Wage Structure and Labor Mobility in (West) Germany 1993 – 2000

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1. Introduction

As a part of the international NBER project we are going to present empirical evidence from Germany about the structure and dynamics of wages and the mobility for different kind of jobs. The requested tables are computed on the basis of the linked-employer-employee-dataset of the IAB, which consists of an IAB-establishment part and an employment statistics part from the German social security system. The data are provided for the years 1993, 1995 and 2000. They are described in the next section 2. After a few comments regarding the macroeconomic situation in the nineties, something is said about the relevant institutions in section 3. Then in section we will present the empirical results. Section 5 summarizes the main results and concludes the paper.

2. Data

Since 1993 the Institute for Employment Research conducts the IAB-Establishment-Panel which is based on the employment statistics register of the Federal Employment Service. Annually employers have to report relevant information to the Federal Employment Service concerning employees' entries, exits and wages. There are legal sanctions for misreporting.

From those establishments included in the employment statistics register a stratified sample is drawn using selection probabilities which depend on the variation of the number of employees covered by social insurance in the respective stratum. To correct for panel attrition, exits, and newly founded units, the samples are augmented regularly, leading to an unbalanced panel.

With the common plant identifier in the IAB-Establishment-Panel and in the employment statistics register it is possible to create the Linked-Employer-Employee-Dataset of the IAB.

Crucial for the analysis presented is the construction of the tenure variable. The date of reference in the IAB-Establishment-Panel is June 30th. Then from the employment statistics register all employee reports which cover the reference point in the years 1993 to 2000 are linked to the plants in the panel. Not only plants but also employees have an uniquely defined identifier. Job tenures can be computed by checking the appearance of the employee identifier in t, t-n (n ϵ N) with the condition of the duration equal 365 (366). With larger n we have less plant observations (panel mortality). This is why we decided to reduce the requested job tenures of at least five years in table 3 to three years.

The information about the duration of working contracts is on an annual basis. This allows to identify stayers and movers[1]. By appending other years, information about the job tenures of employees can be obtained. This procedure has at least two implications: first, we cannot

[1] Stayers have a duration of 365 (366) days (movers otherwise).

observe employees after leaving a plant. This is the reason why the cell in the later analysis "average change in wage from workers who change firms" is not filled in. Second, for computing job tenures and change in wages a balanced panel is needed[2].

The employment statistics register covers more than 90 percent of all employees in the manufacturing and 75 percent in the service sector. Civil servants, self employed persons and workers who are not eligible to the social security system because their earnings and/or working time are too low, are not included in the data. However, it is possible to obtain this information from the IAB-Establishment-Panel on the aggregate level of the establishments. We exclude apprentices from our analysis[3].

The plant size was constructed by aggregating the number of workers with social insurance in the employment statistics register. As agreed, there should be at least 25 employees in the plant, otherwise they should not to be included in the analysis. Many plants have in fact more than 25 workers. There are some establishments which have only a few full-time workers but exceed the number of 25 employees with part-time workers and/or apprenticeships or workers not covered by social insurance. 25 workers have to be observed only in t, not in t-1.

To illustrate the effect of the weighting procedure adopted to the establishment data, which are collected as a stratified sample, Table 1 shows weighted and unweighted values of selected variables. In principle smaller establishments are sampled with a lower probability so that weighting increase their proportion.

Table 1: Weighted and unweighted values of selected variables

	percentage of ……		
	part-time Workers	fixed-term contracts	blue-collar workers
unweighted			
1993	.09	.02	.36
1995	.17	n.a.	.38
2000	.20	.08	.43
weighted			
1993	.13	.03	.40
1995	.22	n.a.	.43
2000	.28	.09	.36

n.a. : not applicable

Sources: IAB-Establishment-Panel, Linked Employer-Employee-Dataset from the IAB

[2] This is not possible in 1993. We got from the data holders the requested information about employees by delivering the plant identifiers. It is also the reason why we have the highest number of observations in 1993.

[3] Apprenticeships work full-time, but stay two days per week in school and receive fixed wages by collective agreement. These wages are much lower even than those for unskilled blue collar workers.

The increase in the share of part-time workers is mostly driven by the rising participation rate of female workers in the labor market. Fixed-term contracts are distributed more equally between males and females. The correction for panel attrition by means of substitution of mainly larger plants by newly founded – mainly smaller – establishments decrease the proportion of employees covered by the IAB-Establishment-Panel from 68 percent (1993) and 84 percent (1995) to 57 percent in the unweighted sample.

All wages are gross wages. In the German data is a treshhold at the upper limit of wages. From a specific amount on all wages are *censored*, because payments for the social security system are limited to some extend. This threshold is varying from year to year (rising) and was for example in the year 2000 a gross monthly wage of 3427 Euros. Thus the treshhold is the highest observable wage in the respective year.

Of course this has important implications on the distribution of wages. We adopted the following procedure: we impute the observed wage at the threshold (and only there) with predicted values using a Mincerian earnings function augmented by ten sector and ten occupation dummies[4]. Varying from year to year ten to fifteen percent of all observations are imputed. In the group of employees with a university degree 50 % of all observations are censored. Occupations (3-digit code) are ordered according the average wage paid. From the employment statistics the working time is available only on the basis of an interval scale, which differs between full- or part-time working employees. The latter can be distinguished between more or less than 15 hours per week.

Switchers from part-time to full-time (and opposite) were excluded from the analysis in the former tables 7 and 8. We did not compute the change in wages for these persons. They are not counted as exits or entries in the analysis of the former table 4.

The job tenure can be computed by comparing the incidence of the individual identifier in the plant at t and t-n. We decided that n should not be greater than three (years) in order to loose not too much establishment observations. Two further conditions must be given for an individual to be in the group “job tenure > 3 years”. First there must be full-time employment in t and t-1 and the individual identifier in the plant must be observed in all three years. Secondly there has to be an annual job duration in these three years of 365 (366) days. It follows that employees recalled in the specific time period of three years belong to the group “job tenure < 3 years”.

[4] We estimate cross-sectional tobit-regressions for the requested years. Heteroscedasticy is checked on plant level.

3. Macroeconomic situation and institutional setting in Germany

Table 2: Macroeconomic Situation in West Germany 1991 to 2000

Year	GDP*	growth GDP 1 year	growth GDP 2 years	growth GDP 5 years	unemployment**
1991	2798.8				.063
1992	3007.3	.063			.066
1993	3086.0	.026	.093		.082
1994	3469.0	.110	.013		.092
1995	3459.6	-.003	.108	.191	.093
1996	3541.5	.023	.021	.151	.101
1997	3641.8	.028	.050	.153	.110
1998	3784.4	.038	.064	.083	.094
1999	3877.2	.024	.061	.108	.088
2000	3976.1	.025	.048	.109	.078

* actual prices in Billion German Marks ** West Germany

Source: Federal Statistic Bureau of Germany

In the first years after the reunion especially the West German economy benefits a lot from the scarcity of goods and services in the former German Democratic Republic. Due to the emerging market the West German GDP grew substantially from 1990 to 1994 (table 2). Then, in 1995 there was a slump in economic activities. From 1996 to 2000 we can observe a rather slight growth in GDP, but compared with the situation after 2000 the growth rates appear in a better light. Not before 1997 the peak of unemployment was reached due to a time delay in labor market reaction.

Although we focus on the West German economy one should address the persistent high unemployment in East Germany (in 2000 about 17 percent) as well as the extensive money transfers from West to East Germany. In the nineties there was an enormous governmental program to adapt the East German Economy to the Western level. But still in 2002, establishments in the East German manufacturing sector had on average only 70 percent of the productivity in the West.

Labor market institutions in Germany

One country-specific institution which should be mentioned is the German system of apprenticeship training. It has a strong position in acquiring skills. The training duration is between two and three and a half years, so plants invest remarkable time and money in apprenticeship training. Although we decided to exclude apprenticeships from our later

analysis, it has to be stressed that the German system leads to a reduced mobility of employees especially in the group of young skilled blue collar workers in the first years after finishing their training because establishments try to amortize their human capital investment by means of longer job tenure of their trainees. In several branches it is guaranteed by collective agreement that trainees can stay at least one year after the completing of their apprenticeship training in the firm. It is especially the mobility of younger workers which is hampered by the apprenticeship system.

On the OECD-scale of rigidities and employment protection Germany ranks in the midfield (depending on the special indicator between position 18 and 23). Even though there was a trend of deregulation in the nineties, there are still several institutions which enforce the position of insiders in such a manner that outsiders have only a small chance to re-enter the (internal) labor market.

A prominent example is the German Protection against Dismissal Acts, according to which in all plants with more than five (between 1996 and 1998 ten, since 2004 again ten) employees, dismissals must be judged in perspective of avoiding social cases of hardship. As a result, especially young employees (workers with short job tenures) *must* be dismissed instead of others. Especially elder, married and/or workers with children are protected by this law. In all of the plants included in the analysis this law is valid. Thus we can expect that the mobility of individuals is mainly determined by (younger) persons with shorter job tenures.

Another notable institution is the set-up of works councils. They have a very strong legal base in Germany. Lots of studies were made about the effect of works councils on the mobility of employees (for example Addison, Schnabel, Wagner (2002)). Nearly all these studies come to the conclusion that the mobility of workers is hampered by this institution. The set-up of a works council is guaranteed by law in all plants with more than five employees. In plants with more than 20 employees the works council must agree to dismissals. In case of mass dismissals, the regional labour office and the firms involved plants have to draft a social plan to avoid cases of hardships if possible. Especially in larger establishments works councils often exist in combination with collective agreements. This co-determination can be a powerful tool for employees to influence the personnel policy.

Table 3 shows the coverage of works councils, collective agreements and their combination in the year 1998 and 2002[5].

[5] In 1993 and 1995 the information are not available. We choose the years 1998 and 2002 in order to show the dynamical process at the end of the millennium.

Table 3: Works Councils and Collective Agreement: Coverage of full-time employees in the West German private sector (percentage points)

Size class	Coverage of collective agreement 1998	Coverage of collective agreement 2002	Coverage of collective agreement and works councils 1998	Coverage of collective agreement and works councils 2002
1 - 4 employees	.46	.45	not possible	not possible
5 – 19 employees	.65	.55	.05	.05
20 – 99 employees	.73	.62	.24	.29
100 - 199 employees	.79	.72	.60	.61
200 – 499 employees	.85	.81	.79	.76
500 and more employees	.96	.94	.95	.92
Total	**.78**	**.71**	**.51**	**.48**

Source: IAB-Establishment-Panel 1998 and 2002, weighted values

In this table branch tariff arrangements and those on plant level are summarized[6]. The coverage of works councils and collective agreement is close to 100 percent, even in smaller plants. Firms being member in an employers' association can deviate on paying tariff wages only by negotiating with the union on plant level, but nevertheless the branch union must agree to the result of the bargaining process. Plants which are not member in an employers' association have no restrictions in setting wages. Tariff wages must be paid only for union members, but in fact such wages are often paid to all employees in a plant. The coverage of collective agreement in manufacturing is higher than in the (private) service sector. Also the bargained wage increase is often higher in the manufacturing sector.

Some plants pay more than tariff wages, but often not for all employees. This additional payment increases the flexibility in setting wages in labour markets with rather rigid wage structures (Bellmann/ Kohaut, 1995). In addition, centrally bargained tariff arrangement cannot take into account all observed and unobserved heterogeneity of establishments and employees. In this perspective paying higher wages than fixed by collective agreement can be regarded as an indicator for a wage differential *within* establishments. Büttner/ Fitzenberger (1998) argue that at the bottom end of wages there is a high likelihood for wages to be equal to tariff arrangements. Paying more than fixed by collective agreement is especially the case at the upper end of wages. However, the proportion of plants paying higher wages than bargained was decreasing in the observation period (table 4).

[6] Approximately ten percent of all establishments have tariff arrangements on plant level (rising). The public sector is excluded.

Table 4: Summary Statistics for paying more than tariff wages

	Proportion	mean	Standard Deviation	10%-ile	90%-ile
1993	.41	.134	.076	.05	.25
1995	.32	.112	.073	.05	.20
1998	.23	.111	.066	.05	.20
2000	.27	.115	.071	.05	.20

Sorce: IAB-Establishment-Panel 1993 – 2000, weighted values

4. Results

With regard to what was said in the data section 2 we present each table twice, with weighted and unweighted values. All figures for wages are calculated on a monthly base and always in Euros. Before 1999 we have all wages in German Marks, and multiplied them times 1.95. We did not deflate.

4.1. Structure of wages within and between plants

Table 5 shows the unweighted values for the structure of (gross) wages within and between plants.

Table 5 about here

Wages grew very fast in the first half of the nineties and then at a slower rate. The standard deviation of wages on the individual level was smaller in the second half of the nineties. In accordance with other studies (e.g. Stephan, 2001) at the upper limit of the wage distribution the growth rates were moderate – here in the unweighted analysis even negative. At the bottom end of the wage distribution were more or less stable positive growth rates in the observation period.

Also in line with other findings, the wage differentials for individuals and plants exhibited different developments. The standard deviation of individual wages became smaller, on plant level larger. The range between high- and low paying establishments was getting wider in the second half of the nineties[7] .

[7] The 90/10 - Quotient changes as follows: 1993: 1.48 , 1995: 1.49 , 2000: 1.54.

For the observed establishments the last two columns of table 5 give some hints what partly drives this development. Regarding their wages the group of workers aged 45 to 50 became more homogenous, the group of younger workers more heterogenous.
Table 6 shows the weighted values.

Table 6 about here

We cannot observe the declining effect in the 90%-ile like in table 5, but nevertheless, compared to the 10%-ile the growth rates in the 90%-ile were more moderate. In the low-paying segment the average wage of establishments was in 2000 nearly the same as in 1995[8]. Especially for blue-collar workers the proportion of the variance attributed to employer was larger than for white-collar workers. Stephan (2001, 147) got a similar result from analysing regional linked-employer-employee-data.
In the weighted figures the results for the 90%-ile and 10%-ile of the wages for younger and elder employees remained stable. While the difference between 1993 and 1995 did not increase, there is a polarisation for well paid jobs by age groups from 1995 to 2000.

4.2. Wage dynamics

The wage dynamic results seem to be more sensitive to the development of the business cycle. There are only small differences between weighted and unweighted values. Therefore, the two tables for the wage dynamics will be discussed together.

Tables 7 and 8 about here

In the recession year 1995 the change in wages of employees was smaller than in our boom years 1993 and 2000. Larger German establishments (unweighted values) could not react in the same i.e. short time as smaller establishments to changing market conditions regarding their number and composition of employees. In addition, wages are often tied by the bargained tariff arrangement for a specific time period.
In recession years the wages became more homogenous (column 3, average of standard deviation). This is what we could expect: in difficult economic times there is less mobility because the German labour market institutions protects insiders (we come back to this point

[8] The 90/10-Quotient is in 1993 and 1995 1.63 and in 2000 1.65.

by discussing the mobility patterns). The remaining personnel profit from the central bargaining process with guaranteed wage growth rates.

4.3. Mobility

In this part we will focus more on technical aspects and computations. Weighted and unweighted values will be discussed together. Such descriptive results are difficult to interpret without further investigations according to observed and unobserved person and establishment effects.

Panel A: all jobs

Table 9 and 10 show the results for all jobs.

Table 9 and 10 about here

In general we computed all rates based only on the chosen years. Growth rates are computed as $[(N_t - N_{t-1})/N_t]*100$ with N as the total number of full-time workers in plant i. Entry and exit rates were quite similar constructed as E/N_t*100. E is the total number of missing (exits) or additional (entries) individual identifiers in t compared to t-1 on plant level (in column five the whole sample). Only full-time workers are considered excluding apprentices and switchers between full-time and part-time and opposite.

Some of the sample characteristics reflect more or less what was said in earlier sections. We have nearly all larger establishments in our sample and the decreasing number of employees is partly a result from sample attrition. The weighted values should correct for the selectivity, because German plants became in fact smaller in the second half of the nineties, according to other studies. In addition there are an important number of in- and outsourcing activities in the observation period.

Comparing the exit rates of bottom and top quartiles (deciles) of establishment wages and with regard to the business cycle, the development between those establishments at the ends of the wage distribution differed the most in recession years. There was less mobility in high paying and more in low paying establishments. In both groups of establishments the entry rates were reduced in recession years. As mentioned earlier in recession years we observe higher proportions of workers with job tenures over three years.

The correlation of the exit rates with wage characteristics was weak, especially at the beginning of the observation period. At the end of the observation period the correlation of the exit rate and the average wage in establishments became stronger. A more stable effect was the negative correlation between the entry rate and the average wage of establishments, as expected. Only for the year 1993 we find a positive correlation between the entry rate and the average wage change.

Panel B: High-level jobs

Table 11 and 12 refers to high-level jobs with the exception, that the selection whether a plant has more or less than 25 (100) workers is still based on *all* full-time jobs. Especially in the columns 'bottom quartile' and 'decile of plants average wages' some extreme values are included. In this group high-level jobs are rare. For example there were 11 plants which have only one high-level job in t-1 and none at t. This gives an exit rate of 100 percent.

Tables 11 and 12 about here

We prefer to interpret the weighted values. In all of our plants in the sample are - depending on the specific year - on average 25 high-level jobs, in larger establishments about 60. The values for the number of occupations show little increase in the number of occupations belonging to the group of high-level jobs, especially in larger establishments. It is difficult to judge whether this is evidence for rising unobserved heterogeneity. Looking at the growth rates of establishments - which is in this panel based on the growth rates of high-level jobs – we assume that in difficult economic times smaller establishments have more problems to keep their high-level jobs stable, while larger establishments have small, but nevertheless positive growth rates of their high-level jobs. This is what we expect from theory.

In principle the mobility patterns follow the business cycle: in 1995 lower entry and higher exit rates (vice versa). The differences between the top and bottom quartile (decile) of establishments wages are consistent. We observe higher mobility of workers with high-level jobs in better economic times. In difficult economic times the actors become more risk-averse and preferably stay in establishments paying higher wages and leave more likely establishments, who pay on average lower wages. The workforce becomes more homogenous on establishment level, meaning here mobility of high-level jobs from establishments with a

low to a high average wage. High-level jobs after entering a plant are more often readjusted. The switch-rate for the high-level jobs is nearly twice as high as for all jobs.

Panel C: Low-level jobs

Vice versa to Panel B these two tables are based only on jobs in the bottom 20%-ile of the average wage. In establishments of the top quartile and decile of plants average wage are sometimes only a small number of low-level jobs computed, resulting in quite similar problems to interpret entry- and exit-rates like in Panel B. But it is more likely that low-level jobs also occur in the top quartile (decile) of plants average wage than high-level jobs occur also in the bottom quartile (decile) of plants wages. Extreme cases should have not a meaning as in Panel B.

Tables 13 and 14 about here

Also in this panel we preferably interpret weighted values. We have on average in 1993 34 and in 2000 28 low-level jobs in all German establishments. In larger establishments the number of low-level jobs decreases from 71 jobs in 1993 to 62 in 2000. On the other hand, the number of occupation codes belonging to low-level jobs are raising and in larger establishments more than in smaller ones. The interpretation is roughly the same as for high-level jobs.

The average exit rate on plant level goes along with the business cycle. The exit rate in the bottom and top quartile (decile) of the average wage of establishments becomes higher in the observed time period. Roughly the same can be observed for the entry rates. In larger establishments, especially in the top quartile of establishments wages, the development of the exit- and entry rates of low-level jobs follow the business cycle[9].

The proportion of workers with job tenure of more than three years shows a similar development. In 2000 the proportion of workers with low-level jobs and job tenures of more than three years is much higher than in 1993. In Germany there was trend of deregulation and declining demand for unskilled blue collar workers (which should have a higher likelihood to have a low-level job). On the other hand establishments tend to become more homogenous concerning their workers: the larger the dispersion of qualifications on individual level the

[9] Maybe extreme cases in the top decile disturb this relationship. We have – quite similar to the bottom decile - 97 plants belonging to this group.

more likely it is – under certain conditions of the production function – for high skilled workers to work together with workers owing a comparable qualification, because their competence becomes more and more different from other, especially low skilled workers. This might reduce the shift and therefore the mobility of low-level jobs in good economic times towards plants in the upper segment of the average wage of establishments. Maybe such employees would earn more in cases of mobility, but because of reasons of employment protection and an uncertain future they prefer to stay in their plants and renounce on higher wages.

5. Summary and conclusions

Wage dynamics and mobility differs in Germany in the first and the second half of the nineties. In our first boom year 1993 establishments are larger than in the second boom year 2000. Over the observation period the range between the average wage of individuals and that of establishments is getting wider. Especially in the 10%-ile wages stagnate. From the perspective of individuals the wages of employees aged 45 to 50 become more homogenous, meaning a decline in the 90%ile and stable growth rates at the bottom of the individual wage in this age-group. In accordance with other studies this can be interpreted as indicative for a relatively high protection of wages against downward mobility.

In opposite to the group of workers aged 45-50 the wages for younger employees become more heterogenous. The growth rates from the 90%-ile average change in wage of individuals in this age-group are higher than from 10%-ile (from 1995 to 2000: ≈ 10 percent versus ≈ 2.5 percent).

The change in wages goes along with the business cycle meaning lower growth rates in years of recession (and vice versa). Also here we observe the process of raising wage differentials between establishments especially in the second half of the nineties. While on the individual level the distance between the 90%-ile and the 10%-ile remains nearly stable, the wage differential between establishments is rising. The range between high and low paying firms is getting wider in the second half of the nineties.

The figures for the mobility of employees show that there is in general more mobility in the second half of nineties. It is supposed that this effect is not only driven by the business cycle but also by a strong trend of deregulation in the formal institutional setting for working contracts in the German labour market. On the other hand several institutions tend to protect

insiders. It can be assumed that a notable part of the higher mobility in the second half of the nineties is undertaken by a minority of employees, while (still) the majority of employees remain in stable employment.

Such mobility patterns become also obvious in our tables 9 – 14. While the entry rates in most cases grow moderate (but nevertheless there is more mobility), the exit rates become higher during the nineties. Despite that fact, stable employment is still the normal case in Germany. The protection of insiders becomes most obvious in the percentage of workers with duration of job tenure of more than three years. In recession years the proportion of core (full-time) workers rises in German establishment (and vice versa during boom times).

Wage growths can be described as moderate, stable and more homogenous for elder employees. In contrast, the wage differential for younger people is growing on both ends of the personal wage distribution. The same can be observed for the wage differentials at the establishment level. At the upper limit of the wages at the establishment level positive are growth rates, while at the lower end the average establishment wage is nearly unchanged during the second half of the nineties. Thus we can conclude that especially the upper end of the wage distribution in Germany becomes more dynamic both on the individual *and* on the plant level.

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Tables 5 – 14 (former tables 2 – 4)

Table 5: Structure of Wages within and Between *Plants* (unweighted values)

	Wages in Euros			Log monthly wages in Euros		
	1993	1995	2000	1993	1995	2000
Average Wage, observation = a person	2587,6	2759,7	2919,8	7,83	7,89	7,95
(s.d.)	611,49	662,63	635,10	0,26	0,26	0,27
(90%-ile)	3666,61	3732,49	3714,68	8,16	8,22	7,66
(10%-ile)	1841,43	1957,10	2125,30	7,19	7,57	8,22
[N – workers]	2221228	1375534	784955	2221228	1375534	784955
Average of plant average wage, observ = a plant (weights observations differently from previous row)	2381,5	2550,3	2609,5	7,76	7,83	7,85
(s.d.)	369,48	404,41	445,70	0,17	0,17	0,20
(90%-ile)	2858,42	3074,92	3132,20	7,99	8,03	7,61
(10%-ile)	1928,07	2063,57	2023,90	7,56	7,63	8,05
[N – firms]	2727	1922	1652	2727	1922	1652
Average of s.d. of wage, observ = a plant	527,69	562,89	544,25	0,24	0,24	0,26
(s.d.)	100,82	106,88	135,74	0,07	0,07	0,13
(90%-ile)	644,84	686,07	710,96	0,32	0,31	0,40
(10%-ile)	397,29	420,03	403,17	0,17	0,17	0,15
[N – firms]	2727	1922	1635	2727	1922	1635
Average Coefficient of variation of wages, observ = a plant)	0,227	0,225	0,217	0,031	0,031	0,033
(s.d.)	0,057	0,057	0,077	0,009	0,009	0,018
(90%-ile)	0,299	0,291	0,307	0,041	0,041	0,053
(10%-ile)	0,164	0,163	0,139	0,021	0,021	0,019
[N – firms]	2727	1922	1635	2727	1922	1635
Correlation(average wage, s.d. of wage), observ = a plant	0,103	0,155	-0,111	-0,406	-0,387	-0,391
Average Wage for workers between 25 and 30, observation = a person	2385,67	2500,23	2684,90	7,75	7,79	7,86
(s.d.)	509,02	535,07	602,99	0,23	0,23	0,29
(90%-ile)	3078,53	3217,42	3461,25	8,03	8,07	8,15
(10%-ile)	1790,28	1884,64	1993,75	7,49	7,54	7,60
[N – workers]	409762	233503	92428	409762	233503	92428
Average Wage for workers between 45 and 50, observation = a person	2711,04	2899,57	3012,34	7,87	7,94	7,98
(s.d.)	619,41	679,05	618,37	0,25	0,26	0,26
(90%-ile)	3583,17	3856,35	3955,00	8,18	8,26	8,24
(10%-ile)	1930,32	2042,63	2233,50	7,65	7,62	7,71
[N – workers]	542048	317142	184910	542048	317142	184910

Table 6: Structure of Wages within and Between *Plants* (weighted values)

	Wages in Euros			Log monthly wages in Euros		
	1993	1995	2000	1993	1995	2000
Average Wage, observation = a person	2387,17	2535,97	2696,97	7,74	7,79	7,85
(s.d.)	657,15	705,82	708,20	0,31	0,31	0,34
(90%-ile)	3336,81	3553,94	3615,23	8,11	8,18	8,19
(10%-ile)	1596,7	1703,13	1820,68	7,37	7,44	7,51
[N – workers]	12807207	11249475	11399001	12807207	11249475	11399001
Average of plant average wage, observ = a plant (weights observations differently from previous row)	2228,53	2370,56	2449,29	7,69	7,75	7,78
(s.d.)	408,08	445,67	474,39	0,20	0,20	0,22
(90%-ile)	2725,29	2946,97	3008,32	7,91	7,98	8,01
(10%-ile)	1667,21	1807,21	1806,62	7,41	7,49	7,49
[N – firms]	110056	104699	95992	110056	104699	95992
Average of s.d. of wage, observ = a plant	520,06	547,98	559,71	0,26	0,25	0,29
(s.d.)	129,65	124,76	160,99	0,09	0,08	0,16
(90%-ile)	671,37	705	782,54	0,36	0,35	0,44
(10%-ile)	357,07	387,53	351,26	0,16	0,16	0,14
[N – firms]	110056	104699	95992	110056	104699	95992
Average Coefficient of variation of wages, observ = a plant)	0,241	0,238	0,238	0,033	0,032	0,037
(s.d.)	0,074	0,069	0,089	0,013	0,01	0,021
(90%-ile)	0,338	0,329	0,349	0,048	0,046	0,061
(10%-ile)	0,154	0,159	0,138	0,019	0,021	0,018
[N – firms]	110056	104699	95992	110056	104699	95992
Correlation(average wage, s.d. of wage), observ = a plant	0,101	0,202	-0,002	-0,365	-0,377	-0,347
Average Wage for workers between 25 and 30, observation = a person	2196,41	2292,97	2460,17	7,66	7,75	7,76
(s.d.)	535,65	560,18	643,13	0,27	0,26	0,33
(90%-ile)	2912,81	3030,16	3331,83	7,97	8,02	8,11
(10%-ile)	1589,13	1669,76	1712,33	7,37	7,42	7,45
[N – workers]	2425083	1508222	1448199	2425083	1508222	1448199
Average Wage for workers between 45 and 50, observation = a person	2522,31	2673,94	2789,08	7,79	7,84	7,89
(s.d.)	666,52	726,44	715,87	0,31	0,31	0,36
(90%-ile)	3485,89	3725,04	3660,39	8,21	8,22	8,21
(10%-ile)	1704,14	1786,25	1932,17	7,44	7,49	7,57
[N – workers]	3096853	2630634	2667795	3096853	2630634	2667795

Table 7: Wage dynamics (unweighted values)

	Change in Wages in Euros (defined as wage in year t – wage in year t –1)			Change in Log monthly wages in Euros (defined as log wage in year t – log wage in year t-1)		
	1993	1995	2000	1993	1995	2000
Average change in wage observation = a person	116,93	130,79	162,88	4,73	4,84	4,85
(s.d.)	191,87	185,89	248,19	0,95	0,91	1,11
90%-ile	275,02	331,33	390,26	5,72	5,88	6,06
10%-ile	-66,76	-60,42	-46,17	3,68	3,86	3,51
[N – workers]	1993988	1126940	675699	1636879	947480	569108
Average of firm average change in wage, observ = a plant	117,69	113,33	130,49	4,67	4,68	4,59
(s.d.)	58,49	65,48	85,53	0,34	0,4	0,53
90%-ile	186,32	183,89	234,13	5,09	5,16	5,24
10%-ile	46,67	46,41	41,85	4,25	4,21	4,00
[N – plants]	2727	1921	1641	2726	1921	1639
Average of s.d. of change in wage, observ = a plant	167,63	155,46	206,59	0,89	0,85	1,05
(s.d.)	55,48	57,36	84,73	0,28	0,23	0,30
90%-ile	237,08	221,78	315,77	1,19	1,15	1,51
10%-ile	103,21	93,6	101,79	0,63	0,61	0,73
[N – plants]	2727	1920	1631	2726	1920	1627
Avg Coefficient of variation of change in wages, observ = a plant)	3,76	9,03	2,76	0,19	0,19	0,24
(s.d.)	28,38	276,33	10,45	0,06	0,07	0,09
(90%-ile)	3,35	2,85	3,31	0,27	0,26	0,33
(10%-ile)	0,84	0,81	0,95	0,13	0,13	0,15
[N – plants]	2727	1921	1631	2726	1920	1627
Avg change in wage for people who change firms, observ = a person	X	X	X	X	X	X
Avg change in wage for people with tenure < 3 years , observ = a person	147,51	174,97	194,93	4,88	5,04	5,08
(s.d.)	204,07	246,07	265,79	0,94	0,95	1,09
90%-ile	339,09	422,06	449,77	5,91	6,12	6,17
10%-ile	-42,55	-52,49	-49,67	3,82	3,99	3,73
[N – workers]	306024	63873	51021	260871	54409	43078
Avg change in wage for people with tenure ≥ 3 years, observ = a person	111,13	128,15	160,26	4,71	4,83	4,84
(s.d.)	188,22	181,24	246,51	0,95	0,91	1,10
90%-ile	259,57	325,97	384,81	5,67	5,86	6,04
10%-ile	-70,54	-60,89	-45,87	3,66	3,85	3,51
[N – workers]	1673287	1062718	624678	1364837	892825	526030

Table 8: Wage dynamics (weighted values)

	Change in Wages in Euros (defined as wage in year t – wage in year t –1)			Change in Log monthly wages in Euros (defined as log wage in year t – log wage in year t-1)		
	1993	1995	2000	1993	1995	2000
Average change in wage observation = a person	115,12	112,94	142,26	4,69	4,69	4,71
(s.d.)	185,79	177,55	238,88	0,95	0,95	1,14
90%-ile	270,32	291,80	361,17	5,69	5,76	5,96
10%-ile	-55,92	-59,05	-48,17	3,62	3,64	3,40
[N – workers]	9094463	8496555	8867450	7973570	7388309	7710826
Average of firm average change in wage, observ = a plant	112,22	98,45	122,92	4,61	4,53	4,49
(s.d.)	62,03	68,83	122,55	0,40	0,48	0,67
90%-ile	185,95	168,84	211,02	5,09	5,08	5,20
10%-ile	34,08	22,84	18,14	4,09	3,97	3,83
[N – plants]	110056	104699	95992	110056	104699	95992
Average of s.d. of change in wage, observ = a plant	160,34	141,34	187,67	0,90	0,90	1,08
(s.d.)	70,08	60,66	96,50	0,29	0,32	0,39
90%-ile	255,28	217,81	321,57	1,27	1,28	1,49
10%-ile	84,18	77,58	85,00	0,57	0,57	0,68
[N – plants]	110056	104699	95992	110056	104699	95992
Avg Coefficient of variation of change in wages, observ = a plant)	3,01	2,97	3,47	0,20	0,21	0,26
(s.d.)	13,13	56,45	13,75	0,08	0,10	0,14
(90%-ile)	3,67	0,43	4,32	0,30	0,31	0,37
(10%-ile)	0,77	0,07	0,89	0,12	0,12	0,15
[N – plants]	110056	104699	95992	110056	104699	95992
Avg change in wage for people who change firms, observ = a person	X	X	X	X	X	X
Avg change in wage for people with tenure < 3 years , observ = a person	131,97	148,71	165,04	4,78	4,87	4,87
(s.d.)	197,49	237,21	263,73	0,99	0,98	1,28
90%-ile	320,05	360,47	408,44	5,85	5,96	6,13
10%-ile	-51,22	-59,63	-63,65	3,64	3,78	3,46
[N – workers]	1425505	720949	1021412	1260959	620016	878414
Avg change in wage for people with tenure $\geq$ 3 years, observ = a person	110,13	109,74	139,72	4,66	4,68	4,69
(s.d.)	180,93	170,79	235,81	0,94	0,95	1,13
90%-ile	252,71	285,18	352,85	5,62	5,73	5,93
10%-ile	-56,57	-59,17	-46,41	3,61	3,63	3,39
[N – workers]	84664425	8165909	8361386	74891610	7022682	7190792

Table 9: Mobility | Panel A: all jobs

	All firms (# firms)			Firms with 100+ employees (# firms)		
	1993	1995	2000	1993	1995	2000
Employees	814,72	715,89	495,55	894,51	843,98	647,25
(s.d.)	1947,84	1489,76	1286,8	2029,64	1594,56	1454,81
Number of occupations	34,78	33,25	28,42	37,41	37,68	34,19
(s.d.)	26,91	25,56	22,81	26,89	25,53	23,46
Number of levels	X	X	X	X	X	X
(s.d.)						
Employment growth	2,09	-5,16	-4,68	1,44	-5,82	-5,04
(s.d.)	19,58	25,61	19,91	19,88	26,96	20,43
Exit rate, *observ = person*	11,21	14,46	15,06	11,23	14,42	14,92
Exit rate	10,47	17,03	17,43	10,69	17,05	17,05
(s.d.)	10,98	16,16	15,17	11,13	16,42	15,16
Exit rate, top quartile of plant wages	11,94	15,69	24,77	12,18	15,72	25,28
(s.d.)	28,8	17,12	49,08	29,48	16,74	51,59
Exit rate, bottom quartile of plant wages	11,29	26,28	25,74	11,81	28,75	28,38
(s.d.)	13,95	80,67	42,42	14,92	93,98	54,67
Exit rate, top decile of plant wages	13,61	17,11	31,7	13,98	17,65	32,56
(s.d.)	42,45	21,34	70,06	43,53	22,14	73,73
Exit rate, bottom decile of plant wages	10,27	27,97	30,86	10,89	30,15	34,62
(s.d.)	6,88	74,05	29,25	6,87	90,55	34,24
Entry rate	12,79	13,13	13,89	12,45	12,72	13,49
(s.d.)	9,39	9,82	13,42	9,03	9,26	13,31
Entry rate, top quartile of plant wages	10,05	10,27	12,18	10	10,19	11,91
(s.d.)	7,48	7,09	14,34	7,49	6,82	14,79
Entry rate, bottom quartile of plant wages	16,93	17,49	19,54	16,42	16,91	20,83
(s.d.)	12,44	13,34	17,78	12,04	12,74	18,96
Entry rate, top decile of plant wages	10,11	9,27	12,19	10,16	9,05	11,95
(s.d.)	9,31	6,51	13,94	9,4	5,96	14,49
Entry rate, bottom decile of plant wages	22,09	20,76	27,1	22,25	19,74	29,34
(s.d.)	15,15	16,57	21,64	14,67	15,71	21,79
% of employees who switch jobs* internally	2,51	1,83	1,76	2,65	2,01	1,89
(s.d.)	5,29	3,67	4,24	5,49	3,84	4,29

% of new jobs* filled internally (s.d.)	X	X	X	X	X	X
% of workers who have been at plant 3+ years	67,87	80,29	77,05	68,52	81,15	78,02
(s.d.)	18,64	12,61	17,38	18,11	11,99	16,96
Correlation (exit rate, average wage), observ = a plant	0,025	-0,114	-0,178	0,015	-0,099	-0,174
Correlation(exit rate, average wage change), observ = a plant	0,077	-0,103	-0,051	0,079	-0,113	-0,041
Correlation(exit rate, s.d. of wage), observ = a plant	0,072	0,091	0,004	0,065	0,087	0,039
Correlation (entry rate, average wage), observ = a plant	-0,368	-0,34	-0,308	-0,365	-0,333	-0,306
Correlation(entry rate, average wage change), observ = a plant	0,125	0,025	-0,003	0,142	0,041	-0,019
Correlation(entry rate, s.d. of wage), observ = a plant	0,031	0,089	0,042	0,023	0,11	0,051

Note: All statistics are calculated at the plant level, except the first exit rate

Table 10: Mobility Panel A: all jobs (weighted values)

	All plants (# plants)			Plants with 100+ employees (# plants)		
	1993	1995	2000	1993	1995	2000
Employees	123,98	114,1	103,48	165,17	202,13	198,29
(s.d.)	457,78	336,69	419,81	555,45	489,07	639,24
Number of occupations	14,58	14,21	14,48	17,35	19,84	20,41
(s.d.)	11,63	11,44	11,73	13,09	14,52	15,42
Number of levels (s.d.)	X	X	X	X	X	X
Employment growth	8,12	-3,11	-4,45	7,7	-5,87	-6,35
(s.d.)	17,08	24,15	20,22	18,04	31,04	23,4
Exit rate, *observ = person*	11,21	14,46	15,06	11,23	14,42	14,92
Exit rate	9,28	18,58	18,73	9,79	20,58	19,14
(s.d.)	10,86	18,02	15,48	11,64	22,31	16,31
Exit rate, top quartile of plant wages	12,01	17,78	22,78	13,28	19,7	24
(s.d.)	22,01	24,02	26,31	24,67	27,49	28,62

Exit rate, bottom quartile of plant wages	9,53	21,34	24,89	10,14	24,34	34,56
(s.d.)	7,03	24,01	27,64	7,58	33,28	45,06
Exit rate, top decile of plant wages	11,75	18,07	27,44	13,19	23,09	28,11
(s.d.)	28,52	30,05	39,76	32,87	40,69	46,44
Exit rate, bottom decile of plant wages	9,19	24,19	30,53	9,64	27,06	40,71
(s.d.)	6,89	21,79	28,97	6,69	28,27	41,09
Entry rate	17,05	16,24	15,33	17,26	16,24	16,33
(s.d.)	12,28	12,85	13,43	12,51	12,47	15,37
Entry rate, top quartile of plant wages	12,67	12,61	14,09	13,38	13,23	13,75
(s.d.)	9,24	9,72	12,71	9,54	9,23	13,87
Entry rate, bottom quartile of plant wages	20,67	20,41	19,44	20,88	20,76	13,01
(s.d.)	13,57	15,73	15,76	14,14	15,18	10,56
Entry rate, top decile of plant wages	12,75	10,97	14,23	13,99	9,61	25,07
(s.d.)	10,82	3,27	10,5	11,97	6,68	21,55
Entry rate, bottom decile of plant wages	24,61	24,74	25,78	26,44	25,11	33,18
(s.d.)	15,51	19,34	18,57	15,95	18,76	23,33
% of employees who switch jobs* internally	1,78	1,18	1,38	2,16	1,59	1,82
(s.d.)	4,04	2,74	3,24	4,67	3,31	3,63
% of new jobs* filled internally (s.d.)	X	X	X	X	X	X
% of workers who have been at plant 3+ years	60,47	75,35	73,37	59,76	75,88	73,28
(s.d.)	20,97	15,43	18,07	20,77	15,74	19,44
Correlation (exit rate, average wage), observ = a plant	0,075	-0,107	-0,149	0,083	-0,088	-0,174
Correlation(exit rate, average wage change), observ = a plant	0,128	-0,033	-0,026	0,157	-0,075	-0,061
Correlation(exit rate, s.d. of wage), observ = a plant	0,118	0,146	0,025	0,118	0,164	0,058
Correlation (entry rate, average wage), observ = a plant	-0,326	-0,358	-0,334	-0,357	0,399	-0,364
Correlation(entry rate, average wage change), observ = a plant	0,157	0,096	0,056	0,119	0,125	0,055
Correlation(entry rate, s.d. of wage), observ = a plant	0,142	0,147	0,059	0,061	0,191	0,081

Note: All statistics are calculated at the plant level, except the first exit rate

Table 11: Mobility Panel B: high level jobs

	All plants (# plants)			Plants with 100+ employees (# plants)		
	1993	1995	2000	1993	1995	2000
Employees	188,23	166,11	131,63	226,44	200,52	171
(s.d.)	510,14	439,62	418,17	554,58	479,06	474,07
Number of occupations	36,61	35,26	31,31	42,04	40,44	37,27
(s.d.)	26,73	25,38	23,05	26,39	25,08	23,23
Number of levels (s.d.)	X	X	X	X	X	X
Employment growth	-1,47	-15,04	1,74	-3,53	-17,14	-5,20
(s.d.)	200,65	174,33	139,67	220,52	190,94	138,85
Exit rate, *observ = person*	9,25	14,07	14,25	9,26	14,05	14,15
Exit rate	14,58	20,11	12,98	15,7	20,64	17,07
(s.d.)	198,85	81,08	78,23	218,89	88,47	74,57
Exit rate, top quartile of plant wages	10,83	20,64	20,61	10,54	21,05	20,26
(s.d.)	24,94	88,55	44,19	24,55	93,34	46,29
Exit rate, bottom quartile of plant wages	11,24	25,75	17,97	12,18	29,09	16,69
(s.d.)	48,16	132,21	35,82	55,94	158,74	28,36
Exit rate, top decile of plant wages	12,43	19,06	24,59	12,13	20,07	24,77
(s.d.)	34,72	46,29	61,62	34,68	48,75	66,79
Exit rate, bottom decile of plant wages	10,03	18,23	23,53	10,46	16,94	20,84
(s.d.)	17,76	42,65	47,75	16,83	18,61	34,55
Entry rate	11,49	11,96	13,07	10,72	11,36	12,44
(s.d.)	14,21	15,7	18,26	11,84	13,57	16,29
Entry rate, top quartile of plant wages	9,44	9,09	12,06	8,54	8,94	11,19
(s.d.)	11,91	11,05	17,3	9,59	11,02	15,82
Entry rate, bottom quartile of plant wages	13,69	13,24	13,82	12,54	12,53	13,29
(s.d.)	18,48	19,03	21,57	15,48	15,44	18,91
Entry rate, top decile of plant wages	9,46	8,04	11,51	8,55	7,87	11,39
(s.d.)	12,13	10,39	15,15	10,14	10,26	15,81
Entry rate, bottom decile of plant wages	16,02	13,41	13,55	14,29	11,11	16,37
(s.d.)	21,93	20,42	20,59	18,33	14,64	19,45
% of employees who switch jobs* internally	3,42	2,75	2,61	3,51	2,67	2,65
(s.d.)	8,87	8,37	7,49	8,34	7,15	6,98
% of new jobs* filled internally (s.d.)	X	X	X	X	X	X

% of workers who have been at plant 3+ years	70,07	81,62	77,13	71,90	82,39	78,51
(s.d.)	23,79	18,76	23,62	20,59	16,8	20,19
Correlation (exit rate, average wage), observ = a plant	-0,009	-0,005	-0,031	-0,016	-0,003	-0,059
Correlation(exit rate, average wage change), observ = a plant	-0,009	-0,08	-0,115	-0,012	-0,103	-0,092
Correlation(exit rate, s.d. of wage), observ = a plant	-0,019	0,006	-0,021	-0,024	-0,005	-0,011
Correlation (entry rate, average wage), observ = a plant	-0,185	-0,177	-0,137	-0,184	-0,212	-0,135
Correlation(entry rate, average wage change), observ = a plant	0,086	-0,066	-0,021	0,142	-0,087	-0,031
Correlation(entry rate, s.d. of wage), observ = a plant	0,084	0,107	-0,009	0,112	0,131	-0,012

Note: All statistics are calculated at the plant level, except the first exit rate

Table 12: Mobility Panel B: high level jobs (weighted values)

	All plants (# plants)			Plants with 100+ employees (# plants)		
	1993	1995	2000	1993	1995	2000
Employees	26,91	25,24	25,92	60,52	56,98	63,36
(s.d.)	122,37	104,98	147,29	203,63	176,13	256,04
Number of occupations	15,72	15,61	16,53	24,88	24,52	26,85
(s.d.)	11,7	11,79	12,78	15,27	15,16	16,67
Number of levels (s.d.)	X	X	X	X	X	X
Employment growth	7,44	-12,32	2,21	4,27	2,72	0,26
(s.d.)	33,42	163,83	42,81	30,09	27,01	38,21
Exit rate, *observ = person*	9,25	14,07	14,25	9,26	14,05	14,15
Exit rate	9,18	19,06	12,99	10,1	22,41	12,98
(s.d.)	20,87	55,23	21,31	21,9	85,7	18,81
Exit rate, top quartile of plant wages	15,73	23,11	19,34	13,05	33,16	16,37
(s.d.)	35,52	108,88	33,23	30,75	161,37	40,99
Exit rate, bottom quartile of plant wages	7,69	18,58	21,92	10,55	20,86	15,58
(s.d.)	17,61	36,94	39,29	24,95	55,42	27,68
Exit rate, top decile of plant wages	20,06	14,77	24,39	13,82	20,46	24,53
(s.d.)	49,63	34,77	45,65	43,91	51,83	63,59

Exit rate, bottom decile of plant wages	7,33	19,32	20,73	10,69	17,51	18,43
(s.d.)	14,01	29,23	45,71	16,91	18,12	29,14
Entry rate	14,27	13,92	15,21	12,76	13,37	13,29
(s.d.)	19,72	21,09	23,98	14,28	16,49	18,07
Entry rate, top quartile of plant wages	15,35	10,74	20,47	10,44	10,69	14,25
(s.d.)	21,58	12,46	27,93	11,83	12,93	20,18
Entry rate, bottom quartile of plant wages	14,39	13,74	14,06	14,74	12,96	12,75
(s.d.)	21,61	23,18	25,11	17,63	16,58	19,45
Entry rate, top decile of plant wages	12,41	9,85	13,44	11,48	9,63	12,01
(s.d.)	14,48	12,14	12,52	14,04	11,79	13,12
Entry rate, bottom decile of plant wages	15,83	14,78	9,2	15,23	10,44	13,36
(s.d.)	21,23	24,36	21,5	19,84	14,52	16,76
% of employees who switch jobs* internally	3,67	3,01	1,85	4,03	2,35	2,08
(s.d.)	12,52	11,76	6,81	11,19	7,27	6,39
% of new jobs* filled internally	X	X	X	X	X	X
(s.d.)						
% of workers who have been at plant 3+ years	63,51	79,23	70,97	67,81	79,85	77,79
(s.d.)	30,94	24,09	32,57	23,41	20,01	22,68
Correlation (exit rate, average wage), observ = a plant	0,025	-0,018	0,021	-0,019	0,021	-0,026
Correlation(exit rate, average wage change), observ = a plant	0,055	-0,015	-0,163	0,081	-0,099	-0,094
Correlation(exit rate, s.d. of wage), observ = a plant	0,045	0,089	0,029	0,004	0,002	-0,025
Correlation (entry rate, average wage), observ = a plant	-0,033	-0,058	-0,143	-0,04	-0,118	-0,086
Correlation(entry rate, average wage change), observ = a plant	0,059	-0,009	0,018	0,072	-0,018	0,043
Correlation(entry rate, s.d. of wage), observ = a plant	0,067	0,089	-0,027	0,046	0,115	0,002

Note: All statistics are calculated at the plant level, except the first exit rate

Table 13: Mobility Panel C: low level jobs

	All plants (# plants)			Plants with 100+ employees (# plants)		
	1993	1995	2000	1993	1995	2000
Employees	159,13	140,62	99,18	190,35	168,93	131,19
(s.d.)	308,64	267,68	244,26	332,65	289,29	280,66
Number of occupations	36,13	34,58	30,04	41,61	39,11	36,94
(s.d.)	26,79	15,47	22,94	26,52	25,22	23,25
Number of levels	X	X	X	X	X	X
(s.d.)						
Employment growth	13,51	13,33	15,18	11,81	12,12	14,02
(s.d.)	16,64	16,37	22,04	13,92	14,05	19
Exit rate, *observ = person*	13,06	17,62	17,22	13,12	17,57	17,13
Exit rate	17,88	25,23	18,14	19,46	26,17	17,84
(s.d.)	152,39	79,65	20,85	167,9	86,19	18,99
Exit rate, top quartile of plant wages	17,78	20,55	30,17	18,68	20,94	31,75
(s.d.)	80,36	36,83	68,15	84,03	36,91	70,99
Exit rate, bottom quartile of plant wages	12,45	31,56	30,98	12,89	34,57	35,43
(s.d.)	14,61	100,03	90,13	13,05	118,52	125,83
Exit rate, top decile of plant wages	16,11	22,37	35,01	17,47	22,91	38,65
(s.d.)	33,38	29,88	76,26	34,81	30,42	79,61
Exit rate, bottom decile of plant wages	11,39	31,82	31,21	12,75	36,37	36,07
(s.d.)	11,79	106,87	38,94	12,68	142,44	46,25
Entry rate	13,47	13,72	15,99	11,78	12,56	14,96
(s.d.)	15,86	15,42	19,65	12,77	12,78	17,28
Entry rate, top quartile of plant wages	10,56	10,11	14,04	10,11	9,8	13,52
(s.d.)	15,66	13,84	21,35	14,06	12,17	19,76
Entry rate, bottom quartile of plant wages	18,17	19,01	21,21	15,36	16,41	22,01
(s.d.)	17,56	17,89	22,57	14,13	13,8	21,44
Entry rate, top decile of plant wages	10,71	9,35	15,22	10,26	9,47	15,66
(s.d.)	16,23	11,87	22,35	14,34	11,87	21,87
Entry rate, bottom decile of plant wages	24,13	21,94	29,02	21,55	18,47	32,42
(s.d.)	20,41	18,91	25,37	17,55	14,23	25,7
% of employees who switch jobs* internally	2,98	2,49	2,32	2,98	2,71	2,32
(s.d.)	8,04	6,52	7,67	6,72	6,62	6,23
% of new jobs* filled internally	X	X	X	X	X	X
(s.d.)						

% of workers who have been at plant 3+ years	66,47	79,79	73,41	69,11	81,57	76,11
(s.d.)	23,92	18,88	25,38	21,17	16,03	22,26
Correlation (exit rate, average wage), observ = a plant	0,002	-0,045	-0,137	-0,005	-0,039	-0,079
Correlation(exit rate, average wage change), observ = a plant	0,01	-0,028	0,057	0,011	-0,042	0,035
Correlation(exit rate, s.d. of wage), observ = a plant	0,021	0,035	0,032	0,02	0,048	0,009
Correlation (entry rate, average wage), observ = a plant	-0,281	-0,253	-0,306	-0,264	-0,178	-0,268
Correlation(entry rate, average wage change), observ = a plant	0,095	0,127	0,069	0,14	0,046	0,083
Correlation(entry rate, s.d. of wage), observ = a plant	0,014	0,043	0,047	0,027	0,07	0,072

Note: All statistics are calculated at the plant level, except the first exit rate

Table 14: Mobility Panel C: low level jobs (weighted values)

	All plants (# plants)			Plants with 100+ employees (# plants)		
	1993	1995	2000	1993	1995	2000
Employees	33,94	31,85	28,05	70,85	65,36	62,28
(s.d.)	85,82	75,74	79,2	140,75	123,42	135,43
Number of occupations	15,27	15,14	15,87	24,72	24,55	26,29
(s.d.)	11,84	11,76	12,29	15,82	15,25	16,72
Number of levels (s.d.)	X	X	X	X	X	X
Employment growth	20,2	18,05	15,61	13,88	13,61	16,73
(s.d.)	23,61	22,41	30,85	16,24	15,64	20,59
Exit rate, *observ = person*	13,06	17,62	17,22	13,12	17,57	17,13
Exit rate	11,74	22,54	16,68	17,89	26,45	18,32
(s.d.)	62,66	53,94	21,74	106,35	78,98	19,96
Exit rate, top quartile of plant wages	19,92	19,72	21,98	37,04	20,4	25,87
(s.d.)	143,46	40,82	51,09	218,34	41,25	58,89
Exit rate, bottom quartile of plant wages	11,12	24,42	26,65	12,41	25,33	41,59
(s.d.)	16,93	44,56	53,95	14,48	49,11	104,81
Exit rate, top decile of plant wages	6,01	18,67	25,46	10,73	20,49	42,65
(s.d.)	15,92	26,63	64,03	23,34	30,83	78,65

Exit rate, bottom decile of plant wages	10,27	24,72	29,05	14,25	22,65	39,18
(s.d.)	12,84	27,56	36,19	18,75	46,8	30,24
Entry rate	20,07	18,27	18,34	13,84	14,04	17,44
(s.d.)	23,41	22,1	22,59	15,53	15,07	19,52
Entry rate, top quartile of plant wages	12,65	12,41	19,15	11,34	9,81	17,36
(s.d.)	21,49	21,4	29,91	17,69	13,54	24,81
Entry rate, bottom quartile of plant wages	23,08	23,85	18,84	17,19	17,09	23,2
(s.d.)	21,5	23,38	20,29	15,75	15,12	21,09
Entry rate, top decile of plant wages	6,01	7,68	16,6	8,87	9,05	15,11
(s.d.)	15,92	12,41	28,83	14,38	13,26	20,83
Entry rate, bottom decile of plant wages	26,79	26,26	25,83	20,81	19,06	32,76
(s.d.)	22,44	22,85	20,74	17,68	15,04	21,98
% of employees who switch jobs* internally	2,65	1,62	1,96	2,73	2,16	1,76
(s.d.)	10,71	5,77	9,34	6,65	6,26	6,33
% of new jobs* filled internally (s.d.)	X	X	X	X	X	X
% of workers who have been at plant 3+ years	56,81	73,54	67,18	46,4	79,13	72,64
(s.d.)	29,95	25,44	30,45	110,78	19,07	25,47
Correlation (exit rate, average wage), observ = a plant	0,023	-0,066	-0,058	0,062	-0,015	-0,072
Correlation(exit rate, average wage change), observ = a plant	-0,025	0,044	0,055	-0,014	0,03	-0,019
Correlation(exit rate, s.d. of wage), observ = a plant	0,133	0,046	0,094	0,219	0,146	0,009
Correlation (entry rate, average wage), observ = a plant	-0,291	-0,295	-0,272	-0,205	-0,123	-0,211
Correlation(entry rate, average wage change), observ = a plant	-0,008	-0,029	0,021	0,063	0,064	0,058
Correlation(entry rate, s.d. of wage), observ = a plant	0,068	-0,003	0,006	0,045	0,077	0,101

Note: All statistics are calculated at the plant level, except the first exit rate