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Severance Payments for Dismissed Employees Severance Payments for Dismissed Employees in Germany

by

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Key words Severance Payments; Dismissals; Plant closings, Dismissal Protection

JEL Classification Codes M51, M52, J65, J32, J53

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Abstract

This contribution investigates severance payments for dismissed employees in Germany. Particularly, the following questions are addressed: Who receives severance payments? By which characteristics is the level of severance payments determined? Is overcompensation to be considered a relevant issue? Hereby, individual and collective dismissals are distinguished. This is the first study on this issue using individual representative data – the German Socio-Economic Panel – and multivariate methods. The results indicate that rather women, persons with many years of tenure and working in big firms receive severance payments. There is a huge variance in the size of the payments, which can only partly be explained by tenure, the wage and citizenship. About one quarter of dismissed employees is better off in their following careers independent of having received a severance payment.

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1. Introduction

In 2000 the British Vodafone Group acquired the German Mannesmann AG, what resulted in a redundancy of Mannesmann CEO Klaus Esser, inter alia. However, the financial consequences for Klaus Esser were not too bad: he received a totalling severance payment of over € 30,000,000. This 'golden parachute' was approved by the board of directors and justified with Esser's success in increasing the shareholder value of the Mannesmann AG (see Financial Times Deutschland 2000).

Obviously, there are other rules to define whether ordinary employees other than top managers receive severance payments in the case of dismissals and how to fix their size. Apart from the above mentioned prominent case, astonishingly little is known about severance payments for individually or collectively dismissed employees in Germany. The legal framework is not very explicit with respect to this issue and there are only few and not very updated studies, which concentrate on decisions of labour courts and severance payments in connection with social plans in firms with mass layoffs (see Falke et al. 1981, Falke 1983, Hemmer 1997a).

The aim of this study is therefore to analyse the relevance of severance payments in Germany. Both, the probability and the size of severance payments are examined. We make use of the German Socio-Economic Panel (GSOEP), a large representative data set, which has not been consulted for this issue before.

This contribution does not focus on the *effects* of severance payments. See instead Burda (1992) for a theoretical analysis or Lazear (1990), Addison and Grosso (1996), Addison et al. (2000) and Hunt (2000) for empirical investigations of the effects on labour market outcomes. Kodrzycki (1998) and Pencavel (2001) examine the effect of severance pay on individual behaviour empirically.

Some contributions have already investigated the *size* of severance payments to dismissed employees on an aggregated level. Within a wider context, several contributions analyse adjustment costs – differentiated in hiring and firing costs. The results vary substantially among countries and industries (see e.g. Burda 1991). For instance, Del Boca and Rota (1998) estimate hiring costs of 2.0 to 2.6 months of labour costs and a huge range from 0.5 to 20 months of labour costs for firing costs in Italy. Hamermesh and Pfann (1996: 1280) and Hunt (2000: 181) provide brief overviews of the relevant literature. The few studies dealing with the size of individual severance payments in Germany are discussed in Section 2 below.

There are different theoretical economic approaches dealing with severance payments, which are associated with this empirical study to some extent.[1] Fabel (2002) analyses the effect of severance payments on the layoff decisions of firms and finds decreasing layoff rates for older employees if severance payments increase with seniority. Suedekum and Ruehmann (2003) focus on the effect of severance payments on the human capital accumulation of employed workers. In general, investments in firm-specific human capital are strengthened by severance payments. However, the penalty function of dismissals is weakened simultaneously. Goerke

[1] The general seminal work dates back to Oi (1962), who characterised labour as a quasi-fixed factor and examines – among other things – a rational order of dismissals at redundancies.

(2003) incorporates this point even more explicitly within an efficiency wage model assuming that severance payments in the case of collective dismissals are also given to shirkers. Galdon-Sanchez and Güell (2003) point out a double moral hazard problem in dismissal conflicts within an efficiency wage framework. If firing costs are higher in the case of redundancies compared to disciplinary dismissals, employers will always have an incentive to claim each dismissal as a disciplinary one. On the other hand, workers have always an incentive to claim unfair dismissal in order to receive a (higher) severance payment. If information problems occur for a court, wrong decisions lead to the situation that some redundant employees do not receive severance payments and some other fairly dismissed employees by disciplinary reasons do receive severance payments.

Other authors provide bargaining models, where employees and employers ex ante bargain about wages and the amount of severance payments. Hence, the determination of the size of severance payments is in the spotlight of these contributions. For example, Booth (1995) und Pita (1997) obtain a full insurance of the employees as a result. In this sense, full insurance means constant marginal utility of the employees over the states. Fabel (1996) even finds cases of efficient overcompensation of employees within his ex ante bargaining model with labour cost minimising firms.

Malo (2000: 270f) points out that there is considerable empirical evidence of ex-post bargaining about severance payments in most European countries as well. In this sense "ex post" means that negotiations about severance payments begin subsequent to the perception of a negative shock. He provides a model, which fitted especially the Spanish institutional framework of individual dismissals. However, the German case is represented by ex-post bargaining very often as well, because unions are responsible for wage bargaining industry wide and works councils rather than unions can help employees to receive substantial severance payments, when dismissals occur. In another paper Malo presents an ex-post (Nash-) bargaining model representing collective dismissals in continental Europe (see Malo 2001). One of the important results is again an overcompensation of the dismissed employees. Malo (2001: 84-86) and Fabel (1996: 592) try to find some evidence of overcompensation

that is in line with these theoretical considerations. Fabel argues on the basis of average severance payments in Germany and Malo gives a numerical example, using aggregated averages of severance payments and wages in Spain. A first direct empirical examination, using individual data – missing so far –, is given in this contribution (subsection 3.4).

At least the ex-ante bargaining models implicitly presume an *insurance function* of severance payments. Severance payments are supposed to act as insurance benefits against uncertain employment conditions. In this sense, severance payments can be characterised as breach penalties firms have to pay for breaking employment relationships (see Pita 1997). Hence, the size of the severance payments has to be bargained ex ante. Another possible function of severance payments is the *welfare function*. In this case, the underlying objective is the reduction of financial disadvantages caused by the dismissal. It is therefore clearly future based and ex post negotiations between employers and employees are necessary.[2] In the sense of such a welfare function, severance payments can only be pushed through by legal requirements or with employers having a sense of social responsibility. The latter possibility is usually neglected in economic models. Relevance of this welfare function might result in higher severance pay probabilities and sizes for persons faced by unemployment subsequent to their dismissals and individuals with children under age or other obligations to pay maintenance. The empirical relevance of the welfare function will be explicitly examined in this study.

The paper proceeds as follows: Section 2 presents the legal framework with respect to severance payments in Germany. Additionally, the results of earlier studies are summarised. Section 3 comprises the empirical study on severance payments for dismissed employees based on the German Socio-Economic Panel. We will respond in detail to the issues, who the beneficiaries of severance payments are, which characteristics determine their levels, and whether overcompensation is important. Individual and collective dismissals are kept separate throughout the study. Section 4 concludes.

[2] See Hemmer (1997a: 27-30) for a summary of different possible functions of severance payments.

2. Severance pay in Germany – legal framework and prior evidence

As mentioned above, German law neither lays down general severance payments in the case of individual dismissals nor minimum severance payments in the event of collective dismissals in Germany as opposed to other European countries like France, Spain or the UK.[3] Obviously, an empirical examination of the receipt and size of severance payments is particularly interesting for countries without explicit laws, which strictly define recipients and size of severance pay. In spite of the absence of mandatory regulations, severance payments in connection with dismissals can be observed in Germany as well. Different types of severance payments can be distinguished (see e.g. Inhoffen and Müller-Dahl 1981). The first type is based on the Protection Against Dismissal Act ("Kündigungsschutzgesetz"). Until December 2003 it was applicable for firms with more than five employees and employees with more than six month of tenure.[4] Severance payments can be the outcome of dismissal protection claims if ordinary dismissals are socially unjustified or extraordinary dismissals are causeless.[5] In these cases severance payments are arranged if one party makes the application to cancel the employment relationship (although the dismissal was socially not justified), because a further co-operation between the employer and the employee cannot be expected.

A court decision is not necessary for a severance payment. Frequently the parties come to an agreement with the help of a court without an official decision and in many cases employees and employers agree upon a certain amount of severance pay without using a court at all. They may anticipate the costs and the uncertain outcome of claims and are both better off – in terms of expected utility – with a mutual agreement. Additionally, many firms worry about a

[3] See Küchle (1990),the OECD (1999) and Bertola et al. (1999) for an international comparison of legal frameworks. See Eger (2002) for a more detailed description of the legal framework for dismissals in Germany compared to the USA.

[4] In December 2003 dismissal protection has been lowered for firms up to 10 employees. Since the empirical study of this contribution covers the years 1991 to 2002, it is not faced by this reform. However, from October 1996 to January 1999 the threshold of 10 employees did also exist.

[5] An ordinary dismissal has to be justified with a misconduct of the employee (e.g. repeated late arrivals), lack of capability (e.g. repeated or long term illness) or redundancies of the firm (§1 Protection Against Dismissal Act). An additional requirement for a socially justifiable dismissal is that there is no possibility to employ the worker on a different position or plant in the firm. Misconduct of the employees is the reason for the majority of cases (see Falke 1983: 19). See Kittner and Kohler (2000) for a detailed description and discussion of the German legal position in comparison to the USA. Additionally, Emerson (1988: 808-811) and the OECD (1999) provide a summary of international legal frameworks regarding individual and collective dismissals.

loss of reputation if conflicts concerning dismissals become public knowledge.[6] Actually, the share of dismissal protection claims with respect to all dismissals was only about eight percent at the beginning of the 1980s (see Falke 1983: 27).[7] This value increased up to 27 percent in 2001, when German labour courts decided on more than 250,000 dismissal protection claims. Thereby, 4 of 5 court decision are in favour of the employee (see Jahn and Schnabel 2003).

A different, second type of severance payment can occur in the context of operational changes in connection with mass dismissals and a social plan.[8] The German Works Constitution Act ("Betriebsverfassungsgesetz", §§ 112-113) defines that a social plan, as a result of the coordination of the interests of the management and the works council, shall allay the economic disadvantages of the dismissed employees, in particular earnings decreases. The German Work Constitution Act aims at firms with at least five employees. A social plan can be conducted with a minimum number of six dismissed employees.[9] Obviously, the function of a social plan for the firms is somewhat different. From the firms' point of view personnel costs are supposed to be reduced with the help of dismissals and dismissal protection, as well as the necessity of social plans, acts as a restriction of the firms' decision-making authority. Severance payments from dismissal protection claims or settlements can be credited against payments from social plans. Both types of severance payments are paid as a lump sum and not on a weekly or monthly basis for example. The entitlement to possible unemployment benefits is not affected by the severance pay in general.

The *size* of severance payments is not clearly determined by law, either. The Protection Against Dismissal Act denominates only maximum limits at the amount of 12 monthly wages in general and 15 or rather 18 monthly wages for older employees with many years of tenure.

[6] That is why an increasing number of firms authorise some kind of "dismissal consults", who teach managers how to dismiss employees in order to avoid conflicts when dismissals become necessary (see Schrep 2003).
[7] This fraction was somewhat higher, if the dismissals were justified with the behaviour or the person (0.1) than in cases in which the dismissals were justified with operational reasons (0.04).
[8] Heseler and Mückenberger (1999) provide a comprehensive overview of the management of redundancies in Germany.
[9] In detail, a social plan has to be conducted if 20 percent of the workforce or at least six employees are faced (firms with less than 60 employees), 20 percent or at least 37 affected employees (firms with less than 250 employees), 15 percent or at least 60 affected employees (firms with less than 500 employees) and 10 percent or at least 60 affected employees in firms with at least 500 employees.

But there is scope of discretion of the courts, which is endorsed by juridical commentaries on the law, in order to establish an "equitable" severance payment in every single case (see Ascheid et al. 2000: 631ff.). Hence, the size of severance payments should also be determined by future prospects next to past employment characteristics. Apart from court decisions, it is possible that employers and employees make a settlement, which can be coordinated with the help of a judge, though. In this case, an empirical formula, such as a severance payment to an amount of half a monthly wage per year of tenure, is argued to be well established. Characteristics next to tenure and the previous wage that can play a role in court decisions encompass the age[10], the amount of social adverseness, the economic situation of the firm, the expected or actual unemployment duration of the dismissed employees and maintenance obligations (see Dorndorf at al. 2001: 602-604).

The size of severance payments in the case of *collective* dismissals using social plans is not fixed either. Some kind of „severance pay formula" is usually used to calculate the individual payments for the affected employees. Frequently these payments are increasing with tenure, previous wage and age. But other individual characteristics may be relevant as well. Additionally, the jurisprudence indicates that big companies have to pay more on average because of higher financial opportunities (Inhoffen and Müller-Dahl 1981: 1474).

Only little is known about the size of individual severance payments in Germany up to now. On the basis of a firm sample Falke et al. (1981) find severance payments of DM 7,149 (€ 3,655) on average. But the amounts are very unevenly distributed with few very high payments. The median is about DM 2,700 (€ 1,380) in this early study. Data of labour courts decisions in Germany at the end of the seventies show that severance payments are arranged at DM 2,000 (€ 1,023) on average (median) at first instance (see Falke 1983). By dividing the severance payments by monthly wages (in DM) and tenure (in years) it is possible to calculate severance pay factors, which are slightly above 0.5 on average. This means that the labour courts adjudge half a monthly wage per year of tenure to dismissed workers.

[10] Usually, the amount of severance payments should increase with age. But it can also decrease for older employees, who attain mandatory retirement (65 years) in the nearer future.

In a more recent study, Hemmer (1997a) examines the level of severance payments in the context of social plans. The data contain over 100 firms, which are faced with a social plan. The financial burden of the firms with social plans account for 4% of personnel expenses or 1.3% of total revenue in 1995. The mean severance payment per worker within the social plans of his sample increased from DM 13,360 (€ 6,830) in 1985 to DM 19,900 (€ 10,175) in 1995 (see Hemmer 1997a: 113). Hemmer considers possible individual determinants like wages and tenure for the size of severance payments. Unfortunately, he is not able to analyse these features due to lack of data. The relevance of the different possible functions of severance payments has not been examined until now, neither. Remember that higher (probabilities of) severance payments are expected for persons with maintenance obligations and those faced by unemployment subsequent to their dismissal, if a welfare function of severance payments is empirically relevant.

3. Empirical Study

As it is shown in the previous section, only court decisions and the outcomes of social plans have been analysed in very few studies so far and additionally most of the data are somewhat outdated. Court decisions only account for a small fraction of dismissal protection claims (see Kittner and Kohler 2000: 27). Up to 90 percent of the cases end up with a mutual agreement between the employer and the employee without a court decision. Hence, most of the relevant cases of severance payments have not been analysed before. The study presented in this section will use an individual German data set and integrate all kind of severance payments.

There are hardly any comparable international studies either. To our knowledge, only one study analysed determinants of received severance payments and the amount of severance pay with individual data and multivariate methods so far. Kodrzycki (1998) matches a Massachusetts displaced workers data set with information on severance benefit plans of 15 employers with mass layoffs, which result in some 2,000 observations. She investigates that the probability of receiving a severance payment after a dismissal increases with job tenure,

tends to increase with age and is higher in firms of the manufacturing sector. The size of severance pay – measured in the number of weekly wages[11] – also increased with tenure as well as with former annual earnings, and is below average in the manufacturing sector (see Kodrzycki 1998: 67). The shortcoming of this study is obviously that the data are not representative and only employees of a few firms faced by collective dismissals are taken into account.

3.1 Data

This study is based on data from the German Socio-Economic Panel (GSOEP), a yearly representative sample survey of people living in Germany.[12] The sample of this study is restricted to persons, who were affected by an individual or collective dismissal (including plant closings) within the observation period 1991 to 2002. Information for the reason of a separation is only given in the GSOEP from 1991 on. The sample includes only individuals, who were full-time employees before the dismissal (blue and white collars). Thus, building the data set requires matching information of the individuals of two subsequent years. We have information about the severance payments and the employment status of the present years in addition to the information of the individuals' jobs in the previous year. It yields a sample size of 2,534 dismissed employees. In the years 1991 to 1998 and 2001 to 2002 the questionnaire of the GSOEP distinguishes between individual and collective dismissals. Hence, the observations of the years 1999 and 2000 are missing in each separated analysis, which lead to 1,452 persons faced by individual dismissals and 769 by collective dismissals in the data set. The fraction of the latter group decreases from 40 to 30 % during the observation period. A severance payment is received by 27 percent of all individuals in the sample, whereby this fraction is somewhat higher for collectively dismissed employees (0.33) than individually dismissed employees (0.26) (see Table 1 and 2). Hence, more than two of three

[11] The form of severance payments varies among employers in Massachusetts. Some are disbursed weekly and others as a lump sum (see Kodrzycki 1998: 44). Hence, the system differs slightly from severance payments in Germany, where generally a lump sum is paid.
[12] The data is available from the German Institute of Economic Research (DIW), Berlin.

dismissed employees in Germany have not received a severance payment until the date of the survey.[13]

This study has got the following objectives: First, the *receipt* of severance payments is examined. In a second step we analyse the subgroup of employees who received severance payments and ask for the determinants of their *size*. An integral part is the analysis of the relevance of a welfare function of severance payments. Additionally, we have a closer look on the variance of the payments and on the relevance of overcompensation.

In order to investigate these issues, we make use of several other variables of the GSOEP as well. At first, there are individual characteristics as sex, age, years of schooling, employment status, citizenship, tenure, marital status and children in the household, for example. Secondly, job based characteristics such as firm size and branch of industry are taken into account as well.

There are only insignificant differences in the descriptive statistics of the persons faced by individual and collective dismissals with respect to most of the variables (see Table 1). Two thirds in the sample are male; nearly half of them have at least one child under age in the household and about 0.6 are blue collar workers. More than 80% are German, and half of them are from East Germany. Considerable differences can be pointed out as to observed unemployment spells subsequent to the dismissal and for years of tenure. Individually dismissed employees are more likely to be faced by unemployment (0.57 as compared to 0.4 for collective dismissals).[14] Tenure is much higher for collectively dismissed persons (10 years compared to 6 years), even though the difference as to the average age is less than two years.

[13] However it is important to take into account that the sample include 10 percent of observations with tenure not greater than half a year. These are employees, who are dismissed during their probation period and are not covered by the Protection Against Dismissal Act. Excluding these observations has no qualitative effect on the following results.

[14] This difference is highly significant based on a T-Test. Hence, it supports the "lemon-story" of Gibbons and Katz (1991). They derive theoretically and find empirical support for the hypothesis that individually dismissed employees have lower productivity and have therefore worse future labour market outcomes in terms of unemployment spells and wages.

Table 1: Descriptive statistics of individual and collective dismissals

	WHOLE SAMPLE			INDIVIDUAL DISMISSALS			COLLECTIVE DISMISSALS		
	All	**Persons with severance payments**	**Persons without severance payments**	**All**	**Persons with severance payments**	**Persons without severance payments**	**All**	**Persons with severance payments**	**Persons without severance payments**
	(n=2534)	**(n=689)**	**(n=1845)**	**(n=1452)**	**(n=379)**	**(n=1073)**	**(n=769)**	**(n=253)**	**(n=516)**
Severance Payment	0.272	1	0	0.261	1	0	0.329	1	0
Sex (male)	0.673	0.617	0.694	0.674	0.588	0.704	0.651	0.628	0.663
Age (years)	39.48	42.19	38.46	38.90	41.92	37.84	40.77	42.34	39.99
Years of schooling	11.41	11.57	11.35	11.31	11.58	11.21	11.67	11.57	11.72
Marital status (single)	0.258	0.155	0.297	0.280	0.177	0.316	0.203	0.119	0.244
Child in household	0.422	0.415	0.425	0.419	0.422	0.418	0.446	0.431	0.453
Unemployed	0.521	0.496	0.530	0.565	0.562	0.566	0.402	0.387	0.409
Blue collar worker	0.616	0.557	0.638	0.624	0.528	0.658	0.572	0.593	0.562
Tenure (years)	7.30	12.16	5.49	6.19	11.12	4.46	9.94	13.98	7.96
Firm size:									
1 - 5 employees	0.116	0.025	0.150	0.112	0.016	0.145	0.111	0.036	0.147
6 - 19 employees	0.247	0.122	0.293	0.249	0.116	0.296	0.207	0.099	0.260
20 - 199 employees	0.347	0.351	0.345	0.343	0.338	0.345	0.356	0.375	0.347
200 - 1999 employees	0.189	0.328	0.138	0.191	0.351	0.134	0.212	0.316	0.161
≥2000 employees	0.101	0.174	0.074	0.105	0.179	0.079	0.114	0.174	0.085
Region (West Germany)	0.519	0.507	0.523	0.521	0.517	0.522	0.503	0.478	0.516
Citizenship (German)	0.836	0.830	0.838	0.820	0.815	0.822	0.850	0.846	0.853

3.2 Who receives severance payments?

As mentioned above, there are no mandatory severance payments in connection with dismissals in Germany and within this sample less than one third of the dismissed employees receive a severance payment. Hence, the question arises, whether there are any individual or job based determinants for the receipt of severance payments. A first possibility to analyse this issue is to look at the descriptive statistics of possible determinants, separated for persons with and without severance payments (see Table 1). Additionally, Table 2 presents the percentages of persons with severance payments in the corresponding subgroups of the sample.

Several variables are inspected for both, the answer of the questions who gets severance payments and which characteristics determine the size of severance payments (subsection 4.3). *Tenure*, *age* and the *previous wage* are mentioned in the Protection Against Dismissal Act and are well known factors of social plan practise as well. Hence, we can expect a positive correlation between these variables and severance payments. Additionally, *firm size* is obviously important, since the Protection Against Dismissal Act and the Works Constitution Act are not valid for very small firms. Apart from that, the economic situation of the firms regularly influences court decisions (see Dorndorf et al. 2001: 603), which may enlarge severance payments for huge firms, if they have better financial opportunities. If firms account for the individual situation of the dismissed employees, underage *children in the household* and an actual *unemployment status* following the dismissal should enlarge the probability and the size of severance payments. Significant effects of these variables would confirm the relevance of a welfare function of severance payments as discussed above. There might be also differences between *sex, citizenship* and *occupational status* due to some kind of statistical discrimination. If groups of employees differ in the information degree concerning dismissal protection – and therefore in the probability to file a suit –, firms can try to dismiss the uniformed groups (e.g. foreign employees) without (or with lower) severance

payments. Last but not least, *regional and industry distinctions* as well as the *year* of the dismissal are taken into account.

The univariate results indicate that a receipt of severance payments is less likely for males, younger employees, singles, employees with less schooling and tenure, blue collars and employees working in small firms. There are significant differences in the means of these variables between the persons with and without severance payments.[15] The most noticeable differences occur especially as to the firm size. Only 6 percent of dismissed workers in firms with not more than five employees, but nearly half in larger firms with more than 200 employees get severance payments. Additionally, differences between the corresponding percentages of men (0.25) and women (0.32) as well as of singles (0.16) and other marital status (0.31) are remarkably high as well (see Table 2). Table 1 also shows a considerable influence of tenure. The average tenure of persons with severance payment (12.2 years) comes up to more than twice the amount of persons without severance payments (5.5 years). No significant differences can be found as to the citizenship, the region of the workplace, the unemployment status subsequent to the dismissal and the fact that there are children in the household of the dismissed persons. The results for individual compared to collective dismissals are similar, but not identical. The most striking result for both groups is that the probability of severance payments increases with the firm size. However, the results for sex and blue collars not differ significantly for collective dismissals.

Additionally, there might be industry effects that explain differences in receiving severance payments. Table 3 shows that dismissals are more common in the sectors farming, manufacturing and construction. The share of persons in these industries within the sample is much higher than within the whole German workforce. In contrary, dismissals are not so widespread in the service industries. The fraction of persons with severance payments differs considerably between the industries as well. Especially people who are employed in the manufacturing industry have high probabilities of severance payments in the case of dismissals (0.39). Opposed to that, the fraction is very low for the sectors farming/forestry/fishery and construction (0.15 each).

[15] This is tested with a usual T-Test on identical averages.

Table 2: Percentage of persons with severance payments in subgroups

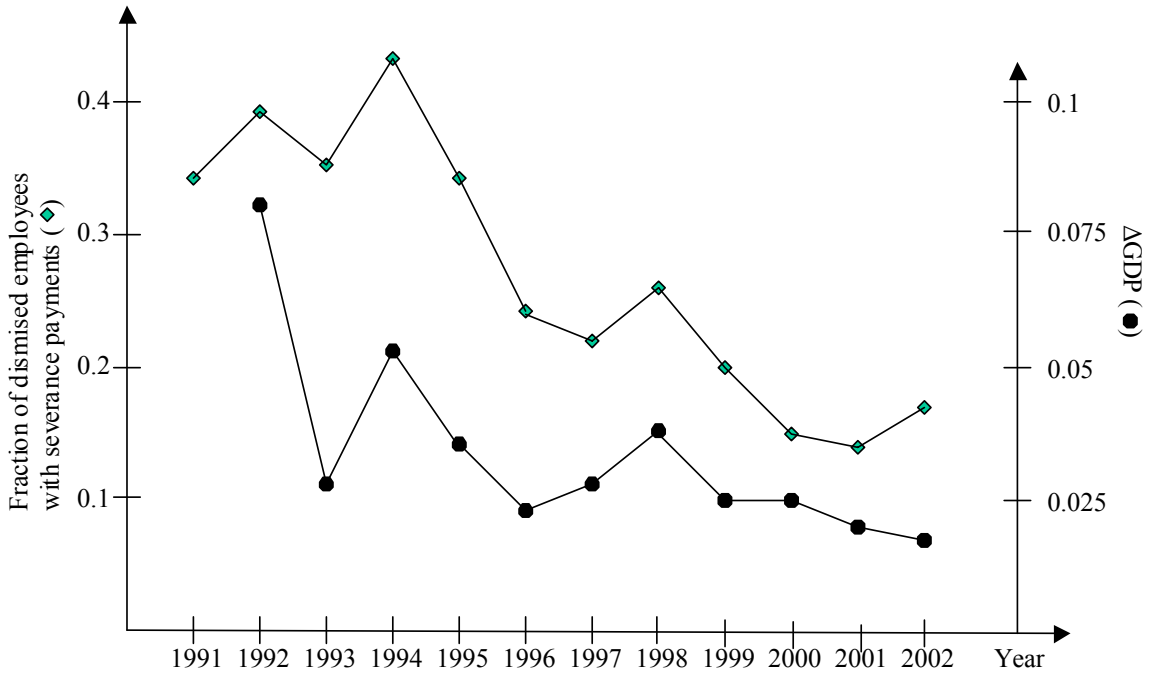
	Whole sample		Individual dismissals		Collective dismissals	
	Number of obser-vations	Percentage of persons with severance payments	Number of obser-vations	Percentage of persons with severance payments	Number of obser-vations	Percentage of persons with severance payments
Whole sample	2534	0.272	1452	0.261	769	0.329
Men	1705	0.249	978	0.228	501	0.317
Women	829	0.318	474	0.329	268	0.351
Single	655	0.163	406	0.165	156	0.192
Others	1879	0.310	1046	0.298	613	0.364
Child in household	1070	0.267	609	0.263	343	0.318
No child in household	1464	0.275	843	0.260	426	0.338
Unemployed	1319	0.259	820	0.260	309	0.317
Not unemployed	1215	0.286	632	0.263	460	0.337
Blue collars	1562	0.246	906	0.221	440	0.341
White collars	972	0.314	546	0.328	329	0.313
Firm size:						
1 - 5 employees	294	0.058	162	0.037	85	0.106
6 - 19 employees	625	0.134	362	0.122	159	0.157
20 - 199 employees	879	0.275	498	0.257	274	0.347
200 - 1999 employees	480	0.471	277	0.480	163	0.491
≥2000 employees	256	0.469	153	0.444	88	0.500
West Germany	1314	0.266	756	0.259	387	0.313
East Germany	1220	0.279	696	0.263	382	0.346
German	2118	0.270	1191	0.259	654	0.327
Foreigner	410	0.281	261	0.268	115	0.339

Table 3: Severance payments in different industries

	Share of employees in the whole German workforce in 2002 (N=27,2 mill.)	**Share of dismissed persons in the sample (n=2534)**	**Fraction of persons in industry in sample with severance payments (n=689)**
Farming, Forestry, Fishery	0.013	0.032	0.150
Manufacturing	0.232	0.364	0.393
Construction	0.058	0.208	0.146
Service industries	0.697	0.397	0.237
Σ	1	1	0.272

Another possible, and plausible, determinant that influences the probability of receiving severance payments is the general economic situation. Indeed, the correlation between the yearly fraction of dismissed persons, who received severance payments, and the growth rate of the German GDP is considerably high during the observation period 1991 to 1998 (0.736; p=0.010; see Figure 1 for an illustration and Table A in the appendix). The correlation is even more obvious for individual dismissals (0.775; p=0.008) than for collective dismissals (0.414; p=0.066). Hence, we observe a higher probability of severance payments in years of high economic growth. Explanations for this finding are speculative. From an economic point of view, firms could be forced by (the anticipation of) court decisions, which may take the firms' economic situation into account, when judges decide on severance payments in dismissal protection claims. Hereby, the firms' economic situation is highly correlated with the general economic trend. Ichino et al. (2003) report that local labour market conditions indeed influence court decisions at dismissal protection claims in Italy. This explanation cannot be separated from possible social motives of firms, whose ability to pay is higher in economically good years.

Figure 1: Fraction of dismissed persons with severance payments and ΔGDP in Germany (1991-2002)



Note: No value for ΔGDP in 1991 because of the German re-unification in 1990.

But the results up to this point might change, if we use multivariate tools and control for different possible determinants simultaneously. By making use of a binary probit approach we examine the determinants of receiving severance payments. The results are listed in Table 4. The dichotomous dependent variable has got a one in the case of persons with a severance payment and a zero otherwise.

The results confirm that firm size increases the probability of severance payments considerably. Hence, especially small firms with less than six employees, which are not faced by the Protection Against Dismissal Act, do not compensate dismissed persons. Unfortunately, it is not possible to control for the existence of works councils in the firms of the dismissed employees. Partly, the firm size effect might rather be a works council's effect, since larger firms are more probable to have a works council and works councils act towards severance payments in negotiations with the management.

Additionally, the probability of severance payments increases with tenure and is significantly higher for women. The positive effect of tenure is in line with anticipated (or actual) court decisions. The longer the relationship endures the more difficult is a dismissal to be socially justifiable. The higher probability of severance payments for women – particularly after individual dismissals – can at least partly be explained by the fact that dismissals caused by misconduct of the employees are more common among males (0.67 of all dismissals) compared to females (0.52, see Falke 1983: 24). It is a reasonable policy for firms to abstain from severance payments for persons dismissed because of misconduct in order to keep the threatening penalty of detected misconduct or shirking as high as possible.

The results for the industry dummies confirm the descriptive statistics. The probability for severance payments is particularly high for employees of the manufacturing sector and very low in the farming and construction sector. Possibly, differences between the power of the unions of the single industries are responsible for this result. There is information for individual union membership in the GSOEP in the years 1993 and 1998. Including a union

membership dummy in the regression for the sub sample of these years, no effect can be found. But it may also be the case that powerful unions cause higher severance probabilities in these industries for both members and non-members. The evidence is at least in line with this consideration. The net union density[16], defined as employed union members divided by all employees, is particularly high in the industries with a high fraction of severance payments. For example, the union density of the early 1990s amounts to 0.39 in chemistry, 0.43 in mining and even more in some other sub-sectors of manufacturing compared to only 0.17 in the construction sector (see Fitzenberger et al. 1999: 258f).

In regression (2) we take the consideration into account that the probability to receive a severance payment might not be independent from the expected amount of the payment. If a dismissed employee only expects to receive a marginal payment, he will probably not exert much effort to get it. Therefore, we include the expected estimated severance payment as an additional variable in the regression (see also regression 1 of Table 6 in the subsequent subsection). Indeed, the estimated amount of the payment is highly correlated with the probability to receive a payment. The results with respect to the other variables are not affected by this modified specification, though.

In spite of the very different legal situation for individual and collective dismissals, there are no significant differences with respect to the probability of payments (regression 3). However, we can observe considerable differences between the influencing factors of severance payments with individual and collective dismissals respectively (regression 4 and 5). For individually dismissed persons there are higher probabilities of severance payments for German citizens as compared to foreigners, for West German persons as compared to East Germans and for employees with many years of schooling. Possibly, employers anticipate that the probability of dismissal protection claims is lower for foreigners and less educated employees, what could make it rational from their point of view to pay severance payments

[16] Sometimes a gross union density, defined as all union members over all employees is mentioned as well. Since there are several non-employed union members like students, unemployed and retired persons, this measure overestimates the influence of the unions especially for shrinking industries like mining. Here, the gross union density amounts to 0.7.

for German rather than for foreign employees. The same explanation may hold for differences between West- and East Germany as well. Since employees (and employers) were not perfectly informed about dismissal protection of employees in the first years after the German re-unification in 1990, risks of dismissal protection claims might have been much lower for East German firms.

Age, marital status, children in the household and unemployment spells subsequent to the dismissal do not affect the severance pay probability significantly. Hence, neither the future job nor individual social criteria are important determinants of receiving severance pay. Apparently the employers do not care very much about the individual situations and future career opportunities of the dismissed employees. There hardly seems to be any relevance of a welfare function of severance payments as mentioned in the introduction above. The results for the year dummies are not listed. In principal the descriptive results are confirmed. The probability of severance payments differs across years cyclically.

So far we have pointed out the important determinants for the receipt of severance payments. The probability of severance payments depends on both individual characteristics, like in particular tenure but also sex and citizenship, and firm characteristics, like firm size and industry. But nothing is said about the size of severance payments until now. The amount of the payments might differ between different groups of employees as well, which would have important monetary consequences for the affected employees as well as for the economic situations of the firms. Thus, in the next section we analyse the subgroup of dismissed persons with severance payments in more detail. We want to examine the determinants of the size of severance payments. It seems interesting whether high probabilities of severance payments come along with high sizes or, in contrary, whether probability and size act as substitutes.

Table 4: Binary probit regressions on received severance payments

	Whole sample			Individual dismissals	Collective dismissals
	(1)	(2)	(3)	(4)	(5)
Sex (male)	-0.213***	-0.312***	-0.240***	-0.266***	-0.210*
	(3.08)	(4.29)	(3.32)	(2.86)	(1.73)
Age	-0.002	-0.005	-0.002	0.003	-0.011
	(0.50)	(1.14)	(0.59)	(0.64)	(1.54)
Years of Schooling	0.029*	0.010	0.029*	0.038*	0.009
	(1.85)	(0.61)	(1.76)	(1.76)	(0.33)
Marital status (single)	-0.240**	-0.232**	-0.223**	-0.102	-0.415**
	(2.50)	(2.41)	(2.16)	(0.78)	(2.35)
Child in household	0.024	0.005	0.059	0.125	-0.054
	(0.35)	(0.07)	(0.78)	(1.29)	(0.44)
Unemployed	0.067	0.088	0.098	0.088	0.091
	(1.11)	(1.44)	(1.50)	(1.06)	(0.83)
Blue collar worker	-0.059	0.013	-0.028	-0.175	0.187
	(0.74)	(0.16)	(0.28)	(1.63)	(1.39)
Tenure	0.040***	0.023***	0.042***	0.046***	0.038***
	(10.3)	(4.33)	(10.1)	(8.26)	(5.73)
Firm size (base: 20-199):					
1 - 5 employees	-1.024***	-0.974***	-1.087***	-1.284***	-0.872***
	(7.16)	(6.80)	(6.98)	(5.65)	(3.88)
6 - 19 employees	-0.351***	-0.327***	-0.416***	-0.459***	-0.381**
	(4.19)	(3.89)	(4.56)	(4.00)	(2.45)
200 - 1999 employees	0.302***	0.282***	0.308***	0.384***	0.166
	(3.83)	(3.56)	(3.71)	(3.60)	(1.22)
≥2000 employees	0.349***	0.304***	0.304***	0.265**	0.391**
	(3.59)	(3.10)	(3.00)	(2.02)	(2.34)
Industries (base: services):					
Farming/Forestry/Fishing	-0.597***	-0.568***	-0.585***	-0.921***	-0.138
	(2.97)	(2.83)	(2.84)	(3.18)	(0.44)
Manufacturing	0.242***	0.231***	0.222***	0.211**	0.280**
	(3.35)	(3.20)	(2.91)	(2.11)	(2.28)
Construction	-0.129	-0.179*	-0.172*	-0.076	-0.249
	(1.34)	(1.83)	(1.66)	(0.58)	(1.30)
Region (West Germany)	0.095	-0.069	0.113	0.194*	-0.006
	(1.30)	(0.85)	(1.46)	(1.93)	(0.05)
Citizenship (German)	0.187*	0.160*	0.211**	0.216*	0.195
	(1.95)	(1.66)	(2.08)	(1.70)	(1.12)
Collective Dismissal	___	___	-0.026	___	___
			(0.38)		
Estimated Severance Pay[$]	___	0.308***	____	___	___
		(4.67)			
Intercept	-1.491***	-3.412***	-1.539***	-1.985***	-0.724
	(4.76)	(6.58)	(4.67)	(4.70)	(1.30)
Year Dummies	Yes	Yes	Yes	Yes	Yes
Observations	2534	2534	2221	1452	769
Log-Likelihood	-1180.46	-1169.75	-1049.09	-631.21	-399.31
Pseudo R^2	0.204	0.211	0.209	0.243	0.180

Notes: Absolute t-statistics in parentheses. *, ** and *** indicate significance at the 0.10, 0.05 and 0.01 level. [$] : Estimated amount of severance pay in accordance with model 1 of Table 6 (= 6.519 + 0.0558 • *Tenure* + 0.00063 • *Monthly Gross Wage*.

3.3 By which characteristics is the size of severance payments determined?

As already mentioned above, there are some obvious determinants for the size of severance payments. Very often tenure and the wage are used to determine severance payments. But other characteristics might be important as well. For example higher severance payments for persons with children in the household or faced by unemployment may hint to a relevance of a welfare function of employers with social motives. Higher payments from big companies may occur due to higher ability to pay.

Table 5 indicates that the size of severance payments is higher for men, persons with no child in the household and other marital status than single, white collars, persons employed in big firms, and in West Germany. But we can observe higher former wages and partly higher tenure for these groups, too. Therefore, it is useful to calculate so called severance pay factors (see Hemmer 1997a: 146), which are defined by:

$$\text{Severance pay factor} = \frac{\text{Severance payment (in €)}}{\text{Gross monthly wage (in €)} \cdot \text{Tenure (in years)}}.$$

The wages and severance payments of all years are deflated with the German consumer price index with the base of the year 2002. A severance pay factor of 0.5 means a severance payment of half a monthly wage per year of tenure. Model (1) of Table 6 shows that tenure and the previous wage are indeed very important factors to determine the amount of severance payments. Looking at the mean severance pay factors of the variables, we find a different picture compared to the basic size of severance payments. Indeed, there are higher severance pay factors for white collars and in West Germany. These results can be explained with the worse economic situation of East-German firms and with a better relationship of white collared employees to the management respectively. There are no considerable differences for the other variables.

Table 5: Average amount of severance pay in subgroups

	Whole Sample			Collective Dismissals			Individual Dismissals		
	Obser-vations	Amount of severance pay	Severance pay factor	Obser-vations	Amount of severance pay	Severance pay factor	Obser-vations	Amount of severance pay	Severance pay factor
Whole sample	689	9243	0.480	253	10408	0.451	379	8617	0.503
Men	425	10933	0.473	159	11855	0.436	223	10555	0.508
Women	264	6522	0.492	94	7959	0.475	156	5847	0.495
Single	107	5999	0.535	30	7652	0.365	67	5398	0.637
Other marital status	582	9840	0.471	223	10778	0.462	312	9308	0.474
Child in household	286	7931	0.490	109	8595	0.460	160	7731	0.519
No child in household	403	10175	0.474	144	11780	0.443	219	9265	0.490
Unemployed	342	8316	0.454	98	9084	0.451	213	8120	0.462
Not unemployed	347	10157	0.506	155	11245	0.451	166	9255	0.554
Blue collars	384	7661	0.396	150	8204	0.366	200	7152	0.415
White collars	305	11235	0.587	103	13617	0.574	179	10254	0.600
Firm size:									
1 - 5 employees	17	5792	0.234	9	7897	0.250	6	4225	0.209
6 - 19 employees	84	4478	0.418	25	5643	0.426	44	4455	0.381
20 - 199 employees	242	6491	0.462	95	7168	0.415	128	5642	0.489
200 - 1999 employees	226	11648	0.464	80	15069	0.461	133	9803	0.479
≥2000 employees	120	15588	0.628	44	12148	0.565	68	14977	0.678
Industries:									
Farming/Forestry/Fishing	12	3502	0.245	7	4086	0.214	5	2685	0.287
Manufacturing	362	10104	0.446	148	11107	0.419	184	9053	0.465
Construction	77	9176	0.533	21	9992	0.371	45	9706	0.581
Service industries	238	8245	0.598	77	9751	0.554	145	7930	0.533
West Germany	349	12057	0.568	121	15238	0.585	196	10463	0.577
East Germany	340	6355	0.390	132	5980	0.328	183	6640	0.423
German	572	8982	0.472	214	10010	0.430	309	8552	0.501
Foreigner	117	10521	0.520	39	12588	0.564	70	8905	0.509

Note: Severance pay factor = amount of severance pay / (gross monthly wage * tenure).

Whereas the average amount of severance pay is higher for persons faced by collective dismissals (€ 10,400) compared with individual dismissals (€ 8,600), things change as to the average severance pay factor, which is higher for individual dismissals (0.5 versus 0.45).

Next to the comparison of the averages, the analysis of the distribution of severance payments is useful. We can observe a huge variance as to the amount of severance payments as well as to the severance pay factor (see Figure 2 and 3 as well as Table B and Figure A and B in the appendix). Nearly a quarter of severance payments do not exceed 2,000 €. However, more than 10 percent of severance payments in the sample come at least to € 20,000. This huge span is not only caused by individual differences in the previous wage and/or tenure.

The distribution of the severance pay factors reveals considerable inequality as well. 10 percent of the dismissed persons receive a factor of at least 0.92, whereas the bottom 10% of the distribution has to be content with a factor of at most 0.11. The inequality of severance pay factors is even higher for the subgroup of collectively dismissed employees. The corresponding values for the 10^{th} and the 90^{th} percentile are 0.09 and 0.96 respectively.

Figure 2: Distribution of severance payments

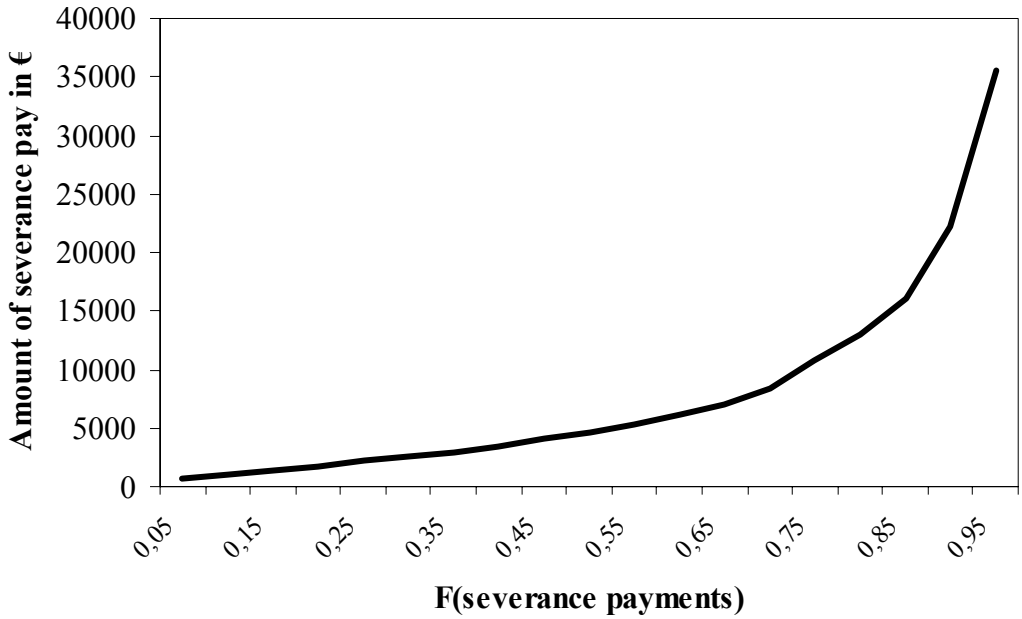
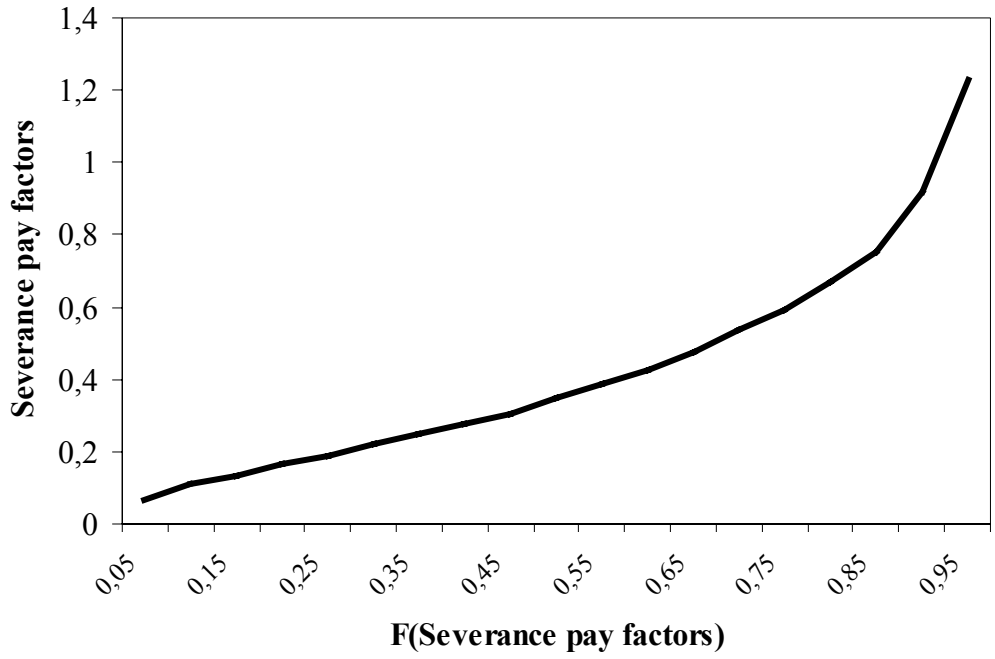


Figure 3: Distribution of severance pay factors



Note: F(·) = Distribution function of severance payments (figure 2) respectively severance pay factors (figure 3).

Despite the observed huge variance in the data, there are some significant determinants of the amount of severance pay, what is shown by the regressions. Model (1) of Table 6 points out the particular relevance of tenure and the previous wage. The full set of variables like in subsection 3.2 is used in addition to the gross monthly wage in the previous job within a simple OLS approach to explain the log of the amount of severance payments in model (2) of Table 6. Making use of the same variables again, a comparison to the results of subsection 3.2 is possible. It turns out that tenure, wage in the previous job, age, region and firm size are the significant factors within this specification. The other variables, as well as the year and industry dummies, have no significant effect. Although the coefficient children under age in the household has a positive sign, a significant "social bonus" cannot be confirmed in general. The coefficient for an unemployment spell subsequent to the dismissal is even negative. Hence, we cannot find clear empirical evidence for a welfare function of severance payments. The most important determinant for severance payments is the wage in the previous job. The average previous wage in the sample is € 1,987. Hence, the coefficient of 0.0006 means that on average a doubling of the wage doubles the severance payment as well.

Additionally, the amount of severance payments increases with the size of the firm. The received payments of employees from big firms with more than 2000 employees are 50 percent higher than in medium sized firms with 20 to 200 employees. This is particularly true for individual dismissals. The result for region differs considerably between the estimations for individual and collective dismissals as well (see models (4) and (5)). Significant differences between West- and East Germany cannot be observed in the case of individual dismissals. However, severance payments in the context of collective dismissals are 50 percent higher in West Germany as compared to East Germany. Subsequent to the German re-unification many East-German firms were bankrupt and did not have the financial opportunities to afford higher severance payments even if they would have wanted to.

Probably, the workers receiving severance payments are not a random selection of all dismissed workers. In order to take into account a possible selection bias a Heckman selection model (see Heckman 1976) is used, where the amount of severance payments and the probability to get a payment are estimated in one common approach. The results of the Probit (Selection) model coincide with the outcomes of the binary probit model in the previous subsection. It turns out that indeed a sample selection occurs. Nevertheless tenure and the previous wage are confirmed as the most important determinants, and the results for age remains significant as well. However, the results for firm size change and the coefficient for citizenship becomes significantly negative. Hence, taking the selection into account, the amount of severance payments is smaller for foreign dismissed employees.

Recapitulating, the average severance payment in the German sample amounts to € 9,200 in prizes of the year 2002. However, a huge variance can be observed, which can still be found, when we look at severance pay factors defined as the individual severance payment divided by the previous gross monthly wage and tenure. In fact, the previous wage and tenure are the most important determinants of the size of severance payments. But age and citizenship are relevant factors as well. In order to discuss the effects of severance payments for the individuals, the reemployment rates have already been mentioned. If an employee, who received a severance payment, finds a job immediately after her dismissal and possibly even increases her wage, she is better off compared to a further employment in her previous firm. This leads directly to the question of the relevance of overcompensation.

Table 6: Determinants of the amount of severance payments (Dependent variable: Ln(severance payment))

	Whole Sample						Individual Dismissals		Collective Dismissals		Heckman Selection Model			
	(1) OLS		(2) OLS		(3) OLS		(4) OLS		(5) OLS		Ln(severance pay)		Prob(severance pay)	
Sex (male)			-0.090	(1.22)	-0.094	(1.21)	-0.054	(0.61)	-0.118	(0.76)	0.073	(0.85)	-0.186***	(2.75)
Age			0.012***	(2.82)	0.013***	(2.84)	0.019***	(3.36)	0.004	(0.47)	0.013***	(2.64)	0.002	(0.45)
Years of Schooling			0.005	(0.30)	-0.010	(0.53)	-0.023	(1.11)	0.005	(0.13)	-0.023	(1.18)	0.035**	(2.24)
Marital status (single)			-0.163	(1.50)	-0.109	(0.94)	0.045	(0.33)	-0.363	(1.61)	0.026	(0.21)	-0.223**	(2.37)
Child in household			0.079	(1.04)	0.104	(1.30)	0.188*	(1.93)	0.062	(0.44)	0.052	(0.60)	0.016	(0.23)
Unemployed			-0.025	(0.40)	-0.016	(0.24)	0.002	(0.02)	0.018	(0.14)	-0.075	(1.02)	0.065	(1.09)
Blue collar worker			-0.066	(0.80)	-0.088	(1.01)	-0.097	(0.95)	-0.121	(0.74)	-0.031	(0.32)	-0.066	(0.85)
Tenure	0.0558***	(17.4)	0.046***	(11.5)	0.047***	(10.9)	0.045***	(8.93)	0.050***	(5.91)	0.024***	(4.74)	0.042***	(10.9)
Monthly Gross Wage	0.0006***	(19.6)	0.0005***	(11.4)	0.0005***	(10.7)	0.0005***	(9.36)	0.0005***	(4.97)	0.0006***	(12.5)	----	
Firm size (base: 20-199):														
1 - 5 employees			-0.509**	(2.43)	-0.473**	(2.08)	-0.256	(0.77)	-0.629*	(1.81)	0.258	(1.12)	-1.010***	(7.12)
6 - 19 employees			-0.158	(1.51)	-0.106	(0.93)	-0.010	(0.74)	-0.138	(0.62)	0.126	(1.10)	-0.353***	(4.27)
200 - 1999 employees			0.200***	(2.61)	0.226***	(2.78)	0.230**	(2.40)	0.219	(1.47)	-0.035	(0.38)	----	
≥2000 employees			0.471***	(5.08)	0.470***	(4.81)	0.599***	(5.15)	0.282	(1.59)	0.207*	(1.83)	0.261***	(3.36)
													0.309***	(3.25)
Industry (base: services):														
Farming/Forestry/Fishing			0.109	(0.45)	0.097	(0.39)	-0.077	(0.22)	0.212	(0.55)	0.506*	(1.90)	-0.623***	(3.12)
Manufacturing			0.069	(0.91)	0.046	(0.58)	0.070	(0.74)	0.031	(0.21)	-0.099	(1.13)	0.233***	(3.28)
Construction			-0.045	(0.40)	-0.037	(0.30)	0.052	(0.38)	-0.130	(0.51)	0.027	(0.22)	-0.142	(1.50)
Region (West Germany)			0.161*	(1.78)	0.153	(1.57)	-0.011	(0.10)	0.436**	(2.18)	0.034	(0.35)	0.075	(1.06)
Citizenship (German)			-0.126	(1.23)	-0.131	(1.21)	-0.192	(1.51)	0.037	(0.18)	-0.295**	(2.51)	0.151	(1.61)
Collective dismissal			----		0.025	(0.36)	----		----		----		----	
Intercept	6.519***	(79.2)	6.339***	(19.1)	6.328***	(18.0)	6.313***	(15.0)	6.385***	(9.88)	8.184***	(20.0)	-1.514***	(4.93)
Year dummies	No		Yes		Yes		Yes		Yes		Yes		Yes	
Observations	689		689		632		379		253		689		2534	
	$R^2_{adj.}$ = 0.494		$R^2_{adj.}$ = 0.543		$R^2_{adj.}$ = 0.534		$R^2_{adj.}$ = 0.580		$R^2_{adj.}$ = 0.456		ρ = -0.888*** (29.50) λ = -0.998*** (11.79)			

Notes: Absolute t-statistics in parentheses. *, ** and *** indicate significance at the 0.10, 0.05 and 0.01 level.

3.4 Is overcompensation to be considered a relevant issue?

In order to answer this question it is first of all necessary to define and create a measure for overcompensation. One can speak of an overcompensated dismissed employee, if the present value of future wages in addition to the severance payment exceeds the hypothetical present value of the wage profile in the dismissing firm (see e.g. Fabel 1996). This definition cannot be used with the data of the GSOEP. Therefore, we will speak of overcompensation, if a person received a severance payment *and* has a higher wage in her new job after the dismissal. Certainly, this simple measure is imperfect, because on the one hand overcompensation may also occur in cases with high severance payments and minor wage reductions or moderate durations of unemployment.[17] On the other hand, wage increases may be transitory. But because of the relevance of increasing wage profiles the latter argument does probably not fit for many cases. Hence, the applied proxy for overcompensation might be interpreted as a lower bound for actual overcompensation.

Indeed, a substantial fraction can be assigned to the category of overcompensated employees even with this definition. More than one fourth of dismissed persons with severance payments are reemployed and experience a nominal wage increase (see Table 7). This fraction drops by 4 points focussing on real wage increases. Based on the fraction of reemployed persons, even more than half get a higher wage in addition to the severance payment. Persons with severance payments are not worse off in their subsequent careers compared to dismissed employees without severance payments. Hence, once again a particular relevance of a welfare function of severance payments cannot be confirmed.

The reemployment rate is much higher in cases of collective dismissals. While more than 50 percent of the affected persons are reemployed in the next year, only slightly more than one third of individually dismissed employees have a new job. However, the distribution of wage

[17] Unemployed persons receive unemployment benefits amounting to 60 percent of their net monthly wage of the last year, if they have been employed subject to social insurance contribution at least 12 months within the last three years. This fraction increases to 0.67 if the person has at least one child. The duration of the claim – depending on the duration of previous employment and the age – was between 6 and 32 months during the observation period. Additionally, a reduced tax rate for severance payments can enlarge the relevance of overcompensation.

increases within the subgroup of reemployed persons with or without severance payments is very similar between individual and collective dismissals.

Table 7: Consequences of dismissals – reemployment rates and wage increases

	Whole sample	Individual dismissals	Collective dismissals
Number of observations (n)	2534	1452	769
Reemployed persons (share of n)	0.429	0.361	0.580
Persons with nominal wage increases (share of n)	0.261	0.213	0.374
Persons with real wage increases (share of n)	0.221	0.178	0.320
Persons with severance payments (sp)	689	379	253
Reemployed persons (share of sp)	0.419	0.359	0.526
Persons with real wage increases (share of sp)	0.270	0.223	0.338
Persons with wage increases (share of sp)	0.232	0.170	0.314

Overcompensated employees can be characterized by comparing the descriptive statistics of Table C (see Appendix) with those of not overcompensated employees. Apparently, overcompensated workers tend to be well educated white-collar workers, German citizens from East-Germany with no unemployment spell subsequent to their dismissal. To sum up, we can state that overcompensation is indeed a relevant phenomenon. Although in many cases severance payments are required to finance times of non-employment, a lot of persons are better off with their severance pay in addition to higher wages.

Finally, some hints due to shortcomings of the data have to be given. First, a legally required period of notice is usually part of the employment contract after a common six-month probation period. This period of notice starts with one month and is increasing with tenure up to seven months for employees with tenure of more than 20 years. Sometimes dismissed employees do not have to work the whole remaining time, but do get their wage until the expiration of the contract. Hence, this continued pay after dismissals without duty to work corresponds to severance payments. This effect cannot be captured with the data. Additionally, not every court decision may have been made by the time of the survey of the GSOEP. Although 80 percent of dismissal protection claims are finished within six months and almost all after twelve months (see Franke 1996: 100), some dismissal protection claims

were probably not concluded at the date of the particular survey.[18] In sum, slightly more than 27 percent of dismissed employees may benefit from severance payments and the size of the payments may be slightly underestimated as well. For a more detailed analysis it would be helpful to have additional information on the reason of each dismissal and on whether the employees took legal action.

4. Conclusion

In this empirical study we analysed severance payments for dismissed employees in Germany in the 1990s. In particular we responded to the questions: 1.) "Who gets severance payments?" 2.) "How much do recipients get?" and 3.) "Is overcompensation relevant?" It turned out that approximately one third of dismissed employees receive a severance payment from their former employers. Tenure and firm size are the most important determinants with respect to the receipt of a severance bonus. Additionally there are industry and business cycle effects, though. The size of severance payments is slightly higher for collectively (€ 10,400) than individually dismissed persons (€ 8,600). The most important determinants for the size are tenure and the previous wage. However, age and citizenship do matter as well. About one quarter of dismissed employees are better off in the future in the sense that they receive higher wages in addition to a severance bonus. Although law in Germany lays down a welfare function of severance payments, there is hardly any evidence for adequate empirical relevance.

The huge variances in the results are worth mentioning. Hence, there is enormous uncertainty for both, employees and employers about the bonuses or respectively the costs of dismissals at least since severance payments are not fixed in an ex ante bargaining. Due to the unspecified legal situation it seems to be beneficial for employees to insist on severance payments and threaten with a suit in order to increase the chance of a substantial severance

[18] Note that the survey is conducted at the mid of each year and the individuals provide information about the whole last calendar year.

payment.[19] Taking this behaviour into account, employers might be better off by fixing a (generous) amount of severance payment as an explicit part of the employment contract. This might even reduce total wage costs, because risk premiums of risk averse employees can be economised.

Focussing on collective dismissals it is stated by Hemmer (1997c: 130) that two of three firms wish the legal framework of social plans to be improved. Apart from that, Hemmer (1997b: 102) points out that firms more and more often make use of alternative procedures of the adaptation of staffing levels instead of dismissals, such as early retirement plans, training programs, assistance to become self-employed, outplacement and so on.

There is much discussion about modifications of the German severance pay system. Some authors propose a more explicit orientation of the size of severance payments on the economic situation of the dismissed employees, which is in line with the German Work Constitution Act (§112). In detail, Hemmer (1997c: 132f) suggests that the severance payment should increase with future employment status. This might be an improvement in terms of equity, but neglects harmful incentives for omitted job search.

An increasing number of politicians as well as researchers discuss the possibility of introducing mandatory severance payments for dismissed employees in Germany for macroeconomic reasons as well (see e.g. IZA 2002, Jahn 2002, Handelsblatt 2003). It is often argued that the uncertain legal situation leads to a reduction of recruitments. Concrete suggestions include an annulment of dismissal protection within the first years of tenure in favour of a mandatory severance pay of e.g. one monthly wage per year of tenure. Intuitively, such a kind of modification of the legal situation concerning severance payments seems to be reasonable. However, Malo and Perez (2003) recently address the problem of moving from an unknown severance pay situation to a known severance pay one theoretically and find ambiguous effects on severance pay and expecting firing costs. The examination of this issue is an exciting task for further both empirical and theoretical research.

[19] This is an integral part of the theoretic model of Galdon-Sanchez and Güell (2003) as well.

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Appendix

Table A: Fraction of dismissed persons with severance payments and ΔGDP in the 1990s (corresponds to Figure 1)

Year	Fraction of dismissed persons, who received severance payments	ΔGDP
1991	0,343	---*
1992	0,386	0,074
1993	0,351	0,025
1994	0,433	0,049
1995	0,341	0,038
1996	0,239	0,018
1997	0,215	0,021
1998	0,255	0,031
1999	0,206	0,026
2000	0,145	0,026
2001	0,136	0,02
2002	0,177	0,018

Note: *: Value for ΔGDP is missing in 1991 because of the German re-unification in 1990.

Table B: Distribution of severance payments and severance pay factors (corresponds to Figure 2, 3, A and B)

	Amount of severance payment			**Severance pay factor**		
Percentile	Whole sample	Individual dismissals	Collective dismissals	Whole sample	Individual dismissals	Collective dismissals
0.1	1,089	1,105	1,077	0.108	0.119	0.087
0.2	1,764	1,764	1,842	0.165	0.183	0.133
0.3	2,582	2,396	2,774	0.219	0.242	0.176
0.4	3,348	3,218	3,859	0.276	0.302	0.252
0.5	4,663	4,356	5,155	0.347	0.375	0.292
0.6	6,140	5,881	6,755	0.428	0.449	0.396
0.7	8,446	7,982	9,247	0.534	0.543	0.534
0.8	12,947	11,762	14,860	0.667	0.688	0.642
0.9	22,190	19,365	27,854	0.917	0.917	0.955

Note: Severance pay factor = amount of severance pay / (gross monthly wage * tenure)

Figure A: Distribution of severance payments

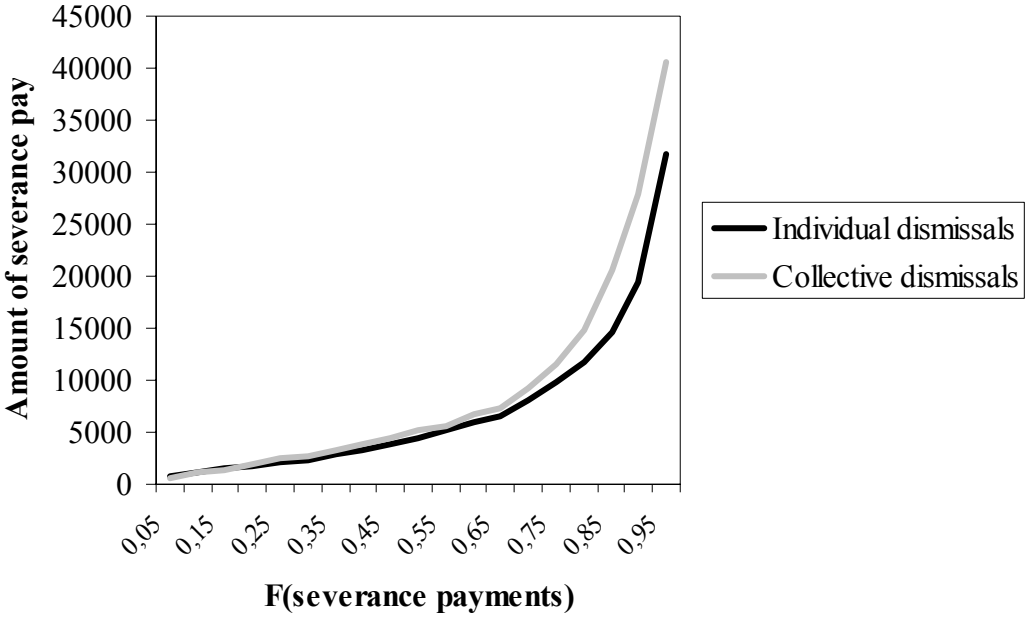
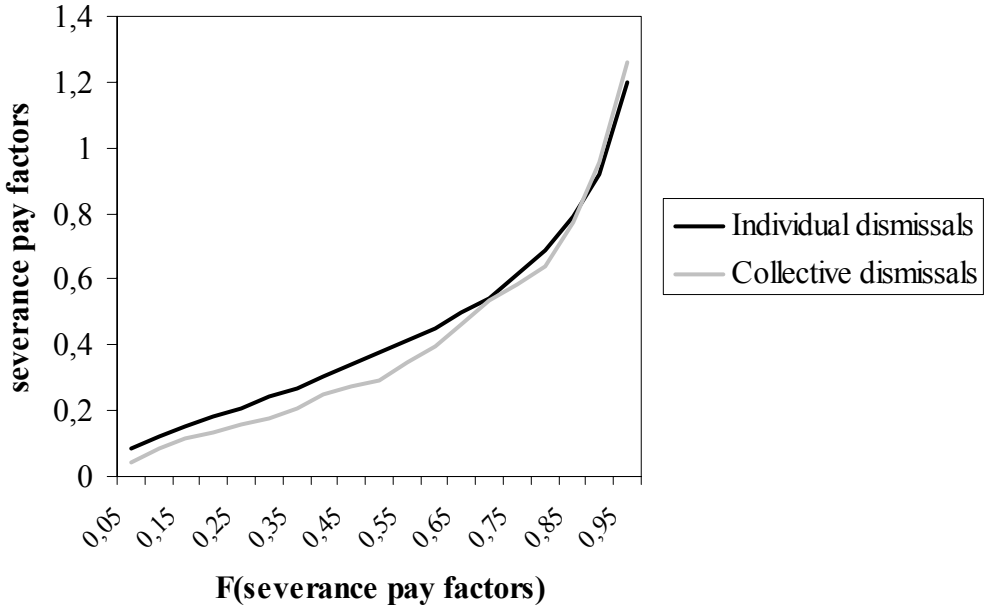


Figure B: Distribution of severance pay factors



Note: F(·) = Distribution function of severance payments (figure A) respectively severance pay factors (figure B).

Table C: Descriptive statistics and overcompensation

	All (n=2534)	Persons without severance payments (n=1845)	Persons with severance payments (n=689)	Persons with severance payments and wage increases (n=186)
Severance Payment	0.272	0	1	1
Sex (male)	0.673	0.694	0.617	0.667
Age (years)	39.48	38.46	42.19	39.12
Years of schooling	11.41	11.35	11.57	12.25
Marital status (single)	0.258	0.297	0.155	0.183
Child in household	0.422	0.425	0.415	0.505
Unemployed	0.521	0.530	0.496	0.231
Blue collar worker	0.616	0.638	0.557	0.473
Tenure (years)	7.303	5.488	12.16	10.25
Firm size:				
1 - 5 employees	0.116	0.150	0.005	0.043
6 - 19 employees	0.247	0.293	0.122	0.140
20 - 199 employees	0.347	0.345	0.351	0.398
200 - 1999 employees	0.189	0.138	0.328	0.269
≥2000 employees	0.101	0.074	0.174	0.151
Industries:				
Farming/Forestry/Fishing	0.032	0.037	0.017	0.038
Manufacturing	0.364	0.304	0.525	0.500
Construction	0.208	0.243	0.112	0.075
Service industries	0.397	0.416	0.345	0.387
Region (West Germany)	0.519	0.523	0.507	0.419
Citizenship (German)	0.836	0.838	0.830	0.930