Churning and institutions: Dutch and German establishments compared with micro-level data

Alda, Holger; Allaart, Piet; Bellmann, Lutz

Veröffentlichungsversion / Published Version
Arbeitspapier / working paper

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:
SSG Sozialwissenschaften, USB Köln

IAB DiscussionPaper

Beiträge zum wissenschaftlichen Dialog aus dem Institut für Arbeitsmarkt- und Berufsforschung

No. 12/2005

Churning and institutions

Dutch and German establishments compared with micro-level data

Holger Alda, Piet Allaart, Lutz Bellmann

Bundesagentur für Arbeit

Churning and institutions

Dutch and German establishments compared with micro-level data

Holger Alda (IAB), Piet Allaart, Lutz Bellmann (IAB)

Inhaltsverzeichnis

Abstract

Often the high level of unemployment in Germany is explained by a lack of flexibility, over-regulation in the labour market and disincentives of the social security system. However, these institutional effects are difficult to test by means of data from only one country. Cross-country comparisons are hindered by the availability of comparable datasets, especially at the establishment level.

The comparative analysis of labour markets with different degrees of flexibility, regulation, and social security systems will show the importance of these institutions for the mobility of individuals. In this paper we will estimate regressions – almost identically specified – using establishment datasets from Germany and the Netherlands. We do not only analyse the process of hiring and firing, but also the extent to which they occur simultaneously. Churning can be regarded as the part of hiring which occurs above the level of replacement of separations.

Our results show that German establishments have significantly lower churning rates than their Dutch counterparts. To some extent this can be explained by a different economic situation and a different age-structure of the working population. Important labour market institutions exerting some influence on churning appear to be: the share of fixed term contracts in total employment (higher in the Netherlands), the German apprenticeship system, and the German works councils.

PD Dr. Lutz Bellmann is head of the department for firms and employment at the Institute of Employment Research (IAB) in Nuremberg and he is affiliated with the Institute for the Study of Labor (IZA) in Bonn (Germany).

Dr. Piet Allaart was senior research officer at the OSA-Institute in Tilburg (Netherlands).

Holger Alda is research officer at the IAB. The authors thank participants of the Applied Econometrics Association conference in Mons 6-8 October 2004 and at the European Commission's workshop "Employment, Productivity and Wage Structures in Europe" in Brussels 7/8 April 2005 as well as Dr. Hermann Gartner for helpful suggestions on earlier drafts of the paper.

1 Introduction

In the last two decades much attention has been paid to the relation between labour market institutions and labour market performance (Freeman 2002; Jackman et al. 1995). Important elements are the role of unions, works councils and wage bargaining regimes (OECD 1997; Rogers and Streeck 1995), and employment protections regulations (Abraham and Houseman 1993; Mayes and Soteri 1994; Nicoletti et al. 1999; OECD 1999). In international comparisons Germany and the Netherlands are often located in the same category (the so-called Rhineland-model). Nevertheless, there are several differences in institutions between both countries (CPB 1997).

Often the high level of unemployment in Germany is explained by a lack of flexibility, over-regulation in the labour market and disincentives of the social security system. However, these institutional effects are difficult to test by means of data from only one country. Cross-country comparisons are hindered by the availability of comparable datasets, especially at the establishment level (Bellmann and Promberger 2004).

Different institutions offer distinct opportunities for the mobility of individuals and may affect the personnel policy of firms. Therefore, the comparative analysis of labour markets with different degrees of flexibility, regulation, and social security systems will show the importance of these institutions for the mobility of individuals.

In this paper we will estimate regressions – almost identically specified – using establishment datasets from Germany and the Netherlands. In contrast to individual data, information from establishment data allow us to analyse not only the process of hiring and firing, but also the extent to which hires and separations occur simultaneously. While the net flow of workers in establishments reflects more their economic situation, churning is often an instrument for readjusting the workforce. We would like to show that - although the latter is also affected by the economic situation - the institutional framework with (national) specific regulations has its own influence on employer and employee decision making.

We focus our comparison of churning in both countries on several perspectives: on the national context of disposable data and different scales of measurement as well as on probably different meanings of institutions,

and adequate ways in which variables can be constructed and interpreted. Therefore the paper proceeds as follows. In the next section we describe some German and Dutch labour market characteristics and the institutions that are relevant for our topic. Section 3 discusses the concept of churning and presents basic labour market flow statistics. In section 4 we formulate a number of hypotheses, explain how the data for both countries are constructed, and conclude to what extent the hypotheses are confirmed by the results of a multivariate analysis. Section 5 completes the paper with conclusions.

2 The German and Dutch labour markets and labour market institutions

Labour market situation and composition of the workforce

Before describing differences in labour market institutions between both countries, we pay some attention to general labour market characteristics in 1998/99, the years on which our analysis is based[1]. Table shows the employment growth rate, the unemployment rates and the employment rates (defined as employment / population ratios) in both countries in our observation period.

Table 1: Employment growth, unemployment and employment rates in Germany and the Netherlands in 1998 and 1999

	Germany		Netherlands	
	1998	1999	1998	1999
employment growth rate	**1.6**		**2.9**	
unemployment rate:				
Total	**9.3**	**8.7**	**4.4**	**3.6**
< 25	9.0	8.2	8.8	7.4
25 – 55	8.4	7.8	3.7	3.0
> 55	14.7	14.4	2.3	2.7
employment rate:				
Total	**64.7**	**65.4**	**69.4**	**70.9**
< 25	46.7	47.7	60.3	62.7
25 – 55	78.0	79.0	79.3	80.6
> 55	38.4	38.0	33.0	35.3

Source: OECD Employment Outlook 2000, Statistical Annex

[1] The IAB-data relate to the first half of 1999, the OSA-data to the year 1998.

The unemployment rate in Germany is more than twice as high as in the Netherlands. For the youngest age group the unemployment rate is more or less comparable between both countries, but the Dutch employment rate is higher. For workers older than 25 years the picture changes and the largest difference becomes apparent for older workers.

In Germany the unemployment rate was approximately 15 percent[2] for this category, compared to less than three percent in the Netherlands. Apart from the overall low unemployment rate in the Netherlands, this large difference can partly be explained by institutional factors.

The Netherlands has a combination of a low unemployment rate as well as a low employment rate for older workers, caused by an easy access to the disability system and generous early retirement schemes[3]. An additional explanation of the relatively high Dutch employment rates (and probably also for the low unemployment rates) is the high share of part-time jobs, especially for women. In the Netherlands 55 percent of the female workers has a part-time job, compared to 33 percent in Germany.

This first comparison between the workforce in both countries shows economic as well as structural differences. The economic situation in the Netherlands was better, i.e. a stronger growth of employment and a low unemployment rate. More structural differences become visible in the employment rates. The high share of part-time employment in the Netherlands plays a part in it, but more important for our topic seems to be the age composition of the workforce. Germany has a higher participation rate of older workers and therefore the share of older workers in the total workforce is significantly higher than in the Netherlands, a fact we also observe in our data (see summary statistics in the Appendix A).

Apart from differences in the (un)employment situation and the age composition of the workforce, there are some additional differences in the

---

[2] Later in our analysis we will restrict our German data to establishments from former Western Germany. There, the unemployment rate is for any age group lower than in Eastern Germany. Because of different concepts of measurement in Germany and the OECD, it is not possible to present figures only for Western Germany which are also comparable to the Dutch ones.

[3] The trend of declining participation rates of Dutch older workers reversed in the second half of the nineties.

country-specific labour market institutions. We pay attention to at least four aspects in the institutional framework of Germany and the Netherlands.

Fixed term contracts

In 1997 a study was published by the Netherlands Bureau for Economic Policy Analysis (CPB) about differences in economic institutions between Germany and the Netherlands (CPB 1997). It states that the relative number of fixed term contracts (FTC) was ten percent in Germany (stable) and twelve percent in the Netherlands (rising). At first sight the difference seems to be small, but the effect of apprentices is substantial. In Germany almost half (45 percent) of total FTC is related to apprentices. In the Dutch case apprentices are only a small minority in the total number of FTC. Thus FTC as an instrument for labour market flexibility (excluding apprentices) seems to be more wide-spread in the Netherlands.

The apprenticeship system

Although apprentices have a fixed term contract, it is important to stress their special position, especially in Germany. The status of the apprenticeship system is different in both countries. In Germany it is a highly valued form of vocational education and training. After completing the apprenticeship training a person is regarded as a skilled worker. It is often guaranteed by collective agreement that German apprentices have the right to work at least for one year after finishing the apprenticeship training in the same firm[4]. In the Netherlands, the dual system is in practice a possibility for young people with little learning abilities to get a vocational education (Frietman and Hövels 1994). In general they do not have a protected position after finishing the apprenticeship training.

Worker protection

In Germany, worker protection is often influenced by the strength of workers representation (works council) in establishments[5]. In small firms

---

[4] See Bellmann (1999) for details.

[5] See for detailed theoretical and empirical descriptions of the German system of industrial relations with data from the IAB-Establishment-Panel: Addison et al. (2002) or Addison et al. (2004). The set-up of a works council is guaranteed by law, if the majority of employees votes for it in the specific plant, but up to 20 employees their in-

(less than 5 workers) works councils cannot be introduced in the institutional framework of Germany and workers cannot appeal in court against social cases of hardship if they are dismissed. So there is an important difference in employment protection between small and large firms. In the Netherlands prior admission of the regional employment office is required for dismissals (which is in practice not very restrictive), and works councils are usually not involved. They can only give advice in case of mass dismissals.

Short-time work is another difference between the two countries. It is much more important in Germany. In the Netherlands, there is a strict rule for this government-financed labour hoarding, and its use is rather rare. In Germany, short time working allowances are available to keep employees from being laid off. It does not only apply to overcome temporary difficulties, but to prevent or postpone dismissals in case of structural adjustment difficulties, too. It corresponds with the German focus on commitment within long-term labour relationships.

Co-determination

Co-determination may cause a more sluggish decision-making. Frick (1996) has shown that the presence of works councils significantly lowers both quit and dismissal rates in German companies. German works councils are influential regarding social or personnel policies and have not only an impact on separations. In the Dutch system of co-determination, establishments with 35 workers or more are obliged to have a works council. Workers in establishments with ten to 35 workers can have only advisory personnel meetings, but surely not in a comparable, especially institutionalised manner as in Germany.

Though institutions for co-determination are similar to some extent, in the German system the workers influence on personnel policies seems to be stronger for at least three reasons. *First*, the absence of a works council in smaller Dutch establishments. *Second*, in case of dismissals the German works councils have advisory rights, whereas in the Netherlands the regional employment office determines whether individual dismissals are

---

fluence on personnel policies is rather limited. Only in plants with more than 20 employees the works council must subscribe to hires and separations.

appropriate. In case of mass dismissals, German works councils play an important role. They cooperate with the regional institution, which is responsible for labour market activities (the Landesarbeitsamt). In the Netherlands only trade unions negotiate about social plans. *Third*, in Germany works councils have a stronger legal base. All-in-all the stronger position of German works councils (often in combination with collective agreements) may lead to more insider power.

National regulations by law with respect to dismissals and the strength of worker representation in the firm (unions or works councils) protect the position of the existing workforce in a plant (the insiders), but make the allocation of human resources more sluggish. At the sector level or the national level a reallocation of workers is often regarded as advantageous. If workers or employers find a better match elsewhere it leads to higher productivity and higher economic growth. A typical quantitative indicator for the reallocation of workers is the churning rate, which is calculated from the hiring and separation rates on the plant level.

3 Worker mobility in Germany and the Netherlands

3.1 The churning concept

The concept of churning is based on the evidence that worker flows on the plant or establishment level[6] are higher than needed for adjusting the employment to its desired level. Often there is the underlying assumption that churning can be interpreted as one expression of the equilibrium phenomenon when employers and employees make new judgements of their job matches (Davis and Haltiwanger 1999; Burgess, Lane and Stevens 2000). Churning itself describes the part of worker mobility which cannot be expressed by the net flow of workers. If for example an employer has 10 workers and the desired level is eleven, he can just hire one extra worker. The hiring rate and the net growth (job flow) rate is ten percent, and there is no churning. However, if two workers quit then three new workers must be hired to achieve the desired level of eleven. In this case the extra flow of workers consists of two separations plus two additional

[6] We use plant and establishment as synonyms.

tional hires. These four extra flows correspond to a churning rate of 40 percent. Of course it is also possible that the two separations are no quits, but dismissals because of a change in required skills or for other reasons. Flows into and out of temporary jobs are also important determinants of churning.

In many cases the flow of workers will exceed the flow of jobs, which may arise from the side of workers (quitting and being replaced) or from the employer's side (dismissing workers and replacing them by others). As the analysis of churning is typically from the point of view of the firm, it is an important question to what extent the employer can influence quitting. In principle, as slavery is abolished in developed countries, employers cannot prevent their workers from quitting. However, to some extent they can try to influence the quitting of individual workers by their wage policy or by making the workplace more or less attractive in a subtle way. Burgess, Lane and Stevens (2001) argue that the employer can influence the quit rate, mainly by paying higher or lower wages. But this seems to be not convincing in general, especially in European countries where wage structures are rather rigid. Higher wages for individual workers to prevent them from quitting are probably less common than in the US. Workers might quit for several other reasons than their wages; sometimes for personal reasons, like retirement, child birth, the impossibility of a change in working hours at their current employer, a shorter commuting time, or moving with the partner to another region or country. In other cases they might quit for better job prospects. Better prospects are a dominant motive for job mobility, especially for younger people in general. In particular the mobility of workers could be – regardless the age – depend also on the size of an establishment: for small plants it is often impossible to create an attractive career prospect for their employees.

The empirical framework to formalise the concept of churning starts with the difference between the flow of workers WF (hires + separations) and the flow of jobs JF (change in number of employed workers).

(1) $WF = H + S$
(2) $JF = | H - S |$
(3) $C = WF - JF$

Division by the (average) number of workers gives the flow rates WFR, JFR and CR.

From equations (1) to (3) it follows that:

(4) $C = 2*S$ if $H > S$

(5) $C = 2*H$ if $S > H$

Depending on the time period it frequently happens that labour market flow data include many zero observations. Probably the most frequent case, especially in small establishments, is that of stable employment without any hires or separations (H=S=0). The shorter the observed time period, the greater the probability of such a situation. Also in cases of a growth or decline in employment the churning rate can be zero; a sufficient condition is zero separations (H>S=0) or zero hires (S>H=0).

In all other cases the churning rate is positive. If the number of hires and separations are equal at positive values (H=S>0), the assumption seems justified that hires are in most cases caused by the separations (replacing quitted, fired or retired workers). In the case of a growing aggregate employment the frequency of H>S>0 will be higher than the frequency of S>H>0. Hence, we can conclude that a major part of churning is caused by separations. This means for our comparative study that we can expect a significant influence on the churning rate of institutional restrictions on separations.

3.2 Labour market flow statistics

After defining the relationship between hires, separations and churning in the last section, we illustrate this by the data for our analysis. For practical reasons, we use data for 1998/1999 (see for more details section 4.2). Table 2 presents all possible combinations of hires and separations in combination with growth rates at establishment level and the average establishment size[7].

[7] All descriptive results are weighted. They represent typical establishments in both countries.

Table 2 shows that the aggregate churning rate is significantly lower in Germany than in the Netherlands[8]. A further difference between the establishments in both countries is the size structure. Dutch establishments are on average much smaller than German establishments. The cases without any flow (H=S=0) are concentrated in Germany as well as in the Netherlands in small establishments.

Table 2: Churning and combinations of hires and separations in German and Dutch establishments

IAB 1999				
condition	**cases (%)**	**churning rate**	**growth rate**	**average size**
H=S=0	664 (20)	0	0	27
H>S=0	286 (8)	0	28.6	91
S>H=0	535 (16)	0	-17.4	236
H=S>0	439 (13)	31.3	0	151
H>S>0	711 (21)	20.6	8.7	611
S>H>0	774 (23)	15.6	-8.0	948
total	**3406 (100)**	**11.9**	**-0.5**	**411**
OSA 1998				
condition	**cases (%)**	**churning rate**	**growth rate**	**average size**
H=S=0	204 (11)	0	0	13
H>S=0	187 (10)	0	17.0	19
S>H=0	84 (5)	0	-14.1	39
H=S>0	324 (17)	27.9	0	91
H>S>0	697 (37)	22.3	8.5	313
S>H>0	363 (20)	17.9	-6.6	342
total	**1859 (100)**	**16.7**	**3.0**	**205**

Sources: IAB-Establishment-Panel 1999, OSA-Panel 1998

A striking difference is the average size of the zero-churning category S>H=0. In the Netherlands 93 per cent of this category have less than 100 workers. In Germany this is 65 per cent, whilst five percent of this category have more than 1000 workers[9]. So, it is no exception that large German establishments contract without hiring new workers.

[8] The original German data from the IAB-panel relate to the first half of 1999. They were transformed to a yearly basis (see Appendix E).

[9] 55 percent of all establishments with more than 1000 workers have more separations than hires and a positive churning rate (S>H>0). Eight percent of the plants with more than 1000 workers have only separations with a zero churning rate (S>H=0).

Furthermore, the IAB data show a higher frequency of H=S=0, which had been expected given the shorter time period[10]. But also the frequency of S>H=0 is higher in German data and causes a main part of the difference in the aggregated employment growth. This difference in employment growth is reflected on the other hand by the high frequency of H>S>0 in the Dutch data.

The described (national specific) differences in growth of employment related to the extent and relation of hires and separations show the important role they play in the concept of churning. For this reason we include in our analysis not only the churning rate, but also the hiring and separation rates (see Appendix B and C).

A basic characteristic of the churning concept is that higher churning rates are often related to more separations in growing establishments and more hires in contracting establishments. A first glance at hires and separations can be given by different groups of employment growth rates of establishments (Figure 1a and 1b).

For almost all growth classes of employment Dutch hiring and separation rates have higher values. The most obvious exceptions are classes with a positive growth of 15 per cent or more. In case of contracting employment the Dutch hiring rates are higher than the German, which means that the reallocation of workers is less hampered by contraction. In case of a positive employment growth separation rates between the countries do not differ too much if all growth classes are taken together.

The differences between the German and Dutch flows can also be illustrated from a slightly different point of view. In the Dutch data 81 per cent of the establishments with a negative growth have new hires. In the German data it is no more than 62 per cent. On the other hand 78 per cent of the expanding German establishments have a positive separation rate. In the Dutch case it is nearly the same with 79 per cent.

[10] The frequencies for Germany are based on the first half year of 1999; for the Netherlands on a full year.

Figure 1a: Separation rates by growth of establishments in Germany and the Netherlands

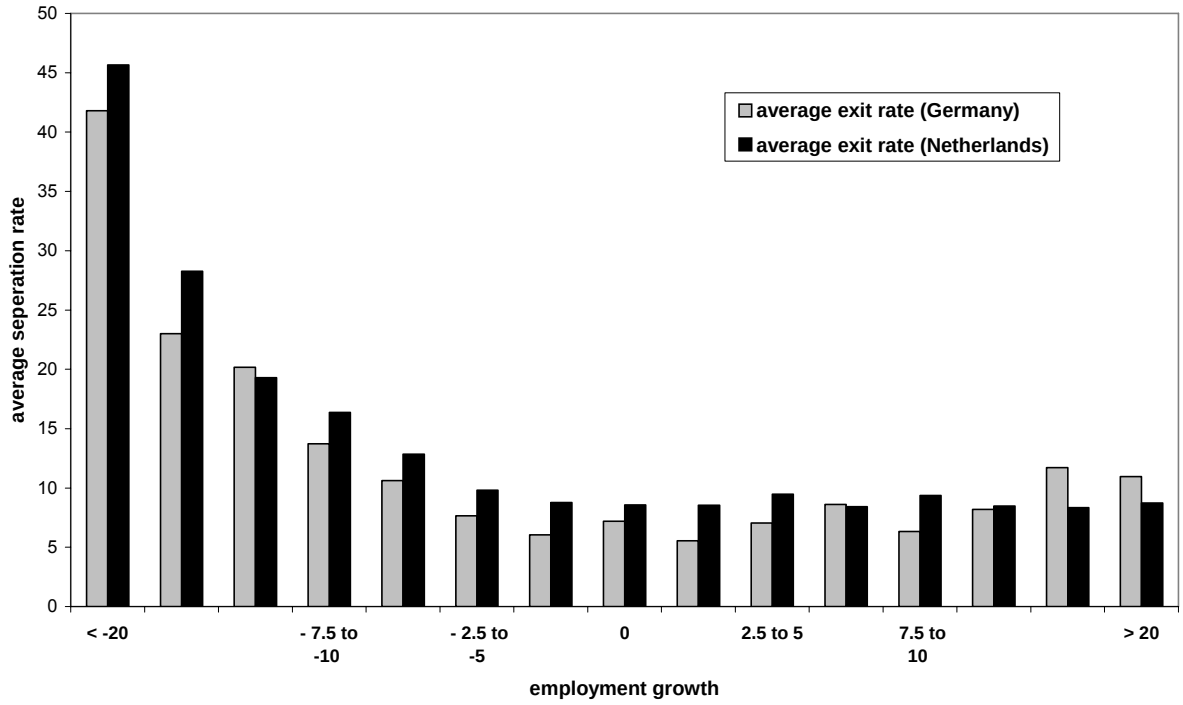
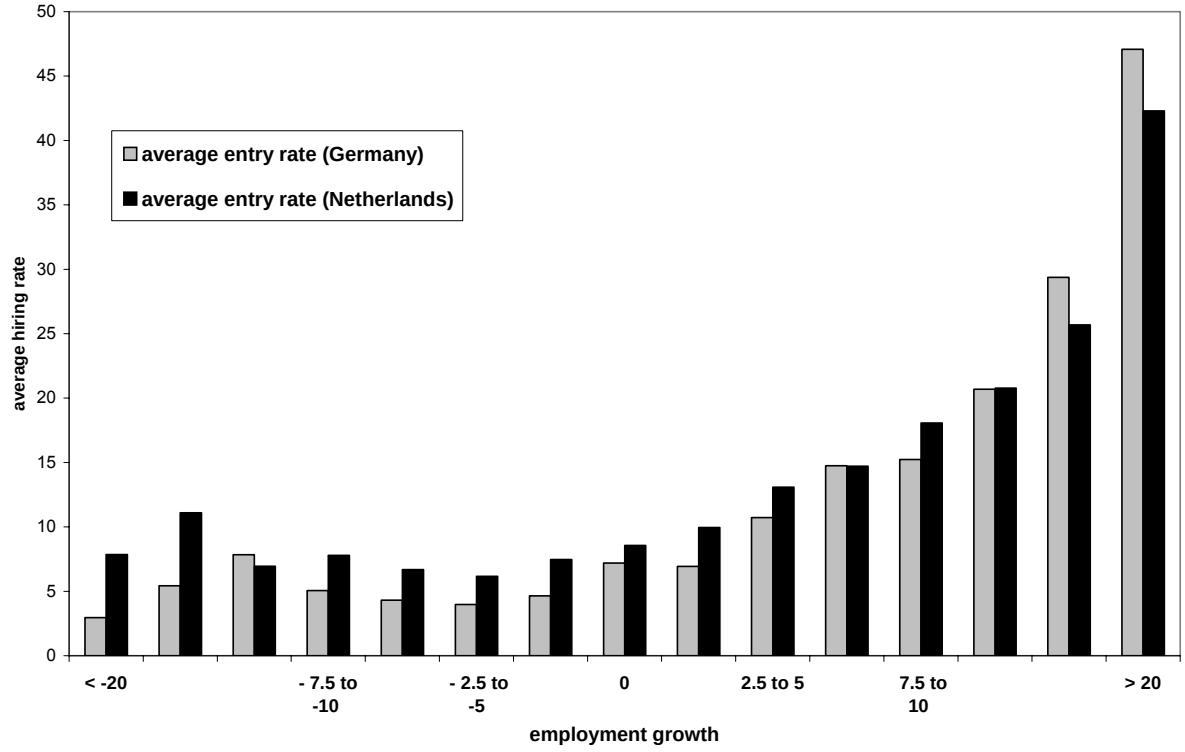


Figure 1b: Hiring rates by growth of establishments in Germany and the Netherlands



Sources: OSA-Panel 1999, IAB-Establishment-Panel 1999

Finally, we present the churning rates by size classes and industries (Table 3). We distinguish between five size classes and eight sectors.

Table 3: Churning rates in Germany (1999) and the Netherlands (1998)

	Germany	Netherlands
Total	**11.9**	**16.7**
Size:		
5-19	11.6	21.1
20-99	12.5	16.8
100-199	12.3	14.4
200-499	13.1	14.3
500 and more	10.3	14.3
Sector		
Agriculture, fishery and mining	7.6	12.3
Processing of food, textile and wood	10.3	17.5
Other manufacturing	9.0	14.7
Construction	12.5	15.4
Private services	14.7	20.4
Education	18.1	10.3
Government	5.5	10.5
Health care and other public services	12.5	18.6

Sources: IAB-Establishment-Panel 1999, OSA-Panel 1998/1999

In almost all cases the churning rates in German establishments are lower than the Dutch rates, only the education sector being an exception. This can be explained by specific Dutch institutions in this sector that discourage labour mobility and give teachers with a permanent contract a protected position. Hence, Dutch teachers have also a high job stability on the individual level[11]. Apart from this special case and the overall lower churning levels in Germany, differences between the sectors are roughly the same in both countries: the highest churning rates are in private services and the lowest in the government sector.

4 Determinants of churning in both countries

In this part we will investigate the determinants of churning in both countries. We start – with regard to comparable information in both country-specific datasets - with the hypotheses. In the next part of section four we give some information about the way in which slightly differing variables are made comparable. Afterwards we turn to the results.

[11] In Germany these persons are mostly integrated in the public service sector while the German education sector in the sector classification of the IAB Establishment Panel reflects more private ownerships.

4.1 Hypotheses

Age-structure

In section 3 we noticed that young people change jobs more frequently. Consequently, a higher proportion of young employees in a plant makes a readjustment of the workforce (defined as churning) more likely, more or less independent from the growth of employment (at the establishment level). In the middle age group (workers aged between 30 and fifty) we assume that job prospects and job matching are dominant motives for mobility of employees. The empirical results will show whether the mobility for middle aged employees is higher than for younger workers (Netherlands). In Germany the middle aged employees should have a higher mobility than the younger ones. It should reflect the effect of the German apprenticeship system. On the other hand, less opportunities to find better job matches (i.e. a high unemployment rate) could reduce the mobility of middle aged employees. The resulting effect is from a theoretical point of view not clear. For older workers it is more difficult to find another job, because their accumulated human capital is often firm-specific. New developments in technology (especially information and telecommunication, ITC) can lead to obsolescence of skills. In this case, employers might invest less in vocational training of older employees. But on the other hand separation and transaction costs for separating older employees with long job tenures are relatively high[12]. On balance we expect lower churning rates with a higher share of older workers.

Gender composition

In many cases, women have a less stable position in the labour market, maybe because of changes in family responsibilities. Child birth can be a reason for a period of non-participation (which is still frequently the case in Germany) or for reducing the working hours, which is often realised by a change of employer (which is frequently the case in the Netherlands). We expect a higher churning rate if the share of female workers is higher.

[12] Sometimes these costs can be delegated to the social security system (for details in Germany see Beckmann, 2001).

Collective agreements and works councils

Theoretical assumptions were made in Section 2. We expect for both variables a restriction of churning in both countries. We explained why especially the effect of works councils should be stronger in Germany.

Investment in skills and firm-specific human capital

If the investment in human capital is more firm-specific, this will reduce the mobility of workers. As stated in section 2, in Germany the apprenticeship system is very important for acquiring skills. Although a major part of these skills is general, they have also a firm-specific component. Therefore, we can expect that more apprentices in an establishment will reduce labour turnover. In the Netherlands, where the apprenticeship system is less important, other forms of on-the-job-training may have the same effect.

Technological change

Technological developments can lead to a mismatch in skill composition. Skills may become (economically) obsolete (De Grip et al. 2002) and sometimes not all existing workers are able to acquire more up-to-date skills. Dynamics in technology and market conditions can be an important source for churning (Beckmann and Bellmann 2000; Bellmann and Boeri 1998; Bellmann and Kölling 1997). In general, adjustments of the workforce take place in the form of *upgrading*, which means replacing low-skilled workers by more skilled workers. This process is stimulated by changing skill requirements at the demand side of the labour market, as well as a higher supply of skilled workers (resulting from a better education and qualification system).

Qualification level and adjustment costs

If churning is more costly for the employer, the churning rate will be lower. However, as explained in section 3.1, employers cannot prevent workers from quitting so that the role of adjustment costs may be limited. Nevertheless, as the costs of hiring and firing are lower for low-skilled workers, we expect a negative relation between the churning rate and the proportion of low-skilled or low-educated workers.

Wages

The relationship between wages and the readjustment process is complex. Burgess, Lane and Stevens (2001) argued that the employer can influence the quit rate by paying higher or lower wages (see Section 3.1), which should result in a negative relationship between churning and wages. But in the European context the wage differentials are smaller and probably more stable, so that the effect of wages on the churning rate may be weaker. An opposite effect may occur in tight labour markets that encourage job mobility of high-skilled, high-paid workers[13]. Hence, the outcome for this variable in the analysis we leave at the moment open.

Unemployment

The argument of tight labour markets leads us to the possible effects of the labour market situation. On the one hand we know that low unemployment rates and tight labour markets stimulate job mobility. On the other hand high unemployment rates can be linked with the restructuring of the economy and the labour market. But we may expect that the first effect has more influence than the second, so that lower unemployment rates are related to higher churning rates.

Other co-variables

The importance of fixed-term contracts (FTC) for hires, separation and churning seems obvious: more FTC means higher churning rates. In the analysis we also control for size and industry[14].

4.2 Standardisation and contents of datasets

For our analysis we use data of the IAB (German) and OSA (Dutch) establishment panel[15]. Representing all economic sectors, these two panels provide comparable information on a great number of variables. One difference is that the OSA-panel does not include establishments with less

---

[13] For our purpose the Dutch case of tight labour markets is especially relevant, and most labour shortages were for skilled workers.

[14] We use size and sector dummies similar constructed like in Table 2.

[15] See Kölling (2000) or Bellmann (2002) for additional information about the IAB-Establishment-Panel. See Fouarge et al. (2001) for the OSA-Panel. Information from the OSA-panel on labour market flows is presented in Allaart et al. (2000) and Allaart and De Voogd-Hamelink (2001).

than 5 workers. For making both panels comparable, this category was dropped from the IAB data. Another selection was made by restricting the German data to former West-Germany[16].

In the OSA-data the information about the age structure is directly obtained from the panel. For the German data, information of the age structure was added to the panel from the official employment statistic register[17]. In our analysis we use dummy-variables for the share of employees aged below 20, 20-30, 30-40 and 50 and older, and take the latter as reference group. The gender composition is equally available in both data sets.

Available information regarding institutional aspects include the relevance of collective labour agreements and the presence of a works council. These variables are fully comparable in both data sets.

For collective agreements we use a dummy variable indicating that the establishment applies a bargaining agreement either from the sector level or from the firm level (1=yes; 0=no). For the works council a dummy-variable is used, too (yes=1; 0=no).

For the investment in skills and firm-specific human capital we use for both countries the number of apprentices (as a percentage of the total workforce). Since the apprenticeship system plays in the Netherlands only a minor role, we add from the OSA-data a variable that indicates the importance of on-the-job-training (1=important; 0=not important). In the German data there is in 1999 no comparable variable for on-the-job-training applicable.

Both panels provide information about technology aspects. In the OSA panel a variable can be constructed representing the impact of newly introduced technology (by the share of the workforce working with it). In the IAB-Panel we can observe whether an establishment invests in information and communication technology (1=yes; 0=no).

---

[16] We exclude plants with in- and outsourcing activities, too

[17] The linking of data from the IAB-Establishment-Panel and the Federal Employment Statistic Register is described in Bellmann, Bender and Kölling (2002).

For the share of low-skilled workers, the definition is slightly different between the two countries. In the German case it reflects the share of unskilled workers and in the Dutch case it is the share of workers with a low education[18].

Another variable which differs slightly is the average wage. From the German data it is calculated by the total wage bill in June (divided by the number of workers), and in the Dutch case the calculation is based on the frequencies of workers over eight wage classes (obtained directly from the questionnaire). We use in our analysis the average wage per worker. In the OSA-panel this is based on full-time equivalents. In the IAB-establishment panel the split up for employees concerning their working time in weekly worked hours is possible. We use for the German data full-time equivalents[19].

Since we use cross section data we cannot estimate the effect of the unemployment rate from an aggregate variable. However, an indication may be given by regional differences, and we add the regional unemployment rates as an additional variable. In the (West) German regions the rates vary between 6.4 and 11.7 percent, in the Dutch regions between 3.9 and 7.8 percent.

The relative number of fixed term contracts (excluding apprenticeships) is available in both panels. The categorisation in five size classes and eight sectors is similar to that in Table 3. We interpret results with reference to the smallest size class (five to 20 employees) and the manufacturing sector[20].

Descriptive statistics of all variables are shown in Appendix A.

---

[18] Most, but not all of German unskilled workers have a low educational level, too.

[19] Part-time employees working more than 24 hours weekly have the factor 0.75, between 24 and 15 hours 0.5, and below 15 hours 0.25.

[20] The sector "Processing food, textile and wood" is separated from the rest of manufacturing and represents an own category.

4.3 Econometric results

Since there are many zero-observations in our flow data, we apply a tobit-estimation (Greene 2003: 962 f.). A one-sided censored tobit model can be formalised as

$$y^*_i = \beta x'_i + m_i,$$

with x'_i as the vector of variables as described in the last sub-section, m_I as the error term and

$$y_i = \begin{cases} y^*_i & \text{if} \quad 0 < y^*_i < 1 \\ 0 & \text{if} \quad y^*_i \leq 0 \end{cases}$$

as our dependant variable, churning. Taking into account the results from section 3.2., which show different structures of hires and separations in both countries, we used all variables for modelling churning also in similar estimations of hires and separations. The results for churning are shown in Table 4. The results for tobit-estimations of hires and separations are presented in Appendix B. Appendix C shows results for a probit estimation of separations yes / no. Sometimes we refer to these appendices in the following discussion of the results for churning[21].

The (expected) influence of fixed term contracts (FTC) is obvious. Parts of FTC are not extended or transformed into permanent contracts, which results in a higher turnover rate.

The implementation of new technologies has no significant impact on churning and hiring rates in both countries. However, in the Netherlands it has a positive impact on separations, and in some alternative model specifications (with less variables) also on churning. But, all-in-all the indications for 'creative destruction'-effects are weak in our investigation.

[21] The results for the regressions with the dichotome dependant variable for hires yes/no seem to be less interesting. They are similar in both countries and reflect the results of the estimation in Table 4. Please contact authors for the results of this regression. We see this result as a justification of what was said at the end of section 3.1.: churning is more a result from separations than of hires.

Table 4: Tobit-estimates of churning rates

	Germany		Netherlands	
	$ß_i$	t-value	$ß_i$	t-value
proportion of females	0,01	0,37	0,059*	1,67
proportion of fixed-term-contracts	0,42***	4,38	0,439***	4,96
collective agreement	-3,66**	-2,11	-5,376**	-2,39
work council	-4,42**	-2,36	-0,654	-0,38
proportion of unqualified workers	0,11***	3,77	-0,008	-0,30
proportion of apprenticeships	-0,43***	-2,82	0,137	1,46
on-the-job-training important	n.a.	n.a.	-3,981***	-3,02
Investment in new technology (ITC)	1,097	0,73	3,800	1,36
wage per capita (log)	-4,38**	-2,24	5,423	1,45
unemployment rate	-0,41*	-1,68	-2,141***	-3,16
proportion of employees aged				
below 20	0,01	0,05	0,502***	3,70
20-30	0,30***	3,72	0,247***	3,93
30-40	0,09	1,26	0,126**	1,99
40-50	0,00	0,03	0,060	0,80
controlling for size and sectors	yes***		yes***	
constant	15,2	0,84	-38,4	-1,14
overall chi-square-test	161,67***		99,7***	
wald-chi-square (degrees of freedom)	296,13*** (24)		263,25*** (25)	
censored observations	1240		396	
observations	2857		1454	

*, **, *** show significance on a level of α < 0.1, α < 0.05, α < 0.01

n.a. : not applicable

Sources: IAB-Establishment-Panel 1999, OSA-Panel 1999

In Germany the percentage of females is not related with churning, but in the Netherlands it is significant positive for the churning and separation rate. So, the hypothesis of a higher churning rate is confirmed to some extent by the Dutch but not by the German results. Possible explanations are related to differences in ways of designing family phases and the connected entries into and exits out of the labour market (see also section 4.1).

Differences in (regional) unemployment rates affect churning clearer in the Netherlands than in Germany. In a tighter labour market (lower unemployment) the churning rate is higher. This confirms our hypothesis that higher job mobility in better economic times dominates restructuring effects in bad times. This is especially reflected in the Dutch case where hiring as well as separation rates are higher. In the German case only the hiring rate is higher with lower unemployment rates.

The effect of the age structure of the workforce is partly different between the two countries. In the Netherlands there is an almost linear relationship: the older the workforce, the lower the churning rate. In Germany the churning rate is only significantly higher with higher proportions of employees aged 20 to 30. A higher share of employees between 30 to 40 years old is only weakly correlated with a higher churning rate. However, for this age group the positive correlation with hires is even stronger than in the Netherlands. The main difference between the two countries is the relation between the age structure and the number of separations. In Germany there is no significant correlation, which reflects the stronger commitment to long term relationships and the institutions, which mainly protect insiders.

In the German case the flows for the youngest category (less than 20 years old) do not differ significantly from the oldest age category. Probably this is related to the apprenticeship system and the opportunities they offer for young people for their integration in the labour market. If in the Netherlands employees younger than 20 years work in a plant, it is very likely that they have a relatively low educational level. In the German system such people are very often apprentices, even when problems arise[22].

The assumed relationship between the mobility of young workers and the apprenticeship system is supported by the effect of the share of apprentices in the workforce. A higher proportion of apprentices in a plant is correlated with a lower churning rate in Germany, confirming our hypothesis. In the Netherlands this correlation is positive, although not significant. It is the institutional framework for integrating young people in the labour market, which is responsible for different (optimal) strategies of organizing long-term skill demand. Such a strategy should in general reduce churning. In German establishments apprenticeship training is an important instrument, in the Netherlands this aspect is reflected by the importance of on-the-job training.

Also as expected, labour market institution like works councils and collective agreements tend to limit churning rates. The negative impact of col-

[22] In this case subsidies and other supports exist for those individuals to become skilled workers anyway.

lective agreements is more or less the same in both countries. The hypothesis that in Germany the works councils have a stronger negative impact on hiring, separation and churning rates is confirmed by the analysis. In the Dutch case this variable is not significant.

The influence of wages shows an obvious difference between the countries. The wage per capita has in Germany a negative influence on churning. The hypothesis that the employer can influence job mobility by paying higher or lower wages seems to be confirmed. But in the Netherlands the correlation is positive, though not significant. A possible explanation was also mentioned in the hypotheses: tight labour markets may have stimulated the mobility of workers in the upper labour market segment.

Finally, the hypothesis that lower adjustment costs for hiring and firing the lower qualified or educated workers are related to a higher churning rate is confirmed for Germany, but not for the Netherlands. A possible explanation for this unexpected Dutch result is the same as for wages: tight labour markets may have an equalising effect on job mobility of workers in the lower and the upper segments of the labour market.

A quantitative overview of differences between the two countries is given in Appendix D, where an Oaxaca-Blinder decomposition is presented (Oaxaca 1973; Blinder 1973). The decomposition makes clear that the differences in coefficients between the countries are dominating in explaining the differences in (predicted) churning rates. The only exception is that for fixed term contracts the coefficient is almost equal and the different effect on the churning rate is due to a higher proportion of these contracts in the Netherlands. The decomposition also shows the very dominating influence of the wage variable.

5 Conclusions

In a wider international context, Germany and the Netherlands have more or less comparable labour market institutions. Nevertheless there are some differences that count. Our analysis points out that these differences are important factors in explaining differences in labour market flexibility. German establishments have significantly lower churning rates than their Dutch counterparts. To some extent this can be explained by a different economic situation and a different age-structure of the working population. For the years of our analysis (1998/1999) the German unemploy-

ment rate was relatively high, whereas the Netherlands can be characterised by low unemployment and a tight labour market. Regarding the age-structure it is the higher share of older workers in Germany that contributes to a lower churning rate.

Important labour market institutions exerting some influence on churning appear to be: the share of fixed term contracts in total employment (higher in the Netherlands), the German apprenticeship system, and the German works councils. In all cases these differences contribute to a lower German churning rate. In general we can state that the position of insiders receive stronger protection in Germany than in the Netherlands, which makes the German labour market less flexible. The judgement whether this is a good or bad thing needs some nuances. The job stabilising effect for the youngest age group of the German apprenticeship system may be regarded as more positive than a strong protection of insiders by works councils.

The different effect of the unemployment rate (stronger in the Netherlands) can on itself be seen as a flexibility indicator. On an aggregate (national) level it can be interpreted as a better ability to adapt or react to changing market conditions. Some questions are not yet solved. The different results for the average wage and for the lower qualified workers remain a bit puzzling. We assume that the Dutch results are caused by the tight labour market, but there may be other explanations. Further research with data from years with a more balanced labour market situation can possibly help to answer such questions.

Literature

Abraham, K.G. and S.S. Houseman (1993): Does employment protection inhibit labor market flexibility? Lessons from Germany, France, Belgium, NBER working paper no. 4390, Cambridge, Mass.

Addison, J.T., L. Bellmann and A. Kölling (2002): Unions, Works councils and Plant Closings in Germany, IZA Discusion Paper No. 474, Bonn.

Addison, J.T., L. Bellmann, C. Schnabel and J. Wagner (2004): The Reform of the German Works Constitution Act: A critical assessment, Industrial Relations 43, 392-420.

Allaart, P.C., M.M. Kerkhofs and M. de Voogd-Hamelink (2000): Simultaneous job creation and destruction on establishment level, OSA working Paper 7, Tilburg: OSA.

Allaart, P.C. and M. de Voogd-Hamelink (2001): Employer-worker separations, internal mobility of workers, and job dynamics, Evidence for The Netherlands 1988-1998, OSA working Paper 13, Tilburg: OSA.

Beckmann, M. (2001): Die Auswirkungen des betrieblichen Personalabbaus auf die Altersstruktur der Belegschaften in westdeutschen Unternehmen: Theoretische und empirische Analyse mit Daten des IAB-Betriebspanels, Tagungsband zum 4. Köln-Bonner Kolloquium zur Personalökonomie in Trier.

Beckmann, M. and L. Bellmann (2000): Betriebliche Suche nach qualifizierten Arbeitskräften in West- und Ostdeutschland. In: U. Backes-Gellner, M. Kräkel, B. Schauenberg and G. Steiner: Flexibilisierungstendenzen in der betrieblichen Personalpolitik: Anreize, Arbeitszeiten, Qualifikation. München und Mering. 205-232.

Bellmann, L. (2002): Das IAB-Betriebspanel: Konzeption und Anwendungsbereiche, Allgemeines Statistisches Archiv 86, 177-188.

Bellmann, L. (1999): Die erfolgreichen Betriebe übernehmen mehr Azubis. In: IAB-Materialien, Heft 2, 1999.

Bellmann, L. and A. Kölling (1997): Technology, wages, and churning in Western Germany: Estimates from the IAB-Establishment Panel, in S. Laaksonen (ed.): The evolution of firms and industries: International perspectives, Helsinki, 417-419.

Bellmann, L. and T. Boeri (1998): Internal and external adjustment to New Technologies, Economics of Innovation and New Technology 5, 325-343.

Bellmann, L., S. Bender and A. Kölling (2002): Der Linked Employer-Employee-Datensatz des IAB. In: G. Kleinhenz (ed.): IAB-Kompendium Arbeitsmarkt- und Berufsforschung, Beiträge zur Arbeitsmarkt- und Berufsforschung 250, Nürnberg, S. 21-30.

Bellmann, L. and M. Promberger (2004): Towards convergence? Current state and future ways of establishment based ICT- and labour market monitoring in Europe, STILE-publications, HIVA, Leuven.

Blinder, A.S. (1973): Wage discrimination: reduced form and structural variables, Journal of Human Resources 8, 436-455.

Burgess, S., J. Lane and D. Stevens (2000): Job flows, worker flows, and churning, Journal of Labor Economics 18, 473-502.

Burgess, S., J. Lane and D. Stevens (2001): Churning dynamics: An analysis of hires and separations at the employer level, Labour Economics 8, 1-14.

CPB (Netherlands Bureau for Economic Policy Analysis) (1997): Challenging Neighbours; Rethinking the German and Dutch economic institutions, Springer-Verlag, Berlin.

Davis, S. and J. Haltiwanger (1999): Gross job flows, in O. Ashenfelter and D. Card (eds.): Handbook of Labor Economics, vol. 3B, Amsterdam: North Holland.

De Grip, A., J. van Loo and K. Mayhew (2002): The economics of skill obsolescence: theoretical innovations and empirical applications. Elsevier Science.

Fouarge D., M. Kerkhofs, A.M. de Voogd-Hamelink, J.P. Vosse and C. de Wolff (2001): Trendrapport vraag naar arbeid 2000, Tilburg: OSA.

Freeman, R. (2002): Institutional differences and economic performance among OECD-countries. Centre for Economic Performance, Discussion Paper 557. London School of Economics, London.

Frick, B., (1996) Co-determination and personnel turnover: the German experience, Labour 10, 407-430.

Frietman, J. and B. Hövels (1994): Varianten van praktijkplaatsen in het primair leerlingwezen: aard en voortkomen, Institute for Applied Social Siences, Nijmegen: ITS.

Greene, (2003): Econometric Analysis, 3rd edition, New Jersey, Prentice Hall.

Jackman, R., R. Layard and St. Nickell (1995): Structural aspects of OECD unemloyment, OECD-paper, Paris.

Kölling, A. (2000): The IAB-Establishment-Panel, Schmollers Jahrbuch 120 (2), 291-300.

Mayes, D.G. and S. Soteri, (1994): The right of dismissal and labour flexibility; an international comparison of redundancy rules and regulations, OSA W121, Tilburg: OSA.

Nicoletti G., S. Scarpetta and O. Boyland (1999): Summary indicators of product market regulations with an extension to employment protection legislation, Economics Department Working Papers no. 226, Paris: OECD.

OECD (1997, 1999): Employment Outlook. Paris: OECD.

Oaxaca, R. (1973): Male-female wage differentials in urban labour markets, International Economic Review, 14, 693-709.

Rogers, J. and W. Streeck (1995): Works councils - Consultation, Representation and Cooperation in Industrial Relations, The University of Chicago Press, Ltd., London.

Appendix

A Summary statistics for variables in OSA- and IAB**-Establishment-Panel-Data

	Germany*			Netherlands		
	obs.	mean	stand.dev.	obs.	mean	stand.dev.
churning rate	3406	11,87	20,20	1859	16,73	17,91
seperations in percent	3406	10,47	14,07	1859	10,29	10,99
hirings in percent	3406	10,01	16,58	1859	13,27	12,84
proportion of fixed-term-contracts	3386	4,21	9,25	1859	6,75	10,27
Investment in new technology (ITC)	3406	0,62	0,49	1859	0,08	0,28
proportion of females	3400	41,10	28,82	1837	47,34	32,75
unemployment rate	3406	9,29	2,73	1859	4,94	0,85
proportion of apprenticeships	3406	4,99	7,67	1847	3,39	8,69
on the job training important	n.a.	n.a.	n.a.	1859	0,67	0,47
collective agreement	3405	0,74	0,44	1858	0,91	0,28
works council	3358	0,55	0,50	1859	0,69	0,46
wage per capita (log)	3021	8,32	0,48	1638	8,25	0,27
proportion of unqualified workers	3406	27,85	27,40	1623	36,84	32,21
proportion of employees aged						
below 20	3290	5,13	7,89	1780	3,08	8,21
20-30	3290	21,33	14,41	1780	22,73	18,29
30-40	3290	29,23	12,74	1780	30,56	14,94
40-50	3290	23,81	12,06	1780	27,34	15,99
50 and older (reference)	3290	20,51	13,90	1780	16,28	13,49
establishment size						
5 - 19 employees (reference)	3406	0,29	0,45	1859	0,36	0,48
20 - 99 employees	3406	0,28	0,45	1859	0,28	0,45
100 - 199 employees	3406	0,11	0,31	1859	0,13	0,34
200 - 499 employees	3406	0,14	0,35	1859	0,11	0,31
500 and more employees	3406	0,19	0,39	1859	0,11	0,3
sectors						
agrar/ mining	3406	0,03	0,17	1859	0,04	0,2
food/textiles/ wood	3406	0,08	0,27	1859	0,05	0,22
other manufacturing (reference)	3406	0,24	0,42	1859	0,11	0,31
construction	3406	0,07	0,26	1859	0,06	0,25
private services	3406	0,32	0,47	1859	0,25	0,43
education	3406	0,15	0,36	1859	0,09	0,29
government	3406	0,01	0,11	1859	0,07	0,25
other public services incl. health care	3406	0,08	0,27	1859	0,33	0,47

n.a. : not applicable stand.dev. : standard deviation

* plants in West Germany with at least five employees

B Tobit-estimation of hiring and separation rates (hires and separations as a proportion of total employment)

	Germany				Netherlands			
	hires		seperations		hires		seperations	
	ß$_i$	t-value	ß$_i$	t-value	ß$_i$	t-value	ß$_i$	t-value
proportion of females	-0,02	-0,92	0,02	1,04	0,03	1,23	0,036*	1,82
proportion of fixed-term-contracts	0,43***	5,68	0,19***	3,26	0,37***	6,21	0,25***	4,80
collective agreement	-4,72***	-3,53	-1,70*	-1,75	-2,79*	-2,03	-2,67**	-2,00
works council	-2,66**	-1,99	-2,95***	-2,93	-0,11	-0,11	-1,07	-1,08
proportion of unqualified workers	0,02	1,02	0,06***	3,68	-0,01	-0,75	-0,02	-1,08
proportion of apprenticeships	-0,48***	-4,39	-0,03	-0,31	0,00	-0,01	0,07	1,16
on-the-job-training important	n.a.	n.a.	n.a.	n.a.	-1,83**	-2,23	-2,05***	-2,70
Investment in new technology (ITC)	0,97	0,91	0,23	0,28	0,36	0,25	2,67*	1,80
wage per capita (log)	-2,61*	-1,88	-3,07***	-2,70	2,69	1,20	2,50	1,22
unemployment rate	-0,41**	-2,48	0,11	0,83	-0,99**	-2,02	-1,02***	-2,88
proportion of employees aged								
below 20	0,10	0,99	0,01	0,15	0,33***	4,36	0,27***	3,50
20-30	0,22***	3,88	0,07	1,59	0,22***	5,89	0,08**	2,26
30-40	0,20***	3,54	0,03	0,83	0,11***	2,89	0,07*	1,84
40-50	-0,01	-0,17	0,01	0,30	0,06	1,34	0,02	0,41
controlling for size and sectors	yes***		yes***		yes***		yes***	
constant	15,9	1,26	23,8**	2,27	-16,7	-0,82	-13,6	-0,73
chi-square-test	104,9***		119,1***		34,8***		82,2***	
wald-chi-square (degrees of freedom)	202,34*** (24)		138,01*** (24)		262,13*** (25)		192,72*** (25)	
censored observations	993		793		238		330	
observations	2857		2857		1454		1454	

*, **, *** show significance on a level of α < 0.1, α < 0.05, α < 0.01

n.a. : not applicable

C Determinants of separations in German and Dutch establishments 1999

(heteroscedasticy consistent probit estimation with separations=yes=1; no=0)

	Germany		Netherlands	
	ß$_i$	t-value	ß$_i$	t-value
proportion of females	0,003	0,25	0,004*	1,79
proportion of fixed-term-contracts	0,004	0,12	0,015**	2,19
collective agreement	-0,074***	-11,06	-0,388**	-2,53
work council	-0,004	-0,05	0,19**	1,99
proportion of unqualified workers	0,002**	1,97	0,000	0,1
proportion of apprenticeships	0,001	0,43	0,005	0,94
on-the-job-training important	-	-	-0,149	-1,44
Investment in new technology (ITC)	0,051	0,8	0,160	1,05
wage per capita (log)	-0,056	-0,77	0,514**	2,41
unemployment rate	-0,007	-0,68	-0,079	-1,66
proportion of employees aged				
below 20	-0,002	-0,55	0,021***	2,79
20-30	0,003	1,2	0,008**	2,08
30-40	0,003	1,09	0,006	1,71
40-50	0,006	0,23	0,005	1,28
controlling for size and sectors	yes		yes	
constant	0,11	0,89	-3,69*	-1,93
chi-square-test	187,1***		94,6***	
pseudo r²	0,28		0,21	
observations	2871		1210****	

*, **, *** show significance on a level of α < 0.1, α < 0.05, α < 0.01

Sources: OSA-Panel 1998/ 1999 , IAB-Establishment-Panel 1999

D Oaxaca-Blinder decomposition of Table 4[a]

	β^D	$\bar{x}^D$	β^{Nl}	$\bar{x}^{Nl}$	$\beta^D\bar{x}^D - \beta^{Nl}\bar{x}^{Nl}$	$\beta^D(\bar{x}^D - \bar{x}^{Nl})$	$\bar{x}^{Nl}(\beta^D - \beta^{Nl})$
proportion of females	0,022	40,81	0,066	46,35	-2,16128	-0,12188	-2,0394
fixed-term-contracts	0,44	4,21	0,447	6,65	-1,12015	-1,0736	-0,04655
collective agreement	-3,664	0,74	-5,388	0,91	2,19172	0,62288	1,56884
work council	-4,764	0,55	-0,629	0,67	-2,19877	0,57168	-2,77045
apprenticeships	-0,576	5,05	0,141	3,39	-3,38679	-0,95616	-2,43063
wage per capita	-6,176	8,32	6,649	8,26	-106,30506	-0,37056	-105,9345
unemployment	-0,472	9,23	-2,2	4,94	6,51144	-2,02488	8,53632
below 20	0,034	5,23	0,495	2,93	-1,27253	0,0782	-1,35073
20-30	0,29	21,28	0,242	22,85	0,6415	-0,4553	1,0968
30-40	0,079	29,33	0,128	30,74	-1,61765	-0,11139	-1,50626
40-50	-0,004	23,68	0,063	27,31	-1,81525	0,01452	-1,82977
Total					**-110,53282**	**-3,82649**	**-106,70633**
					100%	**3,46%**	**96,54%**

[a] The variables „proportion of unqualified workers" and " investment in new technology" are eliminated because of differences in definitions between the two countries. Therefore the coefficients differ from those in Table 4.

E From half-yearly to yearly figures

The original German flow data from the annual establishment-panel are limited to the first half year of 1999, whilst the Dutch data cover a whole year (1998). To take this into account we multiplied the German hires and separations times two and controlled the results with the job flows from administrative data.

After this multiplication for the German data of hires and separations a match better than 95 percent with the administrative data job flows could be reached in 53% of establishments, of course mostly in establishments with no job flows. For another 40 percent the variation in the results are more or less acceptable (see below for reasons of variation). Approximately ten percent of German plants have no hires and separations in the first, but the second half of the year. We assume that this effect on the churning rate per year is compensated by establishments with positive churning rate in the first half and zero-rates in the second half of the year.

Furthermore, the administrative source contain „only" hires and separations from employees related to social security while in the IAB-Establishment-Panel separations and hires can be analysed also for employees which are not related to the social security system. This is also an explanation for differences in the results for both sources. We'd like to thank Stefan Bender from the Institute for Employment Research for these (monthly based) flow data from administrative sources which enables us to accomplish this comparison.

In dieser Reihe sind zuletzt erschienen

Recently published

No.	Author(s)	Title	Date
1/2004	Bauer, Th. K., Bender, St., Bonin, H.	Dismissal Protection and Worker Flows in Small Establishments	7/2004
2/2004	Achatz, J., Gartner, H., Glück, T.	Bonus oder Bias? Mechanismen geschlechts-spezifischer Entlohnung	7/2004
3/2004	Andrews, M., Schank, Th., Upward, R.	Practical estimation methods for linked employer-employee data	8/2004
4/2004	Brixy, U., Kohaut, S., Schnabel; C.	Do newly founded firms pay lower wages? First evidence from Germany	9/2004
5/2004	Kölling, A, Rässler, S.	Editing and multiply imputing German establishment panel data to estimate stochastic production frontier models	10/2004
6/2004	Stephan, G, Gerlach, K.	Collective Contracts, Wages and Wage Dispersion in a Multi-Level Model	10/2004
7/2004	Gartner, H. Stephan, G.	How Collective Contracts and Works Councils Reduce the Gender Wage Gap	12/2004
1/2005	Blien, U., Suedekum, J.	Local Economic Structure and Industry Development in Germany, 1993-2001	1/2005
2/2005	Brixy, U., Kohaut, S., Schnabel, C.	How fast do newly founded firms mature? Empirical analyses on job quality in start-ups	1/2005
3/2005	Lechner, M., Miquel, R., Wunsch, C.	Long-Run Effects of Public Sector Sponsored Training in West Germany	1/2005
4/2005	Hinz, Th., Gartner, H.	Lohnunterschiede zwischen Frauen und Männern in Branchen, Berufen und Betrieben	2/2005
5/2005	Gartner, H., Rässler, S.	Analyzing the Changing Gender Wage Gap based on Multiply Imputed Right Censored Wages	3/2005

6/2005	Alda, H., Bender, S., Gartner, H.	The linked employer-employee dataset of the IAB (LIAB)	3/2005
7/2005	Haas, A., Rothe, Th.	Labour market dynamics from a regional perspective The multi-account system	4/2005
8/2005	Caliendo, M., Hujer, R., Thomsen, S.L.	Identifying Effect Heterogeneity to Improve the Efficiency of Job Creation Schemes in Germany	4/2005
9/2005	Gerlach, K., Stephan, G.	Wage Distributions by Wage-Setting Regime	4/2005
10/2005	Gerlach, K., Stephan, G.	Individual Tenure and Collective Contracts	4/2005
11/2005	Blien, U., Hirschenauer, F.	Formula allocation: The regional allocation of budgetary funds for measures of active labour market policy in Germany	4/2005

Impressum

IABDiscussionPaper
No. 9 / 2005

Herausgeber
Institut für Arbeitsmarkt- und Berufsforschung
der Bundesagentur für Arbeit
Weddigenstr. 20-22
D-90478 Nürnberg

Redaktion
Regina Stoll, Jutta Palm-Nowak

Technische Herstellung
Jutta Sebald

Bezugsmöglichkeit
Volltext-Download dieses DiscussionPaper
unter:
http://doku.iab.de/discussionpapers/2005/dp1205.pdf

IAB im Internet
http://www.iab.de

Rückfragen zum Inhalt an
Lutz Bellmann, Tel. 0911/179-3046,
oder e-Mail: lutz.bellmann@iab.de