to a much lesser extent than the average number of actual working hours of an employee (1447 and 1590 yearly working hours, in 1994, Eurostat).

[10] The definition and way of measuring net participation in the Netherlands changed over time (WRR, 1990). This paper makes use of a corrected time series constructed by the CPB (Arts, 1995) that shows a development of net participation rates that is comparable to the figures presented by the WRR (1990).

[11] Under the assumption that part-timers work 20% of a full-time work week.

Box 5 Sectoral turbulence

Can sectoral shifts explain the rise of unemployment in Germany and the Netherlands? Over the period 1960-1995, both countries experienced a shift away from manufacturing and agricultural employment towards employment in the services sector. A shift of production, a lower rate of labour productivity growth and a faster growth rate of part-time employment in the service sector contributed to this trend.

The shift of production towards the service sector was larger in Germany. Nevertheless, German production remained more manufacturing oriented, in particular because of the larger size of the metal industry (CPB, 1996: 264). Labour productivity in the Dutch services sector grew less forceful (on average 3.5% per year compared to 4.25% in Germany) whereas the Dutch manufacturing industry experienced a stronger labour productivity growth (5.75% compared to 4.25% in Germany, CPB, 1996: 267). The growth of part-time employment, which is concentrated in the services sector, was larger in the Netherlands. As a consequence, the shift of employment was slightly larger in the Netherlands (Van der Wiel, 1995).

Job reallocation associated with this sectoral shift does not constitute a satisfactory explanation for the persistent rise of unemployment in Germany and the Netherlands since 1970 (Alogoskoufis et al., 1995). Both countries did not experience a larger degree of "sectoral turbulence" than in earlier decades, when a shift away from agricultural employment took place (OECD, 1994a: 5 and CBS). Moreover, the American economy experienced a similar structural shift towards service sector employment, without a comparable rise in unemployment.

Long-term trends in service sector employment and current sector distribution

	Share of service sector employment					Sectoral distribution, 1995		
	1950	1960	1970	1980	1990	services	manufacturing	agriculture
	% of total employment							
US	56	61	63	67	72	73	24	3
UK[a]	48	48	53	60	69	72	26	2
Ger	33	39	43	52	57	59	38	3
Neth[b]	na	51	58	62	69	73	23	4
Swe[c]	na	na	56	62	68	71	26	3

Sources: OECD, 1994a: 5, OECD, 1996b: 191, CBS.
[a] 1951 and 1961 instead of 1950 and 1960.
[b] 1973, 1979 and 1994 instead of 1970, 1980 and 1995.
[c] 1973 and 1979 instead of 1970 and 1980.

Unemployment

The second observation refers to the large and persisting differences in unemployment across countries. During the 1950s and 1960s, the level of unemployment in EC countries was far from alarming. Since the 1970s, however, it increased rapidly. Unemployment rates overtook American levels[12] and unemployment became persistent: each expansion of business activity succeeded in bringing down unemployment, but recovery did not drive unemployment down to previous cyclical lows (OECD, 1996c). International differences in demand shocks, for instance in sectoral turbulence, cannot satisfactory explain the differing developments of unemployment (Box 5). In Germany and the Netherlands, the persistent nature of rising unemployment corresponds with an increased average duration of unemployment spells (OECD, 1994a: 48). Currently, the German and Dutch inflow rate into unemployment is lower than that in the United States, but the duration of unemployment spells is much longer (**Tabel II**). In the United States, more frequent labour market flows from employment to unemployment result in a much lower proportion of long-term unemployed.

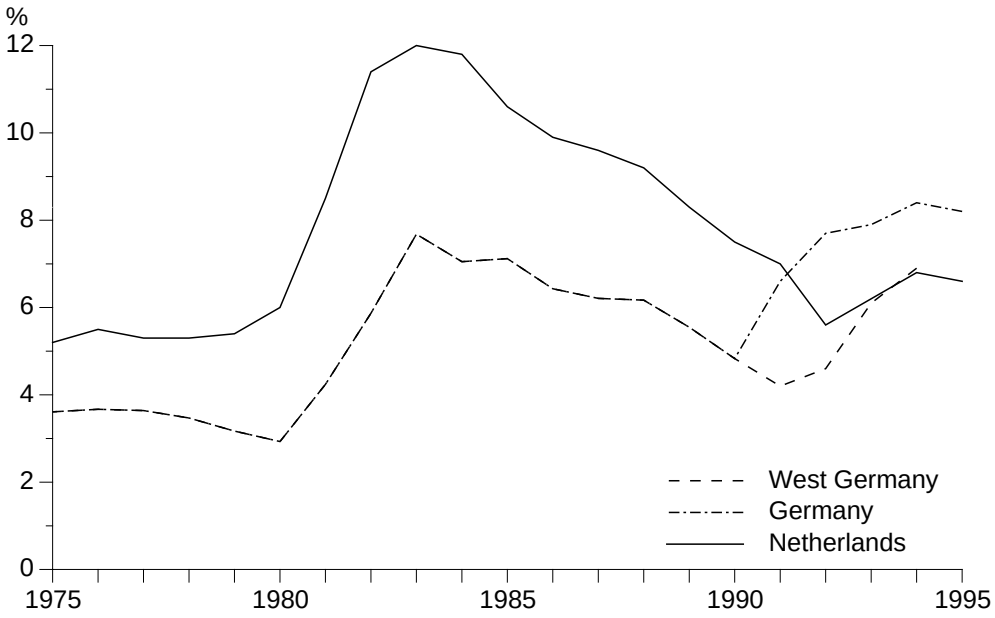
Tabel II *Types of unemployment*

	youth/adult[a]		unskilled/ skilled[b]	long-term[c]	
	1979	1990	1991	1983	1995
			in %	*in %*	
US	2.90	2.49	11.8 / 4.4	23.9	17.3
UK	2.85	1.63	13.4 / 2.5	65.7	60.7
Ger	1.34	0.89	11.6 / 4.0	65.8	65.4
Neth	2.47	1.75	15.6 / 5.3	69.2	74.4
Swe	3.34	3.02	2.6 / 1.1	24.9	35.2

[a] OECD, 1994a: 43. Youth unemployment: 15 to 24 years. Adult unemployment: 25 years and over.
[b] Unemployment rates. US, UK, Swe: OECD, 1994c: 165, males. Ger: 1989. Abraham and Houseman, 1993a: table 11, males, Fachhochschule versus no qualification. Neth: 1990. CPB, 1994: 23, males and females, primary versus higher educated.
[c] OECD, 1996b: 202. % of total unemployment with a duration of 6 months and over.

[12] Swedish unemployment remained at a relatively low level until the beginning of the 1990s.

Figure 3 Development of unemployment



Source: CPB 1996, CEP 1996 appendix B3

German and Dutch unemployment rates have converged (Figure 3). Until recently, the average unemployment level was much lower in Germany than in the Netherlands. Even the stronger job creation in the Netherlands during the second half of 1980s (OECD, 1996b: 3) could not lower unemployment to a level below that in Germany, because of a more forceful labour supply growth. During the 1980s, both the younger population and the stronger rise of participation rates caused a relatively strong growth of Dutch labour supply (CPB, 1996: 225). Since the beginning of the 1990s, however, the German unemployment rate rapidly increased. Unemployment in the former western Länder has now reached the Dutch unemployment level. The unification boom reduced unemployment, but this effect turned out to be only temporary. In the new Länder, employment plunged after unification. The extremely high participation in active labour market policy programs could not prevent a rise in open unemployment, causing an unemployment rate for total Germany that exceeds the current Dutch level[13]. Both parts of Germany now suffer from a high structural unemployment level, although the share of long-term unemployment is lower than in the Netherlands (**Tabel II**).

[13] Quite recently (since mid-1994), however, an upswing of production in the sheltered sector of the new Länder caused a fall in the (open) unemployment rate (OECD, 1995c: 18-23).

In all the countries of reference, unemployment is concentrated at the lower end of the educational attainment range (**Tabel II**). Low skilled unemployment comprises a more severe problem in the Netherlands than in Germany, however, because of a lower educational attainment of the labour force (see the section on worker quality below). In spite of the rising joblessness among low-skilled, the earnings distribution was stable in Germany and income inequality only slightly increased in the Netherlands (between 1985 and 1994, OECD, 1996b: 61). In contrast, the American job market responded to the abundant supply of low-skilled labour with widening earnings differentials. Real earnings of low-skilled diminished and earnings inequality increased during the 1980s and 1990s (Freeman, 1994, ed: 233, Blank, 1994, ed and OECD, 1996b: 59). As a result, the American working poor now have lower living standards than the jobless low skilled in the Netherlands or Germany (Freeman, 1994, ed: 7-14). In spite of falling real earnings of low skilled workers, however, even American unemployment remains concentrated among low-skilled.

Summary

The comparison of activity leads to the following main conclusions: the use of available human resources, if expressed in the number of workers, has converged between Germany and the Netherlands. The process of catching up in net participation corresponded with strong job creation in the Netherlands over the last decade. However, Dutch workers on average work (even) less hours than their German counterparts, which explains a lower activity level in the Netherlands. Unemployment rates of the Netherlands and the old German Länder are equal, whereas unemployment in total Germany now exceeds the Dutch level. This signifies a weakening of the German labour market performance since the beginning of the 1990s and a slight improvement of Dutch performance. However, the Dutch economy to a larger extent suffers from low exit rates of long-term unemployed and high low-skilled unemployment.

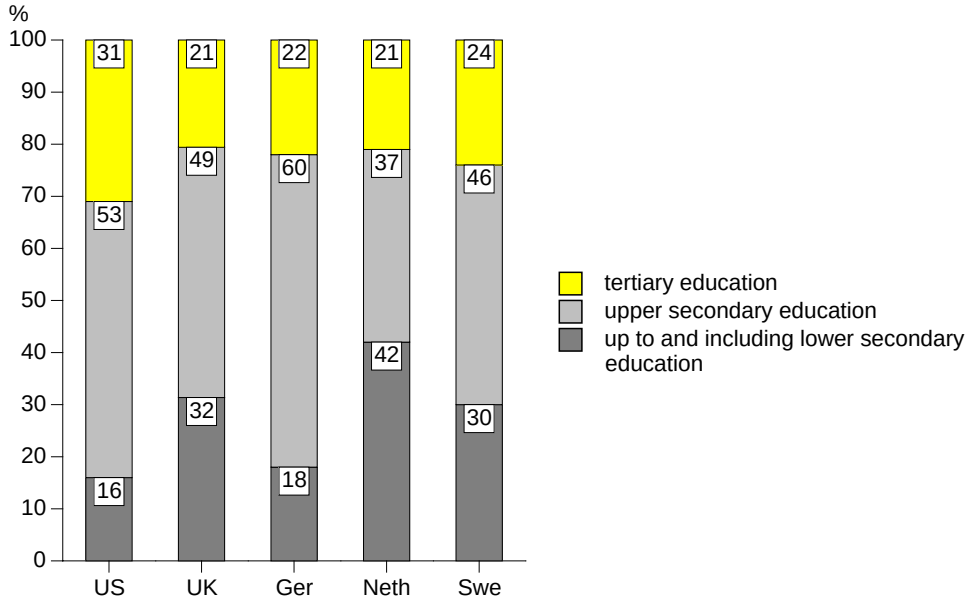
3.3 Quality

Educational attainment

The high nominal educational attainment level of the German labour force indicates a strong position with respect to labour force quality, which is only outperformed by the leading position of the United States. The German population share with upper secondary education stands out from international perspective, which is related to the extensive apprenticeship system. The Dutch educational attainment level, in contrast, lags behind that in the four countries of reference (Figure 4). The share of the population with an educational attainment at the tertiary level (comprising higher vocational and university education) is roughly in line with that in other countries, except for the United States. However, the share of people with upper secondary

qualifications[14] is relatively low. By consequence, a substantial part of the Dutch population merely has qualifications below the upper secondary level.

Figure 4 Educational level of the population 25-64, 1992



Source: OECD (1995), Education at a glance

The current unfavourable position of the Netherlands is caused by the relatively late process of catching up in educational enrolment. In 1960 only 17% of Dutch 18 year old youngsters followed education, compared to 27% in Germany (CBS and Fischer *et al.*, 1993). Between 1985 and 1992, the enrolment of 18-year old youngsters in Germany remained at a constant level, whereas the Dutch enrolment rate continued to increase considerably during the 1980s. At the beginning of the 1990s, Dutch educational enrolment has reached German levels (De Jager, 1996). Enrolment in upper secondary education is almost as high as in Germany. Total enrolment in tertiary education is also similar, although the average age of students in Germany is higher than in the Netherlands. Based on an extrapolation of these enrolment figures, it can be expected that the Dutch working-age population will have reached the same educational attainment level as its German counterpart around

[14] In the Netherlands, upper secondary education consists of the last three years of general education (vwo and havo) and vocational education (mbo or llw), see also De Jager (1996) or Den Broeder (1995).

2035 (De Jager, 1996).

The match between education and work

The level of educational attainment is only a crude measure of labour force quality. Labour force quality also depends on the match between acquired skills and labour market requirements. Mismatches may be quantitative, resulting from a suboptimal total enrolment rate, an inefficient enrolment per type of schooling or deficiencies in subjects of the schooling curriculum. Moreover, they may result from an insufficient quality of the schooling system itself. The quality of schooling may be as least as important as the level of educational enrolment or the educational attainment level. Hanushek and Kim (1995) find that the quality is more significant than quantity (proxied with years of schooling) to explain cross-country differences in economic growth. Finally, mismatches may result from inadequate possibilities to update obsolete skills. An increasing pace of technological change and a rising age of the work force intensify the need to update human capital.

The German apprenticeship system results in a better quantitative match between education and work than the Dutch system (Den Broeder, 1995). It results in a higher share of persons with a vocational educational attainment at the upper secondary level, provides education for a wide ability range, and makes Germany one of the few countries with youth unemployment rates below adult unemployment. According to the WEF (1994: 585) Germany has the lowest share of youth unemployment of the 41 countries considered. In contrast, Dutch pupils more often acquire general instead of vocational qualifications at the upper secondary level (Den Broeder, 1995). Being a combination of working and learning, the links between the contents of education and skill requirements are a strong point of the German dual system as well. Although the system suffers from quality differences in the enterprise-related part of training (Den Broeder, 1995), the WEF (1994: 588 and 595) reports a high score for Germany on the availability of skilled labour and the degree to which the educational system "meets the needs of a competitive economy". The Dutch scores are average from a broad international perspective[15]. The Dutch system is improving, however. Full-time vocational education has become increasingly popular and better linked to employer's demands, because of the introduction of working-experience elements in the curriculum and an increasing influence of employers on the contents of the curriculum. In addition, plans for dual elements in Dutch higher vocational education

[15] On the availability of skilled labour assessed by managers, the American score roughly equals the Dutch score. On a score from one to ten, Germany, the Netherlands and the United States score 7.21, 6.03 and 6.00 respectively. With respect to the capability of education to meet the needs of the competitive economy, the American score is much lower: 3.66 compared to 6.07 in Germany and 5.58 in the Netherlands (WEF, 1994: 588 and 595).

have been developed (FD, 1996).

The choice for different fields of education reveals a weaker quantitative match with skill demands of employers in the Netherlands. Dutch pupils are to a lesser extent inclined to choose a technical field of study. For instance, the share of science degrees amounts to 21% of all university degrees in the Netherlands, compared to 33% in Germany (OECD, 1995d: 225)[16]. Whether the Dutch pattern of human capital specialisation will result in a shortage of technical workers in the long-term future cannot be determined, since future skill requirements are not predictable (CPB, 1993b: 23). However, technically skilled human capital is valuable in a relative large range of professions and types of jobs and cannot easily be replaced by other types of human capital (ROA, 1992). This points at a greater threat of underinvesting than overinvesting in technical human capital (CPB, 1993b: 24). Moreover, the stronger science orientation in Germany is important in stimulating the public interest in technology and the quality of R&D personnel. Hence, the orientation of Dutch students can be considered as a weak point with respect to innovativeness (Van Dijk, 1996).

The quality of education is difficult to compare across countries, since available indicators such as class-size or teacher characteristics are not satisfactory. Scores on international tests, measuring scientific and reading performance, provide some information on the quality of the system. The results of six international science tests, administered by the International Association for the Evaluation of Educational Achievement between 1963 and 1991, report a good performance of Dutch and German pupils on science subjects, and worse results of American students (Hanushek and Kim, 1995). However, Germany did not participate in the most recent tests (see also CPB, 1993a: 37). In reading literacy, in contrast, Dutch pupils are outperformed by all the countries of reference, including the United States (**Tabel III**). However, these test scores only provide a rough indication of quality, since they include a relatively young age group and a limited number of criteria. At the tertiary level, evaluation committees, assessing the quality of higher education from an international perspective, generally report that educational quality in the Netherlands is satisfactory (see also CPB, 1993a, 41).

[16] In 1992. German figure refers to the Old Länder. The share of science degrees in the United States is even lower: 16%, compared to 29% in the United Kingdom and 27% in Sweden (OECD, 1995d: 225).

Tabel III *Some indicators of reading ability, 1991*

	US	UK	Ger	Neth	Swe
reading literacy at 14[a]	514	na	498 / 501	486	529
change in reading literacy[b]	125	na	164 / 180	178	150
low reading frequency[c]	15	na	13 / 10	19	14
high reading frequency[c]	17	na	15 / 22	9	16

Source: OECD, 1995d.

[a] Actual scores of countries range from 456 (Spain) to 545 (Finland) with a mean score of 500. Germany refers to former western Germany / former eastern Germany.

[b] Difference in reading literacy scores of pupils between 9 and 14 years old. Actual scores of countries range from 125 to 209, with a mean score of 155.

[c] Share of 14 year-old pupils reporting a low and high reading frequency respectively.

From a broad international perspective, possibilities to update human capital are high in Germany and the Netherlands. Many authors mention the lack of continuous human capital investments as a weak aspect of American labour relations (Freeman, 1994, ed). Only 16.8% of American workers have received formal training at any time in their current job, whereas more than 25% of Dutch workers and 13% of German workers have participated in a training program during the past four weeks (Lynch, 1994, ed: 11 and Mancini and Visser, 1995). Case study information on training in United States and Germany confirms that American workers spend less time in technical training than their German counterparts. In some sectors, American workers are trained less than their German counterparts, and in other sectors they are trained to the same extent, but the contents of training are to a greater extent directed at the formation of lacking basic skills instead of advanced vocational skills (Lynch, 1994, ed: 14). From a European perspective, Germany and the Netherlands are also characterized as countries with a high training incidence (Mancini and Visser, 1995).

At a closer look, however, possibilities for adults to update obsolete (or shortcomings in) skills turn out to be better developed in the Netherlands than in Germany. More than 25% of Dutch workers have participated in some kind of training program during the past four weeks (vocational or general), whereas this is only 13% in Germany, indicating that Dutch workers to a larger extent follow general courses as well (in 1991, Mancini and Visser, 1995)[17]. More importantly, the largest part of the German employee training courses (52%) consist of dual educa-

[17] Incidence of participation in training courses during the past four weeks by employed persons aged 15 years and over.

tion, which is in fact a part of initial education. As a consequence, possibilities for employee training courses outside the apprenticeship system, are comparatively limited in Germany. The German educational system has become criticised in this respect: limited possibilities for training or further schooling after following dual education block the upward career mobility of skilled workers (Den Broeder, 1995). Moreover, relatively few collective agreements in Germany include provisions for employee training, which also contrasts with the Dutch practice (Mancini and Visser, 1995: 30). It has to be noted, however, that figures on employee training need to be interpreted with caution, since data on employee training suffer from many statistical problems that hamper international comparability. For instance, little is known about the duration, quality and job relevancy of employee training courses.

Summary

To conclude, information to compare the match between education and work is insufficient (see also SZW, 1996). Nevertheless, indicators on the match between education and work do not alter the general picture of a better position of Germany with respect to human capital, except for the stronger Dutch performance in the field of adult education. The Dutch labour market performs worse compared to its German counterpart with respect to the availability of human capital, the share of vocational qualifications and the science orientation at the tertiary level. Although a lower labour force quality does not result in a low labour productivity in the Dutch manufacturing industry (Box 6), it can be considered as a weak element in the long-run, because of the increasing knowledge intensity of production and decreasing job opportunities for low-skilled workers. Therefore, the process of catching up in educational attainment will strongly improve Dutch labour market performance.

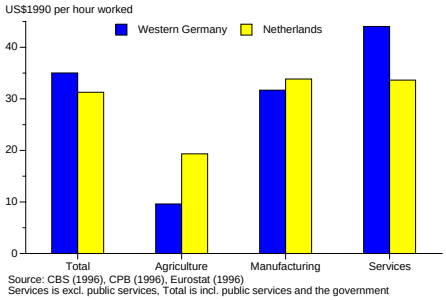
Box 6 Labour quality and productivity

Does the higher quality of the German work force result in a higher labour productivity level? On average, labour productivity per hour worked is higher in Germany. In the manufacturing industry, however, German labour productivity growth fell behind that in other advanced economies since 1980 and is now at a relatively low level. In contrast, Dutch labour productivity in the manufacturing industry is high from an international perspective (CPB, 1996: 161-168 and Van der Wiel, 1996, Van Ark and De Haan, 1996).

The lower level of labour productivity in the German manufacturing industry is puzzling (Gelauff, 1996). It cannot be explained by insufficient human capital investments, as the section on labour force quality reveals. Moreover, the German manufacturing industry, which is predominantly medium-tech oriented, is characterized by high investments in R&D and patenting activities (Paqué, 1996). Baily and Gersbach (1995) report two reasons for the weakening of German productivity performance. First, slow organisational innovations may have hampered an efficient use of the available stock of human capital. Second, lacking adequacy in transforming technological innovations into marketable products, may explain a weakening of productivity performance. According to Cörvers et al. (1995), the difference in Dutch and German productivity simply results from a higher physical capital intensity of Dutch production, for instance in the chemical industry (see also Van Ark and De Haan, 1996). As Dutch manufacturing primarily competes through high productivity in capital intensive low-tech industries, this raises concern on the long-term productivity growth potential (CPB, 1996).

In the services sector, the German productivity lead corresponds better with the higher educational attainment level. Labour productivity growth in this sector was stronger than in the Netherlands, and as high as in the German manufacturing industry. Also in a broader international context, the strong growth of German service sector labour productivity is remarkable (CPB, 1996: 264-285).

Figure 5 Labour productivity



Source: CBS (1996), CPB (1996), Eurostat (1996)
Services is excl. public services, Total is incl. public services and the government

4 Labour market regulations

4.1 Introduction

What is the impact of the German "internal labour market" versus the Dutch system of "flexicurity"? This section describes the effect of labour market regulations on labour market flexibility and the commitment of labour relations[18]. Before turning to the institutional comparison, **section 4.2** briefly addresses the theoretical literature and provides some empirical results. Subsequently, **section 4.3** compares the institutional framework of both countries, focusing on regulations concerning firing, working-time, short-time work and flexible contracts. Moreover, it addresses the impact of these regulations on the institutional arrangements between employers and workers, such as the incidence of flexible and part-time contracts. Finally, **section 4.4** assesses the strong and weak points of the institutional framework in both countries.

4.2 Theory and empirical results

Employment protection enhances the job security of workers, but reduces the freedom of action of individual employers. The employer cannot use particular arrangements without risking legal sanctions (Grubb and Wells, 1993). Firing regulations and legal support of co-determination are the main channels of employment protection. Firing regulations restrict the circumstances that permit dismissals and make firing procedures more costly. A collective voice of workers at the work floor through co-determination strengthens the protection of insiders against dismissals, because the primary objective of workers is to preserve the current employment level (Koene and Slomp, 1991). Hence, both institutions increase firing costs.

The effect of firing costs on labour market performance is ambiguous. Three partial effects need to be distinguished: the effect of employment protection on wage formation, the effect of adjustment costs on hiring and firing strategies, and the effect of secure labour relations on the commitment of employers. **Section 5** addresses the former effect. This section analyzes the effects on hiring and firing strategies and commitment.

[18] A previous version of this paper has been published as a part of (CBS, 1996).

4.2.1 Adjustment costs and hiring and firing strategies

Employment protection reduces employment flexibility: the scope for employers to adjust the employment level to fluctuations in activity. Hence, the effect of firing costs on labour flows is straightforward. Whatever strategy employers choose to deal with this constraint, firing costs form an obstacle to swift adaptations of employment to economic shocks and reduce the access of outsiders to stable employment. Both effects have been confirmed by empirical research (Jackman *et al*., 1995; Abraham and Houseman, 1993b). Low labour mobility and a limited access of newcomers makes the diffusion and reallocation of human resources through the economy more sluggish. Rigidities prevent labour from being transferred from low productivity to high productivity locations. Moreover, outsiders with up to date stocks of human capital cannot easily get access to the labour market. Both aspects reduce the allocative efficiency of the labour market.

The effect of reduced employment flexibility on the overall employment level is ambiguous. On the one hand, higher adjustment costs foster strategies of labour hoarding during economic downturns. On the other hand, firing costs augment labour costs and make employers more cautious to hire during economic upswings (Gelauff and Graafland, 1994). As a direct consequence, both the inflow to and the outflow from unemployment diminish. The overall balance of both factors is not a priori clear. It depends on the size of adjustments costs, the quit rate and expectations of employers on the degree of volatility of economic conditions.

With prohibitive adjustment costs and no quits, labour becomes a fixed asset. Under the additional assumption that employers anticipate the size of future shocks, Bertola and Ichino (1995) explain that employment protection does not lower employment. The optimal strategy of the employer will be to hire an "average number" of workers, in between the optimal employment level in periods of favourable and adverse economic conditions. As a consequence, the employer faces labour shortages or hoards labour, depending on the economic conditions. In the long run, the employment level equals that of a situation without firing costs, because periods of labour hoarding and shortages cancel out. Hence, Bertola and Ichino (1995) argue that employment protection may not be an important obstacle to employment performance. However, its main effect is an inefficient allocation of labour, because sector or firm-specific shocks do not trigger labour flows from firms in unfavourable to firms in favourable circumstances.

A more elaborate model assumes significant (but not prohibitive) firing costs, a positive quit rate and uncertainty about future fluctuations in product demand. Moreover, hiring is also costly, for instance because of screening procedures (Bentolila and Bertola, 1990). Hiring and firing costs make employers cautious to hire. In case of a positive shock, they postpone hiring until the difference between marginal productivity and wages exceeds hiring costs and the expected future firing

costs. Likewise, in case of negative shocks they will not fire until the gap between wages and the marginal productivity exceeds the sum of firing costs and expected future hiring costs. Hence, adjustment costs create a range of fluctuations in economic conditions that do not trigger hiring or firing. Clearly, this range is wider if employment protection is more strict. Besides the size of adjustment costs, three other factors determine the impact on hiring and firing strategies: the existence of other employment adjustment mechanisms; expectations regarding the point in time, duration and persistence of future shocks; and the time preference of the employer.

Based on estimates of realistic values of these factors, also this model finds that employment protection does not lower the employment level. Firing costs are larger than hiring costs[19]. At the time of the hiring decision, however, firing costs are heavily discounted by the employer, because current economic conditions are favourable and future negative shocks are often unforeseeable. Moreover, the employer can partly rely on quits and retirements to lower employment in case of future negative shocks. Low hiring costs and discounted firing costs imply that hiring is not strongly discouraged. Once hiring has taken place, however, high firing costs encourage labour hoarding when the negative shock occurs. Hence, the authors argue that hiring and firing costs do not strongly affect employment. Employment is even slightly higher, because firing is discouraged more than hiring.

Empirical research on the effects of employment protection on employment is inconclusive. As mentioned above, Bentolila and Bertola (1990) find that firing costs will sooner increase than lower the average employment level. Büchtemann (1989) also finds marginal effects. Jackman *et al.* (1995) do not find a significant effect of employment protection on the level of unemployment. However, they find that the limited access of outsiders to stable employment discourages participation, thereby reducing the employment level.

4.2.2 Employment protection, commitment and flexibility

Employment protection supports investments in firm-specific worker quality. As described in the analytical framework (**section 2**), workers are not inclined to invest in firm-specific worker quality if they cannot capture the returns. Job security strengthens the commitment of employers, because it provides countervailing power against dismissals. The lower firing risk stimulates workers to take a long-term perspective and invest in the value of their labour relation. Analogously, the semi-fixed character of core employment stimulates enterprises to invest in worker quality.

[19] Although firing costs may increase hiring costs, because employers more thoroughly screen job applicants, the authors assume that hiring costs are smaller than firing costs.

Empirical research by the OECD (1993: 119-155) concludes that tenure and investments in employee training are positively correlated.

However, if employment protection is excessive, a strong commitment of employers may go hand in hand with weak incentives for workers to employ their human capital efficiently and to put effort in firm-specific investments. This reduces the returns on firm-specific investments of employers, thereby reducing the incentives for employers to invest in labour relationships. This points to the importance of a balanced division of commitment between both parties (see also **section 2**).

4.2.3 Commitment versus flexibility, the trade-off

In policy initiatives to liberalise employment protection, enhanced external flexibility needs to be weighed against possible negative effects on investments in firm-specific quality. The knowledge-intensity of production, the volatility of economic conditions and the existence of alternative ways to enhance flexibility or commitment affect this balance.

Firm-specific investments in human-capital are more important in knowledge-intensive production processes. For these processes, the costs of reduced flexibility caused by employment protection seem less important to individual employers. Once employers have made the necessary investments in firm-specific worker quality, firms face high employment adjustment costs even without firing costs. For human-capital extensive production, in contrast, commitment is less important, because large investments in firm-specific skills are generally not required (Marsden, 1995). As a direct consequence, employers particularly like to flexibly adjust low-skilled employment, which makes hiring more sensitive to adjustment costs. Hence, firing protection may especially reduce hiring of low-skilled workers.

Moreover, the volatility of conditions of demand and supply affects the need for external flexibility. If fluctuations are large and predominantly sector- or firm-specific, the identity of high and low productivity firms continuously alters. This creates a need for labour flows between firms in order to enhance allocative efficiency.

However, the extent of flexibility and commitment not only depends on employment protection, but also on the existence of other institutions. If firms can easily hire temporary workers or adjust wages and working hours, employment adjustment costs do not have to hamper the overall degree of labour market flexibility (Blank, 1994, ed). Rather, employment protection may induce a dual hiring strategy. According to this strategy, "flexible" and "rigid" workers coexist, because a part of employment is hired on a temporary basis. The former category of workers provide flexibility, whereas the latter category develops firm-specific quality. As an alternative, employers may rely on hours adjustments through lenient

working-time regulations, part-time work or short-time working arrangements Likewise, other institutions may stimulate workers to invest in firm-specific assets, such as income support and employer commitment through centralized wage bargaining. **Section 2 and 5** address these institutions. The following sections compare labour market regulations in Germany and the Netherlands.

4.3 German and Dutch labour market regulations

4.3.1 Firing rules

Introduction

Despite deregulatory tendencies, most aspects of dismissal protection have remained intact in Germany and the Netherlands. Viewed from a European perspective, the strictness of dismissal procedures is "intermediate" in Germany and the Netherlands. Procedures are not as strict as in Italy, Greece, Portugal, or Spain, but more severe than in the United Kingdom, Denmark, Ireland or the United States (Grubb and Wells, 1993: 14). Firing procedures in the United States are limited, since periods of notice or severance payments are not obligatory (OECD, 1994c: 73). However, experience rating in the unemployment benefit system and lawsuits in case of firings that may contradict other laws (for instance regarding discrimination) are the American forms of employment protection (Bovenberg and De Mooij, 1996).

At a closer look, firing rules in Germany and the Netherlands differ[20]. This section compares the most important aspects of firing rules, concentrating on individual and collective dismissals for economic reasons[21] (**Tabel IV**). It depends on the size of the firm and the number of workers that become redundant within a specific period of time whether a dismissal is considered individual or collective. In the Netherlands, a dismissal is considered collective if at least 20 workers become redundant within a period of three months (SER, 1994: 67 or IDS, 1995: 39). In Germany, collective dismissals only apply to firms with at least 20 workers. It depends on the number of

[20] This section describes only legal minimum conditions. Collective agreements often specify improvements for workers on those conditions. Especially in case of dismissals at the executive level, considerable severance payments and outplacement services can be offered (IDS, 1995). Moreover, regulations regarding firing procedures are different for members of the management board, since firing a member of the board of directors is decided by the general meeting of shareholders or the supervisory board (Gelauff and Den Broeder, 1996).

[21] In case of firings because of performance below standard requirements, a German and a Dutch employer has to prove that a particular worker is unsuitable for the job. In Germany, dismissals are also considered unfair if a worker can be successfully retrained and subsequently employed in another position within the firm (Grubb and Wells, 1993: 47).

Tabel IV *Overview of firing rules*

	Individual dismissals		*Collective dismissals*	
	Germany	Netherlands	Germany	Netherlands
prior authorization or consultation	works council	regional employment office	works council	regional employment office
prior notification to third party	_	_	state employment office	regional employment office
delay before notice	7 to 10 days	4 to 6 weeks	approximately 1 month	1 month, (plus 4 to 6 weeks)
notice period	2 weeks to 6 months[a]	1 to 26 weeks[b]	as individual dismissal[c]	as individual dismissal
severance pay	0	0	approximately 15-25 weeks blue collar pay[d]	1 to 2 months pay, amount strongly varies
reinstatement after unfair dismissal	exceptional	exceptional	_	_
compensation for unfair dismissal	1 to 18 months pay[a]	1 to 26 weeks pay[b]	_	_
maximum probationary period	6 months[e]	2 months	_	_

Sources: Grubb and Wells (1993), Hunt (1994), Abraham and Houseman (1993b), IDS (1995), Jacobs (1993)

[a] Depending on age, tenure and type of job (blue-collar or white-collar or civil servant).

[b] Depending on tenure and age.

[c] Because of the obligatory one month waiting period the minimum period of notice is in fact 1 month.

[d] Estimate.

[e] This is no legal maximum (EC, 1994, Waarnemingspost voor Werkgelegenheidsbeleid: 24)

dismissed workers and the size of the firm whether a dismissal is collective[22]. Firing costs not only encompass minimum periods of notice, severance payments and provisions for unfair dismissals, but also procedures concerning authorization and involvement of worker representatives.

Individual dismissals

German firing procedures are to a large extent concentrated within the firm. Employers do not need to ask permission from the employment office, but have to consult the works council (at least if a works council is present in the company). Consequently, worker protection depends on the strength of employee representation at firm level (Bosch, 1988: 184). This procedure generally takes a shorter time compared to the Dutch procedure. However, if the works council disagrees, the particular worker has the right to remain employed until appeal to labour court (Büchtemann, 1989, Hunt, 1994, or Jacobs, 1993). Disapproval of the works council happens in a minority of dismissal cases (8%, Jacobs, 1993: 115). Even if the works council agrees with a dismissal, however, workers can appeal in court. If a dismissal is considered unfair, compensation instead of reinstatement is common (Jacobs, 1993: 115).

German employment protection is limited for small companies. The possibility to appeal in court does not apply to workers in firms employing five or less workers. Moreover, these firms normally do not have a works council[23]. Recently, a policy proposal has been accepted that raises the lower limit for dismissal protection from five to ten workers. This change will be implemented next year.

In the Netherlands, the administrative procedure of obtaining prior admission from the regional employment office for each dismissal is unique in Europe. The procedure generally lasts up to six weeks, but only a minority of the requests is rejected (6% in 1992, Van den Boom, 1993: 537). Workers can appeal in court afterwards if they think that the dismissal is unfair, but this is not a common procedure (SER, 1994: 36). However, if a dismissal is judged unfair through a court procedure, the worker receives compensation payments for being unjustly dismissed, since reinstatement is rare. Employers also have the possibility to appeal in court if authorization is refused (IDS, 1995).

[22] In Germany, dismissals are collective if more than 6 workers or 20% of workers in companies with 20-59 employees, more than 37 or 20% in companies with 60-249 employees, more than 60 or 15% in companies with 250-499 employees and more than 60 or 10% in companies with 500 or more employees become redundant within a period of 30 days (Hunt, 1994: 5).

[23] The only restrictions are that the dismissal is not contrary to provisions in general laws, for instance regarding discrimination.

Collective dismissals

In case of collective redundancies, additional - more complex - firing procedures need to be followed. In Germany, the criteria for a collective redundancy were altered in 1985 with the policy-objective of facilitating firing procedures by reducing the number of collective dismissals (AFG 1985)[24]. In addition to the consultation of the works council, the state employment office must be informed in case of a mass dismissal. This procedure includes an obligatory waiting period of approximately one month (Hunt, 1994), although the period of notice can already start during this period (Jacobs, 1993: 129). The involvement of the works council becomes more extensive, because the works council influences which persons will be dismissed and furthermore negotiates a social plan with the employer. A social plan consists of severance payments and may also include retraining measures.

In the Netherlands, an additional waiting period of one month - before the beginning of the procedure to obtain prior authorization by the regional employment office - is obligatory in order to discuss alternative solutions and compensation schemes with union representatives. Moreover, the works council has to be consulted on the intended dismissal. If the dismissal goes through, severance payments are specified in a social plan which the employer determines together with worker representatives (SER, 1994: 78). In practice, large firms frequently pay compensation to redundant workers, but in return demand that workers help to minimize procedural inconveniences (NRC, 1995). Moreover, the fairness of the choice which workers will be dismissed is determined by the regional employment office (SER, 1994: 67, 68). Employers need to justify their choice of workers who are to be fired, which is usually based on the last in, first out criterion (see also Grubb and Wells, 1993: 47).

Summary

The procedures involving dismissals feature many similarities. In both countries, preventive regulations and court procedures exist. Major differences concern the involvement of the works council versus the prior authorization procedure in the Netherlands. The German procedure implies that dismissal protection is limited in small companies without works councils. Moreover, the possibility to appeal in court is also very weak for workers in small companies (Jacobs, 1993: 131). For large

[24] Before 1985, a dismissal in Germany was considered to be collective if more than 5 workers in firms with 21-59 employees, more than 25 or 10% of workers in firms with 60-499 employees or more than 30 workers in firms with at least 500 employees become redundant within a period of 30 days (Hunt, 1994: 3).

companies, both the involvement of the works council and the possibility to appeal in court protect workers against dismissals. The Dutch procedure of obtaining prior admission clarifies in advance whether the dismissal is considered "fair" by an external third party. This prevents costly court procedures (see also IDS, 1995). However, the Dutch procedure is lengthy and hence costly for employers. The maximum probationary period[25] for new workers is relatively short in the Netherlands, which allows employers less time to screen new workers in order to reduce subsequent "firing-risks" (**Tabel IV**). Overall, the strictness of firing regulations is comparable in both countries, except for firing protection in small companies.

4.3.2 Working-time regulations

Deregulation and decentralisation

Working-time regulations protect the safety, health and well-being of workers in relation to their participation in the labour market (Tweede Kamer, 1993-1994). Rules relate to the number of hours that can be worked on an average working day, minimum resting periods, work at irregular hours and variation in the daily working time of individual workers. These rules affect the scope for employers to vary working-hours according to variations in production.

In both countries, recent deregulatory measures have increased flexibility in working-hours[26]. They facilitate working at irregular hours (weekends, nights). In addition, the length of the working-week of individual workers can vary in order to deal with variations in activity. The trend towards more flexibility in working hours induced bargaining at the firm level over working time provisions. Usually, sectoral collective agreements provide the framework, but exact specifications can be concluded at the firm level. In this case, the works council is the bargaining partner of management.

[25] During this period the employer can dismiss a worker without having to obtain prior authorization (IDS, 1995: 31).

[26] The introduction of new regulations was necessary because of an EU-directive that prescribes minimum rest periods, maximum working-hours, and the equal treatment of men and women (except in case of pregnancy, Tweede Kamer, 1993-1994: 21-25).

German and Dutch regulations

In Germany, working-time rules were deregulated in 1994. Nowadays, fluctuations in daily working time can be compensated within a period of six months. Moreover, there is more scope to change working-time conditions through collective bargaining agreements, even if this implies less worker protection. For instance, collective bargaining can result in longer working days.

Tabel V *Working-time regulations*

	Germany	The Netherlands	
		standard	with agreement
maximum average number of working hours per day (per week)	8	8 (40)	9 (45)
maximum number of working hours per day (per week)	10	9 (45)[a]	10[b]
maximum length of compensation period	6 months	13 weeks	13 weeks
minimal resting period number of hours after work day (week)	11 (35)	11 (36)	11 (36)
minimal number of holiday days (of a full-time worker)	24	20	20
work at irregular hours: Sundays	allowed, but restricted[c]	allowed, but restricted[d]	allowed, but restricted[e]
work at irregular hours: nights	allowed, but restricted[f]	allowed, but restricted[f]	allowed, but restricted[f]

Sources: Tweede Kamer, 1993-1994, SZW (1995), Anzinger (1994)

[a] Up to 11 hours in case of incidental overtime (a maximum of 45 hours per week over a period of 13 weeks including incidental overtime applies).

[b] Up to 12 hours in case of incidental overtime (a maximum of 48 hours per week including incidental overtime over period of 13 weeks applies).

[c] Allowed for special reasons only, with a minimum of 15 free Sundays per year.

[d] Allowed for special reasons only, with a minimum of 4 free Sundays per 13 weeks.

[e] Allowed for special reasons only, with a minimum of 13 free Sundays per year.

[f] Restrictions relate to a minimum rest period, a maximum duration and number of night-shifts.

In the Netherlands, former legal regulations stem from 1919. Rules used to be very detailed, but allowed many exceptions through a licence system. The new regulations are gradually implemented in 1996. They specify general minimum conditions. However, these minimum conditions are less strict for firms that negotiate upon working time through collective bargaining agreements or through co-determination at firm level. For a majority of firms, the latter set of rules is

relevant, which implies that the new regulations can actually lead to more flexibility. Only if bargaining is unsuccessful, the standard restrictions apply (see also De Lange, 1995).

Tabel V summarizes the major working-time regulations and reveals the main similarities and differences. In both countries, the working day cannot be longer than 8 or 9 hours on average, whereas working time on a particular day is possible up to 9 or 10 hours. Extra working time needs to be compensated within a maximum period of 13 weeks in the Netherlands. In Germany this period is much longer and amounts to six months. This is a significant difference, since it allows more scope for fluctuations in daily working time. Moreover, in Germany it remains possible to lengthen this period even further through collective bargaining (Anzinger, 1994).

In both countries, the Sunday is still principally considered as a day off, but in practice many exceptions are possible. For example, after much debate it was decided that international competition can be a reason for work on Sundays in Germany (Anzinger, 1994). Analogously, the new Dutch regulations specify that work on Sundays is allowed if the type of work or economic reasons require this. Still, certain conditions apply, such as a minimum number of free Sundays per year. Work at night is possible in both countries, but is restricted in terms of duration and rest periods in order to protect the health of workers.

The effects of deregulation measures strongly depend on collective bargaining agreements. The scope of legal arrangements is usually not fully applied. With respect to the length of the work week and the number of holidays, collective agreements are usually more favourable to workers than the legal minima (Anzinger, 1994; SZW, 1994). For instance, few Dutch collective agreements specify a maximum length of the work week exceeding 9 hours (De Jong, 1996). However, collective agreements increasingly include flexible working-time provisions (Box 7).

Box 7 Working-time: the trade-off between reductions and flexibility

During the 1980s, the resistance of many employers against a shorter work week diminished because of enhanced working-time flexibility.

Between 1975 and 1985, the major German trade union IG-Metall aimed at a reduction of the 40 hour work week, but failed to achieve this. In 1985, trade unions achieved a breakthrough after a harsh labour dispute: a shorter work week was agreed upon in return for an increased flexibility in working hours. Weekly and daily working hours of individual workers could fluctuate over a period of two months around the average of 38.5 hours per week. Since that time, working time gradually decreased further to a 35-hour work week in 1995, with variable individual working time over a six months period (Bosch, 1993).

Other sectors followed these agreements. In 1995, 4,5 million workers, among which workers in the engineering and paper and printing industry, on average worked 35 hours per week (SZW, 1994). A wide variety in working patterns emerged. The incidence of shift work in the metal industry has risen (OECD, 1995c). Some firms in the car industry have agreed upon work at Saturday so as to increase operating hours. In the chemical industry, variable working time (between 35 and 40 hours per week) has been introduced in 1994 (SZW, 1994). Variable working time now applies to 26% of employees (SPU, 1996).

In the Netherlands, developments were similar. The need for shorter working time was stated in a central agreement of the Foundation of Labour in 1982, and was followed by decreases in working time in sectoral agreements (Van der Heijden et al., 1995). Working-time reductions were combined with increased flexibility in working hours, facilitating work at irregular hours and variable working time. Currently, more than 1.1 million Dutch workers, an equivalent of 17% of all workers, are covered by a collective agreement that specifies a 36 hour-work week, with varying forms and degrees of working time flexibility (data from FNV). Variable working hours are not yet common practice, but are becoming more popular. In the private sector, large companies such as Akzo-Nobel, KPN, V&D and KBB have agreed upon or are experimenting with variable working hours.

Summary

Working-time regulations have become more flexible in both countries. As to differences between both countries, it can be concluded that regulations concerning variable working time are slightly more flexible in Germany.

4.3.3 Short-time work

A subsidy on the internal labour market

Short-time work enables firms to temporarily reduce both the quantity of hours worked and the corresponding wage costs. Employees work less hours, but are partly compensated for the corresponding loss of income because they receive unemployment benefits. On top of these unemployment benefits, collective agreements often specify that the remaining wage gap for workers is reduced through additional wage payments of employers.

The primary objective of short-time working arrangements is to stabilize labour relations and to prevent unemployment in case of a temporary slowdown of business activities. Hence, it can be considered as a subsidy on internal instead of external labour market adjustments to shocks (Büchtemann, 1989). Short-time work provides labour market flexibility to employers, and at the same time dampens the effects of a temporary reduction in activities on employment. This reduces the hiring and firing costs of employers and preserves (firm-specific) human capital. By preventing dismissals, short-time work is also a form of employment protection. This strengthens commitment, but hampers employment flows.

The German regulations

In Germany, short-time work (`Kurzarbeit') is one of the main instruments of the Employment Promotion Act (`Arbeitsförderungsgesetz' or `AFG'). This Act specifies that firms (with regular employment) can use short-time working arrangements to deal with a wide range of difficulties: general economic difficulties (such as the business cycle situation); structural changes (such as the introduction of new technologies or reorganisations); or other unavoidable circumstances (such as a fire)[27]. In all three cases, the reduction in business activity must be temporary, unavoidable and impossible to solve in any other way (see also SZW, 1994).

[27] Organisation-specific or seasonal circumstances are excluded.

The regional employment office[28] needs to approve the use of short-time work (AFG §72). Moreover, the works council plays a significant role in deciding whether short-time work is appropriate. The works council has to give its opinion in advance on the intention of management to use `Kurzarbeit' (AFG §72) and will generally only agree if other solutions have failed. Then, the works council usually agrees with `Kurzarbeit' as a strategy to maintain the current level of employment. It is also possible that short-time work is directly requested by the works council. Finally, trade unions play a role in ensuring that the regulations laid down in the Employment Promotion Act are followed (Linke, 1993).

The period for which short-time work can be used is usually 6 months, but this period can be lengthened up to a period of 12 months in case of structural sector-specific or regional problems, or even up to 24 months in case of more general structural problems[29]. For some branches in the metal industry, spells of 36 months have been applied during the 1980s (SZW, 1994). However, the majority of short-time spells lasts up to 6 months (**Tabel VI**). The reduction of working time has to amount to 10 percent or more of the normal working time for at least one third of the number of workers for a period of four weeks or more. **Tabel VI** indicates that the number of hours worked by a large majority of the workers decreases by less than 50%. Over time, the reduction in number of hours per worker slightly diminished, whereas the incidence of longer spells has risen. The use of longer spells is related to an increase of the use of short-time work for structural purposes.

[28] Or the `Bundesministerium für Arbeit und Sozialordnung' in case of a request for structural reasons.

[29] Source: Bundesministerium für Arbeit und Sozialordnung, 1994a: 93, AFG §67 and §63 or Bundesministerium für Arbeit und Sozialordnung, 1994b.

Tabel VI *Indicators for the use of short-time work, Germany (Old Länder)*

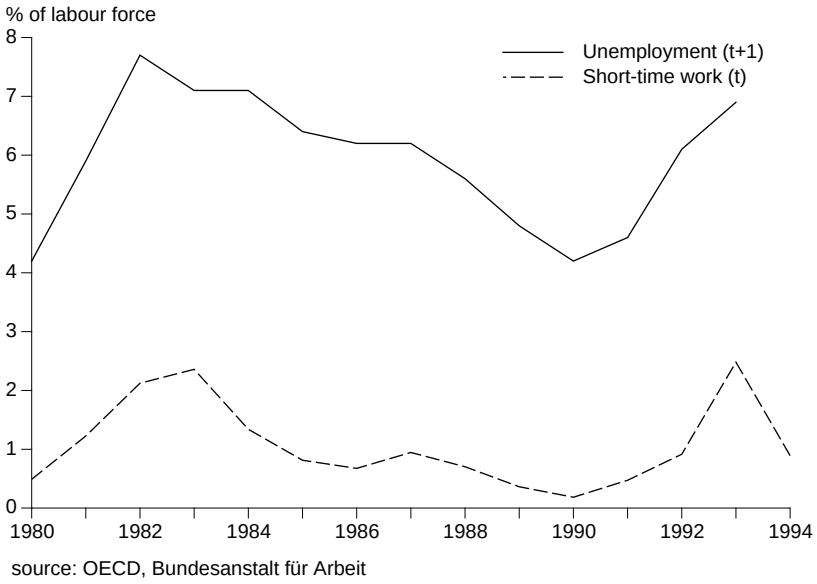
	Duration of short-time working arrangement (months)				
	1 to 3	>3 to 6	>6 to 12	>12	total
	in % of short-time workers				
1986	57.8	28.8	9.4	3.9	100
1993	41.0	30.8	22.9	5.3	100
	Reduction in working time (% of normal working time)				
	10 to 25	>25 to 50	>50 to 75	>75 to 100	total
	in % of short-time workers				
1986	38.5	39.3	12.4	9.8	100
1993	53.1	38.9	5.1	2.9	100

Source: Bundesanstalt für Arbeit, 1994: 158-159

The incidence of short-time work in Germany

The use of short-time working arrangements in Germany is strongly and inversely correlated with the business cycle situation (Figure 6): increases and reductions of the use of short-time work correlated with subsequent rises and reductions of (standardized) unemployment. Empirical research indicates that short-time work is one of the factors that explains why the German employment level is relatively unresponsive to output fluctuations, but the number of working hours is responsive (Abraham and Houseman, 1993b).

Figure 6 Cyclical fluctuations in short-time work, Germany (Old Länder)



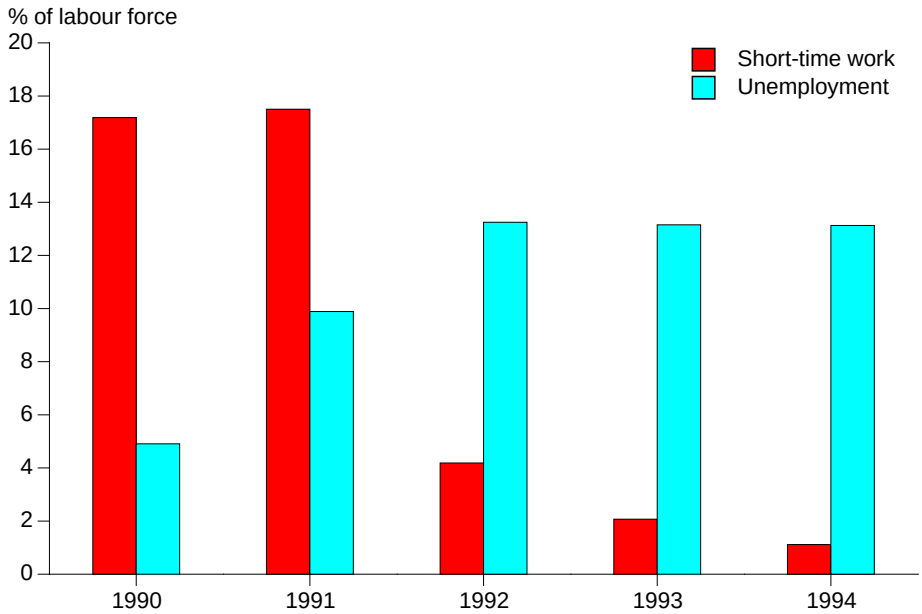
source: OECD, Bundesanstalt für Arbeit

However, German short-time work is also used for restructuring purposes (Linke, 1993: 15). In this light, a crucial question is whether short-time work for structural reasons prevents or merely postpones dismissals. On the one hand, if short-time working arrangements facilitate structural adjustment processes it can be beneficial for the long-run competitiveness of firms. For instance, in the car industry, short-time work has indeed encouraged successful restructuring. On the other hand, short-time work might as well lead to inefficient risk-averse business strategies in which firms do invest little in new technologies and preserve unprofitable activities. For instance, in shrinking branches of the metal industry short-time work with a duration of up to three years could only delay but not prevent mass dismissals during the 1980s (Linke, 1993: 21). Consequently, the use of short-time work for structural reasons is debatable, as Box 8 also be illustrates.

Box 8 Short-time work in the new Länder

After unification, short-time work became widely used for restructuring purposes in the new Länder in order to avoid mass dismissals. In principle, all relevant labour market regulations of the former western territory were implemented in the new Länder after unification. However, there were some exceptions, such as the temporarily more generous regulations regarding short-time work. Special arrangements for the new Länder have resulted in a booming number of nearly 2 million short-time workers, until these regulations were abandoned again by the end of 1991. According to the OECD (1992: 82) short-time work "allowed in extreme (but common) cases a large part of wages to be paid by the state for workers who were producing nothing". Unfortunately, short-time work in the new Länder postponed, but did not prevent dismissals. Apparently, successful internal restructuring was not yet possible, hampered as it was by an uncompetitive wage-level (see also De Jager, 1994). As Figure 7 indicates, a steep rise in unemployment could not be avoided (OECD, 1992 and Linke, 1993).

Figure 7 Short-time work and unemployment in the new Länder



source: OECD, Bundesanstalt für Arbeit

The Dutch situation

Dutch regulations concerning short-time work are relatively strict. Only in case of a reduction of business activity that is substantial (amounting to at least 20% of the usual activity level), temporary (i.e. with a maximum duration of six months) and not related to structural factors or normal business risks, short-time working arrangements can be used, usually for a period of six weeks. However, this period can be lengthened up to six months.

A significant difference to the German situation is that structural problems, such as reorganisations, cannot be a reason to make use of short-time work. The Dutch regulation is based on the conviction that short-time benefits for structural reasons subsidize loss-makers and hamper necessary restructuring. Moreover, the business cycle situation is considered as a "normal risk" and is consequently not regarded as a sufficient condition to make use of the arrangement (SZW, 1994). Procedures to apply for short-time work are also different in the Netherlands, since there is no formal influence of trade unions or works councils (**Tabel VII**).

Tabel VII *German and Dutch short-time working arrangements compared*

	Germany	Netherlands
reasons for use	business cycle or structural	"abnormal" difficulties
maximum duration	6-24 months	6 weeks-6 months
unemployment benefit level (% of former wage)	60% or 67% of net wage[a]	70% of gross wage
net income of workers (% of former wage)[b]	up to 90%	up to 100%
reduction in wage bill (% of former wage)[c]	43.5%	35%
application procedures	works council & employment office	minister of social affairs

Sources: Abraham and Houseman (1993b), table 2, Grubb and Wells (1993), SZW (1994)
[a] For beneficiaries without and with children respectively (SZW).
[b] Including additional wage payments by individual employers, based on collective agreements.
[c] Assuming 50% reduction in working time and maximum additional payments.

The common reduction in the number of hours worked in the Netherlands amounts to 50% or less than that. As in Germany, workers are compensated for their loss of income through unemployment benefits. On top of that, many Dutch employers supplement the entire remaining income gap. In that case, net income

does not decrease at all while the wage bill of employers temporarily diminishes. **Tabel VII** also provides rough estimates of the corresponding effects on wage costs and wage levels in comparison to those in Germany.

As a consequence of the more restrictive Dutch regulations, the use of short-time work is comparatively low in the Netherlands. **Tabel VIII** presents several indicators that point to the low significance of short-time work in the Netherlands.

Tabel VIII *Indicators for the use of short-time work (1990-1993)*

	Germany (old Länder)	The Netherlands
Participation[a] (% of labour force)	1.0	0.2
Estimate of short-time payments (% of unemployment benefits)	12	<1
Approximate duration short-time work	5 months	2.5 months
Estimate of average reduction in working hours (% of former working time)	25%	35%

Source: SZW, Bundesanstalt für Arbeit (1994)
[a] According to the national definition of the labour force.

Summary

Dutch regulations regarding short-time work are more strict than their German counterparts. The purposes for which short-time work can be used are restricted to such an extent that short-time work is not a significant tool to enhance labour hoarding. In contrast, the German regulations do not only allow short-time work to overcome temporary difficulties, but also to prevent or postpone dismissals in case of structural difficulties.

4.3.4 Part-time and flexible labour contracts

Types of labour contracts

Tabel IX *Types of employment, most recent year*

type of contract	US	UK	Ger[a]	Neth	Swe
part-time (% employment)[b]	19	24	16	31[c]	24
full-time (% employment)[b]	81	76	84	69	76
flexible (% employees)[d]	2	7	10	10	14
standard (% employees)[d]	98	93	90	90	86

[a] total Germany.
[b] 1995, CBS for Neth and OECD (1996b: 192-194) for the other countries. Note that the definition of part-time varies across countries. Ger, UK: based on classification of respondent. Neth: working less than usual hours of full-time job, US, Swe: working less than 35 hours).
[c] The Dutch figure assumes that the incidence of part-time work among flexible workers equals that among workers with a contract of unlimited duration. This slightly underestimates the Dutch part-time share.
[d] 1995, CBS for Neth and OECD, 1996b: 8 for the other countries of reference. US: 1995, UK, Ger, Swe: 1994. Note: Figure for the US in % of total employment. Note that the definition of flexible employment differs across countries. Neth: Limited duration (< 1 year) or variable working hours. Ger: Limited duration, including apprenticeships.

This section analyzes the use of part-time and flexible contracts in Germany and the Netherlands. Part-time work is characterized by a less than full-time length of the working week, and is usually of unlimited duration[30]. It enhances working-time flexibility related to regular weekly fluctuations in business activity, if employers can employ part-time workers at more busy hours (OECD, 1994c: 93). A flexible contract, in contrast, is characterized by a limited duration or a variable number of contractual working hours[31]. This type of contract provides employment or working-hour flexibility.

To start the analysis, **Tabel IX** presents an overview of the use of different types of employment in the countries of reference. Employment per type of contract (full-time, part-time and flexible) differs considerably among the reference countries. The

[30] Although the incidence of part-time work among workers with a flexible contract is relatively high, see for example Bierings and Imbens, 1992: 59.

[31] A standard contract specifies a fixed number of working hours and is of unlimited duration.

Netherlands stands out in an international perspective because of its high share of part-time workers, whereas the corresponding German share is relatively low. The total share of flexible contracts is equal in both countries. As could be expected, it is much higher than the American share. This points at the importance of a dual labour market for European employers as a way to avoid strict employment protection.

Dutch part-time work

"Part-time work has become a key feature of the Dutch labour market" (OECD, 1995e: 61). Between 1960 and 1995, the share of part-time work in the Netherlands has risen much more strongly than in Germany[32]. The growth of part-time employment in the Netherlands is mainly supply-side driven and strongly related to the rise of female labour force (Delsen, 1995). Survey-information for the Netherlands reveals that, in spite of the strongly risen incidence of part-time employment, Dutch male workers still prefer to work less hours per week (OSA, 1995). Dutch women, in contrast, often want to work more hours. This is related to the large number of women with small part-time jobs.

Tabel X *Development of employment per type of job in the Netherlands*

	full-time[a]	part-time[b]	flexible[c]	total
	in % of jobs			
1987	69	23	8	100
1995	62	28	10	100

Source: CBS, 1993: 28, and additional data by fax.

[a] Full-time: Contract of unlimited duration (including fixed-term contracts > 1 year or probationary periods) for full-time working week

[b] Part-time: Contract of unlimited duration (including fixed-term contracts > 1 year or probationary periods) for less than a full-time working week. Figure differs from that in the previous table: in this table, part-time flexible work is not included in the category part-time.

[c] Flexible: Contract of limited duration or with variable working hours (includes work through temporary-work agency or TWA). Excluding fixed-term contracts with a duration of more than 1 year or probationary periods).

[32] See **section 3**. SCP (1994: 142) provides an overview of different data sources and definitions.

Regulations regarding part-time work

In Germany, policy makers view the high percentage of part-time workers in the Netherlands as an example (`Niederländisches Modell'). Since 1994, the German Employment Promotion Act (`Arbeitzförderungsgesetz or AFG 1994) provides an incentive for part-time work via the unemployment benefit system: if a worker reduces his or her weekly working time and eventually becomes unemployed, the unemployment benefit level will be based upon the former (longer) working time (SZW, 1994)[33]. This regulation also applies to unemployed who accept a part-time job which they lose again within a period of three years. In the Netherlands, this type of incentive does not exist.

The less extensive use of part-time employment in Germany could be related to differences between both countries in the employment protection and social security entitlements of part-time workers. The employment protection of part-time workers is carefully regulated in Germany, since their legal position is equal to that of full-time workers (since 1985). This implies an equal (or proportionally equal) treatment of part-time workers as regards labour conditions (SZW, 1994; Passchier, 1995: 84). However, social security entitlements of part-time workers are often less well arranged due to minimum thresholds (`Geringfügigkeitsgrenzen'). These thresholds imply that workers with a small part-time job[34] have no access to unemployment, illness and disability insurance schemes (`Arbeitslosenversicherung, Krankenversicherung, Rentenversicherung', Passchier, 1995: 84 and Bundesministerium für Arbeit und Sozialordnung, 1994c: 51).

In the Netherlands, the equal legal position of part-time workers will be arranged from november 1996 onwards, but in many collective agreements, part-time workers are already treated (proportionally) equal to full-time workers. Moreover, in the near future a new regulation will probably be implemented that gives workers the right to work part-time (80% of a full-time work week). In addition, the social security entitlements of Dutch part-time workers are more extensive than in Germany, since many thresholds in social security coverage have been abolished (Tweede Kamer, 1994-1995). Part-time as well as full-time workers have access to unemployment benefits, as long as they lose more than 50% or more than 5 hours of their usual

[33] Provided that the working time has been reduced by 20% or more and that he or she has worked longer hours for a period of at least 6 months, not longer than 3 years ago (AFG §112).

[34] With a weekly labour time of less than 15 hours *and* a wage level below 1/7 of the average full-time wage level, *or* with less than 50 working days per year.

weekly working time[35] (Elseviers Almanak, 1995: 83)[36] [37].

Consequently, it is difficult to relate the relatively low share of part-time employment in Germany to these institutions. Employment protection of part-time workers is well arranged in Germany. Moreover, it cannot easily be related to the social security system, because in the Netherlands minimum thresholds also existed until recently. Apart from differences in the regulatory framework, other factors may explain the different share of part-time work, for instance the supportive attitude of Dutch unions. In contrast, differences in the sectoral production structure - i.e. the large German industrial sector - hardly constitute a satisfactory explanatory factor, since the Dutch share of part-time workers is higher in the industrial as well as in the service sector (Hof, 1995: 243, data from Eurostat). Finally, different preferences of workers between the Dutch and German labour force also form an inadequate explanation, since survey-information shows that German workers (on average) prefer to work less hours, just as their Dutch counterparts (Hof, 1995: 241 data from Sozioökonimisch Panel; OECD, 1996c).

Flexible contracts

The overall share of flexible contracts is equal in both countries, comprising roughly 10% of employee-employment (**Tabel IX**). Over the period 1987-1995, this has slightly risen in the Netherlands (**Tabel X**). However, it is very well possible that a stronger rise occurred during the beginning of the 1980s. The development of temporary work through temporary work agencies (TWAs), one of the components of flexible work, suggests such a pattern (SCP, 1994). For Germany, data report a rather stable level during the 1980s, but it has to be noted that time series of flexible work are of limited reliability (OECD, 1996b).

The overall share in both countries does not provide information on the type of flexible contract that is most frequently used, i.e. a fixed-term contract, a temporary contract through a temporary-work agency (TWA) or a variable-hour contract. This distinction is of relevance, since reasons for the use of flexible contracts and regulations differ per type of contract. Figure 8 provides an overview of the different

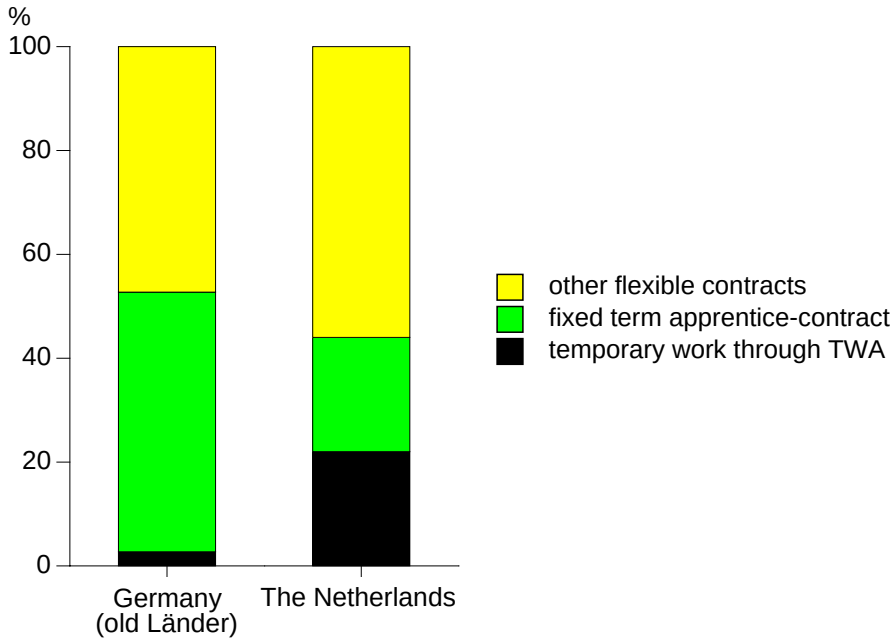
[35] The usual weekly working time is computed as the average number of worked hours during the past 26 weeks.

[36] Two other necessary conditions are that an employee has worked on 26 of the past 39 weeks, and has received wage for at least 52 days - regardless of the number of hours worked on those days - in four of the past 5 years (Voorlichtingscentrum sociale verzekering, 1995: 53-55). However, these two conditions are not disadvantageous to most part-time workers.

[37] Since 1994, part-time workers in Europe cannot be exempted from pensions any more on the basis of working less than a certain number of hours, although a minimum income threshold is still allowed.

types of flexible labour[38].

Figure 8 Rough estimate of flexible employment per type of contract



Source: CBS, Eurostat

In Germany, the extensive dual education system corresponds with a considerable number of fixed-term contracts, because apprentices have a fixed-term contract. In 1992, the number of apprentices amounts to 1,4 million, or nearly 5% of total employment (Tessaring, 1993, old Länder). The reason for employers to hire apprentices temporarily is a combination of screening and external flexibility: employers might exploit the training period to gather information on the quality of a trainee, but the decision to hire him or her after graduation will also depend on the (expected) activity level at that moment. Approximately half of all fixed-term jobs are converted into a "standard" contract (OECD, 1996c).

Dutch employers hire workers for a fixed term as a screening device, a way to deal with seasonal fluctuations or with temporary assignments. Screening appears to be the most significant reason, because two thirds of temporary contracts is changed into a standard contract after expiration (Van Bolhuis, 1996). The number of fixed-term contracts for apprentices is lower than in Germany: the employment share of Dutch apprentices amounts to nearly 2% of total employment, but not all Dutch

[38] Unfortunately, the share of variable-hour contracts is not available in these data-sets.

apprentices have a fixed-term labour contract (Den Broeder, 1995)[39].

In the Netherlands, temporary work through temporary work agencies (TWAs) is popular, also from a broader international perspective. The share of temporary workers is high and has risen during the 1980s: in the beginning of the 1980s the share of temporary work in total employment fluctuated from 0.5 up to 1%, but from 1985 onwards this share fluctuates around 2% in the Netherlands (SCP, 1994: 143, data from SZW, CBS). The predominant motivation to hire this type of flexible workers is to deal with fluctuations, temporary assignments or to replace absent workers. Screening appears to be less important, because only 15% of employers predominantly use this type of flexible contracts as a screening device (Van Bolhuis, 1996). In contrast, temporary work through TWAs is much less popular in Germany, where it fluctuates around 0.3% of employment (see Grubb and Wells, 1993 for an overview of different data sources).

For the Netherlands, more detailed information is available as to the category "other flexible contracts" in Figure 8. Approximately half of this category consist of variable-hour contracts, whereas the other half consists of fixed-term contracts (in 1991, Bierings and Imbens, 1992)[40].

Information on the type of flexible contracts in both countries suggests that Dutch flexible contracts are to a larger extent used for short-term employment flexibility purposes. Information on the share of jobs with a short tenure confirms this picture (**Tabel XI**).

Tabel XI *Jobs with a tenure of less than 1 year*

	US	UK	Ger	Neth	Swe
	% of jobs				
1985	29	15	9	12	na
1991	29	19	13	24	na

Source: OECD (1996b).

[39] For Germany: 1430200 apprentices and 29141000 workers (old Länder, 1992). For the Netherlands: 128744 apprentices in 1992 and 6472000 workers (>0 hours).

[40] A tiny share consists of work at home.

Regulations regarding flexible contracts

The use of flexible contracts is related to the regulatory framework. Three aspects are relevant: first, the degree of employment protection and social security entitlements of flexible workers, second, restrictions on the use of flexible contracts and, third, the employment protection of core workers.

First, the protection of flexible workers is worse compared to that of workers with a contract of unlimited duration. The already mentioned minimum thresholds for social security benefits may put German flexible workers in a disadvantageous position. For Dutch workers, the requirement of a minimum number of working days before they become entitled to unemployment benefits, diminishes their social security access. In both countries, pension funds can still exclude workers with a contract of limited duration. Not surprisingly, demand-factors predominantly determine the increasing incidence of flexible work, since most workers - ceteris paribus - prefer the higher degree of income security and legal protection related to a part-time or full-time contract of unlimited duration (OECD, 1994c, Golden and Appelbaum, 1992).

Tabel XII *Regulations related to use of flexible contracts*

	maximal duration	contract renewals	other restrictive regulations
Fixed-term contracts			
Germany	18 months	only allowed within period of 18 months	not allowed for all types of work
The Netherlands	no maximum	allowed, but restricted	allowed for all types of work
Temporary contracts through temporary work agencies			
Germany	6 months	allowed, but restricted	not allowed for all types of work
The Netherlands	6 months or 1000 hours	allowed, but restricted[b]	allowed for all types of work[a]

Sources: Grubb and Wells (1993), Abraham and Houseman (1993b), SZW (1994), Schömann *et al.* (1995)

[a] Except in the building sector, where temporary work is not allowed, although this restriction will probably be abandoned in the near future.

[b] A period of more than 31 days before the renewal is required (STAR Foundation of labour, 1996).

Second, regulations that restrict the use of flexible contracts are generally more

liberal in the Netherlands (**Tabel XII**). Regarding fixed-term contracts, Dutch regulations have become permissive and will probably become even more liberal in the near future (Box 9). Their use is not restricted to certain circumstances and regulations do not specify a maximum duration. Consequently, employers not only use fixed-term contracts for extra projects or to replace absent workers, but can also easily use fixed-term contracts as a screening device or to deal with fluctuations. In contrast, German employers can use fixed-term contracts for only special reasons such as the replacement of temporarily absent workers, seasonal work, an occasional task, the start of a new business, etcetera. Moreover, fixed-term contracts have a maximum duration of 18 months (or 24 months for exceptional reasons) and cannot be renewed beyond that period.

In 1985 and in 1996, German regulations were liberalized. Since 1985, employers do not have to specify a reason for using fixed-term contracts in case of a transition period after termination of an apprentice contract or in case of first hirings of unemployed (Schömann *et al.*, 1995 or Grubb and Wells, 1993). Recent policy changes, that will be implemented in 1997, will lengthen the maximum duration of fixed-term contracts from 18 months to two years.

Regulations related to temporary work through TWAs are similar in both countries as regards their maximum duration and the possibilities for contract renewals. A difference concerns the type of labour contract. In Germany, workers usually have a fixed-term labour contract with the TWA (Jacobs, 1993: 57-58). For Dutch workers through TWAs, regulations regarding their labour contract are currently changing (Box 9). In contrast to the German practice, Dutch employers do not need to have a special reason to make use of temporary workers. In addition, rules regarding the maximum duration are not always adhered to in practice, since an informal agreement allows longer durations without sanctions, anticipating future deregulatory policy proposals (Box 9).

Box 9 Flexicurity advice of Dutch Foundation of Labour

*Before taking policy measures aimed at enhanced labour market flexibility, Dutch policy makers have consulted the Foundation of Labour (**section 5**) about the policy options they have in mind. The advice of the employer and worker representatives in this foundation touches upon the trade-off between employment security and flexibility. Their advice comprises the following main elements:*

More security

With respect to temporary work through TWAs

* *flexible workers through TWAs can get a fixed-term labour relation with the TWA for the duration of their assignment, but after three assignments and a minimum total tenure with the TWA, they finally get a contract for unlimited duration.*

More flexibility

With respect to firing rules

* *the maximum period of notice can be reduced to 4 months*
* *the period of authorization and the period of notice can partly overlap*

With respect to temporary work through TWAs

* *abolish the legal maximum on the duration of the temporary assignments*
* *TWAs do not need a licence*

With respect to fixed-term contracts

* *the introduction of a (short) probationary period for fixed-term contracts*
* *more scope to renew a fixed-term contract (without the required period of 31 days in between)*

Source: STAR Foundation of Labour (1996)

Third, the use of flexible labour, and of different types of flexible contracts can be related to differences in the institutional framework regarding the protection of core workers (**section 4.2 and 4.3.1**). Protection of workers with a standard labour contract may induce employers to hire a core of workers with a standard contract and a periphery of flexible workers. According to this dual or two-tier hiring strategy, high-quality workers who have acquired a stock of firm-specific capital often possess a standard labour contract (see also De Grip and Hoevenberg, 1995). This argument appears to be relevant for Germany as well as for the Netherlands. Dismissal protection in combination with product market volatility may explain the use of flexible employment.

Empirical research on this relationship is inconclusive. For instance, loosening of

dismissal protection in Germany in 1985 did not significantly lower the use of fixed-term contracts (Hunt, 1994), but this evidence is not overwhelming since firing protection was altered only slightly. Survey information reveals that many employers indeed regard employment protection related to hiring and firing as an important obstacle to hire more staff (EC survey, 1985, Grubb and Wells, 1993).

Summary

Part-time employment is relatively popular in the Netherlands. This enhances working time flexibility with respect to regular fluctuations in work loads. In Germany, the share of part-time employment is much lower. This cannot be satisfactorily explained by different worker preferences, the sectoral distribution in employment or lower limits in social security entitlements.

The incidence of flexible work is approximately equal in both countries, but the importance of types of flexible contracts differs. German employers to a larger extent use fixed-term contracts as a screening device for apprentices. In the Netherlands, the less extensive dual system implies a lower use of fixed-term contracts for this purpose. However, fixed-term contracts are predominantly used as a screening device. The demand for employment flexibility is to a larger extent fulfilled by flexible contracts of temporary workers through TWAs. The relatively high incidence of this type of flexible contract is related to permissive regulations.

4.4 Performance of labour market regulations

The comparative examination of regulations shows that Dutch and German workers have a more secure labour market position than their American counterparts. Firing regulations are roughly comparable in both countries and stricter than in the United States. Hence, labour market flexibility of workers with a standard contract mainly follows from working-hour flexibility. Both countries have recently deregulated working time regulations. In collective agreements, provisions for work at irregular times and variability in working hours of individual workers have become more common. This enhances labour market flexibility without hampering the commitment of employers.

At a closer look, some significant differences between the German and Dutch institutional features and the degree of external labour market flexibility come to the fore. Remarkable differences concern the more extensive use of short-time work in Germany, the greater popularity of part-time work in the Netherlands and a different use of flexible contracts: in Germany, fixed-term apprenticeship contracts prevail, but in the Netherlands temporary work through TWAs.

The Dutch labour market to a large extent depends on part-time and flexible contracts to provide external flexibility. This situation corresponds with relatively

permissive regulations regarding fixed-term contracts and temporary work through TWAs. German regulations are relatively stringent, since employers need to specify a reason to make use of flexible contracts (such as the replacement of a sick employee, a temporary rise in activities etcetera). Flexible contracts are more often fixed-term contracts of apprentices. However, widely used short-time working arrangements subsidize labour hoarding and increase labour market flexibility.

The German way of providing external flexibility stimulates employers to maintain the level of employment within the firm. This enhances commitment. However, the efficacy of short-time work for structural purposes is doubtful. In contrast, the Dutch way of providing working-hour flexibility through part-time employment allows workers to deal with systematic fluctuations in activity, whereas the employment protection of part-time workers supports commitment. In addition, the more extensive use of temporary employment through TWAs in the Netherlands reduces the need for subsidized short-time work and enhances employment flexibility. However, this type of contract reduces commitment.

5 Collective bargaining institutions

5.1 Introduction

What are the strengths and weaknesses of the German `Tarifautonomie' versus the Dutch system of consensus building? In order to examine the performance of both collective bargaining systems, it is necessary to review the theoretical literature, exploring the impact of collective bargaining institutions on the level and dispersion of wages and the cooperative nature of labour relations (**section 5.2**). Next, **section 5.3** describes the main similarities and differences between the actual German and Dutch collective bargaining systems, choosing the United States, the United Kingdom and Sweden as countries of reference. Subsequently, **section 5.4** reviews some recent empirical evidence. Based on the findings of these three sections, **section 5.5** draws conclusions on the strong and weak elements of the German and Dutch collective bargaining institutions, compared to American institutions and compared to each other.

5.2 Theory

Assuming perfect competition and complete labour contracts, the neoclassical theory provides no arguments in favour of collective bargaining. Through swift responses of wages and reallocation of labour to changing demand or supply conditions, wages match the marginal productivity of labour, while differences in marginal productivity across firms disappear. This guarantees allocative efficiency. Moreover, labour relations are perceived to be similar to other market transactions: they are a market exchange of effort against wages. Labour contracts are complete and monitoring compliance to contract specifications is not prohibitively costly. Accordingly, bargaining institutions or wage incentives that support commitment are not needed.

5.2.1 Market failures

Imperfect competition

Bargaining theories relax the heroic assumption of perfect competition. Rent-extracting behaviour of employers or workers can result in a wage level that deviates from the neoclassical equilibrium level. On the one hand, mobility costs of individual employees (resulting from costs of moving, job search and investing in firm-specific knowledge) may give rise to bargaining power of individual employers, especially if workers are easily replaceable. The monopsony power of firms may result in a wage level below the marginal productivity of labour. On the other hand, product market power and firm-specific investments of firms (e.g R&D) may result in insider power

of workers. If insiders possess firm-specific human capital and their jobs are secure, they may exert their strong bargaining power to extract rents in the form of wage premia (i.e. wages exceeding the marginal productivity) at the expense of providers of capital, consumers and job opportunities of outsiders (Nickell, 1995).

Incomplete contracts

Bargaining theories perceive a labour relation as fundamentally different from a market transaction because of incomplete contracts and firm-specific investments (Hartog, Polachek and Theeuwes, 1993). Transaction costs prevent the exact tasks of employees and obligations of employers from being specified in all circumstances. In addition, monitoring compliance to the agreements of an explicit contract covering all aspects of the labour relation would be prohibitively costly. Hence, labour contracts are incomplete. As a result, the commitment of workers to perform the tasks of their labour relation cannot easily be enforced by the employer.

Incomplete contracts in combination with firm-specific investments in worker quality make a labour relation even more complex. The increasing knowledge-intensity of production and rapid pace of technological change create a need for continuous investments in the quality of labour. If these investments concern purely general human capital, workers are generally willing to incur the costs. They can eventually capture the benefits of the investment in the form of higher wages in either the current firm or elsewhere. Investments in firm-specific quality, in contrast, require that both parties share the initial costs and the future returns (Hashimoto, 1981)[41]. Workers will not entirely finance investments in firm-specific human capital, because this will make them too vulnerable to dismissals. Likewise, employers will not entirely finance these investments, because this makes them too vulnerable to quits. These considerations not only pertain to investments in firm-specific human capital, but also to other firm-specific investments in worker quality, such as efficient information flows and internal flexibility of workers. Joint investments give both parties an incentive to continue the relationship in order to capture their share of the returns (Gelauff and Den Broeder, 1996: 25)[42].

In practice, labour contracts do not fully determine the division of rents from shared investments in firm-specific human capital[43]. It is not feasible to deter

[41] The way both parties share the costs and returns depends on their relative bargaining strengths.

[42] For instance, workers gradually benefit from the returns to their investments in firm-specific human capital because of an upward sloping age-earnings profile.

[43] These contracts would be prohibitively costly (Hart, 1995, Milgrom and Roberts, 1992, MacLeod, 1995). Moreover, asymmetric information enables opportunistic behaviour as to determining what state has been reached, again introducing the hold-up problem. The ownership solution, which implies that the

mine the productivity and pay rises that should result from every type of investment in all future circumstances (Gelauff and Den Broeder, 1996: 25). Moreover, the costs of these investments are difficult to calculate by employers, because a large part involves informal training. The incomplete nature of labour contracts leaves room for opportunistic behaviour of the contracting parties once investments in relationship-specific assets have been made. The fear that their cooperative stance will be exploited by the other party may curb investments in relationship-specific assets. In the literature, this is referred to as the hold-up problem (Milgrom and Roberts, 1992: 136;307).

5.2.2 Institutions

Imperfect competition and a lack of commitment due to incomplete contracts can be considered as market failures. Collective bargaining institutions can improve labour market efficiency by reducing the gap between the actual wage and the neoclassical wage level and by supporting commitment. At the same time, however, these institutions may suffer from various failures, depending on the specific features of the collective bargaining system.

The degree of centralisation of the collective bargaining process is a key feature of the collective bargaining system. The literature defines *centralisation* in various ways. Key bargaining elements, in the definition applied here, are the predominant collective bargaining level, the degree of coordination between employees and employers, and the extent of government involvement[44]. The decentralized end of the spectrum consists of collective bargaining at the firm (or plant) level, neither guided by coordination nor by strong government involvement. At the centralized end of the spectrum, economy-wide units bargain, with strong government influence through regulations, tripartite debates or direct interventions. Industry-level bargaining, which is predominant in many OECD countries, can be associated with varying degrees of centralisation. This depends on the degree of coordination and government involvement. If sectoral trade unions coordinate wage claims in advance, a sectoral bargaining level implies a high degree of centralisation. Similarly, regulations or wage recommendations based on tripartite debates at the national level restrict the scope for decision-making at the sectoral level and make bargaining more centralized.

Together with economic factors and the institutional environment, centralisation

investor owns the resulting assets, is not feasible, since human capital is embodied in the worker (see also Gelauff and Den Broeder, 1996).

[44] The definition of centralisation may also include the participation of trade unions and employer organisations in government policy making, an element that is not considered here.

determines the objectives of trade unions and their relative bargaining strength, as the next sections explain. Generally, objectives of trade unions are to secure or improve the income, working conditions and employment opportunities of their members. Although theories of trade-union behaviour "have reached no consensus about what trade unions exactly maximize in bargaining", the preference function of unions encompasses these elements (Van de Wijngaert, 1994: 49-50). Employers are organized in order to counter wage demands by trade unions more effectively. It is assumed that employer organisations aim at profit maximisation for their members[45]. The remainder of this section explores the effect of centralisation of collective bargaining on the wage level, the dispersion of wages and the support of commitment.

5.2.3 Centralisation and the wage level

The inverse U-curve

Centralisation affects the incentives and constraints of trade unions in extracting rents. Calmfors and Driffill (1988) describe the relationship between the degree of centralisation and the level of wages by an inverse-U curve. Decentralized bargaining at the firm-level limits the bargaining power of organised workers; excessive wage demands would result in a considerable loss of market share and employment, endangering the position of the insiders (OECD, 1994c: 11). As a result, the wage bargain is close to the neoclassical outcome. If workers organize at an industry-wide level, they become more powerful. The price-elasticity of product demand is generally lower for the industry than for the individual firm, because the sectoral bargaining unit comprises firms producing relatively close substitutes (Calmfors and Driffill, 1988). Hence, trade unions can demand wages that exceed the neoclassical level, knowing that the firm can more easily translate wage premia into higher output prices without loosing its market share and employment. If trade unions become even more centralized, however, they put more emphasis on employment opportunities instead of wages. The reason is that centralisation internalizes the external effects of the wage outcome on employment and prices. This prevents leapfrogging, wage-price spirals and results in a wage level that is close to the neoclassical level (Calmfors and Driffill, 1988, see also Van de Wijngaert, 1994). Hence, according to Calmfors and Driffill, sectoral bargaining without strong coordination or government involvement yields the worst employment performance, because trade unions are powerful but have only little incentive to internalize the position of outsiders.

[45] Theoretical literature hardly addresses the objectives and behaviour of employer organisations.

Product market competition

The existence of the inverse U-shape is debatable, however. It depends on the degree of international product market competition whether sectoral trade unions can extract rents. The scope for rent-extracting is very small for industries trading homogeneous products on the international market, since these products are extremely sensitive to relative output prices (Layard *et al.*, 1991). Accordingly, wage-setting at the industry-level instead of the firm-level hardly lowers the price-elasticity of demand and the inverse-U shape does not exist. Wages are close to the neoclassical level regardless of the degree of centralisation (**Tabel XIII**: first column). The hump-shape is more relevant for industries sheltered from fierce international price competition (**Tabel XIII**: second column). This holds for industries that primarily produce non-tradeables, or differentiated, innovative, products.

Tabel XIII *Centralisation and the wage level: the impact of competition*

	degree of product market competition		
within a sector	fierce	fierce	moderate
international competition	fierce	moderate	moderate
degree of centralisation			
decentralized	0	0	+
intermediate	0	+	+
centralized	0	0	0

0 neoclassical wage level + wage level exceeding neoclassical wage

Imperfect competition on product markets gives decentralized trade unions the power to raise wages above the marginal productivity of labour (**Tabel XIII**: third column, Hartog and Teulings, 1996). Competition between firms in the product market is often imperfect. For instance, innovative firms with a technical lead or differentiated products can raise their output prices and gain monopoly rents. Moreover, sunk costs often yields monopoly rents by making markets non-contestable. A local trade union has a strong incentive to translate these rents into wage premia for insiders, because it does not internalize employment opportunities for outsiders (Nickell, 1995). These wage premia reflect insider power and make employment growth in prosperous firms more sluggish (Layard *et al.*, 1991). The wage premium will be higher the more powerful the union is and the more interested it is in capturing wage premia. Generally, the presence of firm-specific skills raise

the relative power of local insiders. Once the employer has invested in firm-specific capital, the firm is vulnerable to the threat of employees to quit. However, insiders may face less incentive to capture short-term quasi-rents if they have a long-term relationship with the employer (Soskice, 1990). In this case, they also want to benefit from the long-term profitability of the firm.

Efficiency wages

In a decentralized bargaining setting, incomplete contracts may create an incentive for individual employers to raise wages above the going rate in order to enhance worker effort. High relative wages enhance labour productivity by making outside opportunities relatively unattractive compared to inside opportunities (the efficiency wage hypothesis). Clearly, this behaviour induces leapfrogging behaviour of other employers with the same motive. The higher wage level raises unemployment. In equilibrium, unemployment rather than high relative wages acts as a "worker discipline device" by providing an incentive to maintain work effort (Akerlof and Yellen, 1986, eds). In a decentralized system, individual employers have more scope to raise their relative wage. The positive effect of higher wages on effort may weaken the resistance of employers against wage demands. Hence, insider power and efficiency wage considerations can be reinforcing in a decentralized bargaining setting (Summers, 1988).

Collective extension

Collective extension can be applied in a sectoral (or economy-wide) bargaining system (see also **section 5.3.1 and 5.3.2**). It makes the contents of collective agreements legally binding for non-organised employers. The elimination of wage competition by non-organized employers strengthens the commitment of workers in organized firms, because it prevents poaching of human capital by non-organized employers of sector-specific human capital. However, it eliminates wage competition of non-organized employers. This strengthens the bargaining power of sectoral trade unions to claim higher wages, knowing that this will not lower their market share within the industry[46].

[46] Other relevant aspects of the institutional environment affecting the relative power of trade unions concern legal minimum wages and strike and lockout regulations. These issues will be addressed in **section 5.3.2**.

Social security and the government budget constraint

The social security system may influence collective bargaining outcomes differently in a centralized or a decentralized bargaining environment. A generous social security system diminishes the "terrors of employment" (Jackman *et al.*, 1995) because it provides a relatively high fall-back income for workers that become unemployed. Furthermore, a high replacement rate[47], a long duration of benefits, few benefit entitlement conditions and low monitoring activities, and insufficient measures of active labour market policy may reduce the search intensity of unemployed (Gelauff and Graafland, 1994). Both mechanisms may weaken the importance of the employment level in the objective function of the trade union. This may reduce the sensitivity of wages to the unemployment level. As a result, the higher unemployment rate drives up social security contributions. This may stimulate the trade union to try to raise gross wages, referred to as real wage resistance (Box 10).

Only if a trade union is completely centralized, it also internalizes the budgetary constraint of the government or social security funds into their objective function. Hence, worker representatives realise that higher wage claims will drive up social security costs, thereby lowering net wages or employment. In this case, generous social security will not drive up wages.

Box 10 Real wage resistance

Two conflicting models describe the effect of the wedge (i.e. the gap between wage costs and net wages) on wage formation. Layard et al. (1991: 108) argue that the burden of the wedge will be totally absorbed by workers and does not increase wage costs. The reason is that a (proportional) increase of the average wedge equally affects the net benefit and the net wage. Since trade unions are interested in the difference between both values, their gross wage claims will not change, unless marginal wedge is affected. In contrast, Graafland and Huizinga (1996) and Gelauff and Graafland (1994) argue that a rise of the wedge induces compensating wage demands, referred to as real wage resistance. The reason is that workers demand a certain level of net earnings, not only to make working more attractive than receiving benefits, but also to make the official labour market more attractive than the household sector or the underground economy. In this view, the burden of the wedge increases the gross wage level.

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[47] Defined as the net benefit level divided by net earnings.

5.2.4 Centralisation and wage dispersion

Centralisation affects not only the average wage level, but also the degree of wage dispersion in a country. Two types of wage differentials can be distinguished: wage differentials between identical workers in different firms or industries and between workers with different types and amounts of human capital (referred to as the wage structure). In the neoclassical world, the former type of wage differentials exist only temporarily during periods of adjustments to shocks. Mobility of labour to high wage firms and industries eliminates these differences. In the neoclassical equilibrium, the latter type of wage differentials reflects differences in the scarcity or marginal productivity of workers. If the assumption of perfect competition and mobility of labour is relaxed, wage differentials across firms or industries can persist and the wage structure does not necessarily reflect relative scarcities. The degree of wage dispersion depends on the features of the collective bargaining system in relation to the degree of product market competition and the firm-specific skill intensity of production.

Wage differentials across firms or industries

As mentioned above, a decentralized trade union may induce local insider power in firms with product market power. As a direct consequence, wage differentials between identical workers across industries are most strongly present in a decentralized collective bargaining system. In this system, variations in performance between firms can result in persisting wage differentials between workers that do not follow from human capital differences (Teulings, 1995). Similarly, fluctuations in product market rents may create wage differentials between insiders and new hires within a particular firm. After a period with positive product market rents, the insiders will attempt to keep their current high wage level and to translate a worsening of firm performance into lower starting wages for newcomers (Hartog, Van Opstal and Teulings, 1994).

If bargaining is decentralized, efficiency wage premia may also create persistent wage differentials across firms. For firms where efficiency wage premia are needed to raise effort, wages remain above the neoclassical level. The firm does not hire more workers against a lower real wage, since this would lower the motivation, loyalty and productivity of the existing work force. Generally, a high firm-specific skill intensity of production makes efficiency wage considerations more important, because employers want to provide a disincentive to quit and face high monitoring costs. For firms with less strong efficiency wage considerations, the efficiency wage level will be lower. Hence, wage levels for identical workers in different firms will persistently diverge (Akerlof and Yellen, 1986). In a more centralized collective bargaining setting, in contrast, efficiency wage differentials are smaller because

wages are set at a higher level of aggregation.

The wage structure

The width of wage differentials between various types of workers (the wage structure) depends on preferences of trade unions, the degree of centralisation and the institutional environment. The literature states that trade unions are egalitarian: they attempt to make wage differentials smaller than marginal productivity differences. However, a theoretical framework underlying the motivation of this observation is lacking (Hartog and Teulings, 1994: 44,45).

With egalitarian trade unions, the impact of trade unions on the wage depends on the degree of centralisation. Also this may be described by an inverse U-curve. On the one hand, a decentralised trade union cannot easily change the wage structure autonomously, because high productivity workers with reduced earnings would move to other firms. A centralised trade union has more power to compress the wage structure. On the other hand, it has a stronger incentive to consider the job opportunities of outsiders, and thus aim at relative wages reflecting relative scarcities. However, even if a centralized trade union strongly considers employment opportunities, it is unlikely that it can determine what the efficient wage structure looks like. Due to continuous changes in supply and demand conditions for different types of labour, it is hardly possible to determine the magnitude of the required shifts in relative wages (Jackman *et al.*, 1995).

Trade-off

This points at a trade-off between the promotion of efficient wage differentials and the elimination of insider wage premia. Decentralized wage formation enables flexible adjustments of wages to local shocks, resulting in temporary wage differentials across firms. Moreover, efficiency wage premia may create wage differentials between types of firms. Hence, decentralized wage formation would result in a more efficient degree of wage dispersion, if local insider power would not cause inefficient wage differentials across firms. Centralized collective bargaining, in contrast, curbs local insider power, but frustrates a wage structure that reflects relative scarcities and compresses efficiency wages differentials across firms.

5.2.5 Centralisation and commitment

As explained in **section 2**, centralisation of collective bargaining constitutes an institution that supports commitment of employers and employees to keep to a predetermined division of rents. Opportunistically changing the way rents are shared becomes more difficult, because labour conditions are fixed for a certain period

through a collective agreement (Hartog and Teulings, 1996). More importantly, individual workers and employers have a negligible influence on wages during periods of renegotiation, because they have delegated their bargaining authority to a higher level. In case of sectoral bargaining, wages can be adjusted to changes in macroeconomic or sectoral circumstances, but the scope to adjust the wage level to changes in the ex-post bargaining position or in the outside options of individual workers and employers disappears[48].

Moreover, centralisation reduces the variability of outside opportunities because it eliminates the dispersion of wages over firms within the industry, especially if collective bargaining outcomes are collectively extended. Hence, employers have less scope to poach skilled workers of other companies by offering slightly higher wages. Likewise, individual workers have less incentive to switch to another employer and opportunistically capture the returns to quality-investments made by the current employer (Teulings, 1995, Hartog and Teulings, 1996). This supports investments in employee training.

This points at a trade-off between the wage flexibility and commitment to enhance firm-specific investments in the quality of labour. An extremely centralized collective bargaining setting promotes commitment but hampers wage flexibility at the local level. Regular renegotiations enable wage adjustments to aggregate shocks, but do not allow for wage adjustments to local circumstances of the firm. The position of sectoral collective bargaining is in between these extremes. Sectoral bargaining enables adjustments of wages to changes in sector-specific conditions. However, it increases the variations in outside options of workers and thus induces poaching of human capital. This may curb a dynamic process of raising productivity through investing in relationship-specific assets. Box 11 summarizes the strong points of decentralized versus centralized bargaining.

[48] Hartog and Teulings, 1996, argue that alternative more simple external institutions for renegotiation, such as formulas for wage growth, cannot easily determine how wages need to be adjusted to external shocks.

Box 11 Strong elements of (de-)centralized collective bargaining

Decentralized collective bargaining

* *reduces monopoly power on commodity market*
* *allows labour conditions to be tailor made to firm-specific conditions*
* *allows flexible wage adjustments to firm-specific shocks*
* *allows the wage structure to closely reflect relative scarcities*

Centralized collective bargaining

* *internalizes external effects*
* *curbs local insider power*
* *supports commitment of workers and employers*
* *makes labour relations less confrontational*

5.3 German and Dutch collective bargaining institutions

This section addresses the main similarities and differences between German and Dutch collective bargaining institutions. To put the comparison in a broader international perspective, the United States is chosen as a country of reference. In addition, collective bargaining is looked at from a European perspective, with The United Kingdom and Sweden as reference countries. To provide a better understanding of the current features of collective bargaining in Germany and the Netherlands, this section also describes the main trends in bargaining institutions.

To start with, **section 5.3.1** presents a brief description of the institutional arrangements that govern the bargaining process. It focuses on the degree of organisation, the coverage of collective contracts, the predominant bargaining level and the degree of coordination between bargaining levels. Subsequently, **section 5.3.2** addresses the main aspects of the institutional environment that shape the framework for collective bargaining. Relevant aspects of this framework are regulations concerning collective extension and strikes, the tax and social security system, and government involvement through wage interventions and persuasion. Before turning to these characteristics, Box 12 defines collective agreements and describes the prevalent types in Germany and the Netherlands.

Box 12 German and Dutch collective agreements

Collective agreements can be defined as "agreements entered into by one or more employers or employer associations with full legal rights to bargain and one or more worker organisations with these rights; in which terms and conditions of employment are regulated; and which must be adhered to in employment contracts between individual employers and individual workers" (IDS, 1995). They do not only arrange the growth and structure of wages, but encompass other labour conditions such as working time, holiday entitlements, training provisions and supplementary payments in case of sickness and disability.

Sectoral bargaining is common in many OECD-countries, including Germany and the Netherlands. Sectoral collective agreements apply to an entire industry or an industry within a certain region of the country. This implies that the scope of a collective agreements is in between that of labour market regulations and that of co-determination arrangements. In spite of a similar bargaining level, the German bargaining system results in a relatively large number of collective agreements. This results from regional bargaining, Paralelltarifverträge and separate parts of an agreement.

Due to the federal structure, German sectoral collective agreements (Flächentarifvertrage) are in most cases concluded per region (Land or part of a Land). The regional variation in the contents of sectoral agreements is usually small. Moreover, different but identical agreements are concluded if more than one trade-union represents the workers (Paralleltarifverträge). Furthermore, different agreements are concluded for different aspects of collective bargaining. These collective agreements have variable durations, ranging from one to several years. General labour conditions (such as working time, sickness benefits) and conditions regarding the wage structure are usually fixed for a period of several years, whereas negotiations on wage growth in most cases take place on a yearly basis (Verdonk and Wiggers, 1994, Paqué, 1993).

Dutch agreements do not have a regional dimension, and one agreement usually covers all aspects. As in Germany, more than one trade union can participate in sectoral negotiations. In this case, coordination in advance is the common practice, but it is also possible that the employer concludes an agreement with one of the trade unions (Korver, 1993). Most collective contracts have a duration of one, or sometimes two, years (De Kam et al., 1995).

5.3.1 Institutional arrangements

Tabel XIV *Overview of collective bargaining characteristics, 1990*

	US	UK	Ger[a]	Neth	Swe
	% of employees				
Degree of organisation					
union density[b]	16	39	33	26	83
employers' organisation density[c]	–	–	90	90	na
Collective bargaining level and coverage					
collective bargaining coverage[d]	18	47	90	71	83
coverage effect of collective extension	–	–	3	14	–
predominant bargaining level[e]	firm	firm	sector	sector	sector
Coordination					
presence	no	no	yes	yes	yes
main type	–	–	covert	overt	overt

Sources: Schilstra and Smit (1996), OECD, 1996c: 113-124, OECD, 1994b: 184-185, Van de Wijngaert, 1994: 29, Layard et al., 1991: 52, SZW, 1996.

[a] Figures refer to western Germany.

[b] Employed union members as a percentage of wage- and salary earners, 1990, 1992 for Germany. Retired, unemployed and students comprise 15% of all members in the Germany, and 17% in the Netherlands (in 1989, OECD, 1991: 119).

[c] Estimate, Van de Wijngaert (1994). In the new German Länder, the organisation rate of employers is lower and amounts to approximately two thirds of the work force (OECD, 1996c: 118).

[d] Number of employees covered by a collective agreement divided by total number of wage- and salary earners (corrected for employees excluded from bargaining rights), including coverage through extension of agreements, 1990, 1992 for Germany (OECD, 1994b).

[e] In total Germany, two thirds of all 43 000 agreements concluded in 1994 are industry-wide (OECD, 1996c). In the Netherlands, approximately 200 agreements are industry-wide, covering 58% of workers, and 900 agreements are concluded at the firm level, covering approximately 13% of workers.

Trade-union density

From a broad international perspective, German and Dutch trade-union density rates are roughly similar (**Tabel XIV**). Nevertheless, the difference in trade-union membership between both countries is noteworthy. Dutch workers are less inclined to join a trade union than their German counterparts. This picture results from diverging trends in trade-union density over the period 1960-1995. Until quite

recently, German density rates remained remarkably steady (**Tabel XV**). Between 1990 and 1991 they took a jump, because the organizing territory of West German trade unions spread to the East (Baethge and Wolf, 1995: 254). Membership of the largest trade-union confederation (the DGB) increased from almost 8 to almost 12 million, which equals a rise of 5 percent points in terms of trade-union density. From 1991 onwards, however, membership started to fall (The Economist, 1996). Nowadays, the total trade-union density level of the DGB approximately equals the 1990 level of the former western Länder. Dutch trade-union density, in contrast, started to decline much earlier. During the 1960s and 1970s it gradually fell, but during the 1980s it plunged. Quite recently, however, Dutch trade unions have succeeded to reverse this strong downward trend into a modest rise (**Tabel XV**).

Tabel XV *Development of union density*

	1960	1970	1980	1988	1990	1995
	employed members as a percentage of employment					
United States	na	23	22	16	16	na
United Kingdom	43	45	51	42	39	na
Germany[a]	35	33	37	34	33	33
Netherlands	39	37	35	25	26	27[b]
Sweden	69	68	80	86	83	na

Source: Hancké, 1993, OECD, 1994b and 1991, Visser (1995), CBS, 1995: 65.
[a] Up to 1990, old Länder. 1995: Rough estimate for total Germany based on DGB figures.
[b] The original figure of 29% is biased upwards with approximately 2 percent points compared to the figure of 1990, because of a change in the definition of employment (CBS, 1995: 65).

Sectoral shifts can explain developments in trade-union density within both countries, but not why trends in trade-union membership diverged. The size of the manufacturing sector is larger in Germany, but both countries experienced a similar fall in the share of manufacturing employment over the period 1960-1990 (see also **section 3**). A shift-share analysis carried out by the OECD confirms that sectoral shifts provide no sufficient explanation (OECD, 1991: 114-115)[49]. Hence, differing developments of trade-union density within industries provide a better explanation. In the Netherlands, trade-union membership declined within nearly all industries,

[49] The shift-share analysis covers the period 1970-1986 for Germany and 1975-1988 for the Netherlands. OECD (1991) presents a detailed analysis of trends in trade-union density.

including the traditionally highly organised manufacturing industry and public sector. In Germany, in contrast, trade-union membership within the manufacturing sector rose strongly until 1985, but the public sector already experienced a declining membership during this period (**Tabel XVI**).

According to Hancké (1993), the relative stability of German trade-union density rates during the 1980s can be attributed to the combination of sectoral and firm-level union strength. In Germany, trade-union representation has strong linkages with local employee representation at the firm level. This enhances union influence at the firm level and promotes the recruitment of new union members. In addition, the automatic payments of contributions helped to keep membership at a constant level (Streeck, 1981). In contrast, Dutch sectoral trade unions hardly have a voice at the firm level. Trade-unions are weakly present in the firm and neither have a strong influence thr-ough the works council. Compared to their German counterparts, Dutch works councillors operate with more distance from the trade union (Koene and Slomp, 1991, Visser, 1995).

Tabel XVI *Union density in a few sectors*

	Germany			Netherlands		
	1970	1980	1986	1970	1980	1989
	% of workers					
manufacturing sector	36	48	48	41	42	25
business services sector	15	9	17	8	8	9
public sector	61	53	45[a]	64	60	49[b]

Source: OECD, 1991: 110,111,113.
[a] 1988.
[b] 1985.

Collective bargaining coverage

Trade-union density underestimates the impact of collective bargaining in Germany and the Netherlands. To measure the reach of collective agreements, collective bargaining coverage is a better indicator. Two types of extension mechanisms explain why German and Dutch collective bargaining coverage exceeds trade-union membership by far (**Tabel XIV**). First, "firm-level" extension makes the agreement binding for non-unionized workers within a firm. A Dutch employer is obliged to apply the contents of collective agreements to the non-unionized workers (Schuit,

1995)[50]. In Germany this is not a legal requirement, but it almost always holds in practice through a voluntary clause in the collective agreement or individual labour contract (Verdonk and Wiggers, 1994; Jacobs, 1993). Second, collective extension makes a collective agreement legally binding for the entire industry (or the industry within the region), including for employers who are not affiliated to the employer organisation **(see also section 5.3.2)**. Both extension mechanisms allow free rider behaviour of workers. Hence, individual workers have less incentive to join a trade union. This may partly explain why trade-union density in Germany and the Netherlands is moderate.

Collective extension from an international perspective

The significance of extension mechanisms differs across countries (**Tabel XIV**). Firm-level extension is common, since coverage confined to the trade-union members within a particular firm is virtually nonexistent in OECD-countries. In contrast, the significance of collective extension strongly differs. In the United States and the United Kingdom and Sweden, collective extension mechanisms do not exist. In the former two countries, this follows from the predominance of firm-level bargaining. In Sweden, in contrast, sectoral bargaining is predominant, but non-organised employers are not bound to keep to a sectoral agreement[51]. From a broad international perspective, Germany and the Netherlands can be classified as countries with "intermediate" collective extension practices (OECD, 1994b: 179). The significance of collective extension is smaller than in countries such as Australia, Austria, Belgium, France or Portugal, but nevertheless considerable.

At a closer look, it turns out that collective extension is more widely used in the Netherlands than in Germany: 60% of Dutch employees is covered by an agreement to which collectively extension applies, whereas this share amounts to 25% in Germany. One the one hand, these percentages overestimate the importance of collective extension. The direct effect of collective extension on coverage is much

[50] The qualification needs to be made that some workers, for instance higher management or temporary workers, are often not covered (Hartog, 1995).

[51] In the United States union elections determine what union represents the workers of a particular firm. Single employer bargaining at firm level is predominant (OECD, 1994b: 171, Hartog and Teulings, 1996). In the United Kingdom, the individual firm has also become the principal bargaining level, since the sectoral level has lost importance during the 1980s. This differs sharply from the Swedish bargaining structure, where economy-wide bargaining applied until 1983 (Gennard, 1994: 24). National wage recommendations were closely followed by sectors and supplemented at the firm level (Katz, 1993). However, during the 1980s this system collapsed. A shift towards the sectoral level occurred, but economy wide associations still coordinate the bargaining process (Pestoff, 1994: 157 or Gennard, 1994: 22).

lower, because most employers are affiliated with the employer association. It amounts to 14% of all employees in the Netherlands, and only 3% in Germany (**Tabel XIV**)[52]. Moreover, legally binding collective agreements in Germany mainly relate to "general working conditions" and not to wages (OECD, 1996c: 117). On the other hand, the size of the direct effect may underestimate the significance of collective extension. In industries where collective extension is in force, employers have an incentive to join the employers' association in order to have some influence (OECD, 1994c). In industries where agreements are not legally binding, the threat of collective extension may prevent non-organized employers from paying lower wages than their organized competitors (Paqué, 1993). Through this threat effect, outsiders are actually "covered" by the terms of the agreement.

Coordination

Coordination enhances the degree of centralisation of the collective bargaining process. The OECD (1994b: 171) defines coordination as the degree of integration between the different bargaining levels. It is overt, when bargaining units coordinate wage claims in advance and subsequently try to realise coordinated bargaining objectives. For instance, trade unions take the viewpoints of the confederation as a starting point for their wage claims, or peak level representatives of workers and employers decide upon common bargaining objectives. Coordination is covert, when it is achieved through leading agreements in key-sectors. If key agreements set the stage for collective bargaining in other industries or firms, a system of pattern-bargaining evolves. This diminishes the autonomy of individual bargaining units and makes bargaining more "centralized".

The degree and type of coordination strongly differs across the countries of reference (**Tabel XIV**). In the United States and the United Kingdom, employers and trade unions predominantly bargain at the firm-level, with little coordination from a higher level of aggregation. If coordination takes place, it is covert, creating a system of pattern-bargaining. In Sweden, Germany and the Netherlands, in contrast, national confederations (Box 13) perform a supportive and coordinative role in the bargaining process, but do not participate directly. In the Netherlands and in Sweden, coordination is predominantly overt, but in Germany it is mainly covert.

In Germany, regional divisions of sectoral bargaining units coordinate their demands in advance, but overt coordination between sectoral bargaining units in their peak level organisations weaker than in the Netherlands (OECD, 1996c: 117, Slomp, 1995). Moreover, the peak level organisations of employers' and workers do

[52] In Germany, collective extension mainly applies to small firms in the construction, textile and retail trade sectors.

Box 13 Trade union and employer confederations

Dutch trade unions are grouped in four major confederations at the national level: The Netherlands Trade Union Confederation (FNV), the National Federation of Christian Trade Unions (CNV), the Trade Union Federation for Middle and Senior Staff (MHP) and the General Trade Union Federation (AVC). Some smaller unions are not affiliated to a confederation. The Netherlands Trade Union Confederation (FNV) is by far the largest and represents more than 60% of the unionized work force (CBS, 1995: 61). The civil servants and the manufacturing trade union are, with 27% and 21% of all FNV members respectively, the largest trade unions within the FNV. At the moment, several trade unions belonging to the FNV are planning to merge. Analogously, employer associations are organized sectorally, with confederations at the national level of which the VNO-NCW is by far the largest since the recent merger between the Federation of Netherlands Industry (VNO) and the Netherlands Christian Federation of Employers (NCW). Large sectoral employers organisations affiliated to the VNO-NCW are the Metalworking and Electrical Engineering Industry Association (FME). In turn, central employers' confederations interact in the Council of employers' associations (RCO).

In Germany, trade unions belong to one of the four confederations at the federal level. The Deutsche Gewerkschaftsbund or DGB is the largest confederation, representing more than 80% of all trade-union members (Verdonk and Wiggers, 1994). The metal industry trade union (IG-Metall) is the largest trade union within the DGB, with more than one third of all DGB members (Statistisches Bundesamt, 1991). Apart from the DGB, three other trade union federations exist. The White Collar Union `Deutsche Angestellten Gewerkschaft' (DAG) the Christian Trade Union Confederation `Christliche Gewerkschaftsbund Deutschlands' (CGD) and the Union of Civil Servants `Deutscher Beamtenbund' (DBB). Similarly, German employer associations are organized per sector and region, with two major federal employers' confederations, the Bundesvereinigung der Deutschen Arbeitgeber-verbände (BDA) and Bundesverband der Deutschen Industrie (BDI). The former supports collective bargaining by the affiliated employers organisations. The latter focuses on economic policy interests and political lobbying (Baethge and Wolf, 1995). Together these two organisations are roughly comparable to the Dutch employers' confederation VNO-NCW (Jacobs, 1993).

not interact on a regular basis. They have no "formal system of joint discussions at the national level between social partners (or between social partners and the government, Soskice, 1990: 44; Koene and Slomp, 1991). In contrast, covert coordination is relatively strong in Germany (OECD, 1996c: 117 and Katz, 1993). Bargaining in key sectors set the stage for collective bargaining in other sectors. The largest trade union of the metal industry (IG Metall) plays the most prominent role in this process (Baethge and Wolf, 1995: 236)[53]. This makes the system to a large extent dependent on the relative power of trade unions in key sectors, and their objectives.

In the Netherlands, overt coordination is more extensive. Dutch trade unions usually use the recommendations of their confederation as a starting point for negotiations. These guidelines allow some freedom for variations in bargaining positions across sectoral trade unions, since trade unions have become more independent in relation to their confederations (De Kam *et al.*, 1995: 36). As a counterbalance, employer confederations, usually working together in the RCO, decide upon a common position vis-à-vis trade unions as well, although this common position is not binding (IDS, 1995). Based on the general positions of confederations, consultation and discussion at an economy-wide level *between* employers' and unions' confederations takes place in the bipartite Foundation of Labour (Stichting van de Arbeid)[54]. The government is also involved in this process and the Foundation can also make policy recommendations (**section 5.3.2**). The discussions at the Foundation of Labour incidentally lead to economy-wide recommendations that serve as guidelines for negotiations the sectoral level[55]. Besides overt coordination within and between peak level organisations, covert coordination through trend setting collective agreements also exists in the Netherlands (De Kam *et al.*, 1995; Graafland and Verbruggen, 1993). However, this type of coordination is of less significance than in Germany, because of stronger overt coordination in advance.

[53] At the regional level, coordination is both overt and covert.

[54] The Foundation of Labour was founded in 1945. It is the exclusive representative employer-employee institution where sectoral or company negotiations can be coordinated. The foundation can make recommendations to sectoral trade unions and employers associations, but can also make recommendations to the government (Korver, 1993).

[55] The 1982 recommendation was especially significant because it stated the primary responsibility of employers and employee organisations for wage bargaining and coincided with the end of direct government intervention in wage bargaining (De Kam *et al.*, 1995: 37, see also **section 5.3.2**).

Firm-level bargaining

Although the sectoral level is predominant, the firm level is gaining importance in both countries. Collective bargaining becomes more decentralized in two ways. First, an increasing number of agreements are concluded at the firm level. This trend is more profound in the Netherlands. Second, less specific elements of sectoral agreements leave scope for enterprise-level bargaining with local worker representatives, for instance regarding working time (**section 4.3.2**.). In Germany, the (trade-union-dominated) works council is the main firm-level bargaining partner. In the Netherlands, this depends on the presence of trade unions or works councils, on provisions in collective agreements and the issue at stake. However, in both countries firm-level bargaining does usually not apply to wages.

Firm-level wage bargaining has become more common in the Netherlands. Their number has increased from approximately 600 to 900 between 1982 and 1994, and they now cover 13% of employment[56]. The increased presence of firm-level bargaining coincided with an increase in coverage, because the number of sectoral collective agreements remained stable at a level of approximately 200 (Schilstra and Smit, 1996). Moreover, firm-level bargaining is usually influenced by sectoral trade unions and the recommendations of their national confederations (Slomp, 1995). Hence, decentralisation towards firm-level bargaining is, until now, a modest trend. In Germany, firm-level agreements are less significant than in the Netherlands. Only one third of the number of agreements in total Germany are now concluded at the firm level (compare: the Dutch share is 80% and covers 13% of workers). A prominent example of a large German firm that bargains at the firm level is Volkswagen AG, but generally firm-level agreements mainly concern small firms that closely follow sectoral agreements (Slomp, 1995).

Quite recently, however, the firm-level seems to be gaining importance in Germany. Especially employers in the new Länder increasingly withdraw their membership from employer associations, or are still covered by a sectoral agreement but succeed in paying wages below the agreed wage bargain (OECD, 1996c: 118). This is related to the convergence of eastern to western wage levels after unification[57]. Because wage rises in the new Länder by far exceeded labour productivity growth, costs per unit of production became higher as in the old Länder (CPB, 1996). As a result, employers now have a strong incentive to depart from the

[56] The number of employees covered by a firm-level agreement as a percentage of total coverage slightly increased from 15% in 1982 to 18% in 1990 (Schilstra and Smit, 1996).

[57] The subsidisation of eastern enterprises supported the convergence of wages and it was motivated by egalitarian objectives of trade unions, fear for migration by policymakers and fear for unfair wage competition by western employer organisations (Paqué, 1993).

established bargaining arrangements. However, the rising importance of the firm level does not only concern the new Länder. An increasing number of firms in the old Länder is leaving or wants to leave the employer organisation and bargain at the firm level, but until now no information on the importance of this trend is available (OECD, 1996c). Although individual employers complain about the lack of wage flexibility related to sectoral bargaining, they benefit from their membership in a number of ways, for instance because the employer organisation provides legal advice, and provides cooperation with respect to training and strike insurance funds (Soskice, 1990).

The scope for firm-level variation of wages within sectoral agreements is, until now, limited. In Germany, all collective agreements specify minimum conditions regarding wages (Verdonk and Wiggers, 1994). Hence, employers can pay more, but not less than the agreed minimum wage rise[58]. Formally, works councils have no influence over supplementary wage increases, and these are unilaterally decided by management. In practice, the works council may be involved informally (Soskice, 1990) or has a say about wage-related issues such as performance premia (OECD, 1994b). Lower wages than the sectoral agreement are not allowed, unless opening clauses in the sectoral agreement explicitly state this possibility. The recent textile and clothing industry agreement allows lower wages to be payed by firms facing financial difficulties. In the chemical industry, the agreement allows lower wages for previously long-term unemployed (OECD, 1996c: 119). In the Netherlands, the majority of sectoral collective agreements also specify minimum conditions with respect to wages. Therefore, the employer can only deviate from the agreement in favour of the employee[59]. Firm-level bargaining with worker representatives about wages above this minimum is possible, as long as local agreements do not contradict provisions in the collective agreement. In practice, however, employers are not inclined to give workers at the firm level a voice in determining wages, since this would undermine their position in collective wage-bargaining.

[58] Local employee-representatives do not have collective bargaining rights on wages at the firm level, irrespective of the fact that the contents of the sectoral agreement (i.e. the specification of a minimum) theoretically leaves room for such negotiations. Management can autonomously decide to pay more than the agreed collective wage increase to all workers, but not to some workers, because this affects the wage structure, an area on which the works council has a say (Jacobs, 1993: 175;176).

[59] Minimum wage agreements apply to 65% of covered employees. Additional types are standard agreements that leave no scope for firm-level deviations (17%) and min-max agreements with two-way restrictions on deviations at the firm level (18%). Source: Tweede Kamer, 1993-1994.

5.3.2 The institutional environment

Besides their significant role as a bargaining partner for the public sector (Box 14), the government shapes the institutional environment for collective bargaining through regulations, direct wage interventions or persuasion. Regulations provide the boundaries for collective bargaining outcomes, because the issues dealt with in collective bargaining and through regulations to a large extent overlap (Paqué, 1993). Moreover, they have an impact on the process of bargaining, as they provide a framework for the way of bargaining, the reach of the subsequent bargaining outcomes, the possibilities for interventions and the presence of institutions for persuasion.

The importance of these three channels differs. In Germany, labour law is extensive, but the system of `Tarifautonomie' prohibits direct government interventions in wage bargaining (Paqué, 1993). The government tries to influence wage bargaining through persuasion, but formalized coordination between social partners and the government prior to actual bargaining is lacking. The Dutch government is more strongly involved in wage formation. Regulations in labour law are roughly as extensive as in Germany, but direct interventions in wage formation are possible and tripartite wage debates between the government and confederations in order to reach consensus on "sensible wage growth" and influence the actual bargaining process are common practice.

Box 14 Public sector bargaining

Institutions regarding collective bargaining in the public sector, which includes the government and the public service sector, differ between both countries. In the Netherlands, civil servants were not allowed to bargain collectively before 1993. Consequently, trade unions merely had an advisory role. Instead, the private sector more or less set the stage, but the budgetary constraints usually resulted in more moderate wage growth. Since the change of the system in 1993, unilateral wage setting disappeared and collective bargaining for the government takes place in approximately the same way as for the private sector. However, private sector bargaining outcomes are important as a starting point (Source: De Kam et al., 1995). Wages for the remainder of the public sector, the public services (`g+g sector') – for instance in health care institutions – were formerly based on those for the government. Nowadays this sector also bargains independently, at least within the boundaries of the total budget. Surprisingly, trade union-density in the public sector was already relatively high before these changes took place.

In Germany, in contrast, civil servants (`Beamte'), comprising approximately 40% of all public sector employees (old Länder, 1993, Statistisches Bundesamt), are still excluded from collective bargaining. Their labour conditions are determined by law. Hence, the `Deutscher Beamtenbund (DBB)' must be considered as a political lobbying group instead of a real trade union. In practice, wages for `Beamte' are based on collective agreements for white and blue collar workers in the public sector (Paqué, 1993: 216). These workers (`Angestellte and Arbeiter') are allowed to bargain. As in the Netherlands, union density is relatively high in the public sector, although the influence of trade-unions is limited for a significant part of workers. (Sources: OECD, 1994b, Slomp, 1995, De Kam et al., 1995).

Table Trade-union density in public and private sector, 1988

	US	*UK*[2]	*Ger*	*Neth*[3]	*Swe*
public	*37*	*55*	*45*	*49*	*81*
private	*13*	*38*	*30*	*20*	*81*

Source: OECD, 1991: 113

[a] As defined here, the public sector includes public administration, police, education, health, welfare and related community services, but excludes state-owned businesses.

[b] 1989 [c] 1985

Regulations

Legal minimum wages, characteristics of the social security system, collective extension and strike rules are addressed here, because they influence the relative power and objectives of trade unions. **Tabel XVII** summarizes some characteristics of regulations in Germany, the Netherlands and the reference countries.Many aspects of labour regulations are broadly similar in Germany and the Netherlands, but legal minimum wages only exist in the Netherlands (through the Minimum Wage and Holiday Allowance Act). German bargaining partners, in contrast, are not constrained by restrictions on wages. Formally, the government is entitled to impose minimum conditions if it considers the bargaining outcomes as socially unacceptable[60], but in practice this type of intervention has never been used (Jacobs, 1993: 156).

Collective extension

Regulations regarding collective extension strengthen trade-union power, because they eliminate wage competition within the industry. The regulatory framework regarding collective extension slightly differs between Germany and the Netherlands. In Germany, collective extension (Allgemeinverbindlichkeit) is only allowed if more than 50% of the employees in the extension domain have participated in the bargaining process. In this case, an agreement is legally binding if a request of the signatory employers' or employees' representatives has been approved. The federal Minister of Labour and Social Affairs (Bundesminister für Arbeit und Sozialordnung) and subsequently a bargaining commission consisting of representatives of employers and workers (`Tarifausschuss) needs to favour the request (Paqué, 1993: 219). A necessary condition for approval is that it serves the public interest (Verdonk and Wiggers, 1994). According to Paqué (1993) this procedure is not a strong obstacle, as the public interest is in practice defined as a "defense against undermining collectively agreed terms by outsider competition". Hence, the outsider perspective is hardly considered in the procedure. The Dutch procedure is similar, but the criterion for the approval of collective extension by the Minister of Social Affairs and Employment is more loosely defined: a request is approved as long as it is not contrary to general interests and if the agreement already covers an "important majority" of the sector (Schuit, 1995). Before the government decides, it consults the Foundation of labour (Korver, 1993). In practice, collective extension is almost always permitted in the Netherlands (Lever and Marquering, 1995).

[60] If workers or employers in a particular sector are hardly organized; if agreements are not collectively extended; and if the existing labour conditions are below accepted minimum standards.

Strikes

In both countries, strikes are considered as a last resort option and strike activity is low from an international perspective (OECD, 1994c: 17). In Germany, strikes are not allowed if the current collective agreement is still in force. Moreover, a strike needs to be approved by the trade union, must address a topic that is included in the bargaining outcome and can only be started if negotiations have resulted in a deadlock (Paqué, 1993, Verdonk and Wiggers, 1994). Workers on strike do not receive wages or unemployment benefits, but are paid by the unions. The employer may respond to a strike with a lock-out. In this case, even the workers who are not on strike are not able to work. They do neither receive their wages or payments by the union, nor unemployment benefits (Jacobs, 1993)[61]. In the Netherlands, strike activity is limited to periods of collective negotiations as well (Koene and Slomp, 1991). Workers on strike are paid through trade-union funds, as they are not entitled to wages or unemployment benefits (De Gier *et al.*, 1994: 168). Lock-outs are no attractive option for employers, since they have to continue paying wages (OECD, 1994c: 17).

Minimum wages

One would expect that the absence of lower boundaries on wage formation in Germany results in a relatively low minimum level of wages in collective agreements, but this is not the case. The lowest level of wages varies between sectors and regions (Vogels, 1994: 29). In the metal industry, the minimum wages for German white collar workers are relatively low, but blue collar workers earn the same as their Dutch counterparts (**Tabel XVII**). A crude estimate by SZW (1996) based on Vogels (1994) suggests that the lowest level of gross wages is higher for blue collar workers but lower for white collar workers, compared to the Dutch legal minimum wage level. However, these figures do not include wages for apprentices. In Germany, apprentices earn roughly one third up to half of the lowest collective wage (Paqué, 1993). As the German dual system attract two thirds of young workers, this implies that a considerable share of young workers earns less than the minimum presented in **Tabel XVII** (see also Den Broeder, 1995). In the Netherlands, legal minimum wages of young people (up to 23) are lower than the values shown in **Tabel XVII**. For instance, the legal minimum wage of workers of 20 years old amounts to 61% of the legal minimum for adults.

[61] A change in the Employment Promotion Act (Arbeitsförderungsgesetz) removed the entitlement of these workers to unemployment benefits (Baethge and Wolf, 1995: 241).

Tabel XVII *Characteristics of the institutional environment, 1993*

	US	UK	Ger	Neth	Swe
legal minimum wage	yes	yes[a]	no	yes	no
gross statutory minimum wage level (EC= 100)	93[d]	86	–	157	–
gross collectively agreed minimum wage level for the metal industry (EC=100)	–	74[e]	148/105[b]	148	na
average replacement rate (%)	41	63	68	78	na
active labour market policy (1995 or 1994, spending as % GDP)	0.20	0.53	1.33	1.06	3.00
average wedge for apw[c]	32 to 37[d]	29	41	44	na
average wedge for min wage[f]	17 to 19	-16	20	32	na
marginal wedge for apw[c]	30 to 39[d]	40	53	54	na
marginal wedge for min wage[f]	37 to 42	74	50	59	na
effect of collective extension	–	–	3	14	–

Source: CPB, 1995: 21,26,29, Vogels (1994), OECD, 1996b: 210-212.
Note that Dutch figures include holiday payments, whereas German figures don't.
[a] Only in the agricultural sector.
[b] Minimum wage in collective agreement for blue and white collar workers respectively.
[c] Average Production Worker.
[d] Figures vary across states. Texas, New York and California are considered in CPB (1995).
[e] In the textile industry.
[f] At the minimum wage level.

Social security system

As described in **section 5.2.3**, the social security system influences collective bargaining, because it affects the objectives of trade unions, in particular the value they attach to employment opportunities versus wages. Generous security benefits and encourage trade unions to concentrate on the level of wages, and not on the position of outsiders. The broad indicators in **Tabel XVII** suggest that the Dutch social security system does not encourage trade unions to consider outsiders: the average replacement rate is high compared to the American value. Spending on active labour market policy lags behind compared to the Swedish system. In

Box 15 Diminishing government involment in Dutch wage bargaining

Between 1945 and 1963, Dutch wage formation was directly governed by law. The government laid down legally binding guidelines – based on the growth of labour productivity and consumer prices – after having consulted employers' and workers' representatives through the Foundation of Labour (IDS, 1995). Since 1950, the tripartite Social and Economic Council (SER), the public discussion forum with an advisory task on socio-economic policy, advised the government on the acceptable degree of wage growth. This system was characterized by a high degree of consensus.

During the 1960s, strong economic growth and a tight labour market resulted in less consensus and a call for more independent wage bargaining. Between 1963 and 1967, bargaining became more independent, but collective agreements needed to be approved by the Foundation of Labour and could be annulled by the government (`ontbindendverklaring'). In determining whether an agreement was acceptable, the Foundation of Labour made use of recommendations that followed from economy-wide debates between employers, workers and independent experts in the Social and Economic Council (SER). Gradually, the Foundation of Labour lost its role in approving collective agreements.

In 1970, independent collective bargaining was legally established. The Wage Determination Act (`Wet op de Loonvorming') stated that employers and workers can freely bargain over wages and employment conditions. Nevertheless, the government kept the right to intervene in wage determination. From 1963 until 1982 direct interventions in collective bargaining (`looningrepen') regularly took place.

The 1982 agreement of the Foundation of labour stated that social partners are primarily responsible for wage bargaining and coincided with the end of direct wages interventions. The government still has the right to intervene, but the circumstances that allowed interventions were tightened. Criteria for wage interventions are that the "interests of the national economy require intervention in the wage level because of sudden external shocks to the economy" (Van der Heijden et al., 1995: 37). This right has not been exercised, but quite recently (in 1993) the threat of government intervention had the impact of restricting the scope of bargaining (Sources: Van der Heijden et al., 1995, De Kam et al., 1995, De Gier et al. 1994, Verdonk and Wiggers, 1994).

Germany, both indicators are slightly more favourable to outsider considerations[62]. Vossers (1996) confirms that the Dutch system generally puts less emphasis on promoting search activity, in comparison to the German system. **Tabel XVII** moreover shows that the wedge in both countries has a large impact on the collective bargaining process. The value of the wedge is the highest in the Netherlands, especially at the low end of the earnings distribution.

Wage interventions and persuasion

The German system of `Tarifautonomie' does not allow direct government intervention in wage formation. The German government may indirectly influence wage bargaining, however, through persuasion or exerting political pressure (Baethge and Wolf, 1995: 237). Additionally, the opinion of independent institutions, notably the Deutsche Bundesbank and the Council of Economic Experts (Sachverständigenrat)[63] may influence collective bargaining. However, tripartite wage debates at the economy-wide level do not take place at a regular basis. Concerted Action meetings existed between 1967 and 1977 (konzertierte Aktion, Verdonk and Wiggers, 1994). However, these type of meetings were generally not very effective in changing the actual bargaining outcomes (Soskice, 1990). Recently, rising unemployment rates have stimulated the re-introduction of a tripartite debate on the need to moderate wage growth and reduce tax costs in order to reduce unemployment (the Bundnis für Arbeit).

Government involvement in the Netherlands evolved from direct wage determination by the government to more indirect influence (Box 15). Although the bargaining environment has become more liberal, the degree of government influence is still larger than in Germany. The government may directly intervene in the bargaining process. This possibility constrains the bargaining process, even though the restrictions on wage interventions have been tightened and wage intervention have not taken place since 1982. Moreover, wage negotiations remain strongly influenced by the government through persuasion. Persuasion is usually directed at the Foundation of Labour, the meeting place of employer and worker representatives at the economy-wide level (Korver, 1993).

[62] At the lower and of the earnings distribution, however, replacement rates for couples are equally high in both countries and amount to almost 100% (CPB, 1995: 14).

[63] The Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung consists of economic experts.

5.3.3 Similarities and differences

What does this overview of bargaining institutions tell about the position of Germany and the Netherlands? From a broad international perspective, both bargaining systems are similar. In contrast, the American and to a somewhat lesser extent also the British system, can be characterized as a country with decentralized collective bargaining setting and a low coverage of collective bargaining agreements. In comparison, collective bargaining in Germany and the Netherlands is characterized by an intermediate degree of centralisation and a high coverage. At the other end of the spectrum, Sweden is characterized by a more centralized bargaining setting (see also SZW, 1996).

At a closer look, it turns out that Dutch sectoral bargaining is more centralized than the German system. This results from the greater role of a priori consensus building on "sensible wage growth" at the economy-wide level. Interaction between the peak level organisations of employers and workers is institutionalized, and government influences bargaining in advance through persuasion. This influence is supported by the, although strongly constrained, possibility to intervene in wage formation. In Germany, the sectoral level has more autonomy in determining bargaining outcomes. Direct government involvement is not allowed and persuasion and coordination are not institutionalized. The absence of institutions similar to the Dutch Social and Economic Council and Foundation of Labour illustrates the larger sectoral autonomy. Because of covert coordination, sectoral autonomy is concentrated in a few key sectors. A different centralisation ranking of the Netherlands in two studies, depending on whether or not these "corporatistic" elements , i.e. overt coordination between the government and the social partners in collective bargaining, are included in the definition, illustrates this point (**Tabel XVIII**).

Tabel XVIII *Rankings of centralization*

	US	UK	Ger	Neth	Swe
	ranking (16 to 1)				
Calmfors and Driffill[a]	16	11	6	7	3
Lehmbruch[b]	14	12	6	2	3

1 most centralized 16 most decentralized

The rankings of Calmfors and Driffill (1988) and Lehmbruch (in Hemerijck, 1992) are presented.

[a] ranking depends on predominant bargaining level and coordination within trade-union and employer confederations

[b] ranking depends on tripartite decision making.

However, the Dutch system also features more firm-level characteristics, because of the larger number of firm-level agreements. This points at a mixture of centralized and decentralized elements. Firm-level bargaining leaves scope for wage deviations at the local level, but firm-level bargaining is also influenced by consensus-building at the economy-wide level

Are both systems converging? In some ways they are. The degree of centralisation in Dutch bargaining is diminishing. Guidelines of the peak-level organisations leave more scope for sectoral variations and government involvement as become more indirect over time. The stronger influence of works councils also implies a convergence to the German system (Gelauff and Den Broeder, 1996: 93-108). In Germany, in contrast, the rise of unemployment in recent years induced an attempt for more overt coordination at the economy wide level. At the same time, however, it resulted in a call by employers for greater firm-level autonomy, which may result in a larger number of firm-level agreements.

Yet, with respect to coordination and government influence, differences are still significant. Despite decentralisation in the Netherlands, institutionalized consensus building remains a core element that guides the process of wage formation. And, despite the recent economy-wide coordination effort in Germany and the growing impopularity of the sectoral agreement to employers, coordination is still predominantly covert and (key) sectors constitute the predominant bargaining level.

5.4 Empirical evidence

This section addresses some empirical evidence for the reference countries. First of all, it reviews the empirical evidence regarding the effects of collective bargaining on the level of wages in a decentralized versus a centralized bargaining setting. Subsequently, it presents empirical evidence regarding the degree of wage dispersion.

5.4.1 The level of wages

Two indicators

Two indicators illustrate the effect of collective bargaining on the wage level. The first indicator is the union wage markup, i.e. the difference in wages between identical workers, depending on whether or not they are covered by a collective agreement. The union markup is relatively small in the Netherlands[64] and Germany, substantial in the United Kingdom and by far the largest in the United States (**Tabel**

[64] For the Netherlands, Van Praag and Hop (1995) find a negative union markup.

XIX). Hence, the presence of a trade union has a large effect on the wage level of a particular firm in case of decentralized wage bargaining. In Germany and the Netherlands, in contrast, the union markup is low. In both countries, however, it is difficult to measure, because only a minority of firms are not covered, Hence, it implies comparing wages in dissimilar industries.

Tabel XIX *Union wage markup*

	US	UK	Ger	Neth	Swe
	in %				
difference between union and non-union wage	20[a]	10[a]	5[a]	2 to 4[b]	na

[a] 1985-1987. World Bank, 1995.
[b] 1992. Hartog and Teulings, 1996, Wiggers, 1996.

The union wage markup does not reflect the total effect of collective bargaining on the wage level in a country. This depends on the coverage level and on behaviour in the uncovered parts of the economy. If coverage is low, the aggregate wage level is less strongly affected by collective bargaining institutions, unless the uncovered part of the economy strongly responds to collective bargaining. This response can go either way. On the one hand, wages above marginal productivity in covered firms may drive up wages in uncovered firms. Employers do not want to pay low relative wages because this will reduce effort and increase quits (the efficiency wage hypothesis), or because this will result in a call for collective extension by organised employers. On the other hand, lower employment in the covered parts increases the supply of labour in uncovered parts, which may drive down wages in uncovered sectors.

Direct empirical evidence regarding the total effect of collective bargaining institutions on wages is scarce. For the United States, and to a lesser extent the United Kingdom, empirical evidence suggests that the total effect of collective bargaining on wages is modest. Low coverage implies a lower impact of the union wage markup on the average wage level. Moreover, indirect evidence confirms that the American way of collective bargaining does not strongly drive up aggregate wages. Wages of new hires flexibly adjust to changes in supply and demand, while insiders try to keep their wage markups (see section below on wage dispersion). For the Netherlands, in contrast, high coverage implies a stronger influence of collective bargaining. Moreover, Lever and Marquering (1995) find that wages tend to rise in the uncovered parts of the economy as a side-effect of unionisation. Yet, modest union wage premia imply a modest aggregate wage effect. Lever and Marquering (1995) estimate that collective bargaining in the Netherlands raises the average wage level by approximately 5%.

Centralisation

The empirical evidence suggests that the total effect of collective bargaining institutions is low in a decentralized (the United States) and in a more centralized wage bargaining system (The Netherlands). In the United States, large wage premia of local trade unions do not strongly drive up aggregate wages because of low coverage and flexible wage adjustments in uncovered parts and for new workers. In the Netherlands, the wage effect is low in spite of high coverage and positive side-effects, because trade unions do not strongly drive up wages. This may point at the wage moderating effect of centralization. Jackman *et al.* (1995) confirm this hypothesis. In a cross country analysis they find that a higher collective bargaining coverage drives up wages, but that this effect is moderated if the degree of centralisation rises. Hence, a lower degree of centralisation may explain why German efforts to moderate aggregate wages have been less successful than Dutch efforts (Box 16)[65].

Social security system

As to the effect of the institutional environment on wage formation, Jackman *et al.* (1995) find that a more generous benefit system reduces the sensitivity of wage formation to the unemployment level. This confirms the notion that trade unions put less emphasis on the position of outsiders if social security is generous. Being characterized by a relatively high replacement rate compared to the United States and the United Kingdom, and less expenditures on active labour market policy promoting search activity, this points at an unfavourable position of the Netherlands and, to a somewhat lesser extent, of Germany (**Tabel XVII**).

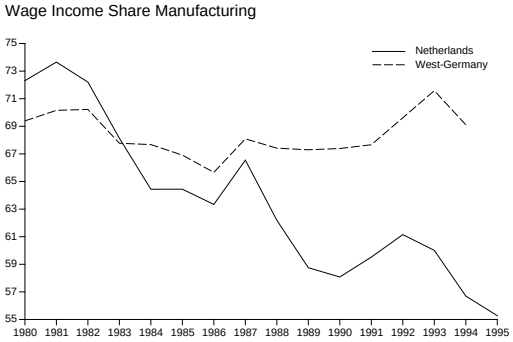
Empirical evidence on the effects of the wedge on wage costs is inconclusive. Generally, evidence from macroeconomic time series analysis is mixed. Tyrväinen (1994) suggests that real wage resistance is extremely high in Germany, indicating that the burden of taxes are not shifted onto labour but result in higher wage costs. In contrast, Carruth and Schnabel (1993) find no effect of the wedge on German wage costs. For the Netherlands, Graafland and Huizinga (1996) find that a rise in the average wedge (and a corresponding rise in the marginal wedge) increases wage costs in the long run by approximately 40%. In a cross-section analysis of OECD countries Jackman *et al.* (1995) find that the wedge does not significantly affect wage costs.

[65] Jackman *et al.* (1995) use similar rankings for the degree of coordination in Germany and the Netherlands, because they focus on the bargaining level and coordination within employers versus employee organisation, and seem to include covert coordination.

Box 16 Wages in the German and Dutch manufacturing industry

During the 1970s, wage growth in Germany and the Netherlands exceeded the European average. Since then, both countries attempted to moderate wage costs, but this effort was more successful in the Netherlands (Verdonk and Wiggers, 1994). In Germany, sectoral bargaining units managed to moderate wage growth during the beginning of the 1980s. However, especially since the second half of the 1980s wage growth was more abundant than in the Netherlands. As a result, the current wage level in Dutch manufacturing industry now equals 4/5 of the (western) German level, whereas Dutch labour productivity in the manufacturing industry exceeds the German level (IW, 1995 and CPB, 1996). Also from a European perspective, German labour costs per unit of production have become extremely high. This has caused a loss of the German market share on the European export market (CPB, 1996).

To measure the impact of wage bargaining, the wage income share is a better measure than unit wage costs, because the latter are strongly influenced by the value of the exchange rate (Köddermann, 1996). An analysis of the wage income share for the total economy shows that German values for the total economy are not alarming, since they are currently roughly in line with those in other countries (Köddermann, 1996). This is related to the relatively high labour productivity in the German services sector. In the manufacturing industry, in contrast, the wage income share has considerably increased. It is now much higher than the Dutch level. Hence, both abundant wage growth and the appreciation of the DM contributed to the loss of the German market share in the European export market (CPB, 1996). In 1995, wage growth in Germany was again abundant, but total wage growth in 1996 will be more moderate (OECD, 1996c).



5.4.2 Wage dispersion

Empirical results confirm that bargaining institutions have an impact on wage dispersion. Wage dispersion related to firm or industry characteristics is large in the United States and the United Kingdom, intermediate in Germany, and much smaller in the Netherlands and Sweden (**Tabel XX**). Based on an overview of empirical evidence for several countries, Layard *et al.* (1991: 188; 212) find that the effect of firm- or industry-specific factors on wages is large in the United Sates, intermediate in the United Kingdom and Germany, but very small in Sweden. Waaijers (1994 and 1996), analyzing wage dispersion in Germany and the Netherlands, also concludes that this type of wage dispersion is somewhat larger in Germany than in the Netherlands.

Tabel XX *Wage dispersion, variance analysis*

	US	UK	Ger	Neth	Swe
	square roots of variance components				
total	0.60	0.58	0.44	0.40	0.31
related to human capital	0.21	0.22	0.19	0.30	0.14
related to firm/industry	0.17	0.20	0.14	0.07	0.05
related to tenure	0.12	0.03	0.05	0.04	0.05

Source: Hartog and Teulings, 1996, Hartog, Van Opstal and Teulings, 1994.

Although unobserved skill differences, varying pleasantness of jobs or imperfect mobility of labour may play a role, these factors cannot completely explain the relatively large and persisting wage differentials between firms (Layard *et al.*, 1991). Hence, adjustment processes to shocks, efficiency wage considerations and insider power of local trade unions contribute to wage dispersion, but these three causes of wage dispersion are difficult to separate.

Flexible adjustments and efficiency wages

Flexible adjustments of wages to local shocks are facilitated in a decentralized system. This may also explain part of the large wage differentials between American firms (**Tabel XX**). If a regional shock leads to labour productivity differences between regions, wage differentials trigger employment adjustments to high productivity locations. Eventually, if labour can be efficiently reallocated, differences in wages for identical workers will disappear. In a dynamic environment with continuous shocks, however, the identity of high productivity and low

productivity firms continuously changes. Bertola and Ichino (1995) argue that wage differentials between firms may be persistent in a dynamic environment, because they are needed to provide an incentive for workers to overcome mobility costs and migrate to profitable locations. This type of dynamic adjustment becomes more relevant if the instability of the environment increases.

Insider power

Yet, empirical evidence suggests that these markups are not only related to efficiency wage considerations and adjustments to shocks, but also follow from local insider power. The large size of union wage markups in the United States and the United Kingdom (**Tabel XIX**) suggests that insider power plays a role. In unionized firms with market power significant wage markups exist (Stewart, 1990). In contrast, union mark-ups are small for firms that encounter fierce product market competition. Moreover, in the United States new hires pay the price for higher wages of insiders, since tenure profiles are relatively steep (**Tabel XX** and Waaijers, 1996). This also reflects the existence of insider power, because efficiency wage considerations do not discriminate between new hires and existing workers.

The higher degree of centralisation in Germany and the Netherlands curbs local insider power but also reduces the possibility for individual employers to raise wages out of efficiency wage considerations or to adjust wages to local shocks. This corresponds with a lower degree of wage dispersion across firms.

The wage structure

Besides affecting the union wage markup, collective bargaining affects the wage structure, i.e. wage differentials between types of employees. Empirical research generally confirms that trade unions compress the wage structure. Generally, the overall degree of wage dispersion is smaller in countries with a high trade-union coverage (**Tabel XX**). In Sweden for instance, centralised bargaining substantially compressed the wage structure, especially during the 1960s and 1970s (Hartog and Teulings, 1994: 62). Even in the United States, egalitarian tendencies of trade unions appear from a relatively stronger wage compression within unionized firms. In American companies covered by a collective agreement the wage dispersion over individuals tends to be lower (Hartog and Teulings, 1994: 60).

Wages by educational level

As to the effects of collective bargaining institutions on the wage structure by educational level, empirical research is inconclusive. Wage dispersion related to human capital variables (education and experience) is not lower in Germany and the Netherlands than in the United States or the United Kingdom (**Tabel XX**). However, wage differentials between workers of different educational levels are substantially lower in countries characterized by more centralized collective bargaining (**Tabel XXI**). In the United States, a lower demand for unskilled work during the 1980s resulted in a lower relative, and even absolute, real wage level of the lower educated (Freeman, 1994, ed). Nevertheless, even in the United States, the considerable worsening of relative earnings for the least educated could not prevent relatively high unemployment levels for the least educated (**Tabel XXI**).

Dutch evidence generally reflects that the wage structure does not adequately reflect relative scarcities. Hartog and Teulings (1994) argue that a decreasing return to higher education in the Netherlands may be in line with market adjustment towards an increased supply. However, the relative low returns to technical education do not support this conclusion (Groot and Mekkelholt, 1995). In addition, relative wages for workers with a vocational degree compared to workers with a general degree are neither in accordance with the relative number of vacancies nor with relative unemployment rates (CPB, 1994: 23). Therefore, the dispersion of wages does not adequately reflect relative scarcities.

Tabel XXI *Earnings and unemployment of men, by educational level*

	US[a]	UK[a]	Ger[b]	Neth[c]	Swe
	ratio of gross earnings				
higher/no qualification	2.47	2.04	1.94	1.74	1.55
	unemployment				
primary or lower secondary /higher	11.8 / 4.4	13.4 / 2.5	11.6 / 4.0	15.6 / 5.3	2.6 / 1.1

[a] OECD, 1994c: 160-161, 168, male.

[b] 1989. Old Länder. Fachhochschule versus no qualification, Abraham and Houseman, 1993a.

[c] 1994 CPB, 1994: 23, higher education versus primary education, male and female.

Especially at the lower and of the educational attainment range, the Dutch wage structure is far from market conform. This is not only related to egalitarian trade unions, but also to minimum wages and the relatively high level of the replacement rate for lower educated workers (OECD, 1996d: 49). Although the level of legal minimum wages decreased in relation to the average wage level between 1984 and 1995, the number of workers receiving the minimum wage has declined (Verdonk and Wiggers, 1994 and OECD, 1996d). In most sectors, the lowest gross wage level in collective agreements is considerably higher than the legal minimum wage level.

For Germany, empirical research leads to similar conclusions on the wage structure. Abraham and Houseman (1993a) investigate to what extent the stable earnings structure by educational level during the 1980s is caused by solidaristic wage policies of trade unions. They conclude that the wage bargaining system may have played a role in compressing the wage structure. Relatively low returns to higher education in the technical field point at insufficient wage differentials between educational fields in Germany (Groot and Mekkelholt, 1995). At the lower end of the earnings distribution, minimum wage levels are not lower than those in the Netherlands, in spite of the absence of a legal minimum wage. Wage dispersion at the lower end of the market did not increase in response to the relatively high unemployment levels for lower educated workers. As in the Netherlands, this is also related to relatively high replacement rates (CPB, 1995: table 1 to 4).

5.5 Performance of collective bargaining systems

In this section, the performance of collective bargaining system is analyzed with respect to the following performance indicators: the market conformity of wage formation and the support of commitment. In the assessment, the American bargaining system is again taken as the point of reference. This section summarizes differences in collective bargaining outcomes in the United States versus Germany and the Netherlands. Subsequently, it assesses the differences between the German and Dutch collective bargaining systems.

The American system of wage formation closely resembles the competitive model. It results in flexible wage formation. The wage level of a firm is responsive to shocks in labour market conditions, for instance to regional variations in firm performance. Hence, wages of individual workers show large variation over time. This points to neoclassical efficiency in a dynamic environment. Moreover, individual employers can use wages to provide incentives to their workers, thereby enhancing efficiency within the firm. However, wage differentials between firms are related not only to adjustments to shocks, but also to the existence of insider bargaining power and strategic behaviour of local trade unions. Especially in case of monopoly power in the product market and a high firm-specific skill intensity of production, insiders are strong. Insider power in combination with efficiency wage

considerations result in large wage premia. This drives up wages, hampers employment growth and weakens the position of outsiders. Due to low coverage, however, high wage premia do not appear to drive up the aggregate wage level. This is related to flexible wage formation in the uncovered parts of the economy. Moreover, insiders cannot easily prevent downward wage adjustments in case of negative shocks, since limited employment protection and a low fall back position of outsiders diminishes local insider power in case of a worsening of firm performance.

In Germany and the Netherlands, wage formation is closer to the cooperative model. Sectoral trade unions exert a strong influence on wage formation in both countries, because of high coverage and an institutional environment that supports trade union power. This curbs insider power at the firm level, but hampers wage flexibility. Wages can be adjusted to changes in supply and demand affecting the entire sector during renegotiations on collective agreements. Because wages are uniform for an entire sector, firms bear the adjustment costs during fluctuations in local business conditions. If a worsening of business conditions is temporary, it will sooner lead to a period of labour hoarding and lower profit rates than to downward wage adjustments. In addition, in contrast to the American situation, new hires do not carry the burden of a negative shock, since they do not earn less than insiders. If a negative local shock is persistent, a downward adjustment of employment instead of labour hoarding will occur. Only if the negative shock affects a large part of the sector, it will eventually lead to a downward wage adjustment.

In promoting commitment to invest in firm-specific assets, the collective bargaining institutions in both countries compare favourably to those in the United States or the United Kingdom. In the latter two countries, the predominance of uncoordinated firm-level bargaining may hamper investments in relationship-specific assets. By consequence, some collective agreements have a relative long duration of three years as a way to enhance stability (Layard *et al.* 1991: 90). However, this type of stability does not reduce the appearance of the hold-up problem during periods of renegotiations and makes wage formation rigid to macro-economic shocks because of the long duration. Hence, the major drawback of the flexible system of American wage formation consists of the lack of institutions that support commitment.

The comparison of the wage structure provides a mixed picture. Wage differentials between educational categories are smaller in countries characterized by more centralized bargaining. In these countries, flexible adjustments of relative wages to changing scarcities is imperfect. At the lower end of the market, high replacement rates reduce the dispersion of wages. Legal minimum wages in the Netherlands further constrain downward wage adjustments. However, the absence of legal minimum wages in Germany has not led to a lower level of minimum wages in collective agreements. In countries characterized by decentralized bargaining, downward wage adjustments of low skilled workers could more easily be realized. Still, unemployment levels are also relatively high for the least educated in these

countries.

It is not possible to draw a firm conclusion on the advantages of a wage formation system that promotes flexibility versus a system that promotes commitment. On the one hand, long-term trends point at increasing knowledge-intensity of production and a need for continuous investments in firm-specific assets. On the other hand, internationalisation trends and a high pace of technological change increase the volatility and dispersion of production conditions that individual employers have to face. This increases the importance of flexible wage adjustments at the firm level. It is questionable, however, whether decentralisation of German and Dutch wage formation will enhance flexibility. The American situation shows that this depends on the emergence of local insider power. Because of the stronger worker protection and a more generous social security system in Germany and the Netherlands, the local insider power in a decentralized setting may be larger in these countries.

The most significant difference between the German and the Dutch system of wage formation concerns the degree of centralisation. The Dutch system encompasses both more centralized and more decentralized elements. Sectoral trade unions have more power to raise wages than decentralized trade unions because the sectoral level eliminates competition between firms. However, they are less inclined to do so if the degree of centralisation sufficiently guarantees that bargaining units internalize external effects. Hence, the greater reliance on tripartite overt coordination is a strong element of Dutch wage formation, because it moderates wage claims of trade unions. In contrast, the German system of covert coordination is less effective from the perspective of internalizing external effects, because it is not based on the coordination of wage claims in advance and will thus sooner promote leapfrogging than wage moderation. However, the Dutch system also features more decentralized elements, as a larger number of firms bargain at the firm-level. This allows greater flexibility to adjust wages to firm-specific shocks, which is particularly relevant for firms that are exposed to a volatile economic environment.

6 Summary and lessons

This section summarizes the main findings of the paper. First, **section 6.1** reviews the main features of the two archetypical models of labour institutions: the competitive and the cooperative model. Subsequently, **section 6.2** addresses the position of Germany and the Netherlands in this spectrum of models, using the United States as a reference country.

6.1 Two models

Tabel XXII summarizes the strengths of both archetypical models of labour relations. The competitive model performs well in using human resources efficiently. Employers have ample freedom to act at the decentralized level. This allows flexible adjustments to diverse and changing economic conditions. Moreover, limited income support provides strong financial incentives for activity and effort.

The cooperative model, in contrast, is strong at accumulating firm-specific human capital and increasing the internal flexibility of employment. Employment protection, centralized collective bargaining and co-determination strengthen commitment to implicit labour contracts. This encourages a long-term view towards labour relations and builds confidence that the other party will not opportunistically exploit the other party's cooperative stance, once investments in firm-specific assets have been made. Income protection insures workers against a loss of firm-specific knowledge, supports the search of outsiders for a good job match, and improves equity. In addition, consensus-building at a centralized level allows the internalisation of external effects, and helps to stabilize labour relations.

What can be learned from the analytical framework?

The analytical framework helps to structure the policy debate for a number of reasons. First, it explains that both the extreme reliance on commitment and the extreme reliance on flexibility frustrate labour market performance. Extreme reliance on flexibility curbs investments in the quality of labour relations, whereas extreme reliance on commitment makes labour markets too rigid. Hence, the effects of policy measures on overall labour market performance depend on the current position on the trade-off, the present economic conditions, and the main economic trends.

Tabel XXII *Features, strengths and economic conditions of the two models*

Institutional model	**Competitive model**	**Cooperative model**
Features	easy hiring and firing	employment protection
	firm-level wage formation	centralized collective bargaining
	managerial autonomy	co-determination
	financial incentives	income protection
Strengths	*(External) flexibility*	*Commitment*
	improves allocation of labour	encourages long-term view
	promotes diffusion of knowledge	promotes firm-specific investments
	enhances wage adjustments	allows adjustments to macro-shocks
	permits swift managerial decisions	stimulates internal flexibility
	Individual discretion	*Consensus building*
	promotes decisions that conform to individual preferences	internalizes external effects
	promotes efficient wage structure	curbs local insider power
	allows efficiency wage premia	stabilizes labour relations
	Financial incentives	*Insurance*
	promotes search and effort	improves equity
	encourages investments in general skills	supports search for good job-match and encourages firm-specific investments
Economic conditions		
Preferences	heterogeneous	homogeneous
	risk taking	risk averse
	few equity considerations	strong equity considerations
Technology and skills	general knowledge	firm-specific knowledge
	technology diffusion and innovative start-up firms	R&D in established firms with economies of scale
Product market	volatile	stable
	firm-specific shocks	macro-economic shocks
	competitive	imperfect competition (sunk costs, economies of scale)
Labour market	heterogeneous demand and supply	homogeneous demand and supply

Second, it points out that a mix of different labour market institutions may better suit a diverse economic environment. Diverse economic conditions across firms, industries and types of workers require labour market institutions involving a mix between flexibility and commitment. For instance, start-up firms need flexible conditions to promote entrepreneurial risk-taking, whereas established R&D intensive firms with firm-specific assets benefit from institutional support of commitment. As another example, low-skilled jobs usually do not require substantial investments in firm-specific human capital. Jobs with a high skill intensity, in contrast, benefit from commitment.

Third, it reveals how changes in single labour market institutions may affect performance in different ways, depending on the characteristics of the entire institutional system. For instance, decentralisation of wage bargaining may yield non-competitive insider wage premia of local trade unions, if employment and income protection is extensive.

Fourth, it describes that the importance of the strengths of both models depends on the economic environment (**Tabel XXII**). Hence, economic conditions in a country may explain why a particular institutional setting has been developed. The strong points of the competitive model are especially important in a diffusion-oriented, volatile, competitive and heterogeneous economic environment. Flexible labour flows promote the diffusion of general knowledge, embodied in workers, through the economy. Volatility requires flexible adjustments of employment, working hour and wages at a decentralized level. Fierce product market competition ensures that economic agents at the decentralized level cannot easily capture monopoly rents. Finally, decentralized decisions can account for heterogeneous conditions and preferences. In this economic environment, the flexible model is conducive to performance, unless risk-preferences or equity considerations require more extensive income support and employment protection.

The advantages of the cooperative model, in contrast, are more important in an environment with a high firm-specific knowledge intensity, stable economic conditions at the firm level, homogeneous preferences and labour demand and supply conditions. The cooperative model strengthens the commitment that is needed to support firm-specific investments in the quality of labour relations. Moreover, extensive social insurance insures investments in firm-specific skills. Finally, the job and social security of this model correspond with risk averse preferences and strong equity considerations.

Fifth, the analytical framework shows how structural changes in preferences, technological orientation, frequency and nature of shocks, degree of product market competition and heterogeneity may require a change in labour market institutions. **Tabel XXIII** summarizes the most important trends, indicating whether they result in a greater demand for more flexibility versus commitment.

Tabel XXIII *Trends and their impact on the trade-off*

	More flexibility required	More commitment required
Preferences	more heterogeneous society (diverse tastes)	individualisation (smaller families and less family solidarity requires more insurance)
Technology and skills	technology in small firms (greater importance of diffusion)	more firm-specific, tacit knowledge (need for firm-specific investments)
	technology ages faster (general skills more important)	higher skill intensity (more skill requirements)
Product market	more international competition (stronger product market competition)	more sunk costs (more product market power)
	more diversity (decentralized discretion needed)	more product differentiation (more product market power)
	greater mobility of physical capital (flexible labour required)	firm-specific physical capital (co-specialisation with firm-specific human capital)
	more firm-specific shocks (more flexibility and general skills required)	more firm-specific shocks (more insurance desired)
Labour market	more heterogeneous labour (optimal wage structure hard to determine at central level)	ageing (more need for continuous investments in employee quality)

6.2 German and Dutch labour market institutions

Labour market performance

Tabel XXIV summarizes the main findings regarding labour market activity and quality. The American labour market performs well in stimulating activity. In Germany and the Netherlands, net participation has converged over time, and both countries now suffer from high long-term unemployment. If expressed in working hours per head, activity is at a relatively low level in the Netherlands, because of a larger share of part-time work. Moreover, the Netherlands does not perform well on long-term unemployment.

Tabel XXIV *Performance, main findings*

	US	Ger	Neth
	relative performance (– –, –, + or + +)		
Quantity			
net participation	+	–	–
working hours per head	+	–	– –
long-term unemployment	+	–	– –
Quality			
current educational attainment level	++	+	_
vocational skills	_	++	+
match between education and work	_	++	+
employee training courses	_	+	++

With respect to labour market quality, the American system stands out because of a high nominal average educational attainment level, but suffers from deficiencies in the match between education and work and investments in firm-specific skills. The Dutch labour market performs worse compared to its German counterpart with respect to the availability of human capital, the share of vocational skills at the secondary level and the science orientation at the tertiary level. The extensive German dual system provides a better match between education and work. Yet, the Dutch system is catching up in terms of educational attainment and the match between education and skill requirements of employers. Moreover, the possibilities for employee training courses for adults are more extensive than in Germany.

The position on the trade-off

Tabel XXV *Labour market institutions*

	United States	Netherlands	Germany
Regulations	*Competitive*	*Mixed*	*Cooperative*
firing protection	liberal	restrictive	restrictive
working-time regulations	liberal	liberalised	liberalised
short-time work	–	restrictive	liberal
flexible contracts	liberal	liberal	restrictive
Collective bargaining	*Competitive*	*Mixed*	*Neither*
consensus-building	absent	strong	weak
adjust to firm-specific shocks	flexible	partly flexible	inflexible
Co-determination	*Competitive*	*Cooperative*	*Cooperative*
worker influence	absent	considerable	strong
Income support	*Competitive*	*Cooperative*	*Cooperative*
generosity	limited	more generous	more generous
type of system	–	passive	more active

What is the position of Germany and the Netherlands on the trade-off between flexibility and commitment? **Tabel XXV** summarizes the main findings with respect to the four types of labour market institutions (indicated in the table). The United States is used as a benchmark. American labour market institutions rely on market forces and promote the freedom to act of actors at the decentralized level. Hence, they can be associated with the competitive model.

In comparison, German and Dutch institutions are closer to the cooperative model. For instance, core workers are strongly protected against dismissals, collective bargaining is predominantly concentrated at the sectoral level, workers influence management through legally supported co-determination arrangements, and social security benefits for outsiders are more extensive.

At a closer look, however, some striking institutional differences between

German and Dutch institutions emerge. Overall, the German labour market is more oriented towards commitment, whereas the Dutch institutional arrangements involve a mix of commitment and flexibility. In the Netherlands, part-time employment provides (a limited form of) working-hour flexibility. Moreover, flexible contracts, especially through temporary work agencies, provide employment flexibility. The German method of providing flexibility, in contrast, involves labour hoarding and working-time flexibility, by subsidizing working-time reductions in case of adverse economic shocks (short-time work). The collective bargaining system in the Netherlands relies on a mix of consensus building at the central level and firm-level bargaining over secondary labour conditions or wages. The German collective bargaining resembles neither the competitive nor the cooperative model. Bargaining takes place predominantly at the sectoral level, whereas overt coordination at the central level is less important than in the Netherlands, but covert coordination through the influence of key agreements is important.

Lessons from American labour market institutions

The advantages of the American system with high labour market flexibility have often been praised. "The concordance of high flexibility and employment growth in the United States convinced many policy makers of the advantages of flexible labour markets" (OECD, 1990). However, the disadvantages of the American system of labour relations have recently become more recognized (Freeman, 1994, ed). In particular, limited job security and decentralized wage formation hampers commitment. Limited social security encourages workers to engage in risk-spreading strategies such as taking two jobs and investing only in general skills. Moreover, a lack of social insurance has resulted in a class of working poor, threatening social cohesion. Decentralized wage formation improves wage flexibility, but also has resulted in non-competitive wage premia.

Lessons from German and Dutch institutions

What can be learned from the comparison of German and Dutch labour market institutions? As **Tabel XXV** reveals, the Dutch system results in a mix between flexibility and commitment, whereas the German system remains more oriented towards commitment. The trends toward greater knowledge-intensity, volatility and heterogeneity of conditions within countries, indicates that such a mix is generally better able to deal with the economic conditions.

Labour market regulations

With respect to labour market regulations, the main differences are the more extensive use of short-time work in Germany, versus the greater popularity of part-time work and flexibility through flexible contracts (via temporary work agencies or TWAs) in the Netherlands.

The German labour market relies more heavily on working-time and internal flexibility. Extensive short-time work provisions provide working-hour flexibility. In principle, short-time work can combine the advantages of flexibility and commitment. In practice, however, the efficiency of short-time work is often doubtful, because it can result in a subsidy on loss-making activities, thereby hampering employment flows towards more profitable activities.

The popularity of part-time work in the Netherlands provides working-hour flexibility and, according to survey information, often corresponds with worker preferences. However, many small jobs depress the Dutch overall activity level. Moreover, the current preferences for (small) part-time jobs may be influenced by the current regulations that hamper a combination of work and care and by a high wedge on additional labour income. The more liberal regulations with respect to the use of flexible contracts in the Netherlands stimulate employment flows. This improves allocative efficiency, but also creates a dual labour market: employers hire a core of high-skilled workers on a long-term basis and a periphery of workers with flexible contracts. Hence, the latter group of flexible workers has less insurance against job loss. This shifts risks away from insiders to "semi-outsiders" with a weak position on the labour market. Whether this is acceptable, depends on equity considerations.

Collective bargaining

With respect to wage formation, **Tabel XXV** reveals that the Dutch system involves a "pragmatic" mixture between commitment and flexibility. Consensus-building (or overt coordination) at the centralized level makes labour relations at the firm level less confrontational, improves the internalisation of external effects and strengthens commitment. A number of firm-level agreements can account for firm-specific conditions and preferences, although these agreements are still influenced by the central level. In addition, some scope for firm-specific variations in sectoral agreements, renders the system of collective bargaining more flexible.

In Germany, sectoral collective bargaining is less strongly influenced by overt coordination at a centralized level. Moreover, the government has no means to directly intervene in the bargaining process. This hampers the internalisation of external effects and may reduce the sensitivity of wage formation to the unemployment level. Rather, it may induce leapfrogging, by giving leading sectors a

large autonomy in collective bargaining. Moreover, firm-level agreements are currently less popular than in the Netherlands. Only the trend towards firm-level variation within sectoral agreements, for instance concerning working-time provisions, is similar. Hence, the German system neither captures the advantages of centralization nor those of decentralized wage bargaining. Yet, the German system features a strong element, related to the system of collective extension. Separate agreements for wage agreements and general labour conditions allow collective extension to be confined to general labour conditions. This enables a differentiated mix between centralized and decentralized elements of collective bargaining. In the Netherlands, collective extension usually relates to an integrated collective agreement, covering wages and other labour conditions, thereby allowing less scope to employers to deal with firm-specific conditions and preferences.

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Abstract

Institutions differ in the extent to which they promote labour market flexibility versus commitment. These differences are linked to differences in labour market performance: activity and quality. This research memorandum analyzes the relationship between labour market institutions and labour market performance. To this aim, it distinguishes two archetypical models of labour relations: the competitive model, which can be associated with the American labour market, and the cooperative model, which can be associated with labour relations in Germany.

The strong points of both models differ. The competitive model relies on freedom to act at the decentralized level to promote external flexibility. This improves allocative efficiency and the diffusion of knowledge. Moreover, individual discretion allows labour market conditions to reflect heterogeneous individual preferences or conditions. Finally, limited income protection provides strong incentives for search, job acceptance and investments in general rather than firm-specific human capital.

Institutions of the cooperative model, in contrast, strengthen commitment. Employers and workers keep to implicit agreements in labour relations and do not opportunistically exploit the other party's cooperative stance. This encourages a long-term view and stimulates investments in firm-specific assets. Moreover, consensus-building at a centralized level curbs local insider power, internalizes external effects and stabilizes labour relations. Finally, social insurance not only influences equity, but supports job search and insures investments in firm-specific human capital.

Based on this analytical framework, the paper addresses the position of German and Dutch labour market institutions on the trade-off between flexibility and commitment, choosing the United States as a benchmark. With respect to labour market regulations, the Dutch system results in a mix between commitment and flexibility, whereas the German system is closer to the cooperative model. Regarding wage formation, the Dutch system again results in a mix between commitment and flexibility. The German system, in contrast, does not fully capture the advantages of flexibility or commitment.

Long-term economic trends in preferences, technological orientation, frequency and nature of economic shocks, degree of product market competition and heterogeneity result in a greater demand for both commitment and flexibility. This suggests that a mixed system will better be able than an extremely flexible or commitment-based system to deal with future economic challenges.