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Increasing Instability in Employment Careers?
Men's Job Mobility and Unemployment in West Germany:
A Comparison of the Birth Cohorts 1940, 1955 and 1964

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1. Introduction

Theorists like Beck (1986, 1997) and Giddens (1995) predict that instabilities in the life courses of individuals are on the rise. It is maintained that the employment career has become less stable and that more and more employees face the risk of unemployment. Castells (2000) links these developments to the process of globalization and to the increasing international competition which urges firms to react faster and more flexibly to market changes. According to this argument, firms try to pass the increasing insecurities they face onto their employees meaning that they try to adjust the size of their workforce flexibly to their needs (numerical flexibility). For employees this implies less employment security and a higher unemployment risk, or to put it differently: more mobility between jobs as well as into and out of employment.

At the same time, there are good reasons for employers to use forms of functional and temporal flexibility in order to become more customer-orientated and innovative, strategies which often require an entrepreneurial long-term perspective and investment in human resources (Brödner/Kötter 1999). This in return implies the need for a certain amount of workforce stability in order to achieve the employees' commitment and trust; a kind of industrial relations that has been traditionally supported by the German institutional setting[1] (Soskice 1991).

In Germany, the flexibility discussion is closely linked to the thesis that the standard employment relationship ("Normalarbeitsverhältnis") – defined as secure (lifelong) permanent, full-time employment – is eroding, a process that is supposed to have started in the mid-1970s with the oil price shock (Mückenberger 1989; Schmid 2000). To be sure, the standard employment relationship has always been typical for men, but not for women. Thus, the supposed process of erosion of this type of employment should mainly apply to men.

Theorists disagree on the question whether the assumed increase in employment instability is a risk for all (male) employees alike. While Beck (1986, 1997: 107) assumes the latter, stratification researchers like Breen (1997) and Goldthorpe (2001) expect clear class and educational patterns, meaning that those in less advantaged positions or with lower educational qualifications are more exposed to employment insecurity. A related issue arises with respect to labor markets: Employees in the secondary labor market segment are more exposed to the

[1] This framework has contributed to a division of the workforce into what we term 'insiders', persons who have a job and who therefore enjoy a certain amount of security and 'outsiders', persons who try to gain access to the employment system but face difficulties resulting from the closed German employment relationships.

risk of employment instability, whereas those in the primary segment or internal labor markets typically enjoy stable careers (e.g., Carroll/Mayer 1986). The question then is whether the supposed increase in employment instability is realized rather through the expansion of the secondary labor market segment or through the introduction of employment instability to employees working in the primary segment or in internal labor markets.

If the arguments forwarded by globalization theorists are of substantial empirical value, employment instability should not only seriously touch the labor market outsiders who try to gain access to the employment system. Rather, the insiders should also be increasingly affected, namely men in their mid career phase that used to be shielded by the West German institutional setting. Thus, in the present paper we try to find empirical evidence on the question whether there is indeed an increase in employment instability for men in West Germany[2] and, further, who is mainly affected by it. Do *all* employees face similar risks or are there differences based on characteristics of *persons* (like educational qualifications and labor force experience) and/or of *positions* (like firm-size, sector or industry), and how large are these differences?

To tackle the question of employment instability we refer to the following employment transitions: (1) inter-firm moves, that is, direct moves from job to job that involve a change of firm; (2) upward and downward job shifts that do not necessarily involve a change of firm. These movements are measured in terms of occupational prestige; (3) transitions from employment to unemployment; and (4) from unemployment to employment.

What is the link between these transitions and instability? A trend towards inter-firm moves would indicate that employees are less bound to one firm in their work life; in this sense their careers become increasingly unstable. This does, however, not necessarily mean that the moves are involuntary. If upward career paths and the security of employment positions have diminished we should observe a decrease in upward and an increase in downward mobility. A growth in the transition rate to unemployment clearly implies more instability and insecurity in work life. Insecurity is the more severe the longer the unemployment duration is.

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[2] The labor market situation in East Germany is probably characterized by rather different instititutional and structural developments and does not allow for long-term comparisons across cohorts.

Our analyses are based on data from the West German Life History Study that includes detailed work histories. We compare the birth cohorts 1939-41, 1954-56, and in 1964. These cohorts were exposed to very different conditions when entering the labor market and throughout the following years of their labor market career: *Men born* around *1940* began their first employment around 1960 during the economic miracle when labor market conditions were very advantageous and unemployment practically non-existent. At that time the standard employment relationship was probably still well in place. Also, the first nearly 15 years of their career fell into a time of advantageous employment conditions. In contrast, *men born around 1955* entered the labor market around 1975 when the macro-economic conditions started to deteriorate (but with unemployment rates still being comparatively low), that is, during times of the beginning of the (supposed) erosion of the standard employment relationship. Finally, *men born in 1964* clearly faced the worst labor market conditions compared to the other two cohorts. Unemployment started to rise from the beginning of the 1980s. Attempts to deregulate the labor market by introducing fixed-term contracts and a general increase of competition between firms fell into the first 15 years of their working life. If the hypothesis of increased instability of the employment career is of any empirical value, we should observe clearly increasing employment instabilities and unemployment from the oldest to the youngest birth cohort.

We can trace the employment careers of these cohorts up to about age 40 (cohort 1939-41) and about age 34 (cohorts 1954-56 and 1964). That is, we study the early and the mid career phase. As a result of this, two additional processes have to be taken into account: First, the process of *matching persons to positions* at the time of labor market entry. This may include phases of job search and mobility to resolve initial mismatch between individual qualifications (or aspirations) and job requirements. Second, the process of (an 'ideal-type') *career development* in which human capital and seniority is acquired over the life course.

We start from the assumption that the matching process and career mobility as well as the likelihood of unemployment episodes are strongly affected on the one hand, by the institutional context and, on the other, by developments on the demand and supply side of labor and the general labor market trends. Therefore, we begin with the relevant developments in these areas for West Germany (section 2). We will continue with a discussion of our hypotheses in section 3. In section 4, data and methods will be introduced and in section 5, our empirical

results will be presented. We conclude with a summary and discussion of our findings (section 6).

2. The German case

2.1 Institutions

With the increasing interconnectedness of economies, we might expect similar trends for the working life of individuals in all OECD countries. However, as has been argued by a number of authors, while the challenges in the face of globalization might be similar in many industrial countries, how they are dealt with should vary with national institutions (Mayer 1997; Esping-Andersen 1999; Blossfeld 2001). In the following we summarize important features in three institutional systems that have a major impact on Germany's employment structure and career patterns: the educational system, the economic system and the welfare state. We focus on the relevant historical period from about 1955 to the end of the 1990s and on West Germany only.

The educational system

The German educational system has been described as highly standardized and stratified (Allmendinger 1989). Stratification starts at a rather young age: After four years of primary school (around age 10) pupils are selected into three different tracks: the lower secondary school (Hauptschule), middle school (Realschule), and the upper secondary school (Gymnasium or Fachoberschule) which leads to the university entrance qualification (Abitur)[3]. Although it is possible to switch between the schools, transitions between them are quite rare, but have somewhat increased in recent years (Blossfeld 1990). Almost all schools are state schools without much status differentiation between schools of a given track.

General schooling is usually followed by vocational training (approx. 60%) or attendance of a technical college or university (approx. 25%). The majority of young people receive vocational training in the dual system, that is in the form of an apprenticeship (König et al. 1988, Winkelmann 1996). Apprenticeships are offered in the crafts and industrial sector, but in parts of the service sector as well. The dual system combines training at the workplace (3 to 4 days a week) with attendance of a vocational school (1 to 2 days a week) where a broader theoretical understanding of occupational activities is to be achieved (Blossfeld/Stockmann 1999).

[3] See for further details, Müller/Steinmann/Schneider (1997).

Employers' organizations, unions and state institutions are all involved in determining the mode of training, examination, and certification (Winkelmann 1996). The standardization of occupational titles and certificates allows for flexibility between firms and within the same occupation. At the same time, however, flexibility between occupations is hindered. A second tier in the German vocational training system are the vocational schools. These schools exist for a variety of semi-professions, e.g. in the field of health occupations. In contrast to apprenticeships, education in school and training at the workplace do not run parallel in most cases, but in sequence. Finally, tertiary education is provided by state financed technical colleges and universities. They are free of charge. Technical colleges have a lower status than universities; however, within the two groups there is no differentiation by status.

As many studies have shown, there is a close link between the certificates provided by the system of general and vocational education and employment positions (Shavit/Müller 1998; Blossfeld/Stockmann 1999). In particular, apprenticeship graduates usually enjoy a smooth transition to first employment since most of them are retained by their training firm after graduation (Winkelmann 1996). They are also less likely to experience unemployment at the beginning of their career (Kurz/Steinhage/Golsch 2001; Winkelmann 1996; Brauns/Gangl/ Scherer 1999).

The link between educational certificates and occupational positions has become closer since the 1960s due to increasing institutional differentiation and standardization[4] (cf. Hillmert 2001). Hence, occupational mismatch and search mobility at the beginning of the employment career has probably been reduced for younger labor market entrance cohorts.

Type of economy

Germany's economy has been classified as flexibly coordinated (Soskice, 1999; Mayer, 1997). At the core of such economies are long-term cooperative relationships based on trust. Various institutions work as a framework of incentives and constraints that help to create and maintain this kind of relationships. First among them is long-term financing of firms which is an important prerequisite for long-term employment relationships. Second, the vocational training system with job rotation as part of the training process (Maurice et al., 1986) fosters functional flexibility as well as employment relationships that are governed by mutual cooperation (Marsden, 1995). Third, worker's councils within firms help to keep up cooperative

relationships between employers and employees by their involvement in a wide range of decisions concerning the company. Fourth, wages are set by collective bargaining agreements between region-specific industrial unions and employer's associations. About 84 per cent of all German employees are covered by such collective agreements (Bispinck 1997). These regional tariff agreements ("Flächentarifverträge") are binding for all employers who are members of a particular association[5]. This collective wage setting mechanism thus keeps conflicts about wages largely away from the company level.

All institutional features – long-term financing, the apprenticeship system, workers' councils and collective bargaining – help to strengthen a work environment of long-term cooperative exchange and trust. Also, workers with permanent full-time or part-time jobs (of about 15 hours or more) are protected by dismissal procedures that require an advanced notice of at least 6 weeks and the spelling out of specific reasons before an employee can be fired. In addition, in matters of any lay-off the workers' council has to be heard, a regulation that makes quick firings unlikely.

Labor market deregulation

Deregulation of the labor market has been a heavily debated issue in German politics for years. Two major arguments from the employer's side have been that wage levels and the size of the work force cannot be easily adapted to the specific economic situation of the firm within the German institutional setting. The two most important changes introduced so far – the opening clauses ("Öffnungsklauseln") of collective agreements and changes of dismissal procedures – directly address these problems (Fuchs/Schettkat 2000).

Opening clauses mean that certain regional tariff agreements are opened up for exceptions on the firm-level, that is, for firm-specific agreements. They permit wage reductions for firms that are in serious economic difficulties.[6] In West Germany, opening clauses have been applied since 1997, contributing to a diversification of wage levels, but not altering the employment contracts themselves (Fuchs/Schettkat 2000: 225).

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[4] For example, the seminal *Berufsbildungsgesetz, a legislation that regulates vocational training, continuation classes and retraining,* was passed in 1969.

[5] With more than 90 per cent, the degree of employer organization in Germany is exceptionally high (Fuchs/Schettkat 2000: 211).

[6] The discussion on this key issue resulted from problems of East German firms to pay wages that had been agreed upon in collective negotiations. After conflicts between the union of the metal industry and employers in the East, opening clauses were first introduced in East Germany in 1993.

The most important step to deregulate employment contracts came with the Employment Promotion Act ("Beschäftigungsförderungsgesetz") introduced in 1985, which made it easier for employers to use fixed-term contracts. As these end at a specific date, they circumvent dismissal protection. Before 1985 such contracts were only permitted under certain specific conditions, but with the Employment Promotion Act employers gained freedom to offer fixed-term contracts of up to 18 months with new employees and former apprentices[7]. The use of fixed-term contracts spread after the change in legislation, in particular, among young employees (Bielenski et al 1994; Schömann et al. 1998; Kim/Kurz 2001).

Welfare state and gender relations

According to the well-known typology by Esping-Andersen (1990) Germany belongs to the 'conservative' welfare regime. German welfare policies concerning gender relations included only very limited attempts to "de-familialize" women, that is, to free them from the traditional female tasks of childcare and housework (Esping-Andersen 1999; Orloff 1993). This has made it difficult for women with children to be full-time and continuously employed and has implicitly supported men's traditional role as the main breadwinner of a family.

There are three main features that result in the delegation of women to family work: a) Public childcare for children under the age of three is very limited and market solutions to the child care problem play only a minor role. Also, most schools in Germany are "part-time schools" where pupils stay only until about 1 o'clock in the afternoon. b) The parental leave legislation provides the option of an employment interruption of up to three years with a job guarantee thereby supporting discontinuous employment of women (Brumlop1994, Landenberger 1990, Jungwirth 1999). c) Joint taxation for married couples gives strong incentives for the spouse with lower earnings (usually the woman) to reduce working hours or to quit employment (Kurz 1998; Dingeldey 2001). This policy framework makes part-time work, flexible work arrangements, and less secure employment relationships attractive (or, at least, better acceptable) to women who have a family. Therefore, employers might be able to realize their interests in a flexible work force mainly by hiring women for part-time and less secure positions and keeping secure, full-time employment to men. This would be in line with the interests of men, too, who – given the institutional (and cultural) support for the male breadwinner model – face strong incentives for working in secure, well-paid positions.

[7] In firms with up to five employees fixed-term contracts had not been limited to specific conditions even before 1985. The same is true regarding contracts of up to 6 months independently of firm size (Bielenski *et al*., 1994: 2)

To sum up, within the framework of institutional support for the male breadwinner model, the interests of married women, married men and employers work in the direction of reserving full-time, secure positions for men and leave less secure, part-time positions to women. Or to put it differently: the West German family policy measures indirectly support keeping men in stable, full-time employment careers.

2.2 Changes in the demand for labor and flexibilization pressures

Since the mid-1950s, the demand for labor has changed considerably. This is largely due to cyclical and structural developments, namely staggerings of the business cycle, shifts in the core sectors and technological improvement. After a difficult phase in the immediate post war period, labor supply and demand was almost balanced for around 15 years. Labor market problems occurred first at the end of the 1960s and then more pronounced in the mid 1970s with the oil price shock. Unemployment rates started to rise to unprecedented levels from the beginning of the 1980s, dropped down somewhat during the first years of the German unification due to a short economic boom, but rose again during the 1990s (see table 1).

Sectoral shifts

Like in other developed countries, there have been severe shifts in the employment shares of the three core sectors (primary, secondary and tertiary sector): a) the immense shrinking of the agricultural sector, b) cyclical fluctuation and decrease of the production sector since the ending of the 'golden age' (Carlin 1996) in the early the 1970s, c) the growth of the public sector until the mid 1980s and d) a rising labor demand in personal and business services (Schmid 1998). Compared to other OECD type countries, like England and the US, the share of the production sector has remained relatively high in Germany (Kaelble 1997; Castells 2000), while the growth of the tertiary sector has been moderate due to the high costs of – especially personal – services (Schmid 1998). Despite the rather modest decrease in the share of the secondary sector, technological innovation has led to severe changes in the production industries: Due to fast technical improvement, the productivity rates have grown remarkably over the last decades. This has led to a decrease in the demand for labor, with unskilled positions in the industrial sector being especially affected (Baethge 2000).

Table 1: Trends in unemployment rates (%) in West Germany

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995
Unemployment rate - Total	11.0	5.6	1.3	0.7	0.7	4.7	3.8	9.3	7.2	9.3
Unemployment rate - Men	10.8	5.0	1.3	0.7	0.7	4.3	3.0	8.6	6.3	9.3
Unemployment rate - Women	11.5	7.0	1.3	0.5	0.8	5.4	5.2	10.4	8.4	9.2

Source: Bundesantalt für Arbeit (ANBA Jahreszahlen)

Flexibilization of companies

Since the 1980s, we observe processes of rationalization and reorganization on the firm level. The main developments are decentralization, downsizing and outsourcing strategies, the flattening of management hierarchies, shifts of production plants to foreign countries as well as a rising number of mergers and acquisitions. These activities occur against the background of increasing international competition, rising productivity, and a change in management strategies, substantially orientated towards global finance markets (shareholder value orientation) (Zink 1995, Lehner/Schmidt-Bleek 1999).

These processes result in a decline in the demand for labor, especially in large companies. Consistently, between the late 1970s and 1990s, the share of West German employees in large-scale enterprises[8] has decreased considerably by 5.3 percentage points (Strohmeyer 1996; Leicht 1995). With regard to employment careers, this could mean that a shrinking proportion of employees benefit from internal labor markets which offer a certain level of employment security and institutionalized career paths. Concerning the promotion prospects in internal labor markets, the flattening of hierarchies leads to a decreasing availability of management positions.

Besides the flexibility forms described above, firms try to make use of their employees' specific firm- and work sphere related skills and knowledge, their 'intellectual capital'[9] (Krogh/Venzin 1995), in order to achieve forms of functional or temporal flexibility through working process optimization, group work, job rotation, employees participation and working time arrangements (Nordhause-Janz/Pekruhl 2000). These strategies normally require investment in human resources and a long term orientation (Müller 1998, Howaldt/Kopp/Winter 1998, Staehle 1999). As a consequence, employers should be interested in keeping their work-

[8] Large-scale enterprises are defined here as companies with 500 employees and more.

force stable, at least to a certain point, and therefore shield their employees from insecurity. This should especially be true for those groups that were trained for flexibility purposes.

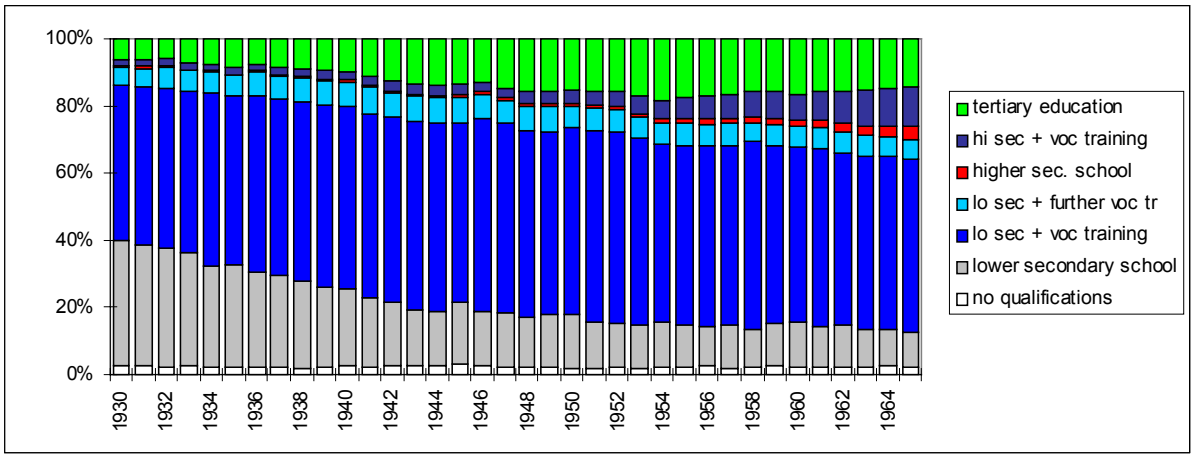
To be sure, strategies of numerical flexibility and externalization normally lead to massive staff cutbacks and fluidity of the work force while human resource oriented flexibility strategies require a certain level of stability and trust. Especially in big, globally operating companies, both kinds of flexibility strategies can often be found at the same time[10] (Haipeter 2000, SFS 1999).

2.3 The supply side and labor market conditions

Historical trends of the supply side of the German labor market during the last decades can be summarized under three headings (see also Corsten/Hillmert 2001): educational expansion and qualificational upgrading, demographic fluctuations, and increasing female labor force participation.

Figure 1 illustrates the main trends in the qualification structure of men over birth cohorts. Higher education levels have expanded and general school qualifications without vocational training or tertiary education have clearly been reduced. This may have further lowered the chances of persons who did not meet the minimum standard of having a vocational degree.

Fig. 1 : Qualification level by birth cohort (1930 - 1965, in %) - West German men, 1995



Source: Microcensus 1995; own calculations

[9] Von Krogh/ Venzin (1995) define 'intellectual capital' as the 'sum of knowledge' in an organization, containing knowledge on e.g. patents, processes, management skills, use of technology and labor force experience as well as information about customers and suppliers.

[10] Empirical researchers have stressed that this mixture of different management strategies often leads to severe problems and inconsistencies in firms. This is often seen as the major reason for failing organizational change (Pekruhl 2001).

Table 2: Trends in education and the labor market in West Germany

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995
School leavers (in 1000)	---	---	468.6	563.2	769.0	921.2	1104.9	1106.5	812.1	1010.9 (*)
School leavers with upper secondary degree (%)	---	---	6.1	7.5	11.3	19.4	21.7	28.5	33.5	35.9 (*)
Vocational trainees (in 1000)	---	---	1265.9	1331.9	1268.7	1328.9	1715.5	1831.3	1476.9	1250.2
Activity rate	46.2	---	47.7	46.0	43.9	41.9	44.9	47.9	49.6	48.3
Activity rate – Men	63.3	---	63.6	62.0	58.8	55.3	57.1	56.2	60.8	58.0
Activity rate – Women	31.3	---	33.6	31.8	29.9	29.8	31.4	37.7	39.2	39.2

(*) (United) Germany
Source: Official Statistics - Statistisches Bundesamt (Bildung im Zahlenspiegel; Statistisches Jahrbuch); BMBF (Grund- und Strukturdaten); Bundesantalt für Arbeit (ANBA Jahreszahlen), various years.

At the same time, there has been significant variation in the size of the cohorts that have left the educational system (see table 2). Together with business-cycle effects, this has led to considerable differences in the labor market situation of particular cohorts beyond long-term trends. The birth cohort 1964 was the largest cohort ever born in the FRG, so it probably was confronted with a particularly difficult situation at labor market entry. Women have increasingly taken part in the labor market . Given their less stable employment careers, they might have particularly been subject to the increasing demands of firms for a flexible work force. As has been argued in section 2.1, this might imply a buffering effect for male careers: men might have faced relatively minor risks in their employment careers in spite of significant changes in the overall labor-market situation.

3. Hypotheses

3.1 Cohort trends: Effects of the institutional and macro-economic context

In section 2 we have pointed out some core institutional and macro-economic features that we suppose to have an impact on career patterns in West Germany. As a result of the institutional setting which favors a close link between educational level and employment positions as well as long-term employment relationships, the West German mobility regime used to be characterized by typically smooth transitions from school to work and subsequently rather stable working careers with comparatively low degrees of individual mobility (Shavit/Müller 1998;

Carroll/Mayer 1986). Moves were mostly lateral and upward, the latter moves often following seniority rules in internal labor markets.

However, a number of changes may have led to a transformation of this system: The overall decline in the demand for labor, due to international competition and technological innovation, has increased the risk of unemployment and, consequently, of unstable employment careers, in particular for unskilled (manual) labor. The employment chances of the latter group have also diminished due to the general upgrading of the qualificational requirements of jobs. In addition, the facilitation of fixed-term contracts since the mid 1980s has contributed to more unstable employment patterns, with an increased risk of unemployment, especially at the beginning of the career. Fixed-term contracts concern not only low qualified individuals, but also university graduates (Kurz/Steinhage 2001; Kim/Kurz 2001). Furthermore, the trend towards the reorganization of companies – especially outsourcing strategies and the flattening of management hierarchies – has probably in general diminished the chances of upward career patterns. These trends should be observable for the birth cohort 1954-56 and even more so for cohort 1964 when compared to the "economic miracle cohort", that is, individuals born 1939-41.

Still, with respect to the early employment career, the thesis of growing employment instabilities needs to be qualified: Institutional adjustments diminished problems of mismatch between educational level and job requirements and, thus, reduced the search mobility in the middle cohort compared to the oldest one. Effective matching was probably again more difficult for the youngest cohort due to labor market turbulence and demographic disequilibria. Thus, across our three cohorts, a non-monotonic pattern of first decreasing and then increasing instabilities is conceivable.

We can summarize our hypotheses as follows:

Inter-firm job changes

Due to the reduction of firm size and the therefore shrinking importance of internal labor markets as well as the facilitation of fixed-term contracts, we expect an increase of moves between firms across birth cohorts. The expected linear trend might be counteracted by the non-monotonic development of mismatch between educational level and occupational positions in men's early career phases. Thus, inter-firm mobility in the very beginning of the em-

ployment career might have dropped down in the middle cohort. Inter-firm mobility should be particularly high in cohort 1964.

Career mobility

Given the reduction in firm size, the flattening of hierarchies within firms and the spread of fixed-term contracts for labor market entrants, we expect a decrease in upward moves and an increase in downward moves across cohorts. However, mismatch might again cause a non-monotonic pattern across cohorts.

Risk of unemployment and transitions out of unemployment to employment

Considering the historical trend in unemployment rates, a higher individual risk of becoming unemployed should be observed for the younger cohorts. Since unemployment in West Germany is mainly due to structural changes that lead to a permanently decreased demand for unskilled (manual) labor, it is likely that it has become increasingly difficult for unemployed persons from younger cohorts to find work again.

Despite the arguments forwarded so far, it is, of course, an open question whether - apart from unemployment - employment instabilities (in the form of more inter-firm moves, less upward and more downward mobility) have indeed expanded significantly across cohorts for men, since the deregulation of the labor market has been modest in Germany and social policies implicitly encourage men's stable full-time employment at the expense of women's employment careers. Furthermore, as has been outlined above, firms still have good reasons for keeping their workforce stable and therefore shielding at least specific groups, in order to achieve a higher level of functional flexibility. Indeed, aggregate data suggest that there is no trend towards more employment instability for men in Germany (Erlinghagen/Knuth, 2002).

3.2 Occupational class or education and employment instability

A core argument on the link between class and the features of the employment relationship has recently been forwarded by Breen (1997). He focuses on employees in the service class, that is, highly qualified employees who typically perform tasks rather autonomously and cannot be easily monitored by the employer. Therefore, the employer has to somehow ensure motivation and commitment of these employees. This is typically accomplished by offering certain advantages – like employment security, high pay and fringe benefits. In contrast, there is no need for the firm to establish such incentives for employees whose tasks are easily moni-

tored. For this reason, the latter group is expected to be more at risk for negative features of the employment relationship such as employment insecurity.

Following this, one could expect that, when firms want to become more flexible, they will enlarge the segment of their work force which belongs to the secondary labor market, that is, the lower skilled employees who typically have low wages, insecure positions and dim career prospects (Doeringer/Piore, 1971). However, research on the changes in the employment structure has shown that the demand for lower skilled manual workers has been decreasing during the last decades, in part due to developments in technology (see section 2). In general, one observes a clear upgrading of the occupational structure which is also visible within the transformative sector (Castells, 2000; Blossfeld, 1989). Therefore, firms might need to find forms of flexibility also within the highly qualified segment of their workforce. One option is to make employment insecurity – e.g., through fixed-term contracts – attractive for parts of the highly skilled employees (in particular, for new labor market entrants) by granting a wage premium that compensates for the increased insecurity (Schömann et al., 1998)[11]. As several studies have shown, fixed-term contracts are indeed quite common for young employees at both ends of the educational hierarchy (Bielenski et al., 1994; Kurz/Steinhage, 2001; Kim/Kurz 2001).

In sum, two opposing hypotheses can be forwarded:
Following Breen (1997) it is to be expected that class and educational level do not lose their power in protecting from instabilities in work life. We would then observe for all birth cohorts similarly that highly educated persons have less inter-firm moves, lower risks of downward mobility and unemployment as well as better chances for upward moves compared to lower educated persons.

According to neoclassical economic arguments, highly qualified employees should experience increasing risks of inter-firm and downward mobility and of moves to unemployment as well as decreasing chances of upward mobility. This pattern should be evident, in particular, in the youngest birth cohort since the pressure and options for less secure working contracts have increased since the 1980s. Despite this argument, given the German industrial relations system, employees with vocational training, that is, skilled workers, should be largely protected from employment instabilities.

At the same time, the non-monotonic trend in mismatch between education and occupational position might change the expected cohort patterns, by intensifying inter-firm mobility and upward mobility for highly qualified individuals during their early career phase in the oldest and the youngest birth cohort.

For unskilled workers and low educated persons (in particular, those with no vocational training), it is in general to be expected that inter-firm mobility and the risk of falling into unemployment have increased and the chances of upward mobility have decreased. Furthermore, leaving unemployment should have become more difficult for this group over the birth cohorts under study.

3.3 Changes in the protective effect of internal labor markets

Internal labor markets are typically found in big firms. They are characterized by entry positions and predefined career ladders on which individuals move up during their work life (Althauser 1989). The upward mobility processes are often governed by seniority rules. Employees in internal labor markets are largely protected from competition with employees outside the firm. Such employment positions can, thus, be characterized as "closed", in contrast to "open positions" which dominate in the secondary labor market segment. Internal labor markets are characteristic for big firms, including the public sector. For employees who started their first position in an internal labor market, subsequent moves to another firm are unlikely (Caroll/Mayer, 1986; Rosenfeld, 1992). In contrast, for employees in small firms that cannot offer career ladders, firm changes are necessary in order to achieve upward mobility.

We have argued above that firms might try to reduce the employment stability of their highly skilled workforce. This would mainly change the situation in big firms with internal labor markets where employment security was typically high and inter-firm mobility low. According to this argument, we expect an increase in employment instability for employees in big companies for the younger cohorts – that is, more moves between firms, less upward and more downward mobility and a higher risk of unemployment.

[11] Of course, in order to become more flexible, firms might also rely on fostering functional flexibility of their employees, a strategy that is well in accordance with the German vocational training system (Marsden, 1995).

4. Data and methods

We use data from three surveys of the (West) German Life History Study (GLHS). The GLHS provides a rich set of detailed retrospective information on educational and employment histories as well as on household- and family related issues on a monthly basis. It covers a comparatively long time frame and therefore allows for analyses that go back a period of time in history. The database consists of a set of singular retrospective interviews[12] with persons belonging to certain birth cohorts. The cohorts were selected on the basis of census data information on people's collective life situation (cf. Mayer/Brückner 1989; Brückner/Mayer 1995; Corsten/Hillmert 2001).

We select data for the cohorts born in 1939-41 ('cohort 1940'), in 1954-56 ('cohort 1955'), and in 1964 ('cohort 1964'). The cohorts were interviewed in 1981-83 (cohort 1940), 1989 (cohort 1955) and 1998-99 (cohort 1964), which means that all respondents were between 34 and 44 years old, when reporting their life histories. The numbers of realized cases are 733 for cohort 1940, 1000 for cohort 1955 and 1476 for cohort 1964[13]. Our sub-sample includes men of German nationality only, followed up to age 40 (at maximum).

We analyze total distributions and relative differences for the following transitions (1) from a job to another job that requires a change of company; (2) transitions up and down an occupational scale, no matter whether the move involves a change of firm; (3) from a job to unemployment[14]; and (4) from unemployment to employment. All jobs and unemployment episodes are regarded as part of an individual's career. For the first three transitions we only refer to dependent workers. That is, when self-employment occurs as the origin state, the episode is excluded from the analysis; and transitions to self-employment (destination state) are treated as right-censored. Also, episodes that are followed by military-/social service, education or any other type of non-employment (except unemployment) are treated as right censored.

For each cohort, survivor functions are calculated using the technique of product-limit estimation which allows for censored observations in the data. This method is based on the calcula-

[12] Partly personal interviews (cohorts 1919-21 I, 1929-31, 1939-41, 1949-51) and telephone interviews (cohorts 1919-21 II, 1954-56, 1959-61, 1964, 1971).
[13] Analyses for this cohort base upon an 85%-sample (checked and edited data) of the overall sample.
[14] Because the questionnaires used for interviewing cohorts 40 and 55 (60) did not contain explicit questions on whether and when someone was registered as being unemployed, we measure unemployment indirectly, using information on reasons for job changes and on activities during phases of non-employment. The central alternative status for men (besides education, employment, illness and unemployment) is military-/social service. This status could be identified clearly.

tion of a risk set at any point in time where at least one event occurred. In this respect, the given information on durations can be optimally used, without the need of pre-defining specific time intervals. For the analyses that include several explanatory variables, effects are calculated using piecewise-constant exponential transition rate models, an option provided by the computer program TDA (cf. Blossfeld/Rohwer 1995).

Transitions (1) and (3): To study overall mobility, we look at all direct job shifts that include a change of firm. Transition from job to unemployment is the competing destination state. For both transitions, the underlying time axis is 'duration within the firm' that we regard as being relevant both in terms of protection against unemployment (due to the length of firm membership) and seniority and investments in firm-specific human capital. In our analysis we distinguish the time-periods 0-12, 12-24, 24-36, 36+ months, and we control for labor force experience (at the beginning of the job in years), unemployment experience (at the beginning of the job in years; unemployment analyses only), educational attainment (5-point CASMIN-scale; cf. Brauns/Steinmann 1997), occupational class (EGP; Erikson/Goldthorpe 1992), sector (public/private) and firm size as independent variables.

Transition (2): We focus on direct job mobility up and down the ISEI occupational status scale[15]. In contrast to transition (1), we study intra-firm as well as inter-firm mobility, in order to capture also career developments in internal labor markets. An upward move is defined as entering a new job which is at least 10% higher in status than the position before. Transitions to a job that is at least 10% lower in status than the position before are regarded as downward moves. Any other direct job shift is defined as a lateral move. The risk sets for these transitions include only persons who are indeed at risk for the respective move. That is, job episodes with a status so low that a move 10% further down is not possible and, likewise, episodes that do not allow for a move 10% further up are excluded from the analyses. In the piecewise constant exponential models we distinguish the time-periods 0-12, 12-24, 24-36 and 36+ months, and control for the number of previous jobs, labor force experience, educational attainment, sector and firm size.

Transition (4): For the analysis on transitions from unemployment to employment, we study the duration of each unemployment spell observed in a person's career. Because of the low

[15] The ISEI is an International Socio-Economic Index of occupational status, derived from the International Standard Classification of Occupations (ISCO), based on comparably coded data on education, occupation, and income (Ganzeboom/De Graaf/Treiman 1992).

case numbers for the two older cohorts, we exclude cohort 1940 from this analysis and extend our sub-sample to the unemployment spells of people born between 1959 and 61 (cohort 1960), added to the cases of cohort 1955. In this model, we use shorter time periods (0-6, 6-12, 12+ months). The independent variables are labor force and unemployment experience, the number of previous unemployment spells and educational attainment.

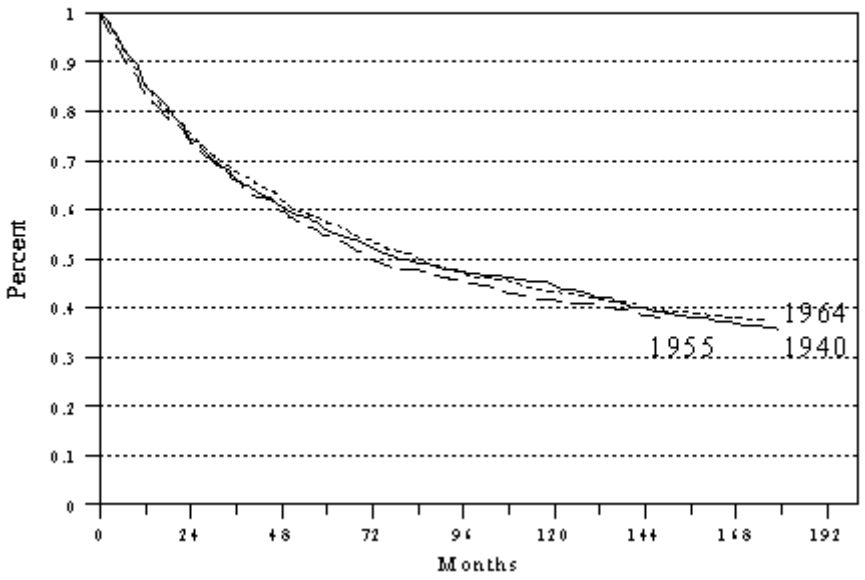
5. Empirical results

5.1 Changes across cohorts

Figure 2 graphs the survivor functions of firm tenure – which ends with a move to another firm – for the cohorts 1940, 1955 and 1964. Such *inter-firm mobility* is strongest within the first years of employment and then decreases noticeably. The comparison of the survivor functions shows that the patterns of inter-firm mobility did not change over cohorts. Thus, our hypothesis of increasing inter-firm mobility is not supported by the data.

Figure 2:

Product-Limit Survivor Function - Interfirm Mobility



For *career mobility,* which may involve job changes within and between firms, we distinguish between upward, lateral and downward moves in terms of occupational status. Table 3 shows the results of our analysis, controlling for time periods only. For all cohorts and directions of move the transition rates are highest within the first three years spent in a job. In the two younger cohorts, the chances of being *upwardly mobile* are best at the very beginning of a job, while in cohort 1940 the likelihood of moving up increases continuously within the first three

years and then decreases again. Overall we see the youngest cohort being most upwardly mobile, followed by cohort 1955. Further analyses reveal that the increases of upward mobility between each successive cohort are statistically significant[16]. These results neither support our hypothesis of decreasing upward mobility over cohorts, nor do they fit with the matching hypothesis.

Table 3: Career mobility (occupational status): transitions from employment to employment

	Cohort 1940			Cohort 1955			Cohort 1964		
	upward	lateral	downward	upward	lateral	downward	upward	lateral	downward
Periods									
1-12 months	-6.34**	-5.01**	-6.09**	-5.61**	-4.58**	-6.41**	-5.43**	-4.80**	-6.01**
12-24 months	-5.98**	-4.82**	-6.37**	-6.07**	-4.76**	-6.12**	-5.89**	-4.72**	-6.24**
24-36 months	-5.72**	-5.11**	-6.25**	-5.79**	-4.65**	-6.69**	-5.86**	-4.90**	-6.26**
36+ months	-6.65**	-5.72**	-7.05**	-6.42**	-4.97**	-6.78**	-5.96**	-5.32**	-6.34**
Events	160	439	122	174	600	105	257	603	176
Total Episodes	1489	1492	1492	2024	2056	2055	2045	2167	2164
Censored Episodes	1329	1053	1370	1850	1456	1950	1788	1564	1988
-2*diff(logL)	21.22	65.14	22.21	20.01	17.05	7.28	13.47	40.14	3.33

Calculations based on the German Life History Study (GLHS). Piecewise constant exponential models.
+ significant at $\alpha \leq 0.1$, * significance at $\alpha \leq 0.05$, ** significance at $\alpha \leq 0.01$.

With regard to *lateral mobility*, the members of cohorts 1955 have overall higher rates than those of cohort 1940 and cohort 1964. Finally, for *downward mobility*, a clear trend is not readily visible comparing the results in table 3. However, a common model for all cohorts (not presented in table 3) shows that overall downward mobility is significantly more likely in the youngest cohort than in the other two cohorts (b = 0.33). Members of cohort 1964 are, in particular, more likely to experience downward mobility after 3 years of job tenure when compared to the members of the other cohorts. Consequently, there is indeed a weak trend towards more downward mobility which concerns, however, cohort 1964 only.

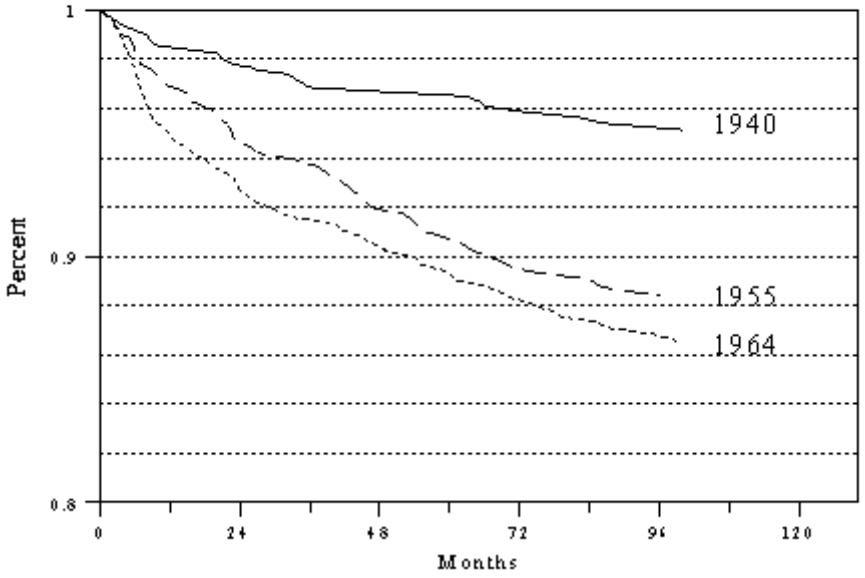
Turning to *the transition to unemployment* (Figure 3), we observe that the curves for the younger cohorts are steeper, with a great number of transitions to unemployment occurring within the first year spent in the job. This illustrates that members of the younger cohorts become unemployed faster and to a much greater extent than those belonging to cohort 1940.

[16] We estimated a common model for the three cohorts with dummy variables for the cohorts.

Therefore, as has been hypothesized, we observe a clear trend towards more unemployment across cohorts.

Figure 3:

Product-Limit Survivor Function - Transition to Unemployment



The analysis of *unemployment duration* for cohorts 1955/60 and 1964 (Table 4) shows that the likelihood of finding a new job is decreasing noticeably the longer a person is unemployed. Interestingly, in cohort 55/60 most transitions to employment occur within the first six months, while the proportion of transitions in cohort 64 is more well-balanced. Furthermore, the members of cohort 64 generally seem to have better chances of becoming (re-) employed than those of cohort 55/60. This result contradicts our hypothesis of increased difficulties in finding work for unemployed men belonging to the younger cohorts. Rather it suggests that temporary unemployment has become a more common experience which can be regarded as a consequence of rising labor market flexibility. This growth in flexibility implies that there are generally better opportunities of finding a new job. Or, to put it differently, people of the youngest cohort are more exposed to the risk of losing their job, but once being unemployed, they are more likely to become re-employed again. Still, a cautionary note is appropriate: For both younger cohorts the case numbers of unemployment incidents are rather low in this sample (n=57 and 91, respectively) which might contribute to biased results. Therefore, further studies are needed to confirm our findings.

Table 4: Transitions from unemployment to employment

	Cohort 1955/60	Cohort 1964
	unemployment → employment	
Periods		
1-6 months	-2.78**	-2.39**
6-12 months	-3.69**	-2.13**
12+ months	-4.67**	-2.78**
Events	57	91
Total Episodes	246	279
Censored episodes	189	188
-2*diff(logL)	45.6	45.1

Calculations based on the German Life History Study (GLHS). Piecewise constant exponential models.
+ significant at $\alpha \leq 0.1$, * significance at $\alpha \leq 0.05$, ** significance at $\alpha \leq 0.01$.

5.2 Changes in educational and class effects?

To study whether the effects of educational level, occupational class and labor market segment have changed across cohorts, we estimated separate piecewise exponential models for each cohort. The results are presented in tables 5 to 8. In the following interpretation we concentrate on the effects that are relevant with respect to our hypotheses.

For *inter-firm mobility* (table 5), we observe that employees with a technical college or university degree have a significantly lower mobility rate than the reference category (lower secondary education with occupational qualifications; b = -0.48) and the lowest rate of all employees in cohort 1940 (see model 1). This pattern continues in cohort 1955, but with the second highest educational level also displaying a low mobility rate. In the youngest cohort, educational differences in the rate of inter-firm mobility have largely disappeared. The only group that stands out in this cohort is employees with lower secondary education without vocational training. Surprisingly, they have the lowest mobility rate.

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The educational effects are largely mirrored in the class effects (model 2): In cohorts 1940 and 1955, employees in the upper and lower service class display significantly lower rates of inter-firm mobility than skilled and unskilled manual workers. In contrast, in cohort 1964 class differences (between dependent workers) cannot be detected anymore.

Table 5: Inter-firm mobility

	Cohort 1940			Cohort 1955			Cohort 1964		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Periods									
1-12 months	-4.24**	-4.14**	-3.98**	-4.02**	-4.01**	-3.87**	-4.22**	-4.20**	-3.97**
12-24 months	-4.21**	-4.10**	-3.93**	-4.31**	-4.28**	-4.12**	-4.56**	-4.54**	-4.30**
24-36 months	-4.37**	-4.26**	-4.09**	-4.36**	-4.33**	-4.17**	-4.69**	-4.67**	-4.41**
36+ months	-5.20**	-5.05**	-4.87**	-4.90**	-4.86**	-4.70**	-5.16**	-5.14**	-4.85**
LF experience	-0.05**	-0.04**	-0.05**	-0.04**	-0.03**	-0.05**	-0.02+	-0.01	-0.02+
Qualification									
Lower second. without occ. qual.	0.14		0.08	-0.02		-0.01	-0.36**		-0.30*
Lower second. with occ. qual. (ref.)	0		0	0		0	0		0
Upper second. without occ. qual.	-0.27		-0.10	-0.16		-0.24+	-0.06		-0.00
Upper second. with occ. qual.	0.14		0.24+	-0.22*		-0.18+	-0.01		0.07
College or university degree	-0.48**		-0.04	-0.36**		-0.30*	0.06		0.21*
Occupational class									
Higher service class		-0.64**			-0.50**			-0.08	
Lower service class		-0.82**			-0.37**			-0.04	
Routine non-manual employees		-0.15			-0.23+			-0.13+	
Masters, technicans		-0.36*			-0.26			-0.16	
Skilled manual workers (ref.)		0			0			0	
Un- and semi-skilled workers		0.20+			0.09			-0.01	
Sector									
Private sector (ref.)			0			0			0
Public sector			-1.07**			-0.39**			-0.32**
Firm size									
Unknown			-0.10			0.62**			-0.41**
1-10 (ref.)			0			0			0
11-50			-0.16			0.04			-0.11
51-500			-0.26*			-0.35**			-0.39**
501+			-0.61**			-0.52**			-0.83**
Events			643			641			1251
Total Episodes			2371			3058			3929
Censored Episodes			1728			2417			2678
-2*diff(logL)	198.37	242.87	284.86	108.25	123.41	177.91	208.66	209.80	315.04

Calculations based on the German Life History Study (GLHS). Piecewise constant exponential models.
+ significant at $\alpha \leq 0.1$, * significance at $\alpha \leq 0.05$, ** significance at $\alpha \leq 0.01$.

To test whether the effects are the result of the differential integration in internal labor markets, model 3 controls also for sector (public/private) and firm size. While for the oldest cohort it is indeed the case that the lower inter-firm mobility of highly qualified employees and of service class members is at least partially due to their integration into internal labor markets[17], this is not true for cohort 1955. Finally, for cohort 1964 the coefficients indicate that employees with a technical college or university degree have even a somewhat higher mobility rate than the other educational groups, taken their typically strong integration into internal labor markets into account. This result is, however, not mirrored by the effects of the variable 'occupational class'; these effects remain virtually unchanged when firm size and sector are controlled for (this model is not included in table 5).

To sum up, the relatively lower inter-firm mobility rates of employees with high qualifications and of service class members have diminished from birth cohorts 1940 and 1955 to cohort 1964. This is in line with our expectations based on neoclassical arguments and on the non-monotonic pattern of mismatch in the early career. At the same time, we find no support for the additional hypothesis that inter-firm mobility of employees with a low educational level has increased across cohorts.

With respect to *upward and downward mobility*, we focus solely on the effects of educational level. We do not estimate models with occupational class as an independent variable since a sensible interpretation of upward and downward moves has to take into account how far the person has already moved up the occupational ladder. This is easily possible only when we use the variable educational level and control simultaneously for the occupational status reached so far. Besides the ISEI status, we include the number of previous jobs and labor force experience as control variables. The "baseline expectation" is that (when controlling for occupational status) educational level should higher the rate of upward mobility and lower the rate of downward mobility (Tuma 1985; Sørensen 1979). This pattern can clearly be observed for upward and downward moves in cohort 1940 although the effects are not significant for upward moves (tables 6a and 6b, model 1). For *upward mobility*, the basic effect pattern does not change across cohorts for highly educated employees (table 6a): In cohort 1955, men with a college or a university degree have clearly the best mobility chances (model 1, b=1.46). The contrast to the reference category (skilled manual workers) is greater than for the oldest cohort (b=0.43). In the youngest cohort, 1964, employees with the highest educational level as

[17] The respective education effect is close to zero, and the effects of being in the service classes are reduced

well as those with upper secondary schooling plus a vocational degree have similarly high mobility rates (b=0.55 and b=0.71). Thus, we neither find support for the hypothesis that upward mobility has been reduced for highly qualified employees, nor for the opposite hypothesis, that – caused by increasing mismatch – highly educated employees should have a growing rate of upward mobility from cohort 55 to 64; at least neither of these processes is dominant. For employees at the bottom of the educational hierarchy, the chances of upward mobility seem to have become similar to the mobility chances of those on the next educational level (lower secondary educational schooling with a vocational degree). Thus, we find no indication of decreasing upward mobility chances for the lowest educational level across cohorts. When firm size and sector are included in the models, the educational effects change only slightly (table 6a, model 2).

The pattern of educational effects on the risk of *downward mobility* changes across cohorts (table 6b): In the oldest cohort the risk was clearly u-shaped, with a high risk for those with lower secondary education and no vocational degree (b=0.59, model 1) and an exceptionally low risk for technical college and university graduates (b=-1.38) compared to the reference category (lower secondary with vocational degree). In the youngest cohort, the major divide is between employees with lower secondary schooling and those with higher educational levels. That is, it does not seem to matter anymore whether a person with lower secondary schooling has a vocational degree or not. The result should not be overrated though, since there is not much room for downward mobility for those in the lowest educational category who typically occupy the lowest occupational positions. The effect pattern for education in the middle cohort lies in between the ones in the youngest and the oldest cohort. Again, the coefficients for educational level do not change greatly when firm size and sector are introduced into the equations. In sum, the results do not support the hypothesis that highly qualified employees face increasing risks of downward mobility.

when the control variables are introduced. (The model with occupational class is not included in the table.)

Table 6a: Upward career mobility (occupational status)

	Cohort 1940		Cohort 1955		Cohort 1964	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Periods						
1-12 months	-3.33**	-3.27**	-2.25**	-2.34**	-3.91**	-3.83**
12-24 months	-2.90**	-2.85**	-2.63**	-2.70**	-4.34**	-4.26**
24-36 months	-2.63**	-2.57**	-2.32**	-2.38**	-4.32**	-4.23**
36+ months	-3.55**	-3.49**	-3.05**	-3.10**	-4.50**	-4.41**
Previous Jobs	0.14**	0.15**	-0.03	-0.03	0.15**	0.15**
LF experience	-0.08**	-0.08**	-0.08*	-0.08*	-0.10**	-0.10**
Qualification						
Lower second. without occ. qual.	-0.30	-0.33	-0.11	-0.12	-0.16	-0.13
Lower second. with occ. qual. (ref.)	0	0	0	0	0	0
Upper second. without occ. qual.	0.30	0.27	0.41	0.40	0.18	0.19
Upper second. with occ. qual.	0.02	-0.01	0.33	0.35	0.71+	0.76+
College or university degree	0.43	0.34	1.46**	1.45**	0.55+	0.55+
ISEI	-0.08**	-0.81**	-0.08**	-0.08**	-0.04**	-0.04**
Sector						
Private sector (ref.)		0		0		0
Public sector		0.22		-0.22		0.28
Firm size						
Unknown		0.17		0.62+		-0.29
1-10 (ref.)		0		0		0
11-50		-0.03		0.21		0.04
51-500		-0.12		0.10		-0.21
501+		-0.07		0.09		-0.25
Events		160		174		257
Total Episodes		1489		2024		2045
Censored Episodes		1329		1850		1788
-2*diff(logL)	122.52	124.43	145.11	148.92	78.84	84.84

Calculations based on the German Life History Study (GLHS). Piecewise constant exponential models.
+ significant at $\alpha \leq 0.1$, * significance at $\alpha \leq 0.05$, ** significance at $\alpha \leq 0.01$.

Table 6b: Downward career mobility (occupational status)

	Cohort 1940		Cohort 1955		Cohort 1964	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Periods						
1-12 months	-7.01**	-6.71**	-7.84**	-7.55**	-7.58**	-7.73**
12-24 months	-7.27**	-6.96**	-7.57**	-7.26**	-7.85**	-7.99**
24-36 months	-7.12**	-6.80**	-8.11**	-7.80**	-7.86**	-7.99**
36+ months	-7.96**	-7.59**	-8.20**	-7.88**	-7.91**	-8.02**
Previous Jobs	0.18**	0.18**	0.01	0.01	0.10	0.08
LF experience	-0.12**	-0.12**	-0.06	-0.06	-0.01	-0.01
Qualification						
Lower second. without occ. qual.	0.59**	0.51*	0.34	0.35	0.14	0.15
Lower second. with occ. qual. (ref.)	0	0	0	0	0	0
Upper second. without occ. qual.	-0.24	-0.46	-0.04	-0.12	-0.68**	-0.67**
Upper second. with occ. qual.	-0.32	-0.34	-0.75**	-0.72*	-1.01+	-0.90+
College or university degree	-1.38**	-1.03*	-1.33**	-1.30**	-1.28**	-1.36**
ISEI	0.03**	0.03**	0.04**	0.04**	0.04**	0.04**
Sector						
Private sector (ref.)		0		0		0
Public sector		-0.50+		-0.20		-0.44*
Firm size						
Unknown		0.58*		0.14		-0.05
1-10 (ref.)		0		0		0
11-50		-0.51+		-0.30		0.12
51-500		-0.48+		-0.43		-0.07
501+		-0.76*		-0.64+		-0.27
Events		122		105		176
Total Episodes		1492		2055		2164
Censored Episodes		1370		1950		1988
-2*diff(logL)	59.13	81.15	37.00	43.44	95.56	103.14

Calculations based on the German Life History Study (GLHS). Piecewise constant exponential models.
+ significant at $\alpha \leq 0.1$, * significance at $\alpha \leq 0.05$, ** significance at $\alpha \leq 0.01$.

Turning to the *transition to unemployment,* the "baseline pattern" that we expected was a clear educational differentiation. Following human capital theory, individual skills determine the productivity of a person and, thus, their market chances. Thus, factors like labor force experience and formal qualifications should decrease the risk of unemployment and – when falling into unemployment - increase the chances of returning back into employment quickly. Empirical studies have confirmed these associations for Germany (Brauns/Gangl/ Scherer 1999; Kim/Kurz 2001; Gangl 2001).

For cohort 1940 we do not find such a pattern for educational level (see table 7, models 1 and 3), even when we estimate a model that does not control for previous unemployment experience (model not included in the table). The missing educational effect is probably due to the small number of events (namely, 43) which result from the extremely good labor market conditions in the first years of the work lives for this cohort. When we turn to cohort 1955, we observe the well-known effect pattern: Those *without* vocational training (no matter whether with lower or upper secondary schooling) have a higher transition rate to unemployment than those with vocational training or with a college or university degree. Men with upper secondary schooling with vocational qualification seem to be best protected. However, except for the latter effect, none of the coefficients reaches the significance level of 0.05. At first sight, the effect pattern changes for cohort 1964: The effect for the lowest educational category goes further down, meaning that there is not much of a difference anymore in the unemployment risk between lower secondary schooling with and without vocational degree. Also, those with upper secondary schooling *without* vocational degree display a lower risk of unemployment than those in the reference category. Both results suggest that the divide between employees with and without vocational degree has lost its importance. However, we have to take into consideration that we control for unemployment experience which is stratified by educational level. If we exclude this variable from the model, the results change (model not included in the table): Employees with lower secondary schooling *without* vocational degree display clearly the highest risk of becoming unemployed (b=0.42**). Thus, we can infer that even in the youngest cohort, the unemployment risk remains differentiated by general educational level and vocational training.

Table 7: Transitions from employment to unemployment

	Cohort 1940			Cohort 1955			Cohort 1964		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Periods									
1-12 months	-6.70**	-6.29**	-6.28**	-5.90**	-5.93**	-5.43**	-5.11**	-5.21**	-4.78**
12-24 months	-7.34**	-6.94**	-6.90**	-6.16**	-6.17**	-5.64**	-5.84**	-5.92**	-5.48**
24-36 months	-7.24**	-6.87**	-6.79**	-6.87**	-6.89**	-6.34**	-6.06**	-6.14**	-5.69**
36+ months	-8.31**	-7.94**	-7.82**	-6.87**	-6.86**	-6.33**	-6.68**	-6.75**	-6.26**
LF experience	-0.03	-0.00	-0.03	-0.03	-0.02	-0.03	-0.05**	-0.05**	-0.06**
UE experience	0.62**	0.64**	0.66**	0.50**	0.54**	0.49**	0.35**	0.36**	0.33**
Qualification									
Lower second. without occ. qual.	-0.37		-0.39	0.36		0.41	0.20		0.22
Lower second. with occ. qual. (ref.)	0		0	0		0	0		0
Upper second. with-out occ. qual.	1.58*		1.61*	0.29		0.23	-0.52**		-0.47**
Upper second. with occ. qual.	0.51		0.53	-0.63*		-0.52+	-0.48		-0.48
College or university degree	-0.62		-0.35	-0.30		-0.12	-0.22		-0.12
Occupational class									
Higher service class		-0.82			-1.10+			-0.39	
Lower service class		-0.06			-0.28			-0.42*	
Routine non-manual employees		-0.93			-0.83			-0.26	
Masters, technicans		-1.72+			-1.36+			-0.52	
Skilled manual workers (ref.)		0			0			0	
Un- and semi-skilled workers		-0.90+			0.48+			0.30+	
Sector									
Private sector (ref.)			0			0			0
Public sector			-0.29			-0.69			-0.30+
Firm size									
Unknown			-0.74			0.30			-0.11
1-10 (ref.)			0			0			0
11-50			-0.61			-0.56*			-0.25+
51-500			-0.21			-0.63*			-0.64**
501+			-1.43*			-1.19**			-0.95**
Events			43			102			331
Total Episodes			2371			3058			3929
Censored Episodes			2328			2956			3598
-2*diff(logL)	37.30	46.89	46.16	48.77	55.90	71.12	247.89	249.29	285.50

Calculations based on the German Life History Study (GLHS). Piecewise constant exponential models.
+ significant at $\alpha \leq 0.1$, * significance at $\alpha \leq 0.05$, ** significance at $\alpha \leq 0.01$.

The effects of occupational class support the interpretation that unemployment risk is stratified: Un- and semi-skilled workers have the highest unemployment risk in all cohorts, followed by skilled workers. Service class members and masters/technicians seem to be best protected against unemployment in all cohorts. The effects for these groups are (with one exception) lower in the youngest cohort compared to the middle cohort, but the differences do not reach conventional levels of statistical significance[18]. Thus, there are no secure signs that the unemployment risk is less stratified by class in cohort 1964 compared to cohort 1955.

Table 8: Transitions from unemployment to employment

	Cohort 1955/60	**Cohort 1964**
	unemployment → employment	
Periods		
1-6 months	-2.18**	-2.34**
6-12 months	-2.94**	-2.04**
12+ months	-3.83**	-2.33**
LF experience	-0.14*	-0.02
UE experience	-0.85	-0.39*
Previous spells of UE	0.51*	0.31**
Qualification		
Lower second. w/out occ. qual.	-1.22**	-0.35
Lower second. w. occ. qual. (ref.)	0	0
Upper second. w/out occ. qual.	-1.11+	-1.90**
Upper second. w. occ. qual.	-0.48+	0.26
College or university degree	-0.86+	-0.16
Events	57	91
Total Episodes	246	279
Censored episodes	189	188
-2*diff(logL)	45.6	45.1

Calculations based on the German Life History Study (GLHS). Piecewise constant exponential models.
+ significant at $\alpha \leq 0.1$, * significance at $\alpha \leq 0.05$, ** significance at $\alpha \leq 0.01$.

Turning to the models on *exits from unemployment to employment* (table 8), our findings are clearly structured by education for cohorts 1955/60. The exit chances are best for employees

[18] To detect this, we estimated common models for cohort 1955 and 1964 with interaction effects between cohort and class position.

with lower secondary schooling and vocational training, followed by those with upper secondary schooling with a vocational or a university degree. It is remarkable that employees with a technical college and university degree are not at the top, but those with a vocational certificate. Employees with *no* vocational degree (no matter whether with lower or upper secondary schooling) have the lowest chances of leaving unemployment. In contrast, the educational effects are less pronounced for cohort 1964. This is true even if we exclude the variable "unemployment experience" from the model. That is, it seems that exits from unemployment have become less dependent on educational level.

5.3 Changing role of labor market segments?

The basic question is whether the role of internal labor markets in stabilizing employment careers has decreased. Going back to table 5 (model 3), we observe - as expected - that in all cohorts employees in the public sector have a lower rate of *inter-firm moves* than those in the private sector. At the same time, the effect has clearly diminished across cohorts. The major change is between cohort 1940 and cohort 1955: While in the oldest cohort the rate of inter-firm mobility was almost 3 times higher[19] in the private sector than in the public sector, the factor is only about 1.5 for cohort 1955 and 1.4 for cohort 1964[20]. For firm size – as an indicator for the availability of internal labor markets – we also observe the expected pattern: The bigger the company the less likely are inter-firm moves. In this case, however, there is no clear trend of effect sizes across cohorts.

With respect to *upward job moves*, the estimation results in table 6a (model 2) do not show any significant differences between public and private sector as well as between different firm sizes. This holds for all cohorts alike. That is, we cannot detect any facilitating effect of internal labor markets on upward mobility, not even for cohort 1940.

At the same time, however, table 6b (model 2) indicates a protecting effect of internal labor markets on *downward mobility.* Members of cohorts 1940 and 1964 who work in the public sector are significantly less likely to experience a downward move (b=-0.50 and –0.44). In contrast, the respective coefficient for cohort 1955 is smaller and insignificant (b=-0.20). Thus, there is no linear trend across cohorts.

[19] This is calculated by 1/exp(coeff) = 1/exp(-1.07) = 2.92.
[20] The increase of inter-firm mobility in the public sector from cohort 1940 to cohorts 1955 and 1964 is statistically significant.

For the variable 'firm size' we observe that the risk of a downward move is lower in bigger firms. This effect has, however, become less pronounced in the two younger cohorts. For cohort 1964, no signifiant effect of firm size can be detected anymore. The results for firm size support the hypothesis that employees in internal labor markets have become less sheltered from downward mobility across cohorts.

For the *transition to unemployment* (table 7, model 3) we focus on the models for cohort 1955 and 1964 only, because of the low number of unemployment spells in cohort 1940. Working in the public sector lowers the risk of unemployment in both cohorts, although significantly only in cohort 1964. Also, the unemployment risk is lower in larger firms than in small firms. Effects do not vary considerably across cohorts. That is, we do not find clear hints for a reduced protection against unemployment through internal labor markets.

6. Summary and conclusions

Contrary to what one would expect based on the globalization discourse, *employment instability has not, in general, increased for German men* of the birth cohorts 1955 and 1964 compared to the "economic miracle cohort", 1940. According to our analysis, the rates of (direct) inter-firm mobility have remained largely constant across cohorts. The chances of upward moves in terms of occupational status have not been reduced, but increased in the cohorts 1955 and 1964. Downward mobility has increased slightly for cohort 1964 only. The main change is the tremendously increasing unemployment risk that the two younger birth cohorts are confronted with. This clearly indicates rising employment instabilities. The question remains, of course, whether unemployment is a consequence of globalization processes. Many economists would argue that the general restructuring of the economy in combination with the closed employment system (with inflexible wages) are the main causes behind the persisting unemployment problem in Germany.

Beside the general trends in mobility, we studied whether there are certain groups who have become more exposed to employment instability. Our findings showed comparatively low rates of inter-firm mobility for highly qualified employees of the cohorts 1940 and 1955. They have risen, however, in the youngest cohort, 1964. The result is consistent with the economic argument that highly qualified employees increasingly choose less stable positions (and thereby more inter-firm mobility) in order to maximize their earnings (Schömann et al. 1998).

It contradicts the thesis by Breen (1997) and others that highly educated employees (or more correctly: employees in the service class) should in any case enjoy more stable employment relationships.

At the same time, we do not find support for the hypothesis that low qualified employees face decreasing levels of firm stability. However, it has to be taken into account that firm stability is measured by *direct* moves between firms only. Moving directly from one firm to another requires that the employee is able to find a new position. This might well be a problem for employees without a vocational training certificate, since the demand for low qualified employees has decreased over time. To put it differently: Our indicator of employment stability misses out firm changes that contain an employment interruption. That is, the indicator captures voluntary firm changes better than involuntary ones.

We come closer to the question of involuntary firm changes when we look at the risk of unemployment. Here, our analyses clearly show that unskilled workers have a higher unemployment risk than other employees. Our results further suggest that the educational and class stratification of unemployment rates has not changed between the two younger cohorts[21]. A change is, however, detectable with respect to (re-)entry from unemployment to employment: The entry chances seem to have become less dependent on educational level from cohort 1955/60 to cohort 1964.

Coming back to highly qualified employees, our findings on career mobility suggest that their upward mobility chances have not diminished over time. Similarly their risk of downward moves does not seem to have increased. Summing up, a picture of relative stability across cohorts emerges: Although highly qualified men are increasingly mobile between firms, the negative aspects of employment instability do not seem to have risen for them: According to our analyses, they do not face a higher risk of unemployment, more downward mobility or less upward mobility. Only with respect to (re-)entry into a job after unemployment, the highly skilled do not seem to be advantaged anymore compared to the other members of the youngest cohort. But the latter result needs to be confirmed by analyses with larger numbers of cases. Similar to highly qualified employees, the results for those who are low qualified suggest mainly stability, with one important exception, however: Unemployment did not matter for (practically) anyone in birth cohort 1940, but for the younger cohorts it matters dispro-

portionally more for the low qualified, in particular for those with no vocational degree. That is, there are indeed changes in employment stability across cohorts, but the negative effects are shouldered more by the low qualified than by the high qualified.

In addition, our analyses investigated possible changes regarding the relevance of internal labor markets. A first result was, that employees in the public sector seem to be increasingly confronted with the need of inter-firm mobility in the younger cohorts (1955 and 1964), although they still have lower rates of mobility than employees in the private sector. At the same time, there are no signs of a general increase in inter-firm mobility out of big firms across cohorts. The increase of inter-firm mobility solely in the public sector could at least partially be a result of the privatization of big state companies (e.g., in telecommunication and public transport). Furthermore, it probably reflects the increasing use of fixed-term contracts coupled with a stop of public sector expansion in the 1980s.

Our analyses also suggest that in the youngest cohorts employees in big firms do not have an advantage anymore regarding the risk of downward mobility. However, their chances of upward mobility have not changed over time. At the same time, employees in big companies are still clearly better protected from unemployment than their colleagues in small enterprises. Thus, in sum, we find only weak support for the hypothesis that internal labor markets have lost their protective power across cohorts.

Taken the findings together, to speak about rising employment instabilities for German men is to speak about increased unemployment rates. It is not about typically shorter firm tenure or more irregular employment careers with ups and downs in occupational status (and income). The typical male career is still well protected by the German institutional framework which protects insiders who have a job and which helps unemployed persons to keep up the occupational status once reached. As soon as a person has a stable position in a company, he is relatively well protected. Nevertheless there are signs of – so far – slight changes: For labor market entrants it has become more difficult to receive a permanent position right from the start (Kurz/Steinhage 2001). In birth cohort 1964, downward mobility has become somewhat more common than in the older cohorts (but also upward mobility!). Public sector employees can be less sure to be able to stay in this sector. Internal labor markets do protect less from downward mobility. What is more relevant, however, is that employment instabilities are not on the

[21] The results for the oldest cohort (born 1940) could not be interpreted because only very few employees experi-

way of becoming a common experience that hits similarly all employees. Instead, well known patterns of social inequality remain dominant. Most importantly, the risks of downward mobility and unemployment are still disproportionally higher among employees with lower educational levels and in lower occupational positions. So even if there are strong external forces on the economy- they obviously have very different consequences for individual workers.

enced unemployment.

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