

In search of turbulence

Labour market mobility and job stability in Germany

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Abstract

Public opinion and some influential strands of the social sciences share an accord on employment rarely found on other subjects. The "standard employment relationship", it is agreed, is disappearing; job insecurity is on the rise; people have to change jobs and even occupations more often than their parents had to; employment careers as well as life courses in general are nowadays more individualised and fragmented; the experience of unemployment is becoming endemic. Jobs in the service sector, it is said, do not last as long as industrial jobs, while women now constitute the "buffer" that provides flexibility in the labour market.

In a project funded by the German Research Council for four years from 2000, we have begun to test some of these assumptions using the IAB Employment Subsample 1975 – 1995. This file for academic use allows us to follow the employment and unemployment careers of German employees covered by the social security system from the decline of industrialism to the dawn of the New Economy. Having started by applying descriptive statistical techniques such as flow counts, turnover rates and job survival analysis to the employment records of the West German sub-population, the results obtained rather contradict received wisdom:

- labour turnover declined slightly,
- jobs tended to last longer,
- what grew dramatically was not the incidence of unemployment but its persistence for growing percentages of persons experiencing it.

Introduction

Since the heyday of industrialism, the German employment system, and that of many other countries as well, has undergone some fundamental changes. Thus the importance of skills and of “lifelong” learning has certainly increased, as have women’s labour market participation and the diversity of new and more flexible working-time forms (cf. Mayer/Müller 1994: 265). There has been no shortage of attempts to characterise this change by locating it within major trends whose effects are said to be all-embracing and which, denoted by such terms as “globalisation” and “individualisation” (cf. for example Rogowski/Schmid 1997) or “tertiarisation” (cf. for example Häußermann/Siebel 1995), are the object of much debate. These trends not only affect society as a whole but are also the cause of changes in social subsystems such as the labour market. There has also been much discussion in Germany of various mutually complementary and, in part, overlapping developments, some of which fits into the international debate on the “end of work” (Rifkin 1996; Zukunftskommission 1997b; Giarini/Liedtke 1998; for a critical perspective see G. Wagner 2000; Knuth 2000), while other aspects reflect specific problems in the German labour market, such as the debates on the “end of the standard employment relationship” (Mückenberger 1989; Zukunftskommission 1996; Hoffmann/Walwei 1998; Kress 1998; for a critical perspective see A. Wagner 2000) or on the growing importance of the “entrepreneurial worker” (Voß 1998; for a critical perspective see Bosch 2000).

A particular focus of the debate on the “future of work” is the evolution of inter-firm labour mobility. Labour turnover and the duration of employment relationships are key issues in both the German and the international debates on the functioning and future of the labour market. It has emerged from these debates that the general findings on labour market mobility and the duration of employment relationships reported in the literature are not wholly unambiguous. Some authors claim to have observed increased labour market mobility and job insecurity in Great Britain (Booth et al. 1999) or the USA (Swinnerton/Wial 1995; Valetta 1999), while others refute these findings and suggest that, despite the alleged (and ongoing) increase in flexibility and deregulation, there is little evidence of any (unambiguous) effects on mobility and duration of employment

relationships (cf., for example, on Great Britain, Burgess/Hedley 1998 and on the USA, Diebold et al. 1996; Neumark et al. 1999; Gottschalk/Moffitt 1999).

As far as external flexibility in the German labour market is concerned, many commentators start from the assumption of a long-established but now strengthening general trend towards a “high velocity labour market” that is increasingly shaping the “future of work”. In such a turbulent labour market, individual employment histories will, over time, “become increasingly unpredictable and chaotic compared with those of the past” (Rogowski/Schmid 1997: 577). Labour markets in the “risk society” are said to be characterised by a constantly advancing, all-embracing process of “destructuring” : “In this way a new division of the labor market is created between a uniform standard industrial society labor market and a flexible, plural risk society market for underemployment, where the second market is quantitatively expanding and increasingly dominating the first” (Beck 1986: 228; cf. also for example Offe 1994; Mutz et al. 1995). The consequence of this increased external labour market flexibility is said to be a levelling out of employment opportunities and risks; uncertainties that in industrial societies were unevenly distributed along clearly defined socio-economic demarcation lines are said to be becoming increasingly generalised. The old division between “core” and “peripheral” workforces is said to be dissolving into general employment instability.

Any attempt to ascertain whether turbulence in the German labour market really has been increasing in recent years as a result of increasing external flexibility must perforce take as its starting point an empirical analysis of (a) labour market mobility, (b) job stability and (c) the extent of the experience of unemployment. This paper is given over to a descriptive analysis of the general dynamic of the Western German labour market, which will provide an empirical basis for sketching in the major trends. To this end, the hypotheses to be tested are formulated in Section 1 and some preliminary methodological observations made. Section 2 is given over to a presentation of the results of the analysis, which are examined in the light of the hypotheses elaborated in Section 1. The conclusions to be drawn from the findings are then summarised in Section 3.

1 Hypotheses and data set

The following three hypotheses provide the starting point for our analysis:

- Hypothesis 1:* Employee mobility in the external labour market has generally increased since the 1970s.
- Hypothesis 2:* The stability of employment relationships has declined since the 1970s.
- Hypothesis 3:* Experience of unemployment has increasingly become a normal part of workers' employment history since the 1970s.

If turbulence really is becoming an established feature of the German labour market, then these hypotheses should be confirmed in the course of the following empirical analysis.

In order to be able to test these hypotheses, we require data capable of depicting dynamic processes. So-called “event history data” are best suited to this task (MAYER 1990).¹ Such data capture changes in the phenomena under investigation on a continuous basis. In this case, “continuous” means that changes of status and hence durations are captured *sufficiently* precisely with regard to the problems to be investigated and the range of statuses thereby defined.²

The so-called IAB employment subsample (IABS) is particularly well suited for use as a data set for the analysis of employment careers in Germany. The IABS contains exact daily data on the employment careers of some 550,000 individuals over the period between 1975 and 1995. The data set is based on a 1% sample of the insurance accounts that the Federal Labour Office (Bundesanstalt für Arbeit, or BA) maintained in respect of *employees liable to pay social security contributions* between 1975 and 1995.³ These “process-produced data”⁴ are

¹ On the difference between longitudinal, panel and event history data cf. Blossfeld/Rohwer (1995); Andreß (1992).

² Event history data for use in analysing labour markets should ideally be able to capture an individual's employment status on an exact daily basis, since a change of status can occur from one day to the next. Flow data collected on a monthly basis would obviously be less exact, while collection on an hourly basis, for example, would be unlikely to improve data quality with regard to the problems to be investigated. Ultimately, it is those problems that determine what ‘sufficiently continuous data collection’ means in reality.

³ Employers in Germany are legally obliged to register their employees with the various social security agencies (pension, health and unemployment insurance). These agencies include the Federal Labour Office in Nuremberg, which is responsible for unemployment insurance.

supplemented by data on periods of unemployment⁵ during which a claimant received benefits and on the establishments that employed individuals in the subsample during the period of observation (cf. Bender et al. 1996; Bender/Haas/Klose 2000).

On an average annual basis, the IAB employment subsample includes around 200,000 individuals liable to pay social security contributions up to 1990 and around 250,000 from 1991 onwards; over the whole period the subsample includes about 560,000 individuals liable to pay social security contributions (about 485,000 in Western Germany and about 75,000 in Eastern Germany). This corresponds to about 7.8 million employment and benefit payment notifications, with each individual record containing 35 variables.

Our analysis will include only those individuals who were employed throughout their working lives solely in West German establishments; the concentration on West German employees ensures that the period of analysis is sufficiently long. Furthermore, second jobs (multiple employment relationships) are not taken into account and individuals in education or training are also excluded from the analysis. Unless explicitly indicated, the analysis does not distinguish between part-time and full-time employment.

It should be noted that the IAB employment subsample enables us to consider only a limited time horizon. Thus there are episodes that had already begun when the observation period started on 1 January 1975 and episodes that had not finished when the observation period ended on 31.12.1995. In the first case, we

Relevant data on each employee taken from the employer declarations is held there electronically in individual “insurance accounts”.

⁴ Process-produced data are “data that are required and gathered for administrative purposes or to assist public institutions (particularly social security agencies) to discharge their duties” (Schmähl 1985: 277). The particular advantage of process-produced data over survey data is that they provide exact data on a large number of individuals over a long period of time (Schmähl/Fachinger 1994). The disadvantage of such data is that they are gathered in order to provide adequate information for administrative procedures.

⁵ The IABS documents only those spells of unemployment during which individuals in the sample receive unemployment benefits from the Federal Labour Office; periods of unemployment without entitlement to benefits are not recorded. The “benefit recipient rate”, that is the share of those entering unemployment who receive benefits, declined from an average of 76.8 per cent in the 1980s to an average of 69.4 per cent in the 1990s (cf. IAB 2000: 62f.). – Moreover, the IABS does not record all types of benefit. The relevant IABS variable has three categories: “unemployment benefit”, “unemployment assistance” (paid to workers who have exhausted their entitlement to unemployment benefit) and “subsistence allowance” (cf. Bender/Haas/Klose 2000: 5).

speak of left-censored and in the second case of right-censored data (Meinken 1992: 69f; Kleinbaum 1995: 5ff; Blossfeld/Rohwer 1995: 34ff). Because of this censoring problem, employment data from 1975 are not included in our analysis at all, while data from 1995 are included only in part.

The data set imposes three restrictions on our analysis.

Firstly, any analysis of the IAB employment subsample must be confined to insurable employment. Consequently, the self-employed, civil servants and those in marginal part-time employment are not included in the analysis. However, since at the end of the investigation period about 80 per cent of the economically active population was still in insurable employment, making it by far the most widespread employment form in the German labour market (Hoffmann/Walwei 1998), this data set captures the overwhelming share of labour market events.

Secondly, it should be noted that the IAB employment subsample provides data only up to 1995; consequently, more recent developments in the labour market cannot be depicted by means of this data set. However, it can be used to examine long-term trends, which include the notion of the “high velocity labour market”.

Thirdly, the data set provides evidence only on objective job stability; in other words, the data can be used only to ascertain how long a particular employment relationship lasts. Employees’ subjective perceptions of these relationships may be different and are not the object of the present investigation. Nor does the data set provide any information on the pressure to which employees are exposed in the workplace to operate more flexibly.

2 The evolution of the Germany labour market between 1976 and 1995

2.1 Labour market mobility between 1976 and 1995

The evolution of labour market mobility can be reproduced with the aid of suitable flow values. The IAB employment subsample can be used to calculate entry and exit rates by dividing the number of employment relationships begun or respectively ended in a calendar year by the total number of employment

relationships.⁶ The average of the entry and exit rates, the so-called labour turnover rate (LTR), is calculated as described by Cramer/Koller (1988) and Schettkat (1995) by dividing the total number of employment relationships begun and ended in that year by the total (double) number of employees in a year.⁷ Thus the LTR is an indicator of total labour market mobility.

Figure 1 shows the evolution of entry, exit and labour turnover rates in the West German labour market, together with the indexed evolution of employment between 1976 and 1995.⁸ There is a simple arithmetic relationship between these values: if the entry rate is greater than the exit rate, then the number of employees rises. Conversely, the number of people in employment falls in those periods in which the exit rate is greater than the entry rate. Thus the points at which the curves cross over represent the points at which the employment situation begins to change.

The number of persons in insurable employment in West Germany rose by 10 per cent between 1976 and 1995. During the employment boom of the early 1990s, the increase actually reached a peak of 15 per cent. Both entries into and exits out of employment show a procyclical pattern. Thus overall mobility is greater during upturns than during downturns. This effect can be explained by the fact that the replacement chains become longer in upturns and act as a multiplier on mobility (cf. Schettkat 1996): increased demand during upturns means that vacancies are more likely than in downturns to be filled by applicants who vacate other jobs, which then have to be filled in their turn. As a result, overall demand increases to a considerably greater degree than the additional net demand for labour. During upturns, therefore, it is not only entries that increase but exits as well. The converse applies during downturns: contrary to the general perception,

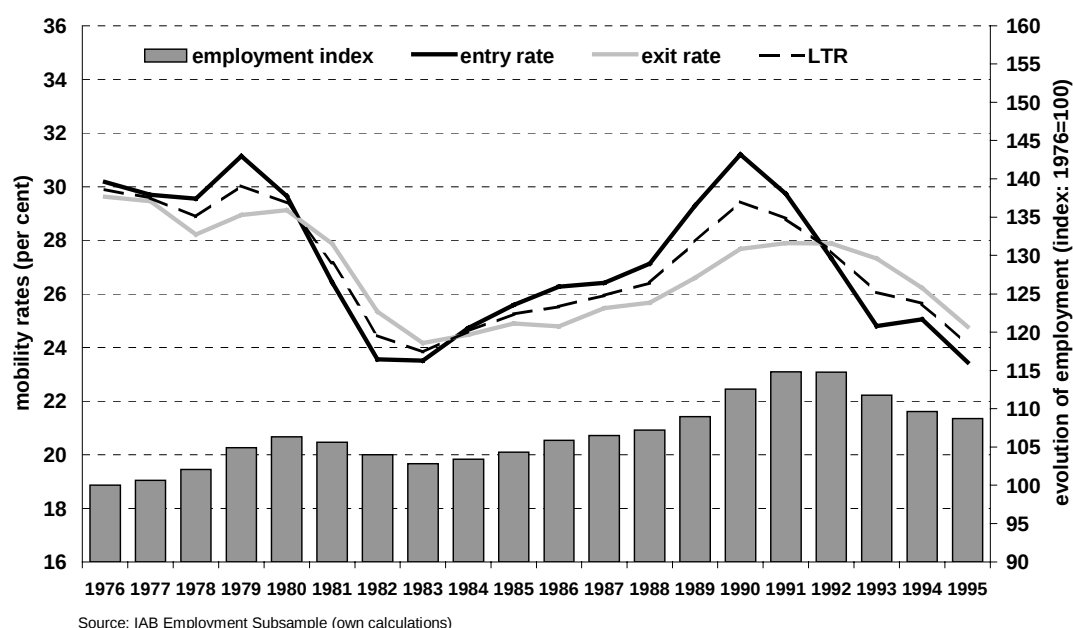
⁶ An “entry” is defined as the start of a new, insurable employment relationship. An “exit” is defined as the ending of an existing insurable employment relationship, although periods of interruption (because of extended periods of illness or maternity/paternity leave, for example) are considered to be part of an ongoing employment relationship. Transitions from full-time to part-time employment and vice versa within the same establishment are regarded as a continuation of the existing employment relationship.

⁷ In order to simplify the calculations, we differ from Cramer and Koller (1988) in taking as the reference value not the annual average number of employees but rather the number of people in employment as at 30 September each year. This leads to slightly different rates, but does not alter the trends.

⁸ The exit rate for 1995, and hence the labour turnover rate as well, is systematically underestimated because of right-censoring, since only exits up to and including 30 November 1995 are included in the calculation.

fed by announcements of large-scale redundancies, that mobility increases, both entries and exits decline during downturns. It is only involuntary exits that increase, in both absolute and relative terms.

Figure 1: *Entry, exit and labour turnover (LTR) rates and evolution of employment (index: 1976=100), West Germany (as a whole), 1976-1995*



In order to test hypothesis 1, which posits a general increase in mobility, we must try to eliminate these cyclical influences. This is only partially possible, of course, since only one cycle, which was, moreover, atypically influenced by German unification, can be completely overlooked. In 1976, between the oil price shocks and the temporary peak of 1980, the West German LTR was 30 per cent; in 1995, two years before the employment low point was reached, it had fallen to 25 per cent. It is known from official statistics that labour turnover rates did not reach the 1976 level again, not even in 1997 and 1998⁹, which are perhaps more comparable with 1976 by virtue of their position in the cycle. Even during the employment boom of the 1990s, when the LTR was around 30 per cent, mobility in the West German labour market was lower (albeit only slightly) than in the weaker employment boom of the late 1970s. It is also notable that, despite the dramatic collapse in employment in the mid-1990s, the labour market at this point was *not*

⁹ More up-to-date figures are not currently available because of a change in employment statistics.

any less “mobile” than during the employment downturn of the first half of the 1980s, which was less extensive in both absolute and relative terms (LTR 1983: 24 per cent; LTR 1995: 24 per cent).

Thus the labour turnover rates do not provide any evidence of a general increase in the labour market mobility of workers in insurable employment during the observation period.¹⁰ In fact, inter-firm labour mobility in West Germany is astonishingly little influenced by supposed or actual economic and social changes. Indeed, the trend in labour mobility even seems to point downwards. Thus the first hypothesis must be unequivocally rejected.

2.2 Stability of employment relationships

The data derived from the IAB employment subsample are exact daily event history data that make it possible to ascertain the exact duration of employment relationships. With the aid of so-called survivor rates, the stability of employment relationships can be calculated and also represented graphically through time-dependent survivor probabilities (on the calculation of survivor rates cf. Andreß 1992; Blossfeld/Rohwer 1995; Kleinbaum 1996). Whereas we have measured mobility in and out of employment relationships in terms of the relative frequency of events (entries and exits) in particular calendar time periods (years), we measure the stability of employment relationships in terms of the persistence of a status (employment relationship) over the course of an observation period (the number of days that have elapsed since the beginning of an employment relationship without it ending). In this way, we can superimpose employment relationships that begin at different points of calendar time on an observation period axis and pool them at will, which allows us to compare, for example, the stability of employment relationships that began between 1976 and 1980 with the stability of those that began between 1986 and 1990.¹¹

¹⁰ Calculations not documented here also show that the relative frequency of immediately completed establishment transitions (i.e. those without an intermediate period of non-activity) did not increase during the observation period if cyclical fluctuations are taken into account.

¹¹ The reference here is to employment relationships not to individuals. In other words, in calculating the survivor rate, we take into account all changes of employer during the observation period, and hence all new employment relationships entered into, rather than the number of individuals making such transitions.

Figure 2 shows the survival rates for *employment relationships that began* in these two periods. If the employment relationship began between 1976 and 1980, it is included here in the 1976-1980 entry cohort (EC 1976-1980); if it began at any time between 1986 and 1990, it is included in the 1986-1990 entry cohort (EC 1986-1990).¹² The survival rate measures the probability that an employment relationship that began in a particular entry cohort has not yet ended by the observation period plotted on the time axis. The maximum period of time observed is five years (1,825 days). Looking at these diagrams the other way round, we can ask how long it takes in each instance until only a certain percentage (e.g. 50 or 25 per cent) of the employment relationships that began in the observation period remain.

The falling survival rate in Figure 2 represents the fact that the longer the time that has elapsed since the entry date, the less likely it is that an employment relationship still exists, since day by day employees quit their jobs, whether because of inter-firm mobility, dismissal into unemployment, transition into retirement, death or move to a non-insurable job.¹³

The downward kinks after 365 and 730 days show that a substantial share of employment relationships last exactly one or two years; after three years there is still a downward kink, albeit a smaller one. The asymptotic trend of the curves over the five-year observation period means that the probability that an ongoing employment relationship will continue in future increases as the period of time that has elapsed lengthens. For obvious biological reasons, this “law” can apply only for limited periods of time, albeit longer ones than those that can be investigated with the data set used here.

The relative path of the curve is of decisive importance in testing the hypothesis of declining job stability. A group of employment relationships – in this case four-year entry cohorts - is shown to be all the more stable the higher the path of the corresponding survivor rate in the coordinate system is.

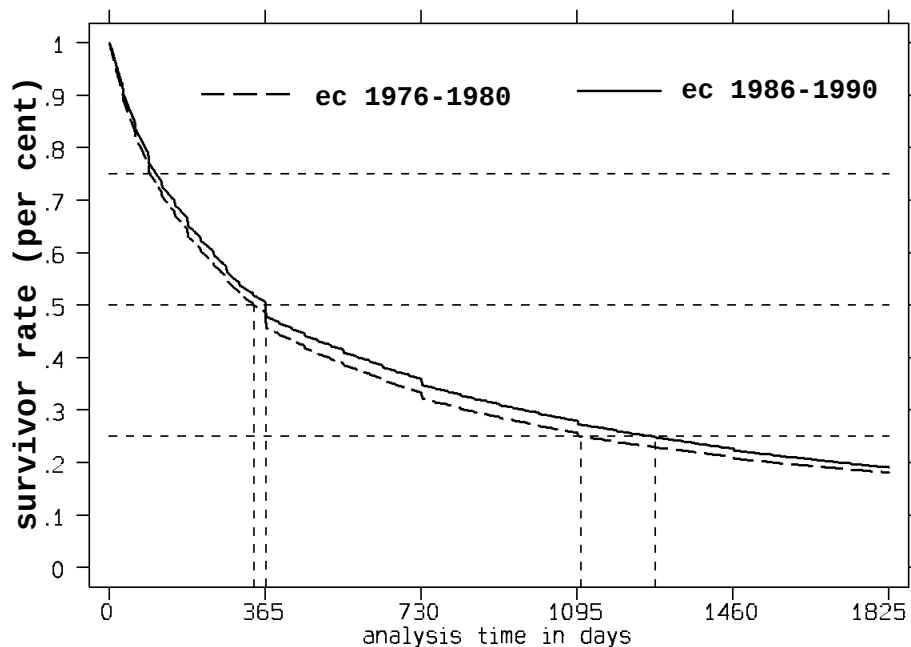
¹² These two entry cohorts were selected because the two periods in question, 1976-80 and 1986-90, were periods of employment growth. Since employment relationships are to be observed over a maximum period of five years, entry years after 1990 cannot be analysed in this way and on these premises with the dataset used here because of right-censoring problems.

¹³ On the criteria used to define when an employment relationship is assumed to be ongoing, see footnote 6.

In Figure 2, the path of the curve for the later entry cohort is higher than the curve for the earlier cohort. This means – contrary to hypothesis 2 – that employment relationships that began at the end of the 1980s were more stable than those that began at the end of the 1970s.¹⁴

And yet how pronounced has the increase in job stability been? One indication of this is the period of time that elapses until a certain survival probability is reached. For example, 50 per cent of the employment relationships that began between 1976 and 1980 had already ended within 340 days, while the median duration of employment in the new job for the 1986-1990 EC is 365 days. In other words, the average job duration increased over a ten-year period by 25 days or 7.5 per cent. This increase in job stability becomes even more evident if the last quartile is considered. In the case of the employment relationships entered into between 1976 and 1980, it took three years (1,095 days) for only one quarter of them to be still in existence, whereas in the case of the younger entry cohort a survivor rate of 25 per cent was not reached until around six months later (+ 16 per cent).

Figure 2: *Survivor rate for new employment relationships (total), West Germany, 1976-1980 and 1986-1990 entry cohorts (ec)*



Source: IAB Employment Subsample (own calculations)

¹⁴ Differentiated analyses for all individual entry years not included here for space reasons show the same trend, although of course with certain fluctuations in the individual years.

Thus survivor analysis reveals that *one in two new jobs is relinquished within approximately one year*, making Farber's conclusion that "most jobs end early" (Farber 1999: 2453) applicable to the German labour market as well. However, comparison of the two entry cohorts does not reveal any increasing destabilisation over time. On the contrary: *over the course of the observation period the stability of new employment relationships increases rather than declines*. Consequently, the second hypothesis must also be rejected.

2.3 Experience of unemployment: increasingly the norm?

In order finally to ascertain whether experiences of unemployment are becoming more frequent, we compared the number of persons experiencing at least one day's unemployment in a calendar year with the number of persons active in the labour market (unemployed and those in insurable employment). The "unemployment experience rate" thus obtained indicates the share of labour market participants who experienced unemployment in any one year during the observation period.¹⁵

Figure 3 shows the shares of labour market participants in each year who (a) experienced only employment (not a single day's unemployment registered; at least one day's insurable employment), (b) experienced only unemployment (not a single day's insurable employment, at least one day's unemployment registered) and (c) were in insurable employment in the year in question and also experienced unemployment (at least one day in each case).¹⁶

In 1980, more than 90 per cent of labour market participants experienced only employment, while the unemployment experience rate for the same year was just under 10 per cent. Although this value rises to a peak of around 16 per cent in 1994, any attempt to interpret these figures must take account of fluctuations in the economic situation. It turns out that the unemployment experience rate was

¹⁵ It should be remembered that the data set used here captures unemployment only through the payment of benefits – cf. footnote 5.

¹⁶ The years 1975 to 1979 are not included in the analysis of unemployment (although data for this period are also in principle available in the IAB employment subsample) because distortions might occur due to the under-recording of unemployment spells in the data set (cf. Bender et al. 1996: 27).

not significantly higher during the employment downturn of the first half of the 1990s than in the less pronounced downturn of the early 1980s. *Thus unemployment is not increasingly becoming a normal part of employment careers* and as a result the third hypothesis must also be rejected.¹⁷

Figure 3: *Unemployment experience rate and employment rate (total), West Germany 1980-1995*

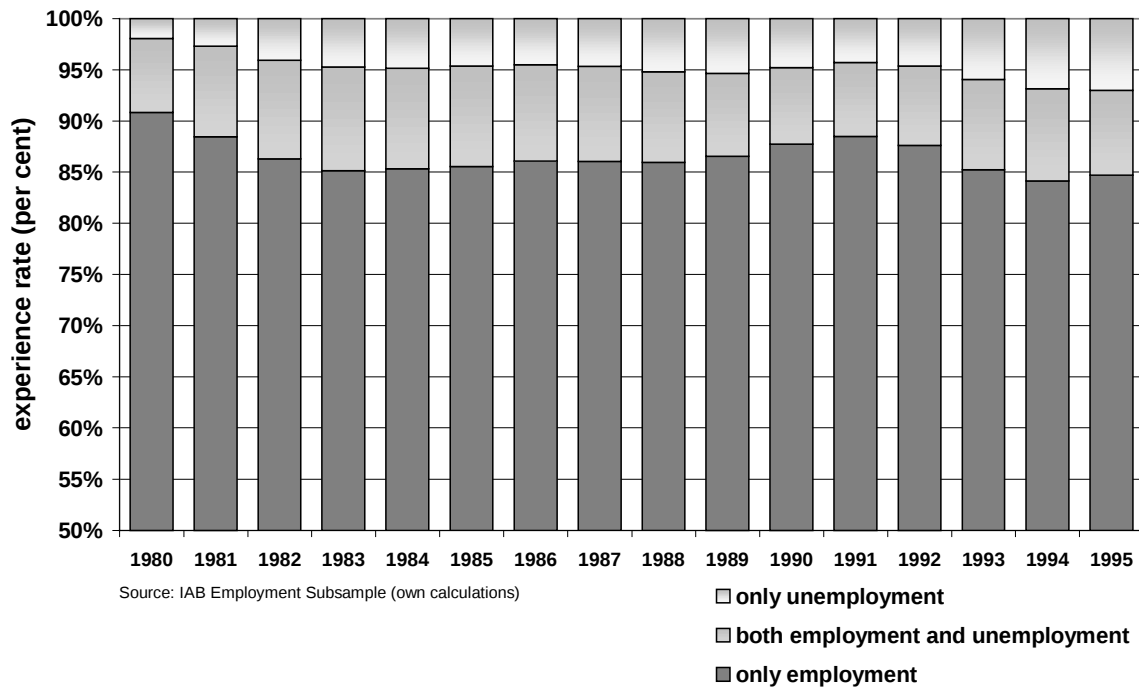


Figure 3 reveals something else as well. There is obviously an expanding category of unemployed individuals who do not make the transition out of unemployment back into employment or who, for whatever reasons, do not attempt to do so. In 1980, only 2.5 per cent of labour market participants experienced only unemployment; by 1995, the percentage had increased to around 7.5 per cent. This increase went hand in hand with an increasingly unequal distribution of the total volume of employment (Karr 1997; Kurtz 2000). Examination of which groups are particularly badly affected by this “hardened” form of unemployment falls outside the scope of this paper. We will merely note that we used the same data set, the IAB employment subsample, in another project in an attempt to ascertain the share of workers effecting the employment/retirement transition by

¹⁷ Cf. also the longitudinal analysis carried out for the period 1995-1995 using the “supplementary sample I” (Kurtz 2000).

taking early retirement (exit from the labour market with payment of benefits until pensionable age). We concluded that in 1993, on a very conservative estimate, more than one tenth of the total volume of unemployment was attributable to “early retirement” (cf. Knuth/Kalina 2001). However, if we were to adduce the use (or abuse) of unemployment benefit as an instrument of early retirement¹⁸, a practice that became increasingly widespread until the 1999 pension reform as a result of firms’ labour shedding policies, as evidence to support the notion that “unemployment is part of a normal employment career”, then we would be ignoring some of the fundamental aspects, social definitions and subjective meanings of old age unemployment as the final phase of employment careers.

3 Conclusions

The descriptive analyses conducted on the basis of the IAB employment subsample provide no evidence of any increase in general turbulence in the West German labour market between 1976 and 1995. *None* of the three hypotheses formulated at the outset has been confirmed: *general labour market mobility is not increasing, the stability of new employment relationships is not declining and the experience of unemployment cannot be said to be becoming increasingly “normalised”*.

As the OECD noted in 1997, the subjective perception of increasing job insecurity in many countries is not clearly reflected in the objective data on labour market dynamics and job stability. We have found the beginnings of an explanation in certain sectoral analyses that conclude that job stability actually is declining among some of the economic groups that help to shape public opinion, including churches, political parties and Non-Profit-Organisations as well as trade unions and employers’ associations. Furthermore, although employment relationships in the media have lost none of their traditional uncertainty and instability, the number of people employed in that sector has increased considerably. Thus there are some indications that the shapers of public opinion are actually witnessing increasing job instability in their immediate environment and are generalising this subjective experience to the public at large. However, our findings reveal that the

¹⁸ On the mechanisms at work here cf. Knuth 1999.

reality in large sections of the German labour market is less exciting and less significant than the latest “mega-trend” would suggest.

The real problem that has to be dealt with in Germany is not the “high velocity labour market” but the entrenchment of unemployment. If this challenge is to be met then the actual duration of the working life must once again be extended until pensionable age. To that end, occupational transitions and further vocational training must be supported and encouraged until the end of the working life and must also be demanded by those affected.

Of course a little more “turbulence” in the German labour market, instead of just in political rhetoric, could help to resolve the unemployment problem, since increased recruitment also creates more opportunities for the unemployed. Recruitment can be boosted not only through the creation of new jobs but also by the need for replacements for employees undertaking further training or taking career breaks. Thus regulations and company benefits that have the effect of blocking occupational mobility should be subjected to the closest scrutiny. Compensation provided by individual employers for cuts in state provision, for example a strengthening of company pension schemes as is currently being discussed in Germany, can only lead to a further reduction in mobility. On the other hand, abolition of the general protection against dismissal, in which Germany now occupies only an intermediate position in international terms, would be an inappropriate instrument for improving the dynamic of the labour market, since it is recruitment rather than dismissals that is the real engine of the labour market. What might be gained in surface movement by easing restrictions on the “exchange” of workers would be lost as a result of the increased polarisation of core and peripheral workforces and the consequent decline in job performance.

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