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Unemployment compensation as a bridge between employment and retirement in West Germany

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Abstract

The paper presents a statistical analysis of the importance of unemployment-related transfer payments as a bridging mechanism between employment and retirement in West Germany. The IAB employment subsample is used as a data base, and the analysis is restricted to West Germany in order to obtain long time series. Both by way of bivariate descriptions and in a multivariate logistic regression model it is demonstrated that this pattern of transition into retirement originated primarily from larger manufacturing establishments and was concentrated on male median income groups below college or university degree. The paper may also serve as an example of the usefulness of event history analysis for Social Security Research.

Topic 2: Reassessing work and retirement in a long life society

Keywords: Labour Force and Employment, Size and Structure; Retirement; Retirement Policies; Unemployment insurance

JEL-Code: J21, J26,J65

Introduction

Over the past 25 years, unemployment has been growing steadily from one business cycle to the next in West Germany. Even though the three upswings which the economy went through since 1976 did create additional employment of considerable magnitude[1], the reduction of unemployment which was effected during upswings never offset the respective expansion caused by the preceding downswing. As a consequence, residual unemployment has been growing.

Contrary to the widespread perception of an increasing risk of unemployment, the incidence of unemployment (percentage of the workforce experiencing unemployment in a given year) has not increased much from the early eighties to the mid-nineties. The growth of annual unemployment volumes (average annual numbers or rates of unemployment) has primarily been due to increasing proportions of the workforce experiencing only unemployment and no employment during the respective year (Erlinghagen/Knuth 2001). This concentration of unemployment can also be expressed as a distribution of unemployment volume over percentiles of unemployment spell duration: In 1996, the 10 per cent of unemployment spells with the highest duration accounted for almost half (46.7 per cent) of the unemployment volume (Karr 1999).

The purpose of this paper is to analyse one substantial cause of the concentration of unemployment on relatively small groups: The use (or "misuse") of unemployment as a bridge between employment and an early pension. Powerful interests of employers and workers are vested in these established patterns of early retirement, and, until very recently, it was still widely believed that it would help to create vacancies for young people. Until recently, the problem was rarely publicly discussed in Germany, and policies towards employment at the end of careers are still very ambivalent. The sizeable literature on "early retirement" which originated during the eighties and early nineties (e.g. Friedmann et al. 1980, Kohli/Wolf 1987, Kohli et al. 1991, Naegele 1983 and 1992, Rosenow/Naschold 1994) concentrated on separation strategies of establishments and on early pensions. It did not link early retirement via unemployment to the debate on labour market policy reforms. By contrast, the discovery of a recent survey that 15 per cent of the German unemployed are not orientated towards re-employment but towards a pension (cf. Brixy et al. 2002).came as a surprise to many.

The paper is organised as follows: The scanty evidence on our subject which can be derived from official labour market statistics will be exploited in chapter 1, framed by the explanation of its background in social security regulations. Chapter 2 will briefly characterise the data set which was used for more in-depth analysis and explain how the data have been modelled in order to adequately mirror the institutional framework whose impact on transitions from employment to retirement is to be captured. Applying this this modelling, the magnitude of unemployment due to early retirement relative to

[1] In 2000, employment subject to social security contributions in West Germany was 2.75 million or 13.7 per cent higher than in 1975 (BMA 2001). In spite of the economic disaster caused by the German unification in the East, the employment rate of unified Germany in 2000 was slightly above the employment rate of West Germany in 1975. Only the full-time-equivalent employment rate declined (European Commission 2000: 88 and 2001: 113).

total unemployment will be estimated, and its distribution both in terms of duration and in terms of the age of the persons concerned will be described (chapter 3). Chapter 4 will be devoted to bivariate descriptions of the impact of some company and worker characteristics on the incidence of unemployment of the early retirement type. In chapter 5, the results derived from the description will be tested for significance and relative impact using logistic regression analysis. Chapter 7 will summarise and discuss our findings.

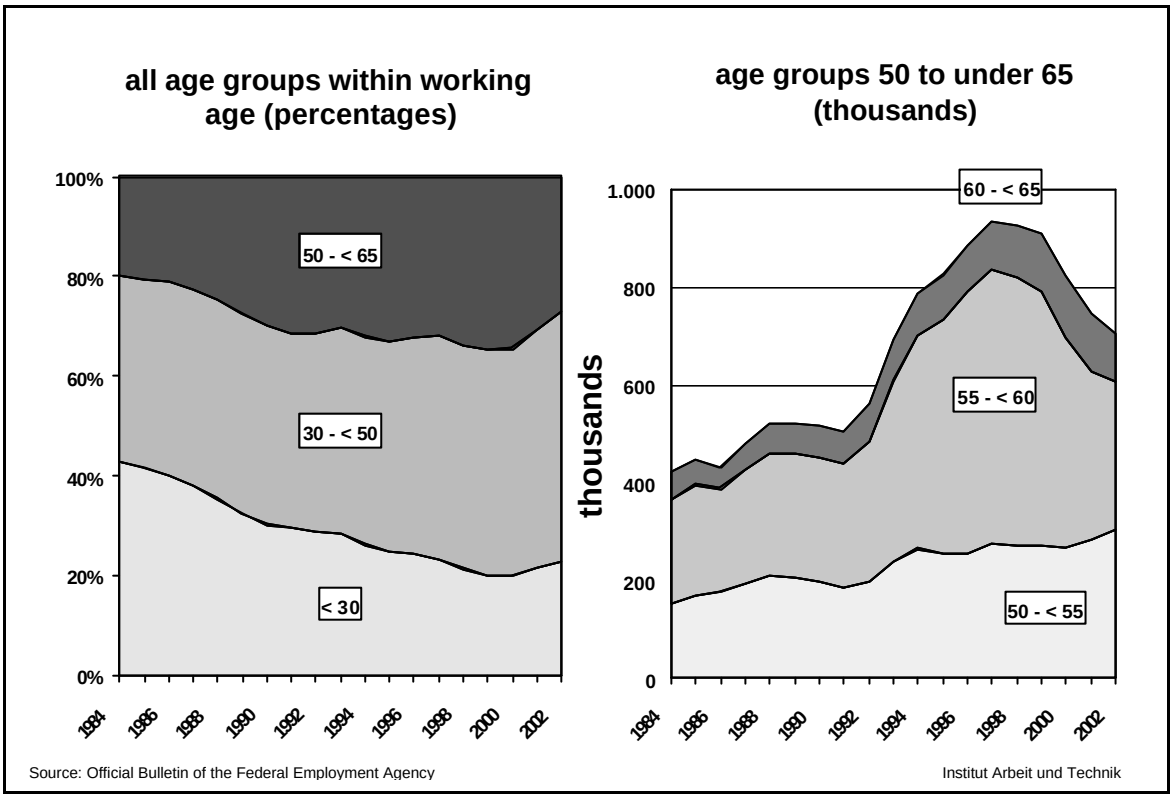
With only one exception (Figure 2), the analysis is restricted to West Germany (old *Laender*) in order to make full use of long-term time series.

1 Statistical and institutional background

1.1 Unemployment and age in official statistics

Even official labour market statistics, insufficient as they are, reflect a dramatically growing share of unemployment of the older age groups which is caused primarily by the age group 55 to 60 (cf. Figure 1))

Figure 1: Unemployment by age groups, West Germany, 1984-2000



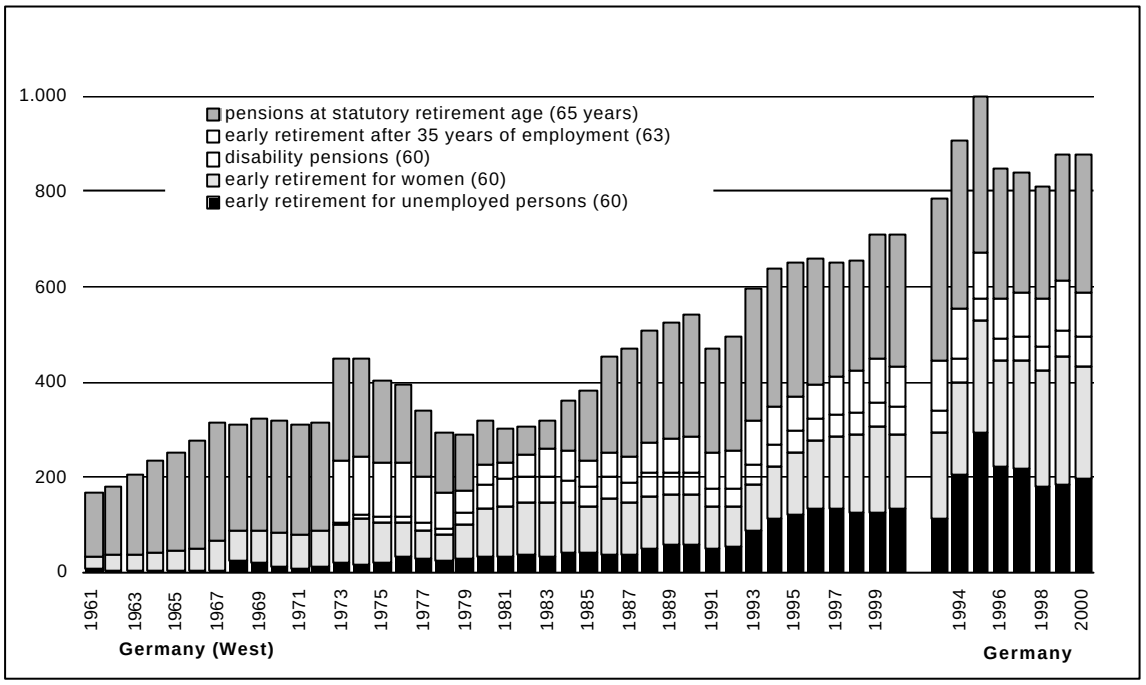
The very recent decrease of the shares of older age groups in unemployment is due to the fact that the less numerous birth cohorts from the forties of the last century have now arrived in the critical age groups.

Some explanation seems to be wanted how this was at all possible. How could unemployment of persons in the fourth quarter of their employable age rise so tremendously in a country where employment protection legislation favours employees of older age and with longer tenure? This can only be explained by the unique German way of early retirement. A basic comprehension of this pattern will also be needed in order to understand the statistical analysis in the later chapters.

1.2 Unemployment and early retirement in social security regulations

Whereas, in Germany, the statutory age of retirement is 65, only very few people actually work until they reach this age.[2] Many people are no longer in the labour market when they approach pensionable age[3], and there were – and, with some restrictions, there still are[4] – many ways to a pension before statutory retirement age, namely:

Figure 2: Entries into old-age pensions by category of entitlement, 1961 – 2000, West Germany (1993 – 2000 also for Germany as a whole), in thousands.



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

- 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 managed to pay contributions for a sufficient period before the disability stopped them from working, and otherwise at 65.

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[2] The share of employees who actually worked until they were 65 had already dwindled to about 8 per cent before 1990 (Wübbeke 1999: 108) and has gone down even further since then. Cf. also Kruse 2001: 13, 23.

[3] For German women in the age cohorts that are now around retirement age, it was still very common to work only before they had children. Having paid contributions for only a short period of time, they are not eligible for their small pensions before 65. These women enter their pension "at statutory age" from "out of the labour force", not from employment. This explains why the average pension starting at statutory retirement age is lower than the average early pension.

[4] All the provisions for a pension at an earlier than statutory retirement age still continue to exist for a transitional period but the earlier pensions now have to be "paid" for by accepting lower rates.

- All women had the option of retirement at 60 if they had contributed to the social security system for a sufficient number of years during the second half of their working lives.
- Both sexes could receive a pension at 63 if they had paid contributions for at least 35 years.
- For men without recognised disability, unemployment lasting for at least 12 months was, until recently, the only way of entry to a pension at the age of 60.[5]

Obviously, this framework of social security regulations made unemployment attractive to older men facing the end of their careers. Severance payments of sometimes considerable magnitude or continuous rents paid by the former employer as supplements to unemployment compensation payments made "voluntary unemployment" even more acceptable. The premature passage to retirement comprises two stages:

(1) The first stage is technical unemployment that is experienced as "retirement" because financial and – from the age of 58 on – also administrative pressures to seek work are removed.

(2) The second stage consists of an early pension. For the men's pension at 60 the retiree has become eligible only by virtue of his preceding long-term unemployment. If he opted for the exemption from active job search offered by employment services from 58 on, he is obliged to apply for an old-age pension as soon as he becomes eligible for one – otherwise unemployment compensation payments will be withheld.

As Figure 2 suggests, the practice of retirement via unemployment has increased very strongly in the course of the restructuring process of the nineties (bottom sections of the columns). In fact, unemployment has become a common status immediately before receiving an old-age pension, and even more so in East Germany (Rehfeld 1998: 169f.). This is reflected in the much higher proportion of "unemployment pensions" in the right hand part of Figure 2 for the whole of Germany.

[5] Since 1996, "gradual retirement", a subsidised form of part-time working at the end of one's career, may serve as an equivalent.

2 Data base and data modelling

2.1 The IAB employment subsample

The concept of unemployment-related transfer payments serving as a "bridge" between employment and retirement hinges on what is before and after an individual's unemployment episode. Therefore, statistics of unemployment by age are insufficient for capturing the issue. A data set will be required which allows event history analyses along the employment, unemployment and (ideally also) retirement histories of individuals. For this purpose, we have used the IAB[6] employment subsample (IABES) 1975–1995. This is a scientific use file with anonymous data on one percent of all employees registered by the social insurance system within the given period of 21 years. Nearly eight million records provide evidence of the employment history of nearly 560,000 persons. Some information on the establishments by whom the social insurance registrations were filed have been supplemented, as well as data on periods during which individuals in the sample claimed unemployment compensation of some sort or received training allowances from the Federal Employment Service (for details, cf. Bender/Haas/Klose 2000).

Though rich in numbers and in its longitudinal quality, certain restrictions of this data set should be considered. In our context, the following will be relevant:

(1) There is no positive information on entering an old-age pension. It can only be inferred that a person who quits either employment or receiving unemployment compensation at a pensionable age and never reappears as being employed or receiving compensation has actually passed on to retirement. In reality, this person may also have died or (in the case of migrants) have returned to her or his country of origin.

(2) In order to secure privacy, birth dates of individuals are only given by calendar year, not by day and month. Furthermore, the whole time series of each individual has been randomly shifted by a constant (constant for the individual in question, random between individuals). Thus, exact information on the duration of spells is preserved, but information on the true position of this spell in the calendar is randomly blurred. As a consequence, the ages of persons computed to be associated with a certain event like, e.g., retirement, are scattered around the true value, but with means unchanged.

(3) As for the type of employment relationships, the administrative procedure from which the subsample is derived records only employment subject to social security contributions. This includes part-time work of more than 15 hours per week but

[6] IAB – *Institut für Arbeitsmarkt- und Berufsforschung* – is the research institute of the German Federal Employment Service.

excludes marginal part-time, Civil Servants[7] and Military as well as self-employed and their unpaid family members. Even with these restrictions, still nearly 80 per cent of gainful employment in Germany was subject to social security contributions (Knuth 1999b: 13) during the period covered by the data set.

(4) As for unemployment, the data set contains only unemployment spells during which some kind of compensation was successfully claimed from the Federal Employment Service. A person without a job and seeking work may be registered as unemployed without being entitled to any compensation – which was the case for more than 20 per cent of unemployment entrants in 1995 (IAB 2000: 61).[8] Since information on unemployment compensation is unreliable in the data set before 1980 (Bender et al. 1996: 27), our analysis is restricted to the period from 1980 to 1995.

As from 1991, the IABES contains also data on jobs in East Germany. Being interested in the whole period covered by the sample, we have restricted our analysis to employment and unemployment careers that evolved exclusively in the old *Laender* – individuals with one or more records from the New *Laender* were excluded.

2.2 Data modelling (1): employment and unemployment episodes

The target group of the following analysis are older people who experience persistent unemployment as the final stage of their careers after stable attachment to a particular establishment. Consequently, for the purpose of this analysis, an "employment episode" is a period of time during which the employee stays with the same employer. German labour and social security laws allow for interruptions during which the employment relationship and the payment of social security contributions are suspended while the labour contract remains in effect.[9] Such interruptions are regarded in our analysis as continued attachments to the respective firms because return to the original employer is guaranteed. Short interruptions of jobs can also occur because of administrative errors, recalls shortly after dismissals or returns after quitting. If a job continues in the same establishment after no more than 30 days and if neither unemployment nor employment in another establishment intervene, these cases are treated as ongoing jobs (cf. Figure 3). However, when calculating the durations of employment (and, likewise, unemployment) episodes, intermittent periods that were "bridged" according to the rules just explained were not counted as unemployment duration or as length of tenure.

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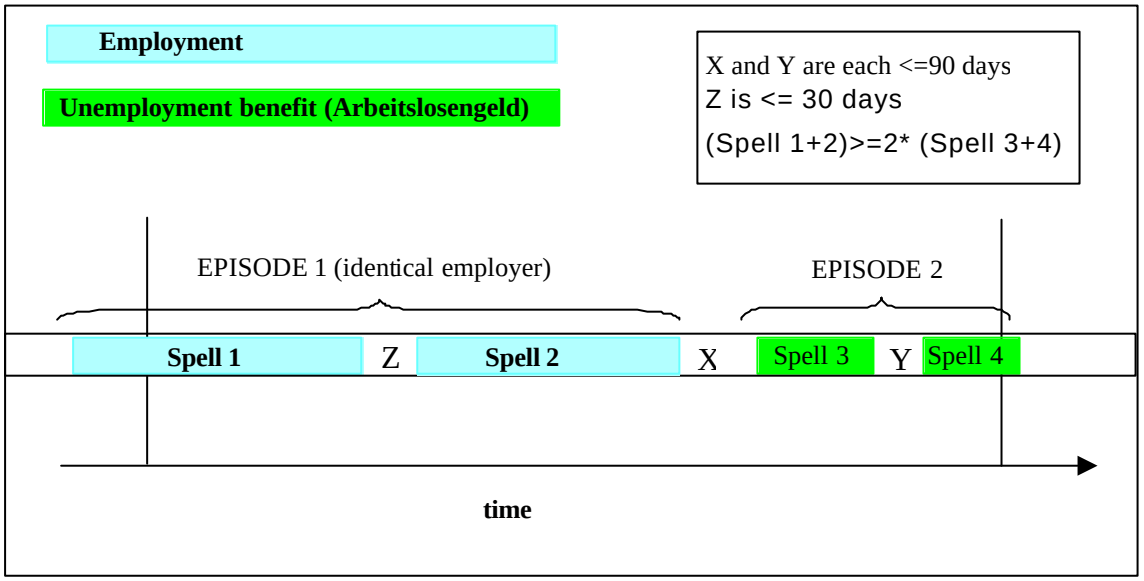
[7] Pensions of civil servants with the privileged status of *Beamte*, of judges and of military personnel are directly guaranteed by the state. Therefore, no social security contributions are paid for them, and their employment relationships are not recorded in the social security system.

[8] On the other hand, as explained before (1.1), compensation claimants aged 58 or older may be exempt from seeking work and will, therefore, be excluded from official unemployment statistics. In the data set used, however, they will appear as drawing compensation – which is exactly what is desired in the context of this analysis.

[9] Practical examples are maternity leave and military service, both irrelevant to the age categories under consideration, as well as periods of sickness beyond the six weeks during which the employer is obliged to continue paying remuneration, which is more relevant here.

Official unemployment statistics systematically underestimate long-term unemployment because a new period of unemployment begins after each interruption – which may be of a purely administrative or punitive nature like, for example, failure to report to the Employment Service, failure to comply with placement offers, long-lasting sickness etc. In the IABES, such circumstances appear as lacunae during which the person is neither employed nor drawing compensation. For the purpose of this analysis, spells of unemployment have been joined together to form a continuous episode if such a lacuna is so short that it can be assumed to be of the technical nature just described. If there are no more than 90 days (the legal maximum of punitive suspension from compensation) between two compensation periods and if no employment is reported to intervene in the lacuna, these two periods are interpreted as one uninterrupted episode of unemployment. Applying this rule repeatedly, several spells of drawing compensation can be joined into one unemployment episode.

Figure 3: Modelling displacement-related unemployment episodes



2.3 Data modelling (2): displacement-related unemployment episodes

In order to categorise unemployment inflows and the subsequent unemployment episodes, rules had to be established for linking unemployment to previous employment episodes and thus to previous employers – or for refraining from assuming such a link. Situations for which such a division is relevant include the following:

(1) On separating from an employment relationship, a person may leave the labour market for a certain period of time and subsequently return as a job seeker and a claimant of compensation. It does not appear appropriate to attribute this type of unemployment to the last employer if the lacuna exceeds certain limits.

(2) "Job-hoppers" will earn their benefit entitlement in different subsequent jobs. If they incur a longer period of unemployment, it would not appear appropriate to attribute their unemployment to the company that happened to be the last employer.

In order to solve problems of this type, and in accordance with the rule for joining unemployment spells together, we have refrained from labelling unemployment episodes by the characteristics of the last employer if a lacuna of more than 90 days intervened between the end of the last employment episode and the beginning of an unemployment episode. Furthermore, the quantitative relationship between the duration of receiving unemployment benefit[10] and the duration of the preceding employment episode was controlled for. According to the applicable rules of social security law, the latter must be at least twice as long as the former in order to have "earned" the whole benefit entitlement with one employer. After exhaustion of the benefit claim, means-tested and tax-funded unemployment aid[11] may follow. Unless a lacuna of more than 90 days intervened, subsequent periods of drawing unemployment aid were linked to the preceding benefit period, thus being attributed to the same employer.

Applying these rules, all the unemployment spells observed in the sample were split into two categories:

(1) Unemployment immediately or shortly after a stable job which can be described in terms of the characteristics of the last employer and which will be referred to as "displacement-related unemployment";

(2) unemployment without attributable company origin (according to the rules spelled out above) that will be referred to from now on as "contingent unemployment".

Applying this very conservative estimate of displacement-related unemployment, percentages between 35 and 46 per cent of total unemployment were derived (see the two lower sections of Figure 4 together).

2.4 Data modelling (3): unemployment as a bridge to early retirement

Building on the definitions developed above, the group of early retirees to be identified has been characterised as individuals:

(1) who entered an episode of displacement-related unemployment (see definition in 2.3) at an age reasonably close to retirement – empirically set at 55 or more because before 55 we rarely found unemployment episodes to last until retirement,

(2) who were never again observed to be in employment subject to social security contributions,

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[10] Unemployment benefit *(Arbeitslosengeld)* is granted for periods depending on (1) the preceding duration of paying contributions and (2) age. The standard compensation period of one year after paying contributions for at least two years was expanded according to age and starting from an age of 42 in 1985. This clause contributed to the evolution of the patterns of early retirement analysed in this article. – Since 1997, the age-dependent scale starts only at 45, but this is outside the period covered by the data set used.

[11] *Arbeitslosenhilfe* is translated here as "unemployment aid". Whenever referring to both types of wage replacement for the unemployed – unemployment benefit and unemployment aid – the term "unemployment compensation" will be used.

(3) who remained in unemployment until they reached a pensionable age and then disappeared from the sample altogether.[12]

Proposition (3) requires that the unemployment careers of early retirees can be observed over a sufficient length of time which entails the problem of right censoring. If some of the time series presented below end before 1995, the last year of the IABES, this is because the values for the later years had to be omitted in order to keep the impact of right censoring in tolerable limits.

[12] Disappearing from the sample at a pensionable age must serve as a proxy for entering a pension on which no positive information is available in the data set.

3 The importance of unemployment as a bridge to early retirement

Using the model criteria defined above, the total amount of days spent each year drawing unemployment compensation by members of the sample population can be split into three mutually exclusive categories:

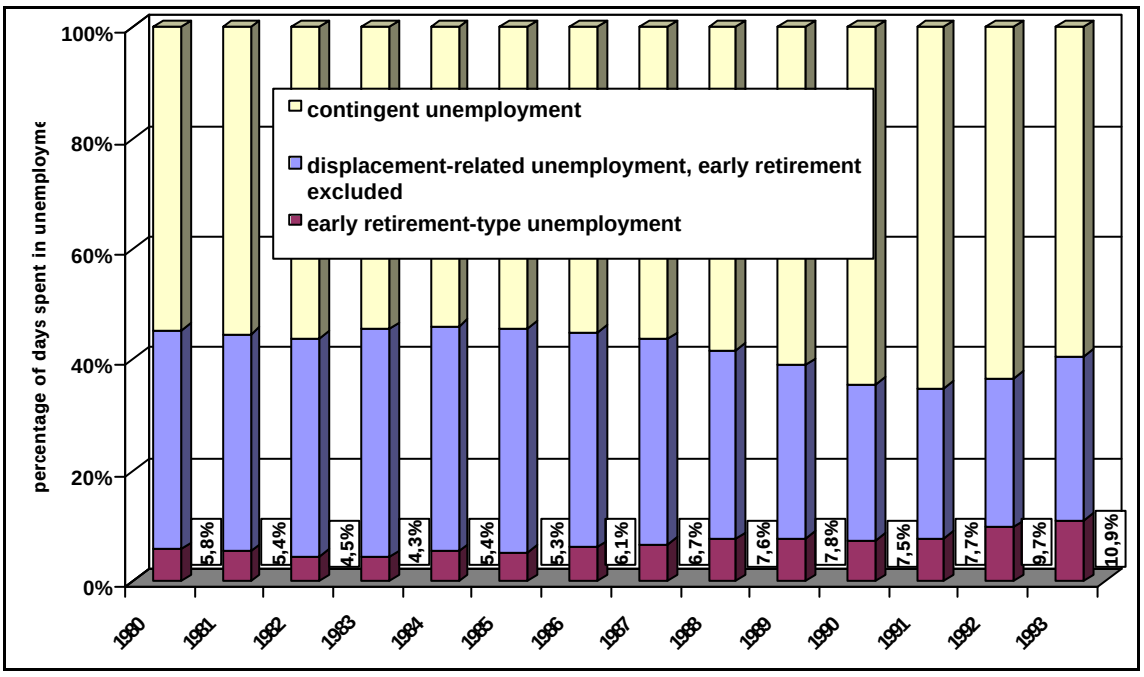
(1) Contingent unemployment (i.e. not attributable to a single former employer);

(2) displacement-related unemployment (i.e. unemployment attributable to a single former employer), early retirement set apart;

(3) unemployment related to early retirement (which is, by definition, also displacement-related).

The result of this classification is depicted in Figure 4. Unemployment of the early retirement type has increased its share in total unemployment from 4 per cent in 1983 to 11 per cent in 1993. Expressed as a share of displacement-related unemployment alone, early retirement reached 27 per cent in that year. This allows to infer that employers have increasingly concentrated their shedding of labour on older employees who then remained in unemployment until they became eligible for a pension. This trend was only temporarily halted but not reversed by the reunification boom around 1990.

Figure 4: Types of unemployment as shares of total unemployment, 1980 – 1993, West Germany



Source: IAB employment subsample; analysis by Thorsten Kalina *© IAT 2002*

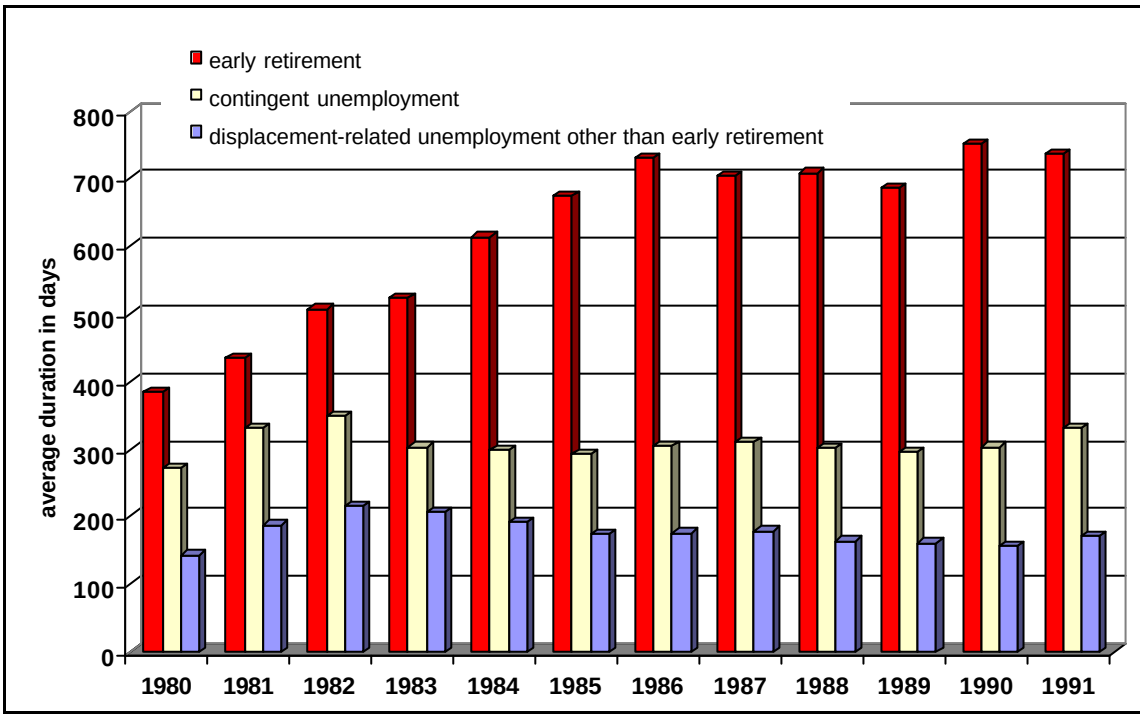
The three types of unemployment display a very distinct hierarchy concerning the average duration of episodes:

- Displacement-related unemployment has the shortest average duration of episodes if it does not belong to the early retirement type. In other words, prime-age workers

who used to have a strong attachment to a particular firm before they entered unemployment tend to experience shorter unemployment episodes.

- The average duration of contingent unemployment episodes is somewhat higher which reflects the greater distance of this group from the labour market.
- Unemployment of the early retirement type displays by far the longest average duration of episodes, which have continuously extended during the eighties. The boom at the end of the eighties only stopped this growth but without reversing the trend.

Figure 5: Average duration of unemployment episodes by type of unemployment and calendar year of their beginning, West Germany, 1980 – 1991[13]



Source: IAB employment subsample 1975 – 1995; analysis by Thorsten Kalina *© IAT 2002*

The average bridge between employment and retirement built with unemployment compensation has a length of approximately two years. This explains the high impact of this type of early retirement on the total number of days during which unemployment compensation is paid.

[13] Years 1992 – 1995 must be excluded from this analysis because of right-censoring.

4 Bivariate descriptions of early retirement

4.1 Unemployment/employment ratios for different types of unemployment

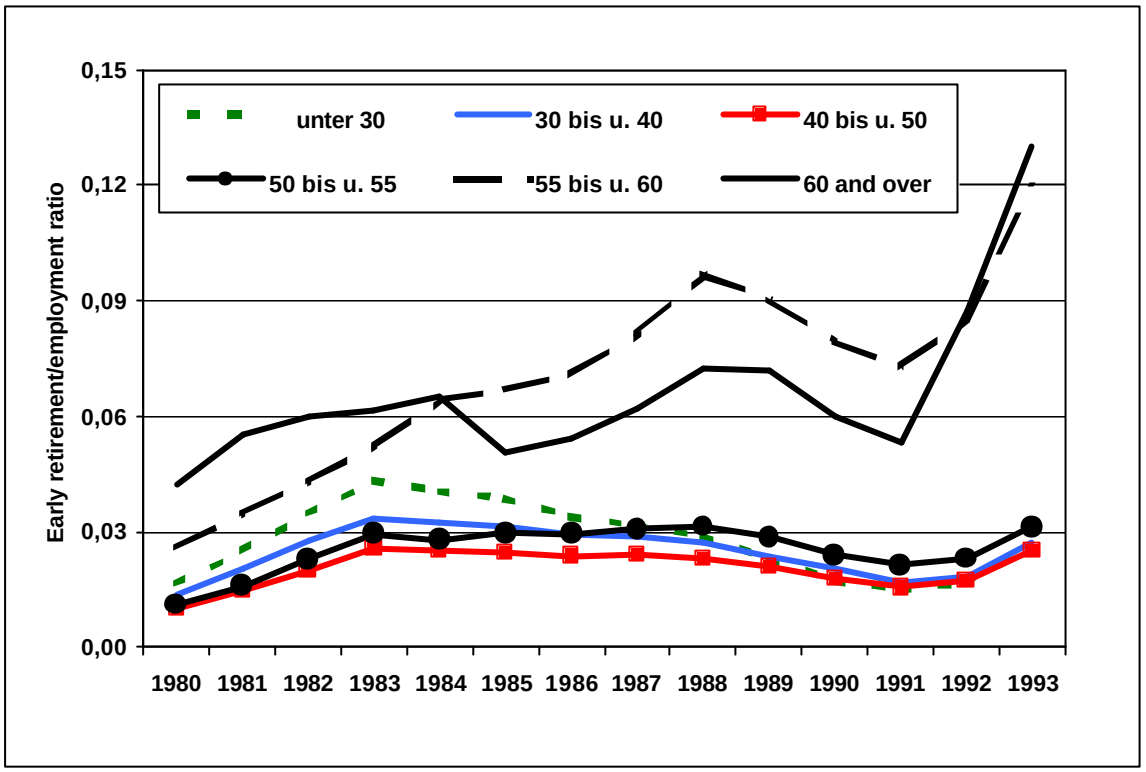
In order to facilitate bivariate descriptions of unemployment related to early retirement, an indicator is needed which is neither affected by changes over time of the composition of the labour force (e.g. in terms of gender, age, or skills level) nor by changes of its distribution over types of establishments (e.g. the growing share of smaller establishments and of the service sector in total employment). As a basic concept for solving this problem, unemployment/employment ratios are suggested. For any given year, the numerator of this ratio is made up of all the days spent in unemployment by any given category of sample members, while the days spent in employment by the same category form the denominator. The unemployment / employment ratio expresses something similar to unemployment rates. However, other than the unemployment rate it can be broken down by characteristics of employing establishments, not only by personal characteristics. Such a measure expresses, for example, how many days of compensated unemployment have been produced by a sector relative to the number of days of employment created by that same sector. Furthermore, the unemployment / employment ratio can be split up by the types of unemployment that have been distinguished above. This will yield a displacement / employment ratio and, more specifically, an "early retirement / employment ratio".

4.2 Displacement / employment ratio by age

The displacement/employment ratio broken down by age will be unbiased by demographic changes which effect numerator and denominator alike. Contingent unemployment is excluded from this analysis because, by its very definition, it cannot be adequately linked to previous employment in a certain establishment. The results of this analysis are presented in Figure 6:

- It was only in the early eighties when the baby-boomers entered the labour market that unemployment risks of the youngest age category were above those of prime age workers. Since then differences in the incidence of displacement have been relatively small for all age categories under 50, and the curves tend to converge over time.
- However, the displacement / employment ratio of the two highest age groups – 55 to under 60 and 60 and above – has deviated more and more from the general pattern. The graph gives the impression that the overall rise of displacement-related unemployment in West Germany is primarily due to these two age categories.

Figure 6: Displacement/employment ratio by age category: ratio of days spent in displacment-type unemployment to days spent in employment, West Germany, 1980 – 1993

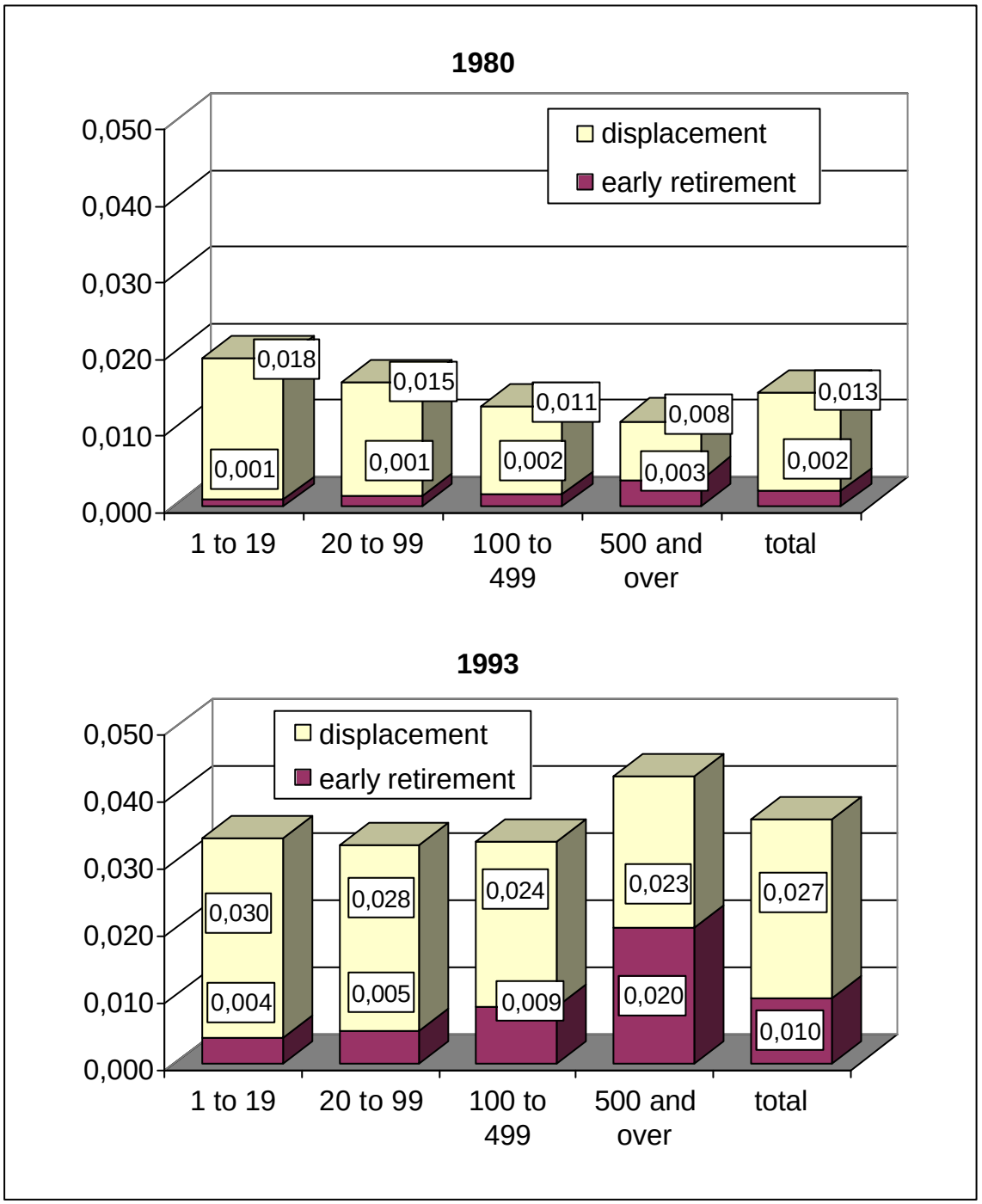


Source: IAB employment subsample 1975 – 1995; analysis by Thorsten Kalina *© IAT 2002*

4.3 Displacement / employment ratio by establishment size

In order to demonstrate the contribution of different types of establishments to unemployment, the displacement / employment ratio was computed for four categories of establishment sizes. This was done for the earliest and latest year possible in the sample, and displacement-related unemployment was split up into "early retirement" and the rest. The results are shown in Figure 7.

Figure 7: Displacement/employment ratios and early retirement/employment ratios by establishment size, West Germany, 1980 and 1993



Source: IAB employment subsample 1975 – 1995; analysis by Thorsten Kalina *© IAT 2002*

The following features of Figure 7 should be taken notice of:

- Not surprisingly, displacement-related unemployment was generally much higher in 1993 than it was in 1980.

- Whereas, in 1980, the smallest establishments had the highest displacement / employment ratios, this position has been taken over by the largest establishments in 1993, the rest of the order unchanged.
- In 1993 as compared to 1980, the early retirement / employment ratio has grown by factors of four to seven in all size categories, causing the differences between them to widen considerably.

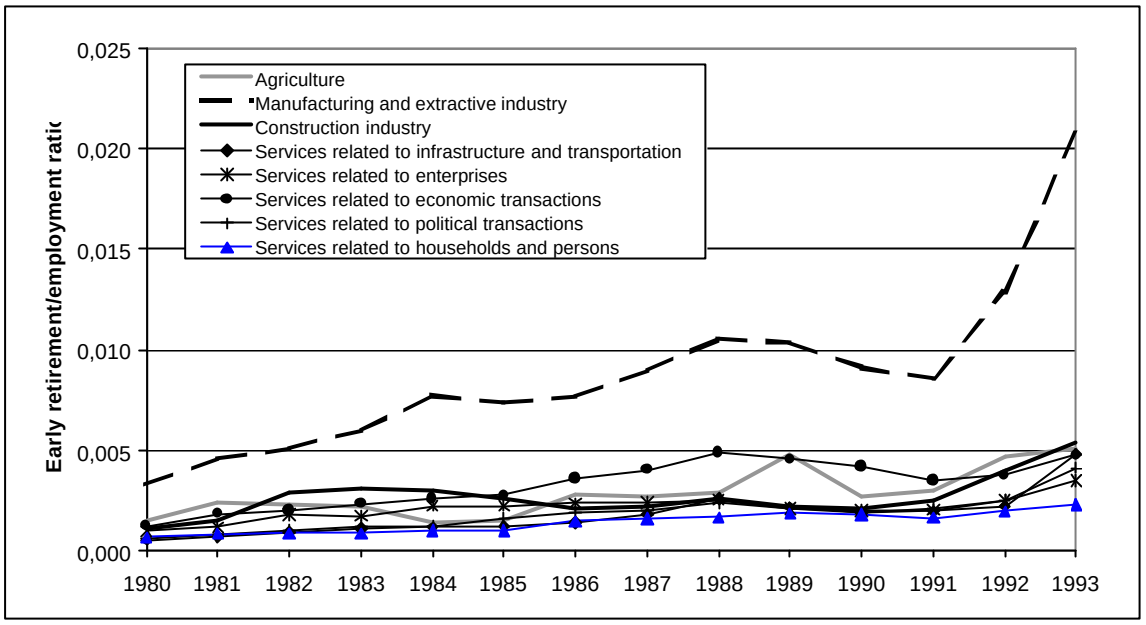
4.4 Early retirement / employment ratios by sub-sectors

Plotting the early retirement / employment ratio by sub-sectors[14] shows very divergent patterns between them (cf. Figure 8). The following characteristics should be taken notice of:

- Services in general score rather low in terms of early retirement, albeit with differences between the different service sectors brought out more clearly in the multivariate analysis (cf. chapter 5).
- Construction displays a highly cyclical pattern at a relatively low level.
- It sticks out very clearly – and conforms to the description by establishment size in the preceding paragraph – that *manufacturing* (which tends to be organised in larger units) is primarily responsible for the rise of unemployment of the early retirement type.

[14] The grouping of sub-sectors used for this description as well as for the regression analysis in chapter 6 is a recent development in the Institut Arbeit und Technik aimed at facilitating more differentiated analyses of the service sector. Its explication would be beyond the scope of this paper. See Beyer et al. 2001 for reference.

Figure 8: Early retirement/employment ratio by economic sub-sectors, West Germany, 1980-1993



Source: IAB employment subsample 1975 – 1995; analysis by Thorsten Kalina *© IAT 2002*

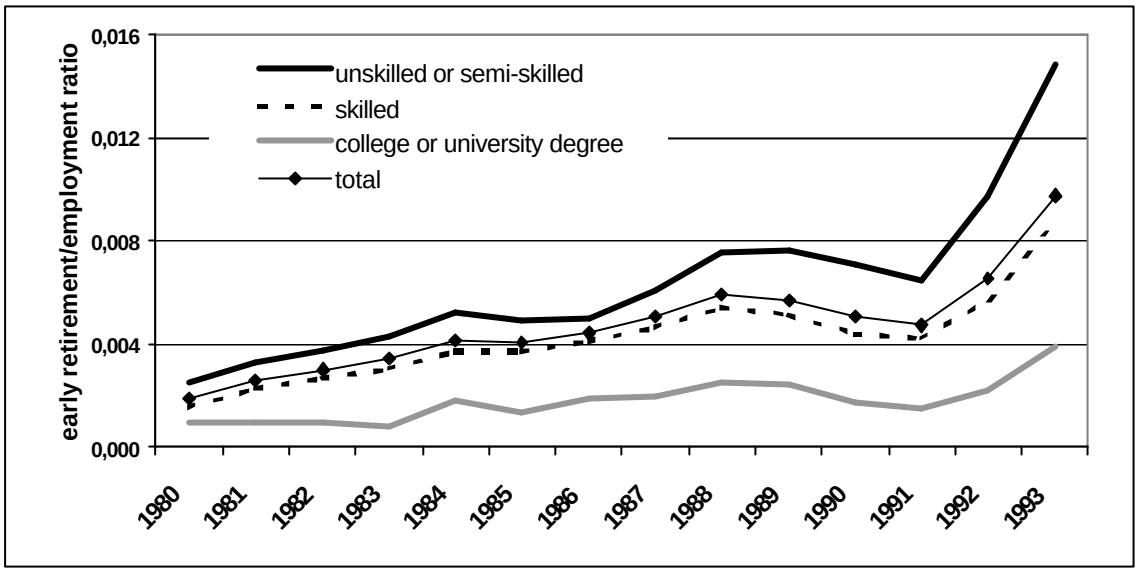
So it appears that the far-reaching restructuring which manufacturing and the extractive industries underwent in West Germany after the unification boom lead to a sky-rocketing of early retirement. Because of the relatively important role manufacturing still plays in Germany, this had a strong impact on the economy as a whole.

4.5 Does skill matter?

Skill levels might play an important role in shaping the pattern of early retirement. On the one hand, it is well known that participation as well as employment rates tend to be positively related to skills level because people who have invested in their human capital have more incentives and possibilities to exploit it. On the other hand, employers might tend to be skills-selective when cutting down on their payrolls, thus getting rid of employees with low skills no longer needed in modernised production processes.

Computing the early retirement/employment ratio by skills level yields the picture shown in Figure 9.

Figure 9: Early retirement/employment ratio by skills level, 1980 – 1993, West Germany



Source: IAB employment subsample 1975-1995; analysis by Thorsten Kalina *© IAT 2002*

At first sight, it appears to be beyond doubt that early retirement via unemployment is a skill-selective phenomenon: The early retirement/employment ratio is higher than average for people without certified vocational qualification (unskilled or semi-skilled), and the gap has widened over time.

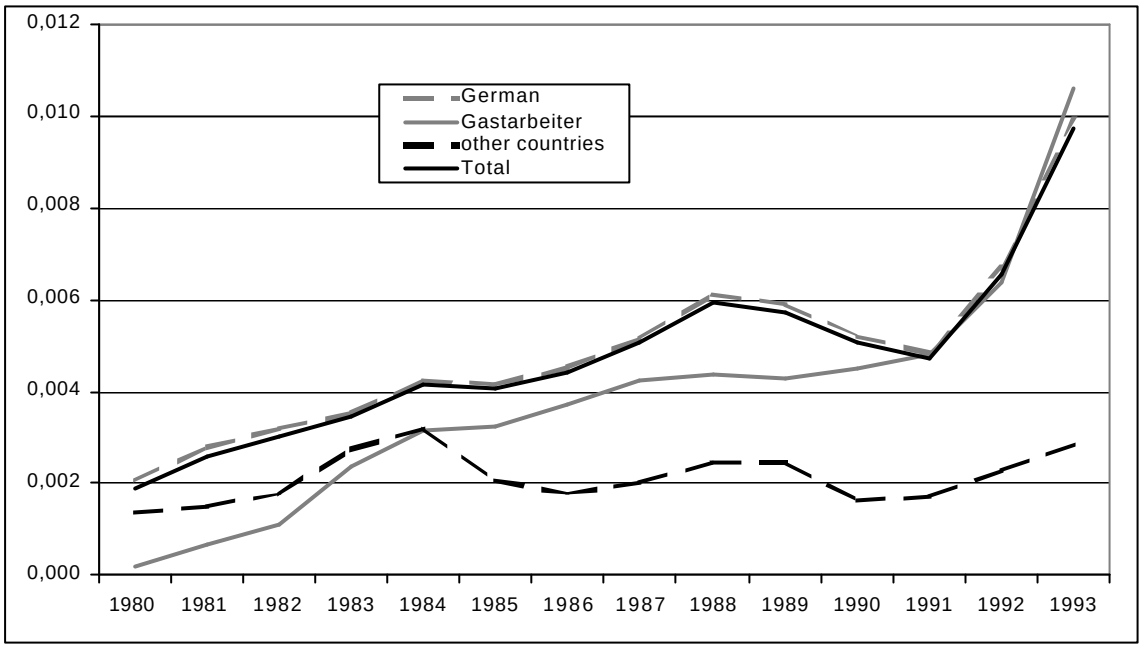
At second thought, however, the idea of skill-selectivity appears to want clarification. It is well established that unskilled workers bear a higher risk of unemployment anyway, regardless of the separation of unemployment into the three types underlying our analysis. Whether low skill alone significantly raises the probability of experiencing unemployment of the early retirement type can only be ascertained by multivariate analyse (cf. chapter 5).

4.6 Early retirement / employment ratios by nationality

Figure 10 displays the early retirement / employment ratio by nationality. The level of early retirement type unemployment of *"Gastarbeiter"*[15] is obviously increasing from the relatively lowest level in 1980 to slightly above the general level in 1993. Since 1991 it is almost identical with that of Germans, as migrants who once arrived at young ages grew older. The early retirement / employment ratio for other nationalities remains at a low level which suggests that these groups who mostly arrived later are still young or not staying until retirement.

[15] „Gastarbeiter" ("guest workers") was the expression for workers from the primary countries of recruitment: Italy, Spain, Greece, Turkey, and the former Yugoslavia.

Figure 10: Early retirement/employment ratio by nationality



Source: IAB employment subsample 1975-1995; analysis by Thorsten Kalina *© IAT 2002*

5 Estimating the impact of variables in a logistic regression model

From the descriptive analysis it can be concluded that unemployment due to early retirement has increased to a maximum share of 11 per cent in the total unemployment volume of 1993. Several statistical factors appear to govern the pattern of early retirement. Age, of course, plays a crucial role by definition. Beyond that, early retirement seems to be concentrated in large establishments, in manufacturing and among individuals with low skills, and it appears to be a predominantly male phenomenon. These factors, however, are closely interrelated in reality: Manufacturing tends to be organised in larger units employing larger proportions of unskilled men than services.

The question to be pursued in this chapter is which of these factors play a role of their own, independent of their entanglement with other factors. Logistic regression analysis will allow to establish the significance, the direction, and the strength of influence of each variable. Since the possible shifting of relative impacts over time was beyond the scope and budget of this investigation, the analysis was restricted to a single year of reference. For this purpose, 1990 was selected as the most recent year that still allows a sufficient period of observation in the data set without right-censoring problems interfering too strongly in the analysis.

From the IAB employment subsample, individuals with the following characteristics were selected:

- They were employed in West Germany at some point or during the entire year of 1990 at full time level.
- In that year, they were aged 54[16] or over. If they were to experience early retirement via unemployment this should be observed in the data set which extends through 1995.

For the persons in question, the impact of economic sub-sector, establishment size, gender, nationality, income and skills-level on the probability of experiencing unemployment of the early retirement type was calculated. The variable "age" of the risk-group refers to the year 1990, not to the age reached at their possible entry into early retirement. For obvious reasons, a person already aged 64 in 1990 and still employed is destined for retirement at statutory retirement age rather than for early retirement.[17] Therefore, in order to adequately assess the impact of the other variables, age must be included in the model but it will not be interpreted.

The overall results of the logistic regression are presented in detail in the appendix. As the “goodness-of-fit” test shows, the model can explain the propensity of taking up

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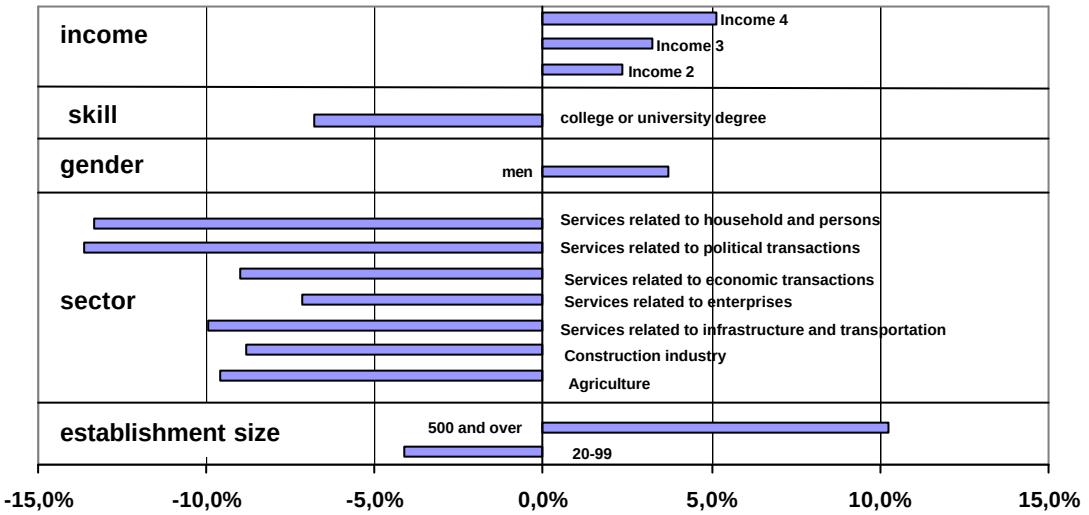
[16] Although we defined early retirement as starting at 55, tolerance has to be allowed for the blurring of age information – cf. chapter 2 for details.

[17] Cf. Figure 12 in the appendix: Ages beyond 61 of those still employed in 1990 reduce the probability of experiencing unemployment of the early retirement type more than any other variable in the model.

early-retirement related unemployment to a high extent. For the variable categories that turned out to be significant, the so-called marginals are presented in Figure 11. The marginals represent the change of probability for early retirement for single variable categories in comparison to a reference category.[18]

Figure 11: Change of probability (in per cent) for early retirement type unemployment by variable categories compared to reference categories (only significant categories), West Germany, 1990



This model is calculated for persons aged 54 and over in the year 1990, who worked full time
Reference categories: Income group 1; unskilled; women; manufacturing; enterprises with 1-19 employees
Source: IAB- employment subsample 1975-1995; Analysis: Thorsten Kalina, IAT
All categories are significant at a 1% level

Source: IAB employment subsample 1975-1995; analysis by Thorsten Kalina *© IAT 2002*

Regarding establishment size, the smallest category (1-19 employees) was chosen as a reference. Moving on to the next size category, other factors unchanged, will reduce the probability of early retirement by merely three per cent, whereas the size category of 100-499 is almost at par with the reference category and therefore not shown in the graph. However, working in an establishment with 500 or more employees will increase the probability of early retirement by more than 10 per cent as compared to the reference group. So the basic finding of the descriptive analysis concerning large establishments (cf. 4.3) is confirmed, but the impact of size is in part absorbed by other variables, presumably sector being the most powerful one.

Belonging to the sub-sector of manufacturing and extractive industries was taken as the reference category for sub-sectors. In accordance with the descriptive analysis, the probability of entering early retirement is lower in any other sub-sector. Of the four service sub-sectors, notably services for households and persons as well as services to

[18] For details of the analysis cf. Figure 12 in the appendix.

the "polity"[19] stand out with low probabilities of effecting unemployment of the early retirement type.

In order to check the influence of income this variable was grouped into ordinal classes. The income information in the sample is on the average daily income, from which five groups, each containing two percentiles of the population, were constructed.[20] It turns out that the probability of experiencing early retirement type unemployment is higher for groups with higher income, with the exception of the highest income group which is therefore not represented in Figure 16. Using unemployment as a bridge from employment to retirement is something one has to able to afford, not something that is imposed on the least affluent.

In accordance with the descriptive finding in 4.6, nationality turned out not to be significant in this model which uses the year of 1990 as a starting-point. “Gastarbeiter” reached the early retirement levels of Germans during the nineties.

Skill matters only at college or university level which reduces the probability of early retirement by 6.5 per cent as compared to the reference category of the unskilled. The difference between unskilled and skilled observed in the descriptive analysis disappears when the other factors come into play.

The gender difference is smaller than would have to be expected from analysing the social security framework: Being a man increases the probability of using unemployment for an early retirement transition by only 4 per cent in comparison to women. The remaining gender difference is brought about by other variables, presumably the different gender composition of the workforces in different sub-sectors.

[19] Government, social security, political parties, trade unions, employers' organisations, churches and religious associations, other not-for-profit and non-governmental organisations.

[20] Group one is from one to 92 DM, group two from 93 to 115 DM, group three from 116 to 136 DM, group four from 137 to 177 DM and finally group five is 178 DM and over. Income originally coded 0 or 999 was recoded as system missing.

6 Summary and discussion

In spite of employment protection legislation that sets privileges according to tenure and age, unemployment as a final and long-lasting stage of previously stable employment careers has become widespread in Germany. In 1993, the most recent year for which the data available allow this analysis, this type of unemployment amounted to almost 11 per cent of the total unemployment volume. The variables which turned out to have the strongest impact on the probability of individuals to experience this type of premature transition into retirement are economic sub-sector and establishment size.

Reacting to the increasing burden of early pensions on the pensions system, the German legislator – with effect as of 2000 – has introduced reforms that will stepwise phase out early pensions for women and by virtue of unemployment until 2011. During the transition period, early pensions can be "bought" by accepting lower payments. As from 2012, the earliest old-age pension will be available at the age of 62, and it will "cost" a reduction of 10.8 per cent in monthly payments. So these reforms create some disincentives against early pensions, and they abolish the attractiveness of unemployment as an entrance ticket into an earlier pension. The aim of the reform is to raise the average age at which people start drawing a pension.

This new framework, however, does not guarantee that people will actually be employed until higher ages. Even if unemployment will be no longer a prerequisite of an early pension it can still be used to bridge time between employment and the pension, as women in our sample demonstrate so clearly. The most recent analysis of employment rates, unemployment and pension entries of older people (Koller 2001) remains indecisive as to whether the pension reforms have already effected a reversal of the trend or whether the observed variations merely reflect a period of economic growth at the end of the nineties.

Tampering with the pension system alone – namely raising the statutory retirement age beyond 65, as repeatedly proposed by some politicians – might only result in lower pensions or shorter pension periods, not in longer employment. It does not follow from making a longer working life an economic necessity for people that it also becomes an economic reality. The key question retirement and labour market policy has to deal with – and here progress in comparison to the eighties is regrettably small – is how to positively influence companies' employment policies vis-à-vis older employees.

With manufacturing on the lead of early retirement records, the decreasing importance of this sector, the rise of services and the increasing importance of smaller establishments might bring some relief. The open question is, however, to what extent the emerging service sectors will copy employment policy patterns from manufacturing as they mature. There is some indication of this in the finding that services related to enterprises (e.g. advertising, accounting, lawyers, security) and services related to economic transactions (commerce, finance, insurance, real estate) appear to be less distant from the industrial patterns of early retirement than the other three service sectors (cf. Figure 11).

"Gradual retirement" (*Altersteilzeit*) which might possess some innovative potential with regard to extending employment over the lifetime is presently being perverted to replicate the established patterns of early exit under a different form. In four fifths of the cases, the gradual retirement is implemented in the form of the "block model" which means that the part-time provision of the gradual retirement scheme is only nominal. In practice explicitly allowed by law and encouraged by collective agreements building on it, gradual retirees actually work full-time for the fist half of their part-time period, and then they take time off for the second half. Although, in this way, unemployment and compensation payments related to it are avoided, the subsidies granted to firms if they replace the gradual retirees by unemployed or younger workers still put an additional burden on the unemployment insurance fund. Furthermore, gradual retirement is oriented towards the same premature pension provision as early retirement via unemployment ("old age pension because of unemployment or after gradual retirement") whose phasing-out will reduce present incentives for gradual retirement. Against the backdrop of projected demographic change and the development of the potential workforce, converging in the expectation of a turn-around at about 2010, gradual retirement turns out to be another attempt of suspending surplus labour rather than an endeavour of establishing a sustainable pattern of working in old age and of alternative pathways to retirement.

The first tentative steps in this direction are to be recognised in the reforms of employment policies that took effect as of January 2002: For a period limited until the end of 2005, establishments employing no more than 100 workers can apply for subsidies for the continued vocational training of workers after their 50th birthday. However, within only four years the majority of the target group of establishments and workers is likely to remain ignorant of this provision. Lacking concepts of labour utilisation adequate to the individual phase in the life cycle establishments will have no use for this provision unless it is supported by counselling on matters of work organisation, knowledge transfer between generations, and training management.

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Appendix

Figure 12: Logit-Estimates for taking up early retirement type unemployment (individuals of 54 and over in 1990).

	Dependent Variable VR	Logit-Coef.	Std. Err.	Z (=t-ratio)	P>|z|	Marginals
establishmentsize	REF: 1-19					0.00000
	20-99	-0.33	0.07	-5.01	0.00	-0.0411
	100-499	-0.05	0.06	-0.86	0.39	-0.00693
	500 and over	0.71	0.06	11.91	0.00	0.10231
	Missing	-0.12	0.17	-0.72	0.47	-0.01569
Economic Sub-sector	REF: Manufacturing and extractive industry					0.00000
	Agriculture	-1.03	0.22	-4.66	0.00	-0.09577
	Construction industry	-0.85	0.08	-11.26	0.00	-0.08831
	Services related to infrastructure and transportation	-1.01	0.08	-13.45	0.00	-0.0993
	Services related to enterprises	-0.67	0.11	-6.22	0.00	-0.07181
	Services related to economic transactions	-0.83	0.06	-13.74	0.00	-0.08998
	Services related to political transactions	-1.54	0.08	-19.94	0.00	-0.1364
	Services related to households and persons	-1.56	0.09	-17.09	0.00	-0.13354
Gender	(women=0 (REF); men=1)	0.29	0.05	5.70	0.00	0.03698
Qualification	REF: Unskilled					0.00000
	Skilled	-0.03	0.04	-0.69	0.49	-0.00407
	College or university degree	-0.62	0.11	-5.89	0.00	-0.06791
	Missing	0.00	0.08	0.00	1.00	0.00002

	Dependent Variable VR	Logit-Coef.	Std. Err.	Z (=t-ratio)	P>|z|	Marginals
	REF: 59					0.00000
Age	54	0.00	0.07	-0.05	0.96	-0.00050
	55	0.22	0.07	3.16	0.00	0.03105
	56	0.34	0.07	4.72	0.00	0.04817
	57	0.39	0.07	5.21	0.00	0.05704
	58	0.26	0.08	3.36	0.00	0.03657
	60	-0.61	0.09	-6.44	0.00	-0.06752
	61	-0.86	0.12	-7.21	0.00	-0.08709
	62	-1.59	0.17	-9.36	0.00	-0.12618
	63	-2.53	0.29	-8.76	0.00	-0.15057
	64	-4.10	1.01	-4.08	0.00	-0.16013
	65	-3.59	1.01	-3.57	0.00	-0.15528
	REF: German					0.00000
Nationality	Gastarbeiter	0.05	0.08	0.62	0.53	0.00652
	Other countries	-0.20	0.16	-1.26	0.21	-0.02438
	Missing	1.85	0.34	5.36	0.00	0.38478
	REF: 1-92 DM					0.00000
Income	93-115 DM	0.17	0.06	2.70	0.007	0.02354
	116-136 DM	0.23	0.07	3.55	0.00	0.03231
	137-177 DM	0.36	0.07	5.48	0.00	0.0513
	178 and over	0.13	0.07	1.81	0.07	0.01784
Constant		-1.44	0.09	-16.29	0.00	-0.28413

Number of obs. = 22482	Log likelihood = 9894.8933	Goodness-of-fit test Number of observations =22482 Number of covariate patterns = 5804 Pearson chi2(5770) = 7243.92 Prob > chi2 = 0.0000
Pseudo R^2 = 0.1349	Likelihood-Ratio-Test [chi2(33)] = 3086.59 Prob. > chi2 = 0.0000	We used a level of significance of 1 per cent

Source: IAB employment subsample 1975 – 1995; analysis by Thorsten Kalina *© IAT 2002*