Matthias Knuth

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Economic Restructuring, Worker Displacement, and Unemployment in West Germany

Data analysis and graphic presentation by Gernot Mühge
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Abstract

In our era of "shareholder value", news of redundancies in leading global companies is good news for the stock market. The coincidence of this kind of news with growing unemployment creates the impression of a direct and simple relationship between the two developments. In this paper, we use official data on employment and unemployment and exploit a number of surveys of establishments, individuals and, more specifically, unemployed persons in order to point out several paradoxes. We find that dismissals for economic reasons account for only a fairly small share of separations. Furthermore, the contracting sectors produce less job destruction, have less labour turnover, make less use of dismissals and produce below-average unemployment inflows.

We find also that among samples of unemployed persons the percentage of those who lost their last job due to a dismissal for economic reasons is rather high. We do not know, however, from which sectors these unemployed originated. From an analytical perspective, it must be concluded that the mechanisms by which structural change produces unemployment are still rather obscure. Event history analysis based on data sets of individuals is needed to shed more light on the unemployment process. From a policy perspective, however, the principal recommendation is that efforts should be concentrated on facilitating the re-employment process rather than slowing down the process of change.

Zusammenfassung

Nachrichten über den massiven Arbeitsplatzabbau führender Unternehmen werden oft im Zusammenhang mit Informationen über die wachsende Arbeitslosigkeit verbreitet. Dadurch entsteht der Eindruck, daß diese beiden Entwicklungen auf eine direkte und unkomplizierte Weise miteinander zusammenhängen. Bei näherer Betrachtung erweist sich dieser Eindruck jedoch als Irrtum.

In diesem Aufsatz nutzen wir die amtlichen Statistiken über Beschäftigung und Arbeitslosigkeit und werten Erhebungen über Betriebe, Einzelpersonen und hier insbesondere Arbeitslose aus, um einigen Widersprüchen auf die Spur zu kommen. So haben wir herausgefunden, daß Entlassungen aus wirtschaftlichen Gründen nur einen kleinen Teil aller Abgänge aus Beschäftigungsverhältnissen ausmachen. Darüber hinaus haben die Betriebe in schrumpfenden im Vergleich zu anderen Branchen weniger Arbeitsplatzabbau mit sich, eine geringe Fluktuation der Arbeitskräfte, machen weniger Gebrauch von Entlassungen und verursachen eine unterdurchschnittliche Zahl von Zugängen in die Arbeitslosigkeit.

Andererseits fanden wir heraus, daß in Befragungen unter Arbeitslosen der Anteil derjenigen, denen aus wirtschaftlichen Gründen gekündigt wurde, sehr hoch ist. Wir wissen allerdings nicht, aus welchen Sektoren diese Arbeitslosen stammen. Vom analytischen Standpunkt her müssen wir feststellen, daß die Mechanismen, mit denen der wirtschaftliche Strukturwandel Arbeitslosigkeit produziert, noch nicht ganz klar sind. Ereignisanalysen, die auf individuellen Erwerbsverläufen basieren, wären geeignet, mehr Licht in die Frage der Entstehung von Arbeitslosigkeit zu bringen. Eine grundsätzliche Empfehlung kann jedoch schon gegeben werden: Förderungen sollten sich auf Maßnahmen zur Wiedereingliederung konzentrieren statt zu versuchen, den Prozeß des Wandels der Beschäftigungsstruktur zu verzögern.

Table of Contents

The Toll of Change

1 Introduction

Unemployment has been persistent and rising in the EU since the mid-1970s. Job growth in the second half of the 1980s brought only temporary relief. In West Germany, in contrast to its neighbours, the boom caused by German unification extended this period of employment increase into the early 1990s. However, Western Germany's gain was Eastern Germany's loss. Within only four years, 40% of the jobs that had existed in East Germany in 1989 were destroyed (Knuth/Bosch 1994). Unemployment in the East has remained above 1 million since, reaching a new peak of almost 1.4 million in 1997.

After this damage had been done in the East, the West German job machine also started running backwards. From 1993 to 1996, Germany's top hundred companies alone shed 560,000 jobs.[1] In the West, 1.2 million jobs (5% of dependent employment) fell prey to what was then described as "globalisation" and "lack of competitiveness". Unemployment grew simultaneously by almost the same magnitude, and long-term unemployment mounted even faster. In a survey of works councils undertaken in the winter of 1997/1998, redundancy was found to have been the most frequent problem since 1994. Staff cuts had been a major concern in two thirds of the establishments whose works councils responded (WSI-Projektgruppe 1998).

Facts like these appear to be interrelated in quite an obvious way. At first sight, they suggest something like the following chain of reasoning:

(1) Decline of employment at macro level results from workforce reductions at micro level.

(2) Major job losses at establishment level will be brought about, in most cases, by dismissals.

(3) Workers dismissed for economic reasons will, in many instances, become unemployed.

(4) In times of declining employment, with job seekers outnumbering job vacancies and a level of unemployment which is already very high, the prospects of displaced workers finding a new job will be very bleak.

(5) Individual unemployment which has resulted from employers' negative selection is very likely to petrify into long-term unemployment.

(6) Long-term unemployment entails lasting exclusion from economically rewarding and socially validated activity. It is, therefore, a major cause of social exclusion.

(7) In short, workforce reductions are a major factor in social exclusion. [2]

In this paper, some of the above assumptions will be questioned or even challenged. Our examination will be restricted to former West Germany because the bulk of East German unemployment is still attributable to the collapse of the former economic and political system rather than the normal structural dynamics of capitalist development. Practical considerations suggest the same restriction because, for obvious reasons, long series of data for Germany as a whole are not available.

1 *Handelsblatt* 122/97: 11 of June 30, 1997.

2 "Redundancy as a factor in social exclusion" is the title of the project for which the first draft of this paper has been written.

The research project consists of a four-country-comparison on "Redundancy as a factor in social exclusion".[3] Even more specifically, and inspired by work done previously by the French co-ordinating team (Mallet et al. 1997), the notion of "dismissal for economic reasons" *(licenciement économique)* which is codified in French labour law and registered in French labour market statistics was hypothetically linked to social exclusion. The first stage of the project consisted of national comparisons of legal and institutional systems which regulate the dismissal process, reviews of existing research evidence in the four countries, and the collection of statistical evidence about the links between job destruction and long-term unemployment.

This paper is a revised and extended version of one of our contributions to an ongoing international project[4] on dismissals for economic reasons and ways to minimise the social risks associated with them. It may also be seen as a product of our project on "Changing Labour Markets" in which we have endeavoured to make the most of published statistics on employment and labour market dynamics and flows before venturing into event history analyses with samples of data on individual movements within the employment system.

Our analysis will begin by exploring the genesis, the degree of comprehensiveness, and some of the drawbacks of the employment data which are available in Germany (section 2). We will then describe the employment shifts between the sectors of economic activity and between the size categories of establishments (section 3). Net changes in employment levels at the meso level result from job creation and job destruction at the micro level of the establishment. This volatility of jobs, measured as job turnover (section 4), defines the minimum level of manpower mobility into and out of employment relationships in individual establishments, although labour turnover is actually much higher and counter-cyclical (section 5). Among the many ways in which employment relationships may be terminated, dismissals – and especially those effected for economic reasons – are of particular interest to us in this paper (section 6). Finally, we will attempt to shed some light on the movements between employment and unemployment (section 7). We conclude that the nexus between dismissals and unemployment is much more intricate than the starting hypotheses imply. Official statistics on employment and unemployment afford, at best, mere glimpses of this relationship. The "production of unemployment" and, in particular, long-term unemployment, through the dynamics of structural change is still a largely obscure process that is barely reflected in the "hard data" available (summary in section 8).

3 The French title is "Licenciement économique comme facteur d'exclusion sociale".

4 Participating countries are France, Germany, Italy, and Spain. This is the reason why, in this paper, some references are made to these countries. The project is funded by the TSER programme (Targeted Socio-Economic Research) of the European Commission, DG XII, during the years 1998 and 1999.

2 Characteristics of German employment statistics

2.1 Employment subject to social security contributions (ESS)

The most comprehensive statistics on employment in Germany are based on the employment returns submitted by establishments[5] to the social security authorities. The beginning as well as the termination of every employment relationship subject to social security contributions must be reported, and ongoing employment relationships are monitored at the end of each year (Bender et al. 1996). Since individuals keep their social security numbers throughout their lives, continuous employment careers can be followed, in principle, without gaps.[6] As we will see below (2.3), however, employment careers interrupted by unemployment or inactivity are more difficult to trace.

> For the sake of brevity, the abbreviation "**ESS**" for "**E**mployment subject to **S**ocial **S**ecurity contributions" will be used from here on.

The vast ESS database is administered and hosted by the Federal Employment Agency. The data have been recorded electronically since 1973, and they allow reliable computations starting from 1976 (Bender et al. 1996: 22). Since this base contains data relative to the persons employed as well as (since 1977) to some of the characteristics of the establishments employing them, these data can be used for types of analyses not possible with surveys of individuals or firms.

In addition to statistics on ESS from the Federal Employment Agency, there are also statistics provided by the Federal Bureau of Statistics, which include those categories of gainful employment which are not subject to social security contributions. These statistics on gainful employment in the broader sense produce only stock data; they do not allow flow analyses. This is why we restrict much of our analysis to ESS data, which cover about 80% of total gainful employment. The remaining categories of economic activity will be briefly examined in the next paragraph.

5 The establishment (plant, site) is the organisational and local unit in which goods or services are produced. In German legislation and statistics, the establishment is clearly distinguished from the enterprise, firm or corporation which is the legal entity responsible for the economic activities of one or more establishments.

6 The system registers the actual employment relationship of wage and salary earners, not the conditions of their contracts. A continuous succession of fixed-term contracts or the transformation of a fixed-term into a permanent contract will be registered as one ongoing employment relationship if there is no interruption. The system is not well equipped to deal with persons who hold two part-time jobs with two different employers at the same time (Bender et al. 1996: 17).

2.2 Statistics on gainful employment in the broader sense (economically active population)

Our analyses based on ESS data will omit the following categories of economic activity:

(1) The health care costs and pensions of *public officials* with the special status of *Beamte* (as well as those of judges and military personnel) are paid directly by their public employers. Their particular relationship with the state excludes the risk of becoming unemployed. No social security contributions are paid for them. Consequently such employment relationships are not registered in the social insurance system.[7]

(2) *Self-employed persons and unpaid family helpers* are not obliged to pay social security contributions.[8] They are, therefore, not included in ESS statistics.[9]

(3) Finally, employment relationships with a working time of no more than 15 hours per week and with monthly earnings below an annually adjusted threshold (630 DM ≈ 322 ECU in 1998) are exempt from social insurance contributions.[10] The same applies to student jobs involving fewer than 20 hours per week during term time as well as to seasonal jobs with fewer than 50 workdays per year if the person doing the job is not seeking more permanent employment. These *marginal temporary or part-time workers* are, therefore, not included in ESS statistics (Bender et al. 1996: 8).[11]

Table 1 illustrates the gap between ESS and gainful employment in the broader sense. In the context of our analysis of redundancy as a cause of unemployment, omitting the self-employed, their unpaid family helpers and *Beamte* is no serious problem, since these categories cannot be made redundant in the regular sense of the word. It is only the exclusion of marginal part-timers from ESS statistics that presents a substantial drawback. It should be noted, however, that 25% to 30% of marginal part-timers work in private households where "redundancy for economic reasons" can hardly occur in the sense which is the focus of our research.

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7 Besides *Beamte*, public authorities also employ wage and salary earners who must pay social security contributions and whose employment relationships are reported just like any other. Consequently, the sectoral category of "public administrations" does appear in ESS statistics, but these data do not cover *Beamte*.

8 Under certain conditions, they may voluntarily join the social pension and health insurance systems, but this has no effect on ESS statistics which counts obligatory contributors only.

9 This category includes "dependent self-employed" persons who, in collusion with or under pressure from their contractors, evade social insurance contributions by re-defining a dependent employment relationship as independent subcontracting. This group is estimated to amount to no more than 2% of dependent employment (Dietrich 1996; Kommission für Zukunftsfragen 1996).

10 Since 1990, employers have been obliged to report these employment relationships, notwithstanding their exemption from social insurance, for statistical purposes. However, the results of this procedure are inconclusive and contradictory to date (Weinkopf 1997). Estimates of marginal part-time workers have to rely on extrapolations from survey data which range from 2.6 to 4 million persons, with an even greater number of jobs. If the latter figure reported by DIW 1997 is accurate, official statistics on economic activity must be criticised for severely underestimating the number of marginal part-timers.

11 The German tax and social security system is still orientated very much towards the male bread-winner model of the traditional family. For married part-timers with a partner working full-time, it provides strong incentives not to exceed the threshold of marginality (Dingeldey 1998). Recent legislation, however, taking effect as of April 1, 1999 has changed the social security status of marginal part-timers.

Table 1: Gainful employment by category, percentages, West Germany

		1985	1990	1995
ESS: wage and salary earners subject to social security contributions		**80.0**	**78.4**	**79.3**
of these:	full-time	62.7	62.4	59.5
	part-time	10.8[12]	10.5	14.3
	Apprentices	6.5	5.5	5.5
gainful employment exempt from social security contributions				
of these:	marginal part-time workers	not available	3.2	3.1
	Beamte and military personnel	8.3	7.7	6.1
	self-employed persons and unpaid family members	11.8	10.8	11.3
	of these Agriculture	*3.7*	*2.6*	*2.1*
	other sectors	*8.1*	*8.2*	*9.2*
control sum/gainful employment		**100.1**	**100.1**	**99.8**

Source: Hoffmann/Walwei 1998, own calculations

2.3 ESS and unemployment statistics

The exemptions from social insurance contributions have (1) a direct as well as (2) an indirect effect on stock as well as flow data on unemployment:

(1) Persons who have not paid contributions will not receive unemployment benefits. Although the legal definition of the status of "unemployed" is independent of the eligibility for unemployment compensation, persons who are not eligible for any benefits may not see any need to register as unemployed. As long as they are out of work, they may disappear from statistics as "discouraged workers".

(2) Persons without work who are seeking no more than marginal part-time work (below the threshold of liability to social insurance contributions) are, by legal definition, not considered as job-seekers and are not, therefore, registered as unemployed.

12 Data for 1985 including marginal part-timers.

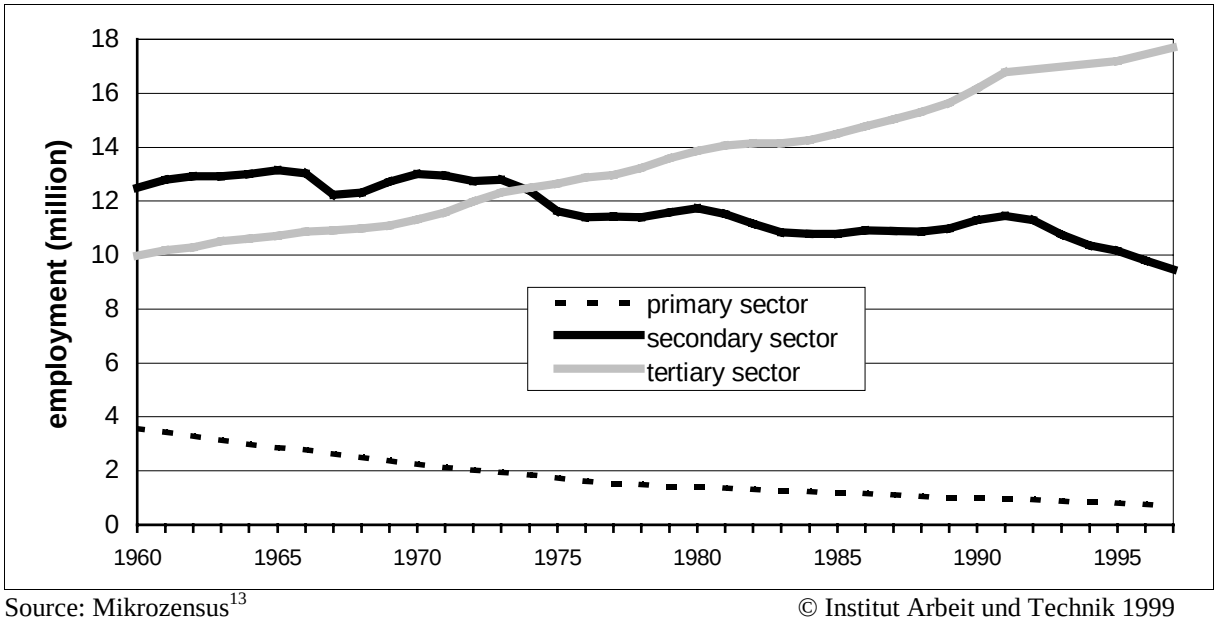
3 The changing structure of employment

As our analysis will show, the incidence of job loss, of dismissal as a specific means of separation, and of entries into unemployment after job loss differs widely according to sector and establishment size. National differences of the degree of "churning" in the employment system can, to a large extent, be explained by different national employment structures in terms of sector and size distribution. It seems appropriate, therefore, to take a brief look at the structural composition of German employment and its changes over time. We will first investigate the change of the employment structure by sector (3.1), and then examine the gradual rise of small and the diminishing importance of large establishments as employers (3.2).

3.1 Sectoral shifts

As in almost all developed and formerly "industrial" societies, services in Western Germany overtook manufacturing in terms of employment some time ago. As Fig. 1 illustrates, the crossing of the lines occurred in the mid-seventies.

Fig. 1: Gainful employment in the broader sense by sector, West Germany 1960 to 1997

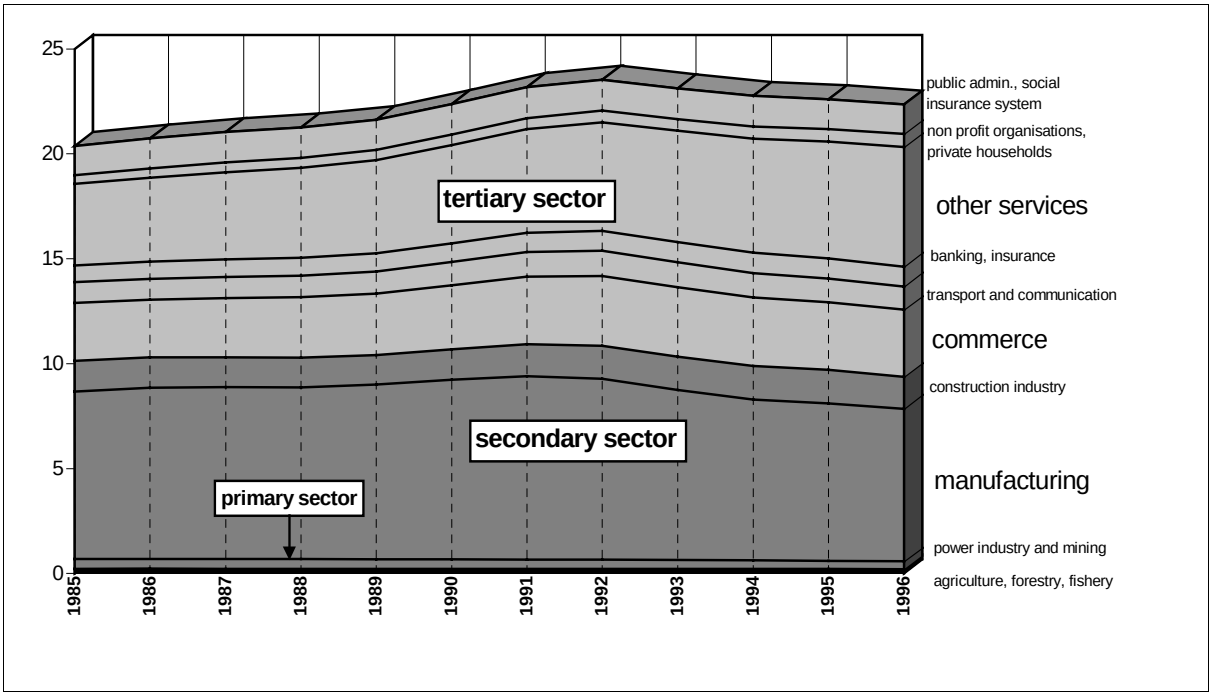


Source: Mikrozensus[13]

By international standards, however, West Germany's share of employment in the secondary sector is still rather high. Fig. 2 illustrates the distribution of employment subject to social security contributions, broken down by sub-sectors.

13 The *Mikrozensus* is a population survey which is also used to contribute to the European Labour Force Survey.

Fig. 2: ESS by major sub-sectors, West Germany, 1985 to 1996 (millions)



Source: ANBA-Jahreszahlen[14] © Institut Arbeit und Technik 1999

3.2 Employment distribution by establishment size

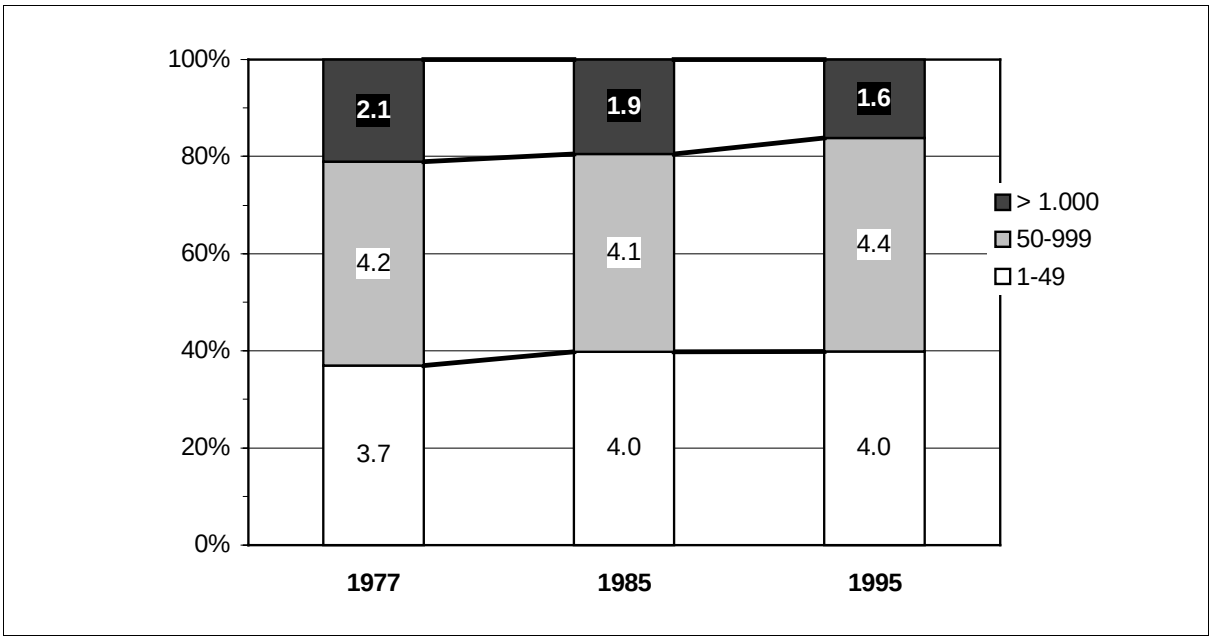
The sectoral changes in employment levels were accompanied by shifts in the distribution of employees between the size categories of establishments employing them. The percentage of employment relationships in "small" establishments with fewer than 50 employees grew between 1977 and 1985 but has almost stagnated since then (Fig. 3). The percentage of employment in "medium-sized" establishments with between 50 and just under 1,000 employees increased between 1985 and 1995, while the percentage in "very large" establishments with 1,000 and more employees declined considerably between 1985 and 1995 (and has continued to decline according to more recent figures). It can be assumed that the relative growth of the "medium-sized" category has been brought about, to a great extent, both by former very large establishments shrinking below the 1,000 threshold and by former small establishments surpassing an employment level of 50.

The distribution of employees by establishment sizes in 1995 is portrayed in a more differentiated way in Fig. 4. The vertical bars indicate the absolute numbers of ESS for each size category of establishment, while the ascendant line shows cumulated percentages of employment distribution. Slightly more than 50% of West Germany's wage and salary earners are employed in establishments with a workforce of fewer than 100, and slightly over 75% in establishments below 1,000 employees. In the classification chosen for this graph, the size category of 100 to 499 employees is the most important locus of employment, followed by establish-

14 Annual figures from the Official Bulletin of the Federal Employment Agency.

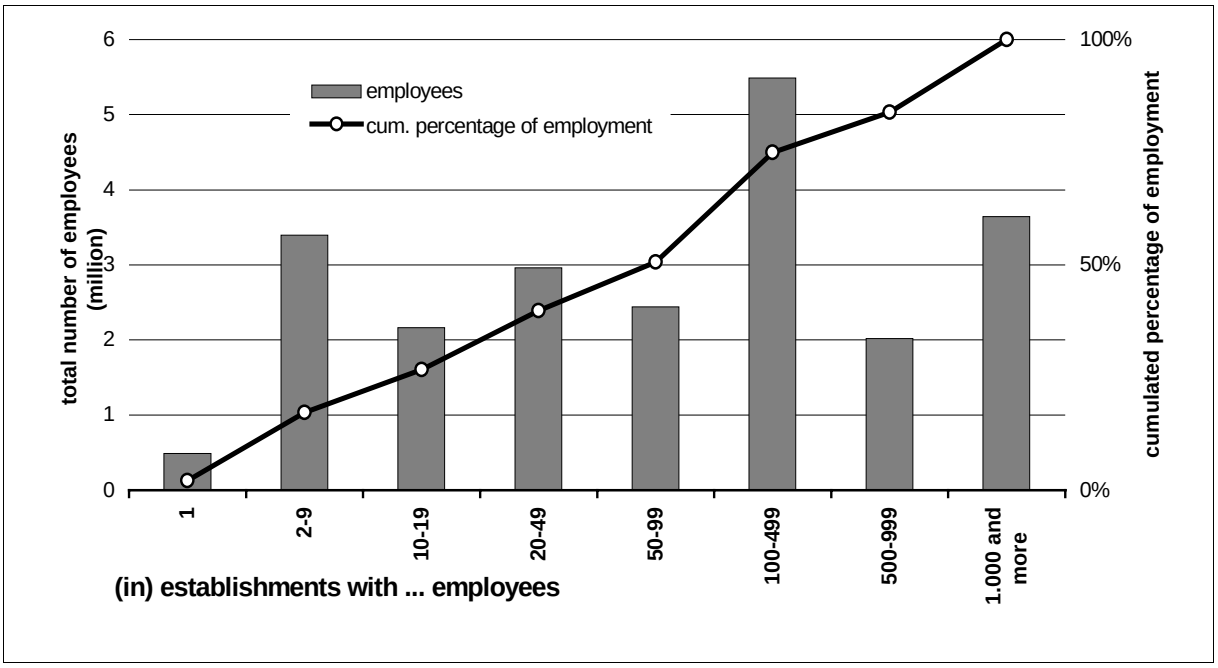
ments with 1,000 and more. By international standards, large establishments are still relatively important employers in Germany.

Fig. 3: Employment (ESS) by establishment size, West Germany, percentages, 1977 – 1985 – 1995



Source: Cramer 1987; iwd 15/97 for 1995

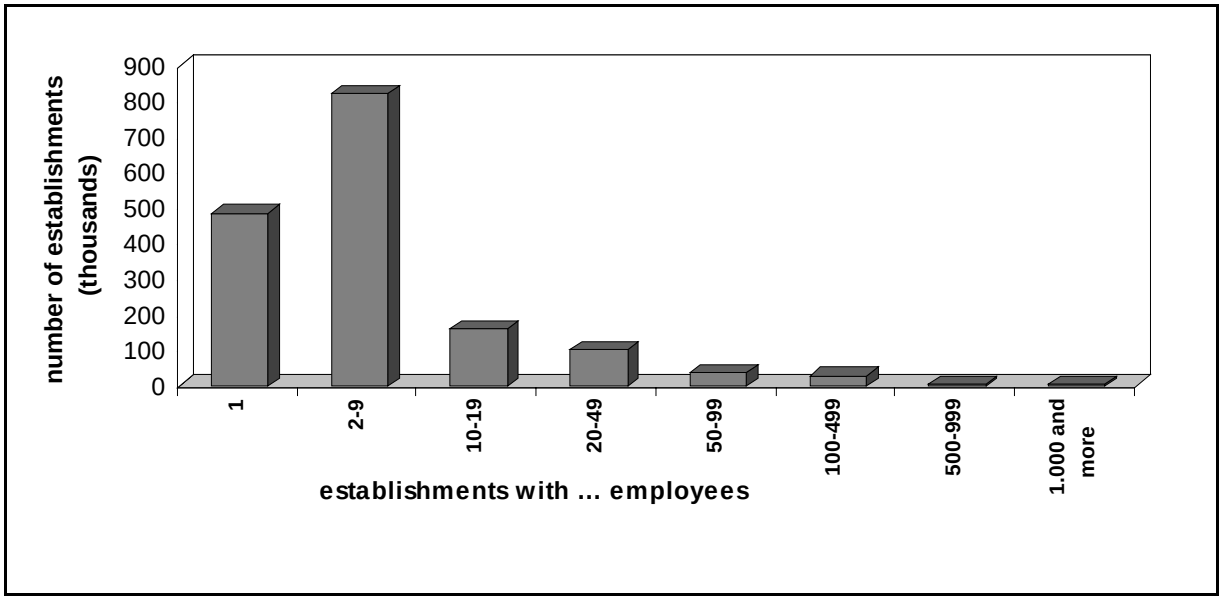
Fig. 4: Employment (ESS) by establishment size, West Germany, absolute figures (millions) and cumulated percentages, 1995



Source: iwd 15/97 © Institut Arbeit und Technik 1999

A contrasting picture is obtained, of course, if the same data are depicted as a distribution of establishments over size categories. Small establishments with fewer than 10 employees now come to the fore, whereas establishments with 500 and more become almost invisible (Fig. 5).

Fig. 5: Establishments by size category, West Germany, 1995



Source: IWD 15/97 © Institut Arbeit und Technik 1999

As in France and Italy, so in Germany it is mainly small establishments that are contributing to employment growth – or rather, since 1992, have continued to produce net employment growth without being able to offset the macro trend. Since 1993, the Establishment Panel[15] of the IAB[16] has shed more light on the distribution of job creation by establishment size. During the downswing which, from 1992 onwards, succeeded the West German "unification boom", only establishments in the 1-20 category reported net employment growth. Net reductions in employment began in the categories from 50 employees upward, and employment cuts became more marked in the larger size categories (Kühl 1995). As the downswing lost momentum, the pattern of employment records by establishment size became a bit more scattered, but the highest percentage of employment gains was still found in the 20-49 category (Bellmann/Kölling 1997: 96). As for employers' expectations, it was only in establishments with fewer than 50 employees that consecutive series of the panel produced positive employment prospects (Projektgruppe Betriebspanel 1995: 47; 1997: 51). Thus the importance of small establishments as employers seems to be growing, even though some of them will ultimately expand to a point where they are no longer so small. In general, the varied potential for job growth (or job destruction) of the different establishment sizes does not adequately show up in cross-sectional size distributions like those depicted in Fig. 3 because establishments move from one size category to another as they grow or shrink.

If smaller establishments and new service industries become increasingly important as employers, this should have consequences for average job stability. This hypothesis will be explored in the next section.

15 Cf. Projektgruppe Betriebspanel 1991.

16 *Institut für Arbeitsmarkt- und Berufsforschung*, the research institute of the Federal Employment Agency.

4 Economic turbulence: job turnover, its components and determinants

In Germany, unlike in France, dismissals are not recorded in official statistics. Because of this unsatisfactory situation we will in this section attempt to locate the risk of job loss for economic reasons by pursuing a more indirect approach. We will look for job turnover with its two components, job creation and job destruction, regarding the latter as an indicator for situations that might result in redundancy. First, we will explain the concept and measurement of job turnover (4.1), and then we will locate Germany's job turnover in an international comparative perspective (4.2). Germany's relatively low job turnover rate can largely be explained by the effects of establishment size and sector (4.3). This allows us to identify the locus of employment insecurity – which is not where net employment reductions occur (4.4).

4.1 The concept and measurement of job turnover

Aggregate negative employment changes in certain divisions or categories of establishment size indicate that employees must have separated from their jobs in one way or another. However, this gives only a very vague hint as to where redundancy for economic reasons might have occurred. A closer analysis reveals that, even in periods of net employment growth, there are establishments which reduce employment or even cease to exist, and vice versa. This is true for a national economy as well as for any subdivision of sectors, establishment size categories or regions. The level of "milling" and "churning" of employment at the level of individual establishments – and this is where the hiring and firing occurs – is always much higher than any aggregate net change.

Therefore, in order to identify instances of employment loss (which may or may not be brought about by redundancy for economic reasons) we have to extend our analysis to the level of individual establishments. The tool for such a task is job turnover analysis.[17] Since "jobs" or "posts" are not statistically observed in a direct way, the existence of an employment relationship (ESS) is assumed to signify the existence of a "job". The numerical change in employment relationships in a given establishment between two points of observation, usually a year apart, is regarded as the "loss" or "gain" of jobs in that particular establishment.[18]

While the measurement of **labour turnover** (see section 5) reflects the movements of individual workers into and out of establishments, job turnover measures only annual changes in the number of workers. In our example, establishment A could not have reduced its workforce by 10 without at least ten workers leaving. Labour turnover cannot be lower than job turnover, but it will normally be higher. In establishment A, perhaps 20 employees left during 1990 of whom 10 were replaced, resulting in the destruction of 10 jobs.

17 The methodological framework is explained in OECD 1987.

18 If establishment A has 50 employees on January 1, 1990 and 40 employees on January 1, 1991, it will be regarded as having lost 10 jobs in 1990 or to have a job destruction rate of 5%, no matter whether its employment level in July, 1990 was 45, 60 or 30. In other words, it makes no difference whether the development of employment between the two points of observation was unidirectional or cyclical; seasonal variations are not taken into account. – In a statistical test with firm data from the Netherlands it was shown that the measurement of job turnover described here comes sufficiently close to the results which are obtained by counting instances of job creation or destruction continuously over the course of the year (Hamermesh/Hassink/Ours 1996).

In any aggregate of establishments, there will be some that will have been set up[19] in the period observed, while others will have shut down; some will have created additional jobs, while others will have destroyed jobs. In order to compute an aggregate measure of this turbulence or "churning" for a given period, the absolute magnitudes of change in each individual establishment in the aggregate are added, irrespective of sign, and divided by the aggregate number of jobs at the beginning of the period. Departing from the formula used by the OECD, and following the example of Cramer/Koller 1988, we use [2 × employment] in the denominator for computing job turnover rates. If we conceive of employment turbulence as a process in which jobs "die" in establishment A to be "reborn" in establishment B, thus considering structural change as a "migration" of jobs from one sector to another, it becomes clear that, in measuring job turnover, each job is counted twice, once when it disappears and once when it reappears. Thus the stock of jobs against which these movements are measured has to be multiplied by two, which produces the following formula for the job turnover rate:

$$JTR = \frac{\sum \left| E_t - E_{t+1} \right|_i}{2 \sum E_{i,t}}$$

in which E_t and E_{t+1} are the employment levels in an individual establishment at the two points of observation and $_i$ is the running index of the establishments under observation. This formula allows direct comparisons with labour turnover, which is also computed with twice the initial stock in the denominator.[20]

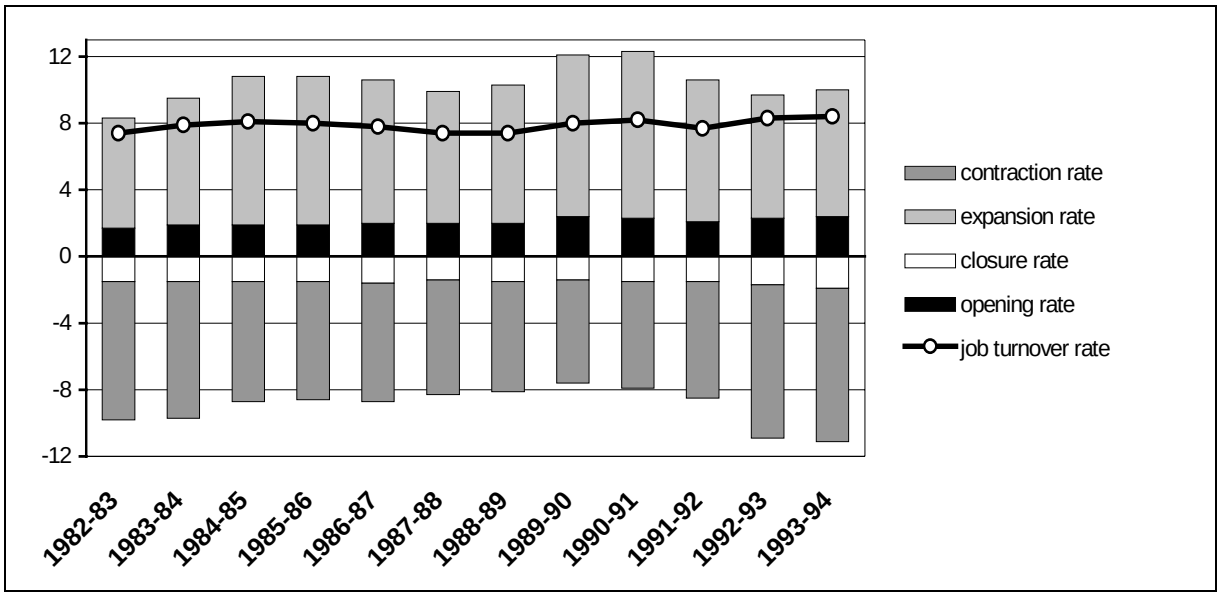
4.2 Job turnover in an international comparative perspective

The West German job turnover rate is fairly stable at around 8% (Fig. 6). Leaving aside the ups and downs of the business cycle and the resulting net employment changes, a job turnover rate of 8% means that every year one out of twelve jobs is "reallocated" from one establishment to another. This is the minimum of labour force reallocation since "jobs" (measured as a unit of employment subject to social security contributions) cannot disappear from an establishment or emerge in another establishment without the equivalent number of workers leaving or entering.

19 Establishments which do not employ at least one person covered by social insurance do not appear in the database. From the point of view of dependent employment, establishments are considered as "newly set up" in the year when they report their first hire, and they are regarded as "shut down" after they have not reported any ESS for two consecutive years. This is important for the interpretation of "opening" and "closure" rates in job turnover analyses based on ESS data.

20 In a more sophisticated version, the stock figures of jobs at the beginning and at the end of the year might be summed up in the denominator, thus calibrating the measurement by the average rather than the initial employment level of the period considered. For our purposes, this makes no difference.

Fig. 6: Job gains, job losses and the job turnover rate, West Germany, 1982 to 1994 (per cent of ESS)

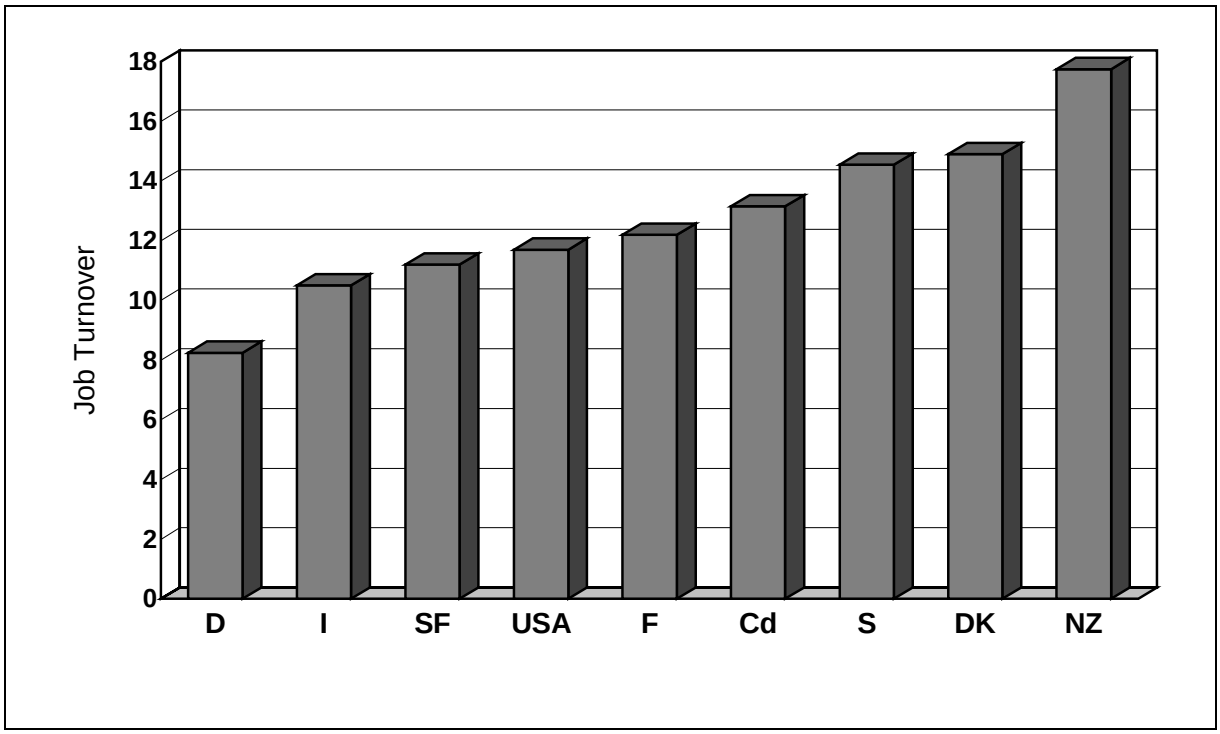


Source: Bellmann et al. 1996: 113.

The relative stability of national job turnover rates over time is not just a German phenomenon but also quite common among the countries for which such data are available. This makes it possible to conduct cross-national comparisons based on job turnover rates averaged over periods of several years. From such an international perspective (Fig. 7), job turnover appears to be very low in West Germany. In other words, the West German economy seems to be rather sluggish both in terms of job creation and job destruction.

Many authors have repeatedly advanced the view that this is due to "over-regulation", namely employment protection. An empirical study of dismissal procedures has clearly demonstrated, however, that German employment security regulations do not prevent dismissals (Falke et al. 1981). An econometric analysis of employment adjustment patterns (Kraft 1994) ranked the reactiveness of the German employment system to changes in output close to the U.K. and far above France. The OECD (1987, 1996) tends to explain the differences between national job turnover rates primarily in terms of the differing distributions of national workforces among the various sizes of establishments.

Fig. 7: Average job turnover rates of selected OECD countries, 1983 to 1991



Source: OECD 1996: 163.[21]

4.3 Job turnover by establishment size and sector

In a national comparison across different categories of establishment size, the effect of size can be clearly demonstrated (Table 2). Smaller establishments have a higher rate of job creation (new openings and expansions) as well as a higher rate of job destruction (closures and contractions). In other words, there is much more turbulence in their employment performance. The smallest category of German establishments with workforces of fewer than 20 has job turnover rates of the same order of magnitude as the national rates of Denmark or New Zealand (cf. Fig. 7). The low national job turnover rate of Germany can, to a great extent, be explained by the fact that large establishments still tend to dominate (cf. Fig. 3).

21 From the OECD tables, only those countries were selected for which longer series of data (mainly for the years 1983 through 1991) covering the entire economy were reported. The US data do not quite fulfil this requirement but were included nevertheless because of the importance of this reference. The figures were adjusted to the formula used for the German data (see previous footnote).

Table 2: Job turnover rates and their components by establishment size, West Germany, averages 1977 to 1985

	Establishment size (number of employees)			
	1 – 19	20 – 99	100 – 499	≥ 500
Expansion rate	11.7	5.8	3.9	2.6
Opening rate	6.6	2.6	1.4	0.8
Contraction rate	-8.7	-7.1	-5.3	-3.8
Closure rate	-5.6	-1.9	-1.0	-0.6
Job turnover rate	**16.3**	**8.7**	**5.8**	**3.9**

Source: Cramer/Koller 1988: 365.

The variation in job turnover rates by sector (Table 3) is almost as widespread as that by establishment size. It is higher in the tertiary sector than in the secondary. Within manufacturing, there seems to be a ranking according to the closeness to the consumer. In services, the internal differences are very marked between non-profit services (mainly public and social insurance administrations) and services to private customers.

Table 3: Job turnover rates by sectors and sub-sectors, averages 1982 to 1994, West Germany

sector/sub-sector	job turnover rate
primary sector	15.0
secondary sector	6.9
raw materials	5.2
investment goods	6.2
consumer goods	7.4
Foodstuffs	7.9
Construction	10.4
tertiary sector	8.6
distributive services	9.7
business services	9.2
services to private households	14.2
non-profit services	5.7
all sectors	**7.9**

Source: Cramer/Koller 1988:365

To the best of our knowledge, no statistical test has been applied to job turnover data with a view of separating out sectoral influences from those of establishment size. It appears, however, that both factors are closely linked to each other: establishments tend to be smaller in sectors where high numerical flexibility is a condition of survival.

4.4 Job turnover analysis: critique and conclusions

To some degree, the low job turnover rates of large establishments may appear to be a statistical artefact. When a larger establishment, in a given year, eliminates ten jobs on the assembly line and creates ten new jobs in product design, then this will be counted as a job turnover of zero. This is because the number of jobs in the establishment does not change – even though it is not very likely, in this case, that assembly workers will be transferred to the design department. If, however, product design has been sourced out to a different establishment, the same kind of shift will be counted as a loss of 10 jobs in establishment A and a gain of 10 jobs in establishment B. Relatively low job turnover rates may, then, reflect a relatively high level of functional integration within establishments which tend in consequence to be larger. In the light of recent changes in industrial philosophies, a relatively low level of job turnover may be associated with a relatively low level of outsourcing. And indeed, there is some evidence that outsourcing, in Germany, has by no means gone as far as the treatment of this issue in management journals and academic conferences might lead us to believe (DIW 1996; Flämig/Hesse 1998).

What appears at first sight to be a weakness of job turnover measurements does have some real meaning in our context of redundancy as a possible result of structural change. If job loss and job creation take place in the same enterprise, and, in contrast to the example given above, on the same functional and skills level, there is a good chance that this shift will be accomplished by an internal reassignment of workers, with fewer or no exchanges with the external labour market. If, on the other hand, job gains and losses take place in different enterprises, workers inevitably will have to move from one employer to another. In this case, there will be fewer mechanisms to assist such a move and tougher adverse selection. The reallocation will be mediated more through the market than through the organisation.[22]

Thus, in our attempt to locate the risk of becoming unemployed as a result of redundancy for economic reasons we arrive at a somewhat contradictory result:

- In an aggregate analysis of employment change, it is the large industrial establishments which reduce employment most substantially. So it would seem appropriate to look for redundancies there, concentrating on the sectors with a negative employment record.

- An analysis of job creation and destruction at the micro level of individual establishments leads us to the opposite conclusion: even though small establishments have the highest job creation rates and are expanding their share of total employment, it is also this category of establishments that has the highest rates of job destruction. The same may be said of the expanding private service sectors.

22 See Pries 1998 for a clarifying discussion of the mechanisms relevant to the allocation of labour. He does away with the misleading terminology of the internal labour "market" by establishing "organisation", "market", "profession", "social security system" and "clan" as distinct institutions which govern employment careers.

In the next step of our analysis, we will look at movements of people rather than of jobs in order to ascertain whether there are similar patterns of stability and turbulence.

5 Workforce mobility: labour turnover and job-to-job changes

As explained in 4.1 above, job turnover measurements reflect only the numerical variations in the number of employment relationships ("jobs") in individual establishments. Employee flows into or out of these individual establishments cannot be smaller in number and will usually be greater. Over and above job creation and destruction, there are many other reasons for beginning, terminating or interrupting employment relationships. On the employees' side, retirements, deaths, new entries into the labour force, parental leave[23], and moves to a more attractive job or to another area must be considered. Employers, for their part, may hire permanent or temporary replacements for workers who quit or take leave. Because of conflicts or poor performance, they may dismiss individuals whom they will then replace. Finally, seasonal effects may cause short-term variations in the workforce which are not captured in the annual observations of job turnover but are included in the measurement of worker flows.

In this section, we will first analyse the overall movements of wage and salary earners into and out of employment relationships using official ESS statistics for labour turnover analysis, differentiated by sector and establishment size (5.1). Breaking down labour turnover by its components and comparing it with employment levels, we will explore the relationship between workforce movements and net employment change (5.2). We will then present data on job-to-job mobility and occupational changes which display the same cyclical pattern (5.3). We conclude that employment restructuring which results in a net contraction of employment does not increase but stifles mobility (5.4).

5.1 Labour turnover rates by sector and by establishment size

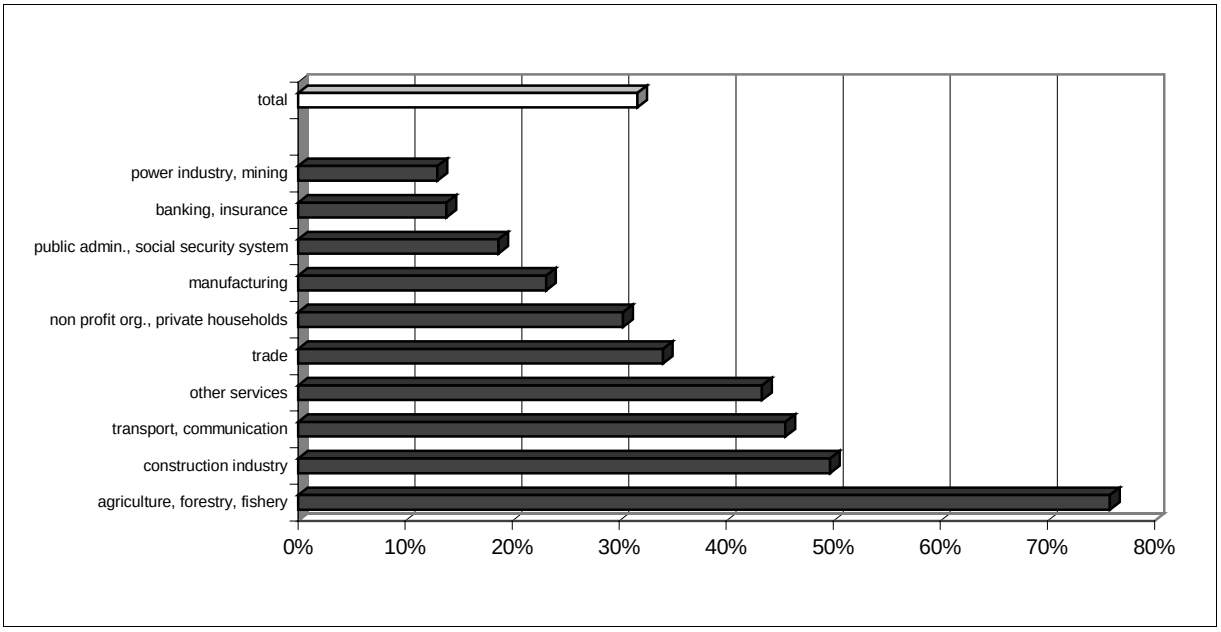
The overall rate of annual labour turnover in West Germany based on ESS data is around 30% (between 27% and 31%).[24] The trend is slightly downwards.[25] It is higher than in many other Western European countries (OECD 1994: 64) and above the EU average (Europäische Kommission 1998: 21).

23 In Germany, not only entries and separations but also interruptions of employment relationships with a guaranteed return option (for example: parental leave, military service, inability to work because of illness lasting more than six weeks) are recorded in employment statistics (ESS, cf. 2.1 above) as a special type of entry or exit respectively. These are included in labour turnover analysis just like other accessions or separations.

24 The annual labour turnover rate is computed as follows: $LTR = \frac{accessions + separations}{2 \times initial\ employment}$

25 This value is much higher than the labour turnover rate of 11% reported by employers for the years 1993 to 1995 in the IAB Establishment Panel (Bellmann et al. 1996: 12). The explanation for this difference is that managers questioned about labour turnover tend to neglect marginal and seasonal employment as well as employment interruptions of the types explained in footnote 23 above and their temporary replacements. – A representative survey of private sector establishments in 1987 obtained an annual labour turnover rate of 13% between May 1985 and April 1987 (Büchtemann 1991: 145).

Fig. 8: Average annual labour turnover rates by major sub-sectors, West Germany, 1985 to 1995



Source: Own calculations from official ESS data

A comparison of labour turnover rates in sub-sectors of the national economy (Fig. 8) reveals characteristic differences between sectors:

- Industries which are affected by natural seasonal rhythms (agriculture, forestry, fishing, and construction) have the highest rates of labour turnover. As we saw before, these are also the ones with the highest job turnover rates (cf. Table 3). Apart from construction, these industries are very small and not characteristic of the employment system at large (cf. Fig. 2).

- Some service industries have labour turnover rates that are above average and higher than those of manufacturing, whereas "mature" and currently contracting service industries – the public and social security administrations as well as banking and insurance – have low labour turnover rates that are both below average and also below that of manufacturing.

- This applies also to the power industry and to mining: although the level of employment is declining, the rate of workforce turnover is the lowest.

- Despite its decline, manufacturing, has below-average turnover rates.

Labour turnover rates by establishment size are only available as survey data from the IAB establishment panel for the years 1993 to 1995 (Bellmann et al. 1996: 12). The differences are not quite as distinct as those between sectors, and the pattern is clear and consistent with the pattern of job turnover: Labour turnover is highest in the smallest establishments and lowest in the largest with 5,000 and more employees.[26] Downsizing programmes in larger establish-

26 The source reports these data only as a graph (Bellman et al. 1996: 12) of which our text gives a verbal description.

ments do seem to leave their mark, however: during the three years 1993 to 1995, labour turnover had a tendency to increase in establishments with workforces of 200 and more, whereas it tended to decrease in smaller establishments.

Using the graphic information from Figures 8 and 2, we end up with a paradox quite similar to the one we derived from job turnover analysis:

- Leaving seasonal influences to one side, the highest rates of labour turnover are to be found in the growing "new" service sectors which are bundled together as "other services".

- Low labour turnover rates, on the other hand, seem to be associated with declining employment levels in an industry. It is definitely not the shrinking industries that produce the highest labour force mobility.

In the next section, a comparison of periods of employment expansion and compression will reveal the same pattern at macro level.

5.2 Labour turnover and net employment change at macro level

The idea of workers being pushed into the labour market by dismissals suggests that labour turnover increases at times when the downsizing programmes implemented by many establishments lead to a net reduction in total employment. However, as Fig. 9 illustrates, this is not true at all. By breaking down labour turnover into its two components – hirings and separations – the underlying mechanism is revealed.

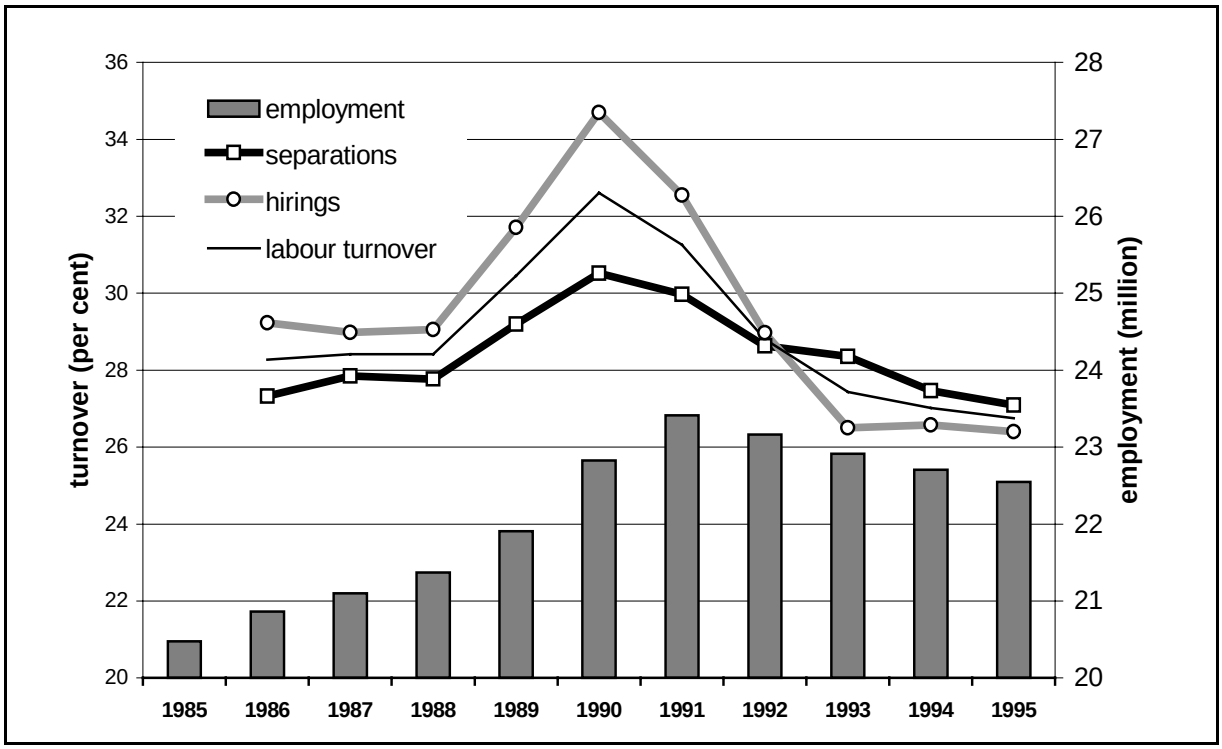
Net employment growth results when hirings outnumber separations, while a net reduction in employment results when separations outnumber hirings. Nevertheless, separation rates are higher in periods of employment growth than in periods of employment decline. During a depression, workers tend to hold on to their jobs if they can because they have no attractive alternatives. As a result, voluntary mobility collapses faster than involuntary mobility is forced upon workers, resulting in a decline of separations. By contrast, in periods of growing employment, incumbent workers leave their jobs to accept more favourable job offers. In this way they create vacancies which are then filled in a new round of hirings, some of which may again create new vacancies. The length of the hiring chain (Schettkat 1992 and 1996) varies with manpower demand, and it works as a multiplier which creates cyclical variations in labour turnover with amplitudes much greater than those of employment levels. It might also be said that mobility in and out of jobs is primarily a "pull", not a "push" phenomenon. The latter, i.e. dismissals or other kinds of separations initiated by employers, will not produce the same magnitude of labour turnover as attractive offers from new employers.[27] This will be true at macro as well as at sectoral level.[28] At micro level, however, allowance will have to me

27 In a comparison of job and regional mobility in the periods 1977 to 1979 and 1982 to 1984 respectively, Weisshuhn and Buechel found that the percentage of employees who stayed with the same employer during a two-year period rose from 81.6% to 86%. The authors attribute this change to the labour market situation: the unemployment rate during the second period was roughly twice as high as during the first period.

28 Average job tenure, the mirror image of job turnover, is consistently found to be counter-cyclical: as employment rises, new hires necessarily have short tenure; as employment falls, hires are cut, the last hires are more likely to be dismissed than those with long tenure, and, consequently, average tenure will rise (Burgess/Rees 1998).

made for the exceptions of bankruptcies, closures or massive staff cuts which will, inevitably, serve as "pushes" into the labour market.

Fig. 9: Labour turnover and its components[29], West Germany 1985 to 1995



Source: ANBA Jahreszahlen (1992 interpolated)

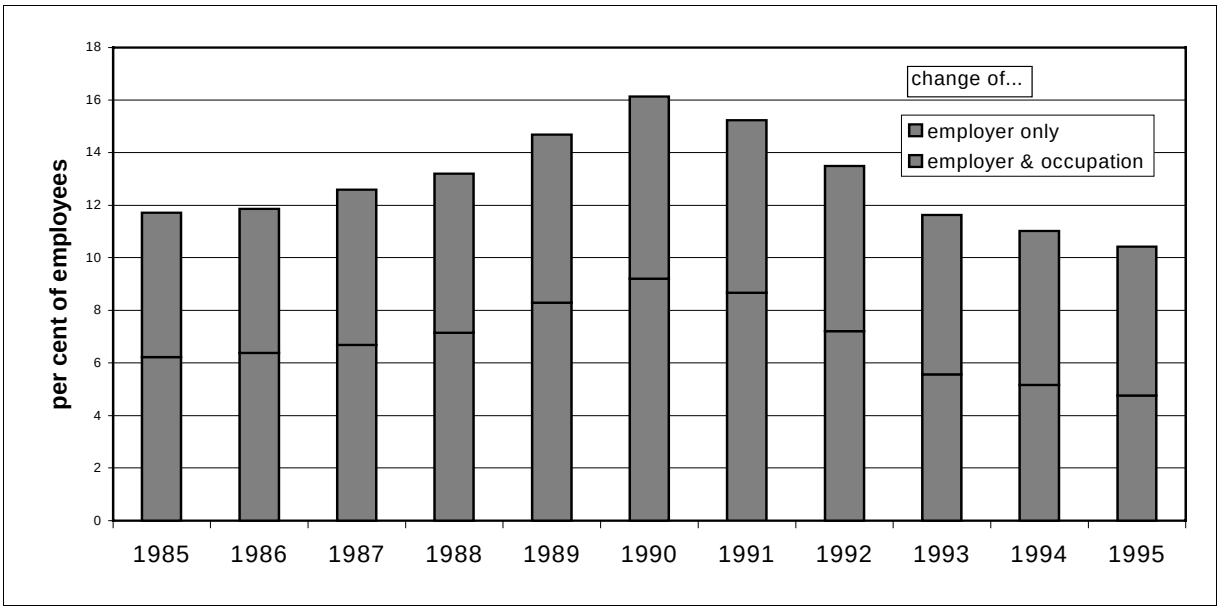
[29] Computed as a percentage of the employment level at the end of the preceding year.

5.3 Job-to-job mobility and changes of occupation

The labour turnover rate at macro level contains all accessions and separations into and out of employment, no matter whether these movements occur from job to job, from a job into unemployment or inactivity, from unemployment into a job or from inactivity into a job. A recent sample from ESS statistics, the IAB Employment Sample (cf. Bender/Hilzendegen 1995), makes it possible to distinguish between these different types of movements. Fig. 10 illustrates the direct job-to-job movements between 1985 and 1995, differentiating between changes of employer only or simultaneous changes of employer and occupation.[30] The basis for computing percentages is, in this case, not the average stock of employment relationships but the somewhat higher number of individuals (between 13 and 14%) who have been reported as employed at any time of the given year (Bender/Haas/Klose 1999).

Direct job-to-job changes involve between 10% and 16% of these persons "in the game". The amplitude of the cyclical variation in job-to-job changes is wider than that of gross labour turnover. Whereas the "employer only" changes are only slightly affected by the employment cycle, the incidence of simultaneous changes of employer and occupation is almost halved between 1990 and 1995. If we regard this period as one of accelerated structural change, such a decline in occupational mobility appears to be alarming since the decline seems to occur when mobility is most urgently needed.

Fig. 10: Annual job-to-job changes as percentages of persons employed for any period of the given year, West Germany, 1985 to 1995



Source: Bender/Haas/Klose 1999: 6.

30 Figures also given on changes of the occupation without changes of the employer are not reported here because employers' reports to the social security system about ongoing employment relationships are incomplete as for facts which are not relevant for contributions or claims.

5.4 Conclusions from the analysis of workforce mobility

Employment contraction does not increase workforce mobility, rather it has the opposite effect. In the current period of declining employment, occupational mobility seems to have been more heavily discouraged than mobility from one employer to the other. There is a decline not only in hirings – as would be expected – but also in separations. A similar pattern is revealed by cross-sectoral comparison: sub-sectors with contracting employment tend to have below-average labour turnover rates. The massive job cuts mentioned in the introduction do not show up at all in terms of increased individual movements in the employment system.

So how do these sectors contract and how do they shed their surplus labour?

6 Redundancies for economic reasons: juggling the data

Even with low labour turnover rates, the industrial dinosaurs with huge but declining workforces might be notorious for separations forced by employers. They might have no accessions and thus succeed in shrinking with relatively few separations, although most of them might be effected through dismissals or other forms of redundancy. How could they otherwise shed their surplus manpower?

In order to explore these questions, regional data on provisional notifications of mass redundancies will be used as a preliminary indication (6.1). We will then present data from surveys of employers (6.2) and unemployed persons (0) on the ways employment relationships were terminated. We will find that dismissals – and, more specifically, redundancies for economic reasons – are not a prominent cause of separations at large but much more endemic among those persons who subsequently turn up as unemployed. As in previous sections, the data on employer-induced separations will be broken down by sector and size of establishment (6.4). This will not produce a reliable estimate of the significance of redundancies. However, it will corroborate the impression that it is not the shrinking "old" industries which are most notorious for sacking their employees (0).

6.1 Provisional notifications on mass redundancies in North Rhine-Westphalia

Our first attempt to estimate the significance of dismissals for economic reasons will take notifications received by the employment offices of imminent mass redundancies as a clue. Not all dismissals for economic reasons will be mass dismissals, but all mass dismissals will have economic reasons.

Employers of establishments with more than 20 employees are obliged to give the local employment office advance notice of mass redundancies. These are defined as dismissals or other forms of separations actively induced by the employer summing up within a period of 30 days to:

Size category of the establishment	**number of dismissals**
21 – 59	>5 persons
60 – 499	>10% or >25 persons
500+	≥30 persons

If the employer fails to give advance notice, the dismissals will not take legal effect. Because of this sanction, establishments have an incentive to give precautionary notice beyond the actual number of dismissals that will eventually be implemented after negotiations with the works council. Since the notifications are valid for 90 days only, they will be renewed if the dismissals are protracted. The provisional character of these notifications means that they cannot be regarded as mass redundancies actually taking place.

For these reasons, the employment offices have usually refrained from statistically aggregating these notifications. In 1998, the Employment Office of North Rhine-Westphalia broke with this custom for the first time and collected the advance notice data from all the 33 regional employment offices under its supervision.

Table 4: Provisional notifications on mass redundancies in North Rhine-Westphalia, 1998

	notifications	dismissals provisioned
Total	**836**	**34,346**
Establishments with 21 – 249 employees	??	77%
Establishments with 250 – 499	??	10%
Establishments with 500+	??	13%
total per cent	100%	100%
of these: bankruptcies and closures	48%	51%

Source: Employment Office of North-Rhine-Westphalia 1999 (unpublished)

If it is assumed that the 34,000 dismissals provisionally announced to the employment offices were actually implemented this would amount to merely 0.6% of the employment relationships in the *Land* of North Rhine-Westphalia, while the labour turnover rate (which roughly equals the separation rate) was nearly 29%. In other words, mass dismissals would account for only 2% of separations. This figure is certainly not a very impressive clue as to the significance of dismissals for economic reasons. All that can be learnt from Table 4 is that establishments between 21 and 249 employees announce 77% of the mass redundancies,[31] which is far above their share of employment among the size categories above 20 employees. Again, it would seem, paradoxically, at first sight, that the incidence of job loss due to economic reasons is not the highest in those categories of establishments which experience the highest aggregate net employment reduction (see. 3.2 above).

31 Establishments with fewer than 20 employees do not have to notify the authorities about redundancies.

6.2 Modes of separation from employment relationships: the employers' view

Once again survey data from the IAB Establishment Panel will be used to examine how employment relationships were terminated in recent years. Employers on the panel were repeatedly questioned as to how employment relationships had been terminated in the preceding year (Table 5). Not surprisingly, quits by the employees themselves are the most important category. Dismissals by employers come second.

Unfortunately, in this survey, respondents were not questioned about the (economic or personal) motives for terminating an employment relationship. It can be assumed that among the "voluntary annulments" in Table 5 there is a substantial proportion of separations that were induced by employers offering severance payments or threatening the employee with dismissal for misconduct or poor performance.[32] Whereas the first alternative is likely to be associated with a downsizing programme for economic reasons, the second may be aimed at getting rid of an individual who is later replaced. The same ambiguity clouds the roughly 10% of separations caused by the termination of fixed-term contracts. There will be cases in which economic reasons prevented the prolongation of the contract or its conversion into a permanent one, and there will be other cases when the fixed-term contract was used as a trial period which the candidate was judged by the employer to have failed.

32 In cases of job loss that are either voluntary or the employee's fault, unemployment compensation may be suspended for a certain period as a penalty. Consequently, employees who have brought about their own dismissal may consent to a "voluntary" annulment under the pretence of redundancy which is generally overlooked by the employment offices.

Table 5: Types of separations, West Germany

	1993	**1994**	**1995**	**1996**	**1997**	**1998**
Quits	36.0	31.8	37.9	33.3	33.6	35.7
Retirement because of age or disability	9.0	10.3	11.0	10.5	10.6	11.1
Transfer: another establishment, the same enterprise	0.0[33]	3.6	3.6	3.8	4.3	4.5
Completion of apprenticeships[34]	4.0	4.2	3.8	5.6	3.4	4.8
Expiration of fixed-term contracts	9.0	7.6	9.8	10.7	10.4	10.0
Voluntary annulments	14.0	13.9	8.0	9.3	8.8	7.9
Dismissals	**24.0**	**24.7**	**22.2**	**22.5**	**24.0**	**22.4**
Other reasons	4.0	4.0	3.7	4.5	5.0	3.6
Total	*100*	*100*	*100*	*100*	*100*	*100*

Source: Bellmann et al. 1996:8 (IAB-Establishment Panel)
Verbund Sozialwissenschaftliche Technikberichterstattung 1999

6.3 How did unemployed persons lose their jobs? The victims' view

What stories do the unemployed tell about how they lost their last job? We now turn to three surveys of unemployed persons – or rather, in one case, of formerly unemployed individuals on the occasion of their re-employment – in our search for clues as to the importance of economic redundancy. When interpreting these data it must be borne in mind that in any sample of persons who are in the **state** of unemployment, disadvantaged persons will be over-represented relative to a sample of persons who are in the course of **entering** unemployment or, more particularly, about to **separate** from their current employment relationship (without necessarily becoming unemployed). Furthermore, the design of the surveys and the questionnaires used are not identical. Comparisons between the different years must be made with caution, and only the data from the nineties, which come from one source, may be interpreted as a time series.

33 It appears that this question was not asked in the first wave of the panel.
34 Without immediate rehiring of the former apprentice as a regular worker.

Table 6: Samples of unemployed persons formerly employed by type of termination of the last employment relationship (West Germany, per cent, various surveys)

	1977/78[35]	**1988**	**1994**	**1995**	**1996**
Quits	35	35	12.6	14.8	11.7
Voluntary annulments	10	not asked	10.5	10.6	5.6
Expiration of a fixed-term contract or completion of an apprenticeship	10	21	15.2	15.9	16.1
Dismissal	45	44	54.1	56.6	62.6
for economic reasons[36]	*30*	--	*46*	*47*	*52*
for personal reasons	*9*	--	*8*	*9*	*11*
Unknown	--	--	7.7	2.1	4.0
Total	100	100	100.1	100	100

Sources: 1977/78: Rosenbladt/Büchtemann 1980: 562
1988: Own calculations from Rosenbladt/Babel/Häbler 1990: 46.
1994 – 1996: Frister/Liljeberg/Winkler 1996: 42 and 44.

With these precautions in mind, the following observations can be made:

- In keeping with the patterns of labour turnover, quits by employees themselves are a much commoner way of becoming unemployed in periods of expanding employment (1977/78 and 1988) than in periods of contracting employment. People were more cautious and, therefore, less mobile during the downswing of the 1990s. In all periods, however, erroneous assumptions about labour market prospects or, possibly in some cases, the intention of using unemployment as a period of "time off" are a considerable source of unemployment.

- The significance of voluntary annulments appears to be remarkably stable except for 1996. Assuming that a large share of the persons unemployed in 1996 experienced their separation by voluntary annulment in 1995, this would be consistent with the pattern derived from the IAB establishment panel, which found a drop in voluntary annulments in 1995 (cf. Table 5).

- Fixed-term contracts were not as important in the 1970s as they became later, but they appear to be a more significant source of unemployment in periods of employment expansion like 1988, than in periods of employment contraction. Since fixed-term contracts in Germany are mostly used for new entrants, there will be fewer such contracts in periods with fewer hirings. This might explain the apparently paradoxical development.

35 This survey covered a sample of unemployed people who were re-employed, whereas the other surveys quoted covered unemployed people while they were unemployed.

36 These figures reported in separate tables have been re-computed as a sub-percentage of the share of dismissals. Due to missing answers, they do not add up to the whole percentage of dismissals.

- Dismissals by employers appear to be on the rise, according to unemployed respondents. Not only were they more important in the 1990s than at the two earlier points in time for which data are available, but they were also gaining importance in three consecutive years in the nineties – contrary to employers' answers in Table 5.

- Finally, dismissals for economic reasons seem to be more significant as a source of unemployment in the 1990s than they were in the 1970s.

In order directly to compare employers' answers with those of unemployed persons, the answers from three consecutive years have been averaged in Tables 5 and 6 and employers' answers recomputed to add up to 100%, excluding the two forms of separation which cannot, by definition, lead to unemployment, namely retirements and transfers to another establishment in the same company.

Table 7: Comparison of answers from employers and unemployed (tables 5 and 6), adjusted for retirements and transfers (per cent)

	Employers		**unemployed**
	Averages 1993 – 1998...	...recomputed to 100% without retirements and transfers	averages 1994 – 1996
Retirements	10.4		
Transfers	3.3		
Quits	34.7	40.2	13.0
Voluntary annulments	10.3	11.9	8.9
Expiration of fixed-term contract or completion of apprenticeship	13.9	16.1	15.7
Dismissal	23.3	27.0	57.8
for economic reasons	*??*	*??*	*48*
Unknown/other	4.1	4.8	4.6
Totals	100.0	100.0	100.0

For sources see tables 5 and 6

In the 1990s, persons remaining unemployed after a separation report roughly twice the proportion of dismissals by their last employer than employers did. There are three complementary explanations for this finding:

(1) Involuntary separations entail higher unemployment risks than voluntary separations. Therefore, victims of dismissals will be over-represented among those who become and remain unemployed after a separation.

(2) Persons with reduced "employability" are both more likely to be dismissed and to remain unemployed afterwards. Therefore, these persons will be over-represented in any cross-sectional sample of unemployed persons whose preceding status was employment.

(3) Employers and former employees tell different stories about the same event. Former employees may see themselves as "dismissed" even though they were coaxed into a voluntary annulment. Employers report relatively more voluntary annulments than the unemployed respondents.

Unfortunately, we have no answers from employers concerning their reasons for dismissals. According to the unemployed respondents, more than 80% of the dismissals leading to the loss of their last job were for economic reasons. But here again, both sides may be telling different stories. Unemployed respondents may tend to believe that dismissals which were declared for personal reasons really had economic motives. In a situation of manpower surplus, employers may deliberately react very strictly to any situation or incidence which might give grounds for a dismissal for reason of bad conduct or poor performance. Similarly, unemployed persons may seek to justify themselves by claiming that a dismissal for which they themselves gave due cause was economically motivated.[37]

In an earlier study of dismissals (still the only comprehensive one) it was found at the end of the 1970s that a dismissal often has several reasons and that employers' and employees' interpretations as to which reason was prominent tend to differ (1983: 17).[38] According to employers, in those days, one third of dismissals were effected for economic reasons. Even if we admit that this ratio may have risen considerably over a period of almost 20 years, it will not have risen to 80% as the answers of the unemployed suggest. Beyond that, we can say only that we do not know.

6.4 Employer-induced separations: the effects of sector and establishment size

Accepting that uncertainty remains as to the legal aspects of separations – dismissals or voluntary annulments, dismissals for personal or for economic reasons – we will now aggregate the three categories of separations undoubtedly induced by the employer which are:

- completion of apprenticeships without subsequent hiring of the former apprentice as a worker
- expiration of fixed-term contracts without conversion to open-ended employment relationships
- dismissals.

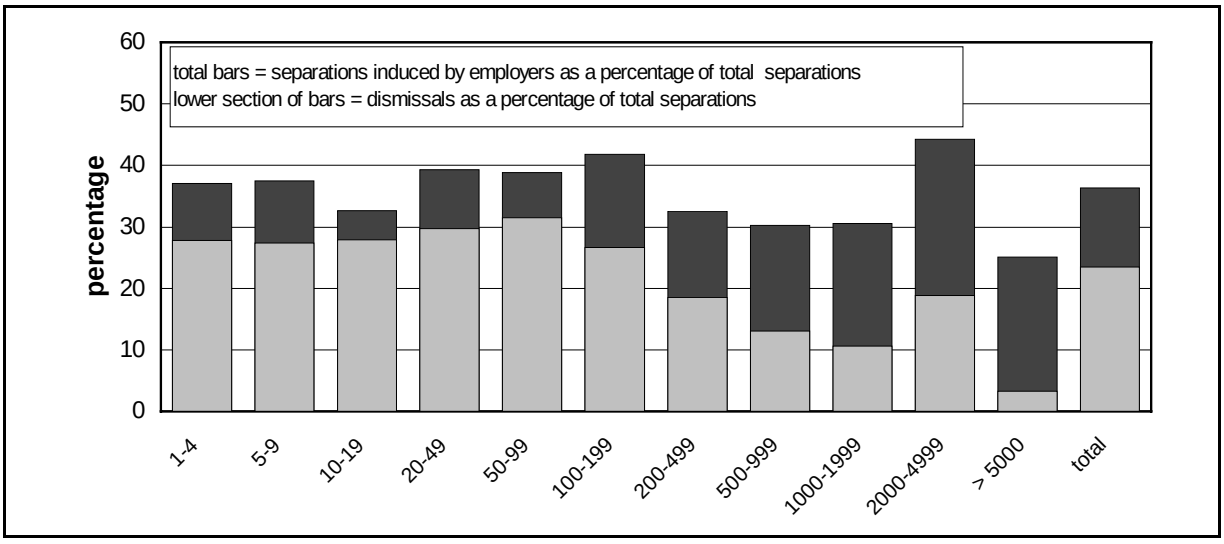
37 During the first three years of unemployment careers, chances for re-employment were found to be significantly greater if the job loss had been due to economic rather than personal reasons (Gillberg et al. 1999: 20).

38 Unless a dismissal is contested in court, an unambiguous classification in terms "economic" and "personal" reasons will never be established.

Computing averages over the three years reported on these categories in Table 5 (source: IAB Establishment Panel), but breaking the data down by establishment size, we arrived at Fig. 11, in which the total bars indicate the shares of employer-induced separations in total separations, while the darker parts of the bars represent dismissals.

In terms of separations induced by employers, the pattern is not very clear: in general, larger establishments with 200 and more employees tend to have relatively fewer employer-induced separations. However, the category of establishments with 2,000 to 4,999 employees disrupts this pattern by having the highest record of separations induced by the employer. According to the original data for the three years that were averaged to draw Fig. 11, this is the result of a wave of dismissals in 1994 in this size category.

Fig. 11: Dismissals and other forms of employer-induced separations, average percentages of total separations, 1993 through 1995, by sizes of establishments, West Germany



Source: Bellmann et al. 1996: 10.

As far as dismissals only are concerned, it is clear that the larger establishments make relatively less use of this mechanism for separations. For establishments with workforces of 500 and more, expiration of fixed-term contracts is the major instrument of numerical flexibility. This does not imply, however, that fixed-term contracts and other "flexible" forms of employment are relatively more frequent in large establishments – quite the opposite is true, according to the same source (Bellmann et al. 1996: 15). We would suggest as an interpretation that larger establishments make more strategic use of fixed-term contracts which, computed as a percentage of a relatively smaller total of separations, results in a higher proportion.

The percentage of separations brought about through dismissals by the employer differs greatly by sector (Table 8). The ranking is roughly similar to those in Table 3 and Fig. 8. Some sub-sectors (public and social insurance administrations, financial services or mining/energy/water supply) have low job turnover, low labour turnover, albeit with low separation rates, and they also have a very low proportion of dismissals among their few separations.

At the other extreme, sub-sectors with high job turnover and high separation rates, like the construction industry, also have a very high proportion of dismissals among their many separations. Here again, the industries with a secular trend of employment decline are not the ones that stand out as having high rates of dismissals.

Table 8: Dismissals as percentages of total separations by major sub-sectors,[39] ranked by average 1993 to 1995, West Germany

subdivision	1993	1994	1995	average
Public and social insurance administrations	6	3.4	3.1	**4.2**
Banking and insurance	10	7.5	7.7	**8.4**
mining, energy, water supply	11	9.5	6.3	**8.9**
Training institutions. Publishing	15	8.1	4.2	**9.1**
non-profit organisations	4	20.6	8	**10.9**
health system	11	9.7	18.8	**13.2**
Agriculture	13	27.8	6.3	**15.7**
Investment goods	22	23	20.9	**22.0**
commerce, transport, and communication	24	22.7	23	**23.2**
all sub-sectors (Table 4)	***24.0***	***24.3***	***22.2***	***23.5***
Lawyers, accountants, business consultants, etc.	27	25.2	22.7	**25.0**
Raw materials	27	31.9	24.1	**27.7**
Restaurants, hotels, nurseries, senior citizens' homes	25	33.3	27.6	**28.6**
consumer goods	31	33.9	29.1	**31.3**
Construction	47	34.3	44.6	**42.0**

Source: Bellmann et al. 1996: 8.

6.5 Conclusions from separation analysis

(1) Our attempts to assess the order of magnitude of dismissals for economic reasons have proven inconclusive. Different approaches lead to a dramatically wide range of results:

39 The survey on which this source is based uses somewhat unusual categories of sub-sectors that differ from official statistics. Since only percentages are reported, we cannot aggregate these data into a three sector or otherwise simpler matrix. Since some of these data display great variations between the three years reported they should be regarded with caution.

- In samples of unemployed persons who were formerly employed, between 30 per cent in the 1970s and over 50 per cent in the 1990s claim a dismissal for economic reasons to have been the origin of their unemployment.

- Provisional notifications of imminent mass redundancies in North Rhine-Westphalia in 1998 sum up to no more than 2% of separations.

- Almost 20 years ago, the percentage of dismissals for economic reasons among all dismissals was established at around one third. Assuming it to be one half today, and accepting data from the establishment panel on the share of dismissals in total separations, it can be estimated that 12% or one out of eight separations are attributable to dismissals for economic reasons.

(2) Even given the uncertainty surrounding the significance of economic redundancy, it may be inferred that:

- Economic redundancy is not a major cause of separations from employment relationships.

- However, it is much more important as a trigger of unemployment of some duration. In any cross-sectional sample of unemployed persons there will be a much higher proportion of victims of economic redundancies than in a sample of persons who have left their jobs within a certain period or even in a sample of persons who entered unemployment within such a period.

(3) Without yet knowing their respective contribution to unemployment, we can identify the sub-sectors that are prone to dismissals due to demands for numerical flexibility. These sub-sectors appear to be:

- construction

- for-profit services to the private consumer (for example, hotels, restaurants)

- services to firms (not the traditional financial services like banking and insurance, but rather services such as cleaning, security, consultancy, legal advice and accountancy)

- commerce

- transport and communication.

These sectors are by no means at the top of the list of shrinking industries, even though some of them (construction, commerce) display some weaknesses.

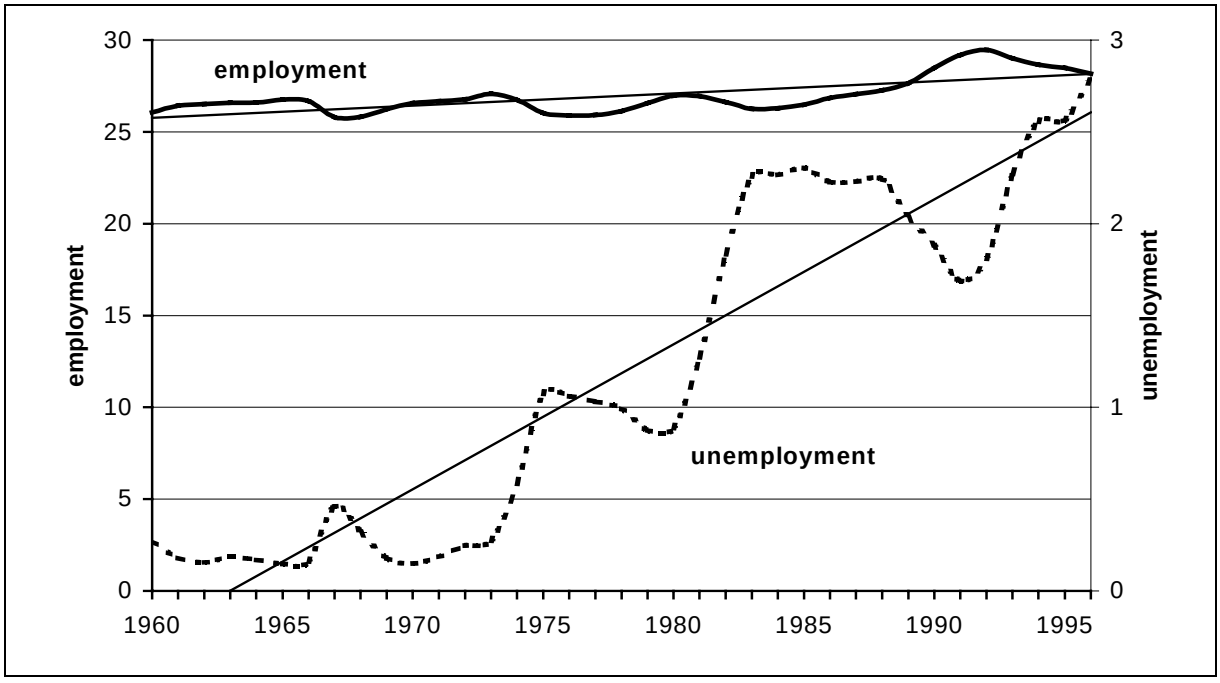
7 Employment, unemployment, and retirement

This section will focus on the relationship between employment and unemployment, first by means of an aggregate comparison over time (7.1), then by looking at the direct flows between the two states (7.2). We will then break down the unemployment inflows by sector of orgin (7.3). Since long-term unemployment among men in their late fifties in Germany cannot be adequately discussed without regard to the pension system, some information on early retirement for reasons of unemployment is added (7.4). We conclude that the relationship between structural change and workforce reductions, on the one hand, and unemployment duration and volume on the other hand is still rather obscure (7.5).

7.1 Employment and unemployment: parallel trends in the medium term

In certain strands of popular discourse, unemployment is seen as an immediate result of employment reductions. The "end of work" (Rifkin 1995) is a topical notion and suggests that, due to rising productivity and global competition, jobs are constantly being destroyed and rising unemployment is inevitable.

Fig. 12: Domestic gainful employment in the broader sense and unemployment, 1975 to 1996, West Germany (millions, scales 10:1)



Source: Statistisches Taschenbuch des BMA

Over the relatively short period of a business cycle there is, indeed, a strong inverse relationship between employment and unemployment. In a medium-term perspective, however, this does not hold true (see Fig. 12). Between 1975 and 1995, i.e., over a period of 20 years, employment in West Germany grew by 2.5 million or almost 9.5%. During the same period, un-

employment grew by 1.5 million or almost 140%. To attribute this rise of unemployment to the poor employment record is merely to say that with more employment growth there would have been less unemployment. While this is probably true, this contention does not contribute much to our understanding of the "unemployment process". As was the case with our analysis of employment, it will be necessary to proceed from comparison of stock data to analysis of flow data.

7.2 Flows between employment and unemployment

It would appear logical, indeed commonsensical, that people become unemployed because they lose their jobs. On reflection it will be evident that persons entering the labour force for the first time or re-entering after a period of inactivity, military service, imprisonment etc. may be considered and officially registered as unemployed if they cannot find a job. Statistically, there are even more pathways into and out of unemployment. As legal definitions of unemployment became stricter and as the administrative procedures for recording the inflows into and outflows from unemployment became more refined, numerous occasions for temporary exclusion from unemployment statistics and, not surprisingly, from unemployment benefits arose. Since 1986, when the Federal Employment Agency first began to record the preceding status of entrants into unemployment[40], the percentage of those entering directly from employment as wage or salary earners has been declining steadily, coming down to around 50% in the 1990s (see table 9). While the absolute number of annual entries into unemployment by wage and salary earners rose by almost 500,000 between 1990 and 1993, the share of this category among the total entries remained unchanged because the entries from inactivity rose by the same order of magnitude. Since there has also been a similar increase in exits from unemployment into inactivity, it may be inferred that rotation between unemployment and "inactivity" has increased. A great deal of this fluctuation among the registered unemployed appears to result from administrative or penal interruptions of unemployment careers and does not stand for any "real" movement of persons within the employment system.[41]

Because of this situation, meaningful interpretations of the relationship between the volatility of employment and unemployment must necessarily be restricted to the direct flows between these two states. Fig. 13 suggests that the level of immediate exchange between employment and unemployment varies much less than the level of unemployment as such, and, surprisingly, in the opposite direction. In the 20 years since the end of the era of "full employment", i.e. from 1975 to 1995, unemployment in West Germany more than doubled, and the annual unemployment inflows and outflows have almost tripled. Annual inflows into unemployment from employment, by contrast, remained in the range between 2 and 2.8 million, and the overall trend seems to point slightly downward.[42] The turn of the employment tide since 1992 has

40 A structural analysis of unemployment inflows and outflows is conducted only during two weeks each year. Using these data, we have to content ourselves with the assumption that the situation in May/June when these data are recorded is roughly representative of the whole year.

41 This is the reason why long-term unemployment, according to survey data, is roughly 40% higher than in official statistics (Wagner/Muth/Stackelbeck 1998: 47).

42 An analysis using the IAB Employment Sample corroborates this finding: the percentage of the total workforce (ESS) leaving employment for unemployment reached a peak in 1993 when the current restructuring crisis began, but it was lower in 1994 and 1995. The "peak" of 1993 was still lower than figures between 1985 and 1987 when employment was rising (Bender/Haas/Klose 1999: 7).

resulted in rising inflows from employment into unemployment – but they have not attained the magnitude of the early 1980s, when the level of unemployment was still lower.

Table 9: Entries into registered unemployment by preceding status, West Germany, 1990 – 1995, thousands

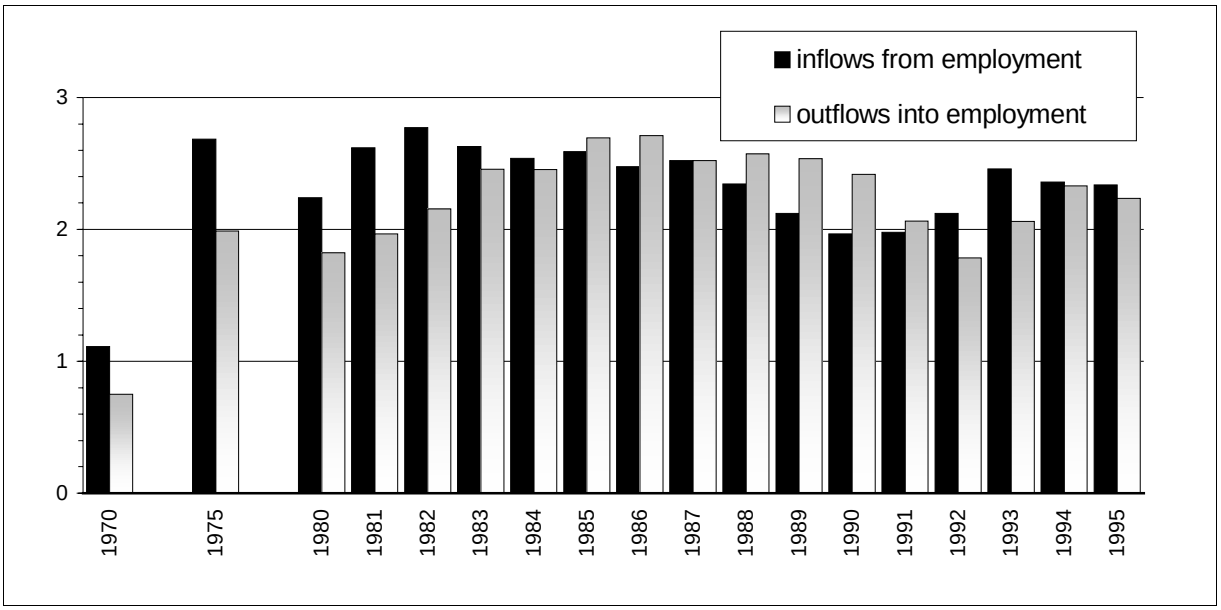
	1990	**1991**	**1992**	**1993**	**1994**	**1995**
Total	**3,703**	**3,660**	**3,962**	**4,549**	**4,514**	**4,655**
From school or university	227	266	270	294	266	287
From apprenticeship	60	57	54	72	77	75
From migration	399	240	218	195	204	201
From active labour market policy measures	369	369	377	427	418	473
self-employment	95	60	63	68	68	69
From inactivity	589	689	858	1,036	1,125	1,215
From employment	1,966	1,979	2,121	2,457	2,357	2,336
from employment per cent	*53%*	*54%*	*54%*	*54%*	*52%*	*50%*

Source: IAB 1997: 28/29.

Even more surprising to common wisdom is the fact that the annual outflows from unemployment into employment **decreased** from 1986 to 1992 while employment was **increasing.** On the other hand, they **increased** from 1992 to 1994 while employment was going **down**. Both flows seem to behave countercyclically, but with some degree of time lag in unemployment outflows compared with inflows. During the two periods of recession in the graph (1981 to 1983 and since 1992), inflows into unemployment from employment rose and outnumbered the flows in the opposite direction, but the latter rose, too. The annual outflows from unemployment into employment continued to rise until they outnumbered the opposite flow as the macro employment level stabilised and then began to increase again (in the mid-1980s), while inflows from employment fell. As the cycle approached its peak (1990 to 1992), the outflows from unemployment into employment dropped sharply, whereas the opposite flows were already starting to grow again.

Our explanation for this is that during an employment upswing the reservoir of "attractive" unemployed persons is soon exhausted and hirings from unemployment go down considerably. During a depression, on the other hand, redundancies deliver a "fresh supply" of able unemployed and therefore a greater number of new hires is made from unemployment than during an upswing, even though the number of total hirings goes down (cf. Fig. 13). On average, in terms of the rate of unemployment turnover and average unemployment duration, unemployment appears to become more fluid while it is on the rise.

Fig. 13: Annual inflows from employment into unemployment and vice versa, 1970 – 1975 – 1980 to 1995, West Germany (millions)



Source: IAB 1997

Recalling a metaphor used earlier concerning labour turnover, it might be said that voluntary labour mobility ("pull" labour turnover) tends to take place without intervening spells of unemployment, whereas involuntary labour mobility ("push" labour turnover) induced by redundancy is more likely to entail spells of unemployment. Our hypothesis is that "frictional" or "search" unemployment of moderate individual duration increases, but in a considerable number of cases, these incidences of unemployment extend and solidify into individual long-term unemployment. As a result, short-term and long-term unemployment grow simultaneously; unemployment becomes more fluid at the "high end" and more petrified at the "low end". This hypothesis of a polarisation of unemployment duration cannot, however, be tested with official statistics, which count only flows between different states without keeping track of individuals. Event history analysis with individual data is needed and is, in theory, possible with the IAB Employment Sample.

7.3 Sectoral sources of unemployment inflows

There have been frequent attempts in this paper to look for sectoral differences in job turnover, labour turnover, and dismissals. To complete the picture already obtained, it might be appropriate to ask how much the different sectors contribute to unemployment inflows.[43] Unfortunately, in the annual "structural analysis" of unemployment flows undertaken only in May/June, the data gathered on the establishments that previously employed the new entrants into unemployment are very incomplete and cover just over half of the cases of unemployed people coming directly from an "employed" status.

43 Sectoral contributions to unemployment duration and, thence, unemployment volume might be even more interesting but cannot be computed with official flow data.

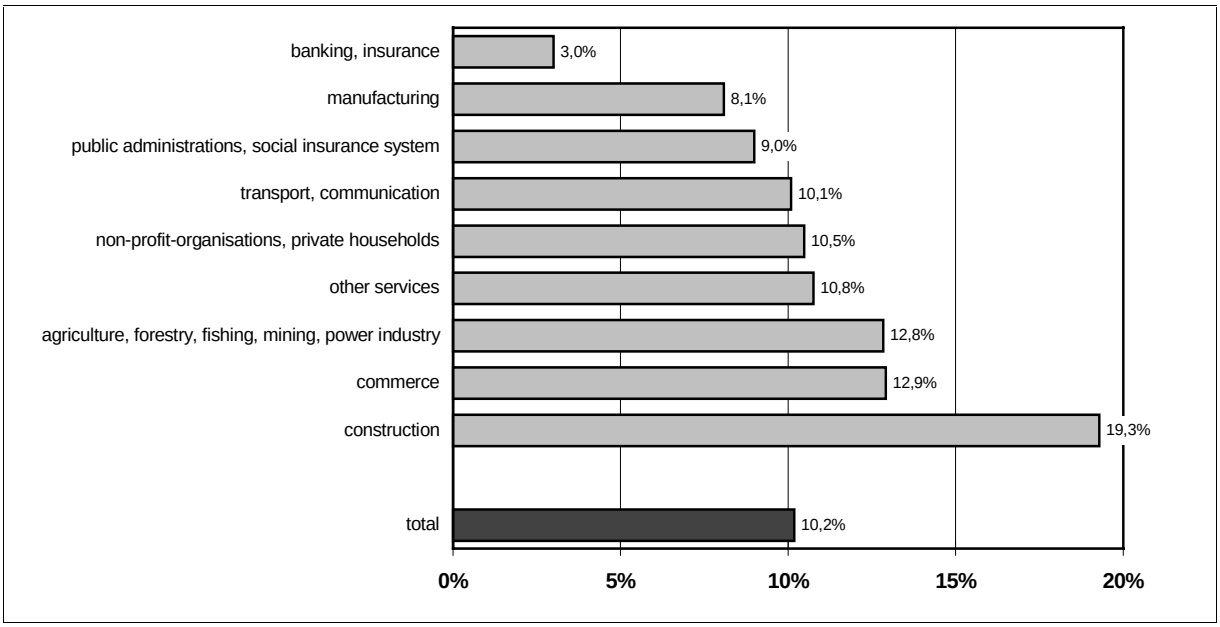
Bearing this limitation in mind, we can identify the sectors which, relative to their share of total employment, make an above or below-average contribution to the entries into unemployment (Fig. 14). We will recognise some old acquaintances from previous stages of our analysis:

- The primary sector[44] (insignificant in absolute terms), construction, and commerce rank above average.
- Most services rank around average. The position of public and social insurance administrations, between manufacturing and average, is surprisingly high.

And once again, the paradox that runs through our analysis rears its head:

- The "mature" sectors of manufacturing, public administration, banking, and insurance, where employment levels are declining, make a below-average contribution to unemployment inflows.

Fig. 14: Average annual Inflows into unemployment from employment by sector of origin, 1990 to 1996, weighted as percentages of employment in the respective sector in 1990, West Germany



Source: ANBA

Nevertheless, unemployment resulting from job loss in one of these shrinking sectors of employment might last longer than unemployment after job loss in a sector with high labour turnover, i.e. high separation as well as high hiring rates. In other words, even though unemployment inflows which originate from the declining sectors are smaller than the employment

44 In Fig. 14, for reasons of data availability, the power and mining industries are bundled together with the rest of the "primary" sector, i.e. agriculture, forestry and fishing, although we know from earlier stages of our analysis that the employment patterns of the former and the latter group are very different.

shares of these sectors, they might contribute to the volume of unemployment at much higher degrees by causing a disproportional share of days spent in unemployment. There are three reasons for this assumption:

(1) As we saw in. 5.1 above, the "mature" sectors with declining employment levels have low labour turnover rates, which means that job duration is high. Losing a job one held for a very long time and perceived to be a "job for life" constitutes one of the major risk factors for long-term unemployment (Mutz et al. 1995: 297; Eberts/Randall 1997; Kieselbach et al. 1998). People who are in a "job for life" either lose or never develop the ability to market their productive potential because there is no need to practice this ability.

(2) If the whole sector in which a person loses her or his job is contracting, there will be few job openings in that sector. Someone who has lost his job in a steel mill, for example, is extremely unlikely to find a new job in another steel mill, of which there are not many left nowadays. The occupational, cultural, mental and geographical barriers a former steel worker has to overcome in order to find new employment are much greater than those a construction worker will have to overcome in order to find a new job in the volatile construction business.

(3) The difficulty of occupational mobility is one of the reasons why works councils and management in sectors like the steel industry collaborate to concentrate redundancies among older workers whose pathway into retirement is paved by a combination of unemployment compensation and severance payments. By constructing unemployment as a stage of early retirement, it is made even more lasting.

These three points are hypotheses in need of further research, since official statistics show little of this – except for the last point which will be explored in some detail in the next section.

7.4 Unemployment and early retirement

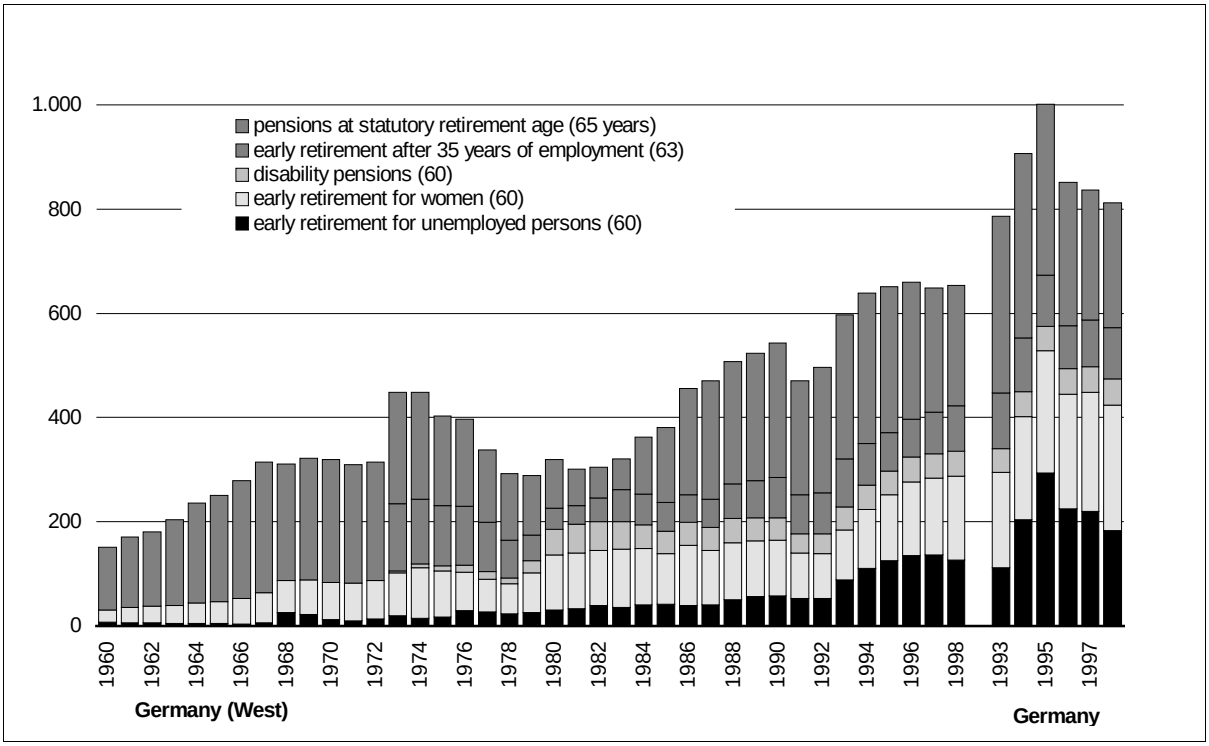
In the German context, the duration and age structure of unemployment cannot be adequately analysed without examination of "early retirement". Whereas the legal age of retirement is 65, unemployment lasting for at least 12 months gave entitlement until recently to a full old-age pension at the age of 60. In addition, women had the option of retirement at 60, irrespective of their employment situation, if they had contributed to the social security system for a sufficient number of years. Both sexes could receive a pension at 63 if they had paid contributions for at least 35 years. Persons who cannot work because of chronic illness or disability receive a special category of pension until they are transferred to an old-age pension – prematurely at 60, if they had managed to pay contributions for a sufficient period before the disability stopped them from working, and otherwise at 65.[45]

45 As a consequence, the uppermost sections of the columns in Fig. 15, "retirement at statutory retirement age", contain not only persons who actually worked until they were 65 but also those who received a disability pension until their 65th birthday. Only the smaller share of disabled persons who change over prematurely from a disability pension to an old-age pension at 60 are recorded separately in pension statistics and they are shown in the middle sections of the columns in Fig. 15. The share of employees who actually work until they are 65 has become neglegible (Wübbeke 1999: 108).

The relevant conclusion in our context is that, for German males without an officially recognised physical handicap or disability, unemployment of at least 12 months is the only pathway to a pension at 60.[46] In the context of social plans negotiated with works councils, "voluntary unemployment" was made attractive for male workers, especially for those who had started working and paying social security contributions early in their lives and could, therefore, opt for early retirement without suffering any loss to their pensions.

As Fig. 15 illustrates, the number of women taking early retirement at 60 has been fairly stable since the early 1970s. On the other hand, early retirement because of unemployment (in practice: for men) has grown steadily since the mid-1970s and it has exploded in the last downswing since 1992 (see the bottom part of the columns in Fig. 15).

Fig. 15: Entries into old-age pensions by category of entitlement, 1960 to 1997, West Germany (1995 to 1997 also for Germany as a whole), thousands



Source: VDR (Association of Public Pension Insurance Providers) www.vdr.de/Internet/vdr/Statistik

46 Against the backdrop of disability pensions serving as pathways to retirement in many other countries, Riphahn (1997) tested the hypothesis that unemployment and disability pensions are equivalents, using data from the German Socio-Economic Panel (GSOEP). Significant differences in the health situations of persons drawing unemployment compensation or a disability pension confirm the strictness of the criteria governing entitlement to a disability pension in Germany. On the other hand, the two groups also differed significantly in terms of the establishment size of their last employer. If we do not accept the explanation that work in larger establishments is more hazardous and exhausting than work in smaller ones this difference appears to be related to the counselling practices of HRM departments in large firms where people with poor health are advised and assisted in filing their disability pension applications.

If East Germany is included in our analysis (see the group of columns at the right of Fig. 15), the drama of the German pension system stands out even more clearly. East Germany accounts for about 25% the population of West Germany, but in the peak year of 1995 its contribution to early retirement because of unemployment was of an order of magnitude approaching West German levels.[47]

So how important is unemployment which is really the first stage of retirement? – In a 1992 survey, two thirds of the long-term unemployed in West Germany were found to be 45 or over. Of these, 26% were not seeking re-employment but were waiting to draw a pension; the average age of this group of unemployed people was 58.4 (Bogai et al. 1994). In the 1994 micro-census, more than 8% of the unemployed in West Germany (and almost 10% of the long-term unemployed) reported that the main reason for termination of their employment was the prospect of retirement. It has been inferred from the age distribution of the unemployed in that year that one quarter of the unemployed aged 50 or over had early retirement in mind from the beginning of their unemployment (Wagner/Muth/Stackelbeck 1998: 122). In a representative analysis of paths of exit from the labour force which occurred between 1975 and 1990 it was found that between 20% and 25% of men (but also between 17% and 21% of women) within each of the birth cohorts of 1920 to 1925 drew unemployment compensation immediately after their last job before retirement (Wübbeke 1999: 110). For a country like Germany, where legal employment protection favours employment security for older employees, such a finding comes as a surprise.[48]

As Fig. 15 suggests, the practice of early retirement via unemployment has very strongly increased since then. In 1996, only 27% of men and 28% of women entering an old-age pension had been in employment subject to social security contributions at the end of the previous year, whereas 36% of the men and 11% of the women had been unemployed (Rehfeld 1998:169f.).[49] The figures for East Germany are even more dramatic, with 83% (men) and 77% (women) entering from unemployment or the special “out-of-the-labour-force” status explained in footnote 47.

The practise of early retirement via unemployment leaves a very marked stamp on the population of long-term unemployed. In a 1997 sample of claimants of unemployment assistance[50],

47 Data for 1995 entries are 159,000 in the West, 111,000 in the East. This development in the East was programmed by a special "out-of-the-labour-force" status designed to assist the mass exodus from *Treuhand* companies. This status was not statistically counted as unemployment but gave the same entitlement to early retirement at 60 (Knuth/Bosch 1994).

48 Breaking down these employment-to-unemployment transitions by age at the time of exit produces a slope which leads to a marked peak at 59, with much lower values for the subsequent age groups. This supports the assumption that there is a timing of these exits aimed at early retirement at 60 after 12 months of unemployment. The strong and highly significant influence of establishment size points in the same direction: male workers in establishments with 500 or more employees bear the highest risk of early retirement (Wübbeke 1999: 115). – This analysis is based on the IAB Employment Sample.

49 Leaving aside minor categories which are idiosyncratic to the German pensions system, the remainders are mainly made up by 26% of men and 50% of women who were “out of the labour force” before claiming their pension.

50 Unemployment assistance (*Arbeitslosenhilfe*) succeeds unemployment compensation after the period of eligibility for the latter has expired – normally after a maximum of 12 months, but after a maximum of 32 months in the case of older employees. So, by definition, the majority of unemployment compensation claimants are long-term unemployed, whereas, on the other hand, not all the long-term unemployed will be on unemployment assistance. This of benefit is lower (53% instead of 60% of former net income) and means-tested, and it is financed from the federal budget, not from contributions.

almost one quarter (23%) of the respondents reported that their principal motive for registering as unemployed was "bridging until retirement". The average age of this retirement-oriented group was 55, their average duration of unemployment was 6.3 years, and majorities of 51% of this group, respectively, had no formal training, reported impairments of their health, and were unemployed for the first time in their lives – all of these values being the highest of the five groups identified. The percentage of women in this group was 44% (as compared to 49% in the sample as a whole), and the net family income was the lowest of all groups (Gillberg et al. 1999 table 27). In other words, early retirement via registered unemployment accounts for a large proportion of long-term unemployment. The typical unemployed person on the path of early retirement is male, unskilled, has a stable employment record well into his forties, experiences poor health and does not actively search for a job.

7.5 Conclusions from unemployment analysis

Employment and unemployment are by no means directly connected vessels. As far as stock data are concerned, employment and unemployment have grown simultaneously over the medium term. Examination of flow data shows that the order of magnitude of direct flows in both directions does not vary over the business cycle as much as might be expected, and it seems to display a slight secular trend downwards. As for the sectoral origins of unemployment inflows, the patterns revealed are familiar from job turnover and labour turnover analysis: sectors with a long-term downward trend in employment produce below average unemployment inflows.

As so often, the significance of official data ends when the story starts to get interesting. In order to assess to what extent redundancy produced by structural change actually is a factor in social risk or even social exclusion answers to the following questions are still required:

- What is the share of long-term unemployed who ever had, in their previous employment history, a genuine attachment to a particular employer?

- From which sectors and establishment sizes have the long-term unemployed who were formerly included in the employment system originated?

- In which ways and for which reasons did these persons lose their jobs?

- How many of them are on a pathway to early retirement, more or less well-paved by severance payments within the framework of a social plan? And, on the other hand, how many remain who are actually endangered by poverty, desperation, isolation, ill mental and physical health and whatever other factors which together make up for "social exclusion"?

Official statistics do not tell this story. Event history analyses with individual data produced from the social security system (the IAB Employment Sample) will provide fairly reliable descriptions of employment and unemployment over the life cycle but they will not yield any answers as to motives, reasons and legal definitions of separations. The German socio-economic panel does contain some items concerning job loss and its circumstances which, to our knowledge, have not yet been used. It appears, then, that a lot of work still remains do be done in order to understand the production of unemployment.

8 Summary and outlook

Repeating our initial hypotheses, we can now summarise the answers we have obtained and the questions we are left with.

(1) Decline of employment at macro level results from workforce reductions at micro level.
This is pure arithmetic and cannot be disputed.

(2) Major job losses at establishment level will be brought about, in most cases, by dismissals.
Only one quarter of separations are caused by dismissals. The larger part of workforce reductions is effected by refraining from hiring. Even massive employment cuts are often effected by voluntary annulments. "Voluntary", in these cases, does not mean "at free will" but it does mean that the workers affected are offered something which makes them prefer voluntarism to dismissal.

(3) Workers dismissed for economic reasons will, in many instances, become unemployed.
We do not know. All we know is that among cross-sections of unemployed populations there is a high proportion of respondents who claim to have been dismissed for economic reasons.

(4) In times of declining employment, with job seekers outnumbering vacancies and a level of unemployment which is already very high, the prospects of displaced workers finding a new job will be very bleak.
This is too sweeping a generalisation. The prospects of re-employment after job loss are determined by the number of "fresh" job seekers and the number of vacancies in the relevant period, area and segment of the labour market. Sad as it is to say, the stock of the long-term unemployed is rather irrelevant as competitors for those who are just about to lose their jobs or who have just recently become unemployed. In other words, the chances of displaced workers finding new employment is dependent not so much on the level of unemployment as on job creation rates and labour turnover which create vacancies.

(5) Individual unemployment which has resulted from employers' negative selection is very likely to petrify into long-term unemployment.
Again, we do not know on any statistical grounds. But we can infer from what is known about selection criteria in hiring decisions that a dismissal for economic reasons – and even more so in cases of bankruptcy or closure – is much less of a stigma on the labour market than some other ways of job loss, namely dismissal for cause. The issue of age discrimination is clouded by the specific mechanisms of early retirement.

(6) Long-term unemployment entails lasting exclusion from economically rewarding and socially validated activity. It is, therefore, a major cause of social exclusion.
This is true for long-term involuntary unemployment, but not of the "technical" unemployment which is used as a pathway to retirement. A realistic debate on solutions for the problem of long-term unemployment will be impossible in Germany as long as there is no honesty about early retirement.

(7) *In short, workforce reductions lead to social exclusion.*
We tend to doubt that economic restructuring is a major source of social exclusion. To be in a position in which one can possibly become the victim of a dismissal for economic reasons signifies a fairly high degree of social integration to start with, and it entails social and financial resources far beyond the job itself. Some of these resources will still be available after the employment relationship has ended, and new proactive labour market policies should be aimed at mobilising, preserving and enhancing these resources. The majority of the socially excluded are those who will never have the "opportunity" to be dismissed for economic reasons.

It appears, then, that the relationship between structural change, job destruction and dismissals is much more complex than stated in our initial hypotheses. Establishments in the sectors and size categories which, when aggregated, go on record as producing net employment losses are not the ones in which, at micro level, job destruction is most endemic. On the contrary, job destruction at establishment level is most frequent in the fast growing sectors of the economy. Dynamic competition and innovation are processes of trial and error, of success and failure. Net employment growth within any aggregate of establishments is produced when successes slightly outnumber failures. Without these failures, there are no successes to outnumber them. So if we take the destruction of a job at micro level as an indicator of a situation of economic redundancy, then the problem of redundancy appears to be associated not primarily with decline but with dynamic development.

Much the same paradox applies if we shift our focus from jobs to people: We find the highest levels of labour turnover not in those industries which are notorious for employment losses but in those which are operating in volatile environments. Some of these like the communications industry or parts of the statistical melange of "other services" are new economic environments with a positive employment record (cf. Fig. 8). Others like construction or consumer goods operate under strong seasonal and cyclical influence but they are not in secular decline. By contrast, it is the sectors with declining employment like mining, manufacturing, financial services and public administration which have "stable" jobs and low labour turnover rates.

If finally the mechanisms of separation from employment relationships are considered, it is again not the contracting industries that are most prone to resort to dismissals but those that operate in volatile environments. Examination of the sectoral contributions to unemployment inflows reveals same pattern. The "mature" industries which operate in saturated markets and which continually reduce employment not only have low job and labour turnover rates but also, among the relatively fewer separations from these industries, the percentages of dismissals and the relative contributions to unemployment inflows are below average.

Dismissals of any kind should continue to be regulated in such a way as to dampen short-term cyclical variations, to rule out employers' arbitrariness and to promote negotiations and jointly agreed procedures. Any restraints going beyond that will not help to safeguard employment or to combat unemployment but only make the employment system sluggish. If we shift our attention from the protection of the *status quo* to the management of change, the primary risk appears not to be the risk of dismissal but the risk of not finding a new job. The regulations, incentives and disincentives around the problem of displacement for economic reasons should be redesigned in order to assist re-orientation, retraining and re-employment rather than only compensate for unemployment. Recent reforms are only the first steps in this direction. In order to overcome growing long-term unemployment Germany does not need an ever faster

succession of employment legislation but a new spirit of dynamism, innovation and change, including a new work culture which encourages participation in working until the official retirement age of 65.

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