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Ostdeutsche Lebensverläufe im Transformationsprozeß

**Job Shift Patterns in the Former German Democratic Republic and
the Federal Republic of Germany:
Convergence, System Contrast or Institutional Variation?**

Wilfred Uunk, Bogdan W. Mach and Karl Ulrich Mayer

Arbeitsbericht 1/1998

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Das Projekt "Ostdeutsche Lebensverläufe im Transformationsprozeß" ist Teil des Forschungsprogramms "Lebensverläufe und historischer Wandel" (Leiter Karl Ulrich Mayer).
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Das Forschungsprojekt
"Ostdeutsche Lebensverläufe im Transformationsprozeß"

Inhaltliche Schwerpunkte:

- die (vergleichende) Sozialstrukturanalyse individueller Lebensverläufe in Ost- und Westdeutschland
- die Analyse individueller Handlungsstrategien im Transformationsprozeß
- die Analyse der gesellschaftlichen Transformation in Ostdeutschland und ihre Auswirkungen auf individuelle Lebensverläufe

Datenbasis

Grundgesamtheit:

Die deutsche Wohnbevölkerung der Geburtsjahrgänge 1929-31, 1939-41, 1951-53, 1959-61 und 1971 in den Neuen Bundesländern im Oktober 1990

Stichprobe:

Personenstichprobe aus dem infas-Master-Sample, das im Oktober 1990 aus dem zentralen Einwohnermelderegister der ehemaligen DDR gezogen wurde

Erhebungszeiträume:

Pilotstudie: Februar/März 1991
Pretest: Mai/Juni 1991
Probeinterviews: August 1991
Haupterhebung: September 1991 - September 1992
Panelbefragung: März - Dezember 1996
Erstbefragung Kohorte 1971: März - Dezember 1996
Non-Response-Studie: ab Januar 1997

Erhebungsmethode:

Persönliche (mündliche) Interviews auf der Basis eines standardisierten Lebensverlaufsfragebogens; Aufzeichnungen der Interviews auf Tonband
Postalische schriftliche Befragung
CATI (computerunterstützte Telefoninterviews); CAPI (computerunterstützte persönliche Interviews)

Realisierte Fälle:

Pilotstudie: 34
Pretest: 71
Probeinterviews: 81
Haupterhebung: 2331
Schriftliche Zusatzerhebung: 1254
Panelbefragung: ca. 1700
Kohorte 1971: ca. 700
Non-Response: ca. 600

Abstract

In this paper we study job shift patterns in the former German Democratic Republic (East Germany) and the Federal Republic of Germany (West Germany). Our research questions concern (a) cross-country similarities and differences in (firm-internal and firm-external) job mobility, (b) an explanation of job shift patterns by labor market composition, and (c) influences of human capital and labor market segmentation on specific rates of job mobility. The hypotheses we test are derived from three models describing job mobility under East German state-socialism and West German welfare-capitalism: a model of system convergence, system contrast, and institutional context. Our data are from the German Life History Studies of 1981/1982, 1988/1989, and 1991/1992. Event history analyses of the job career data document general similarity in the job shift patterns of East and West Germany, evidenced by equal overall levels of job shifting and a similar timing of job mobility in the working career. Yet, our analyses also indicate substantial cross-country differences: in East Germany chances of firm-internal job mobility were much stronger than in West Germany, job moves were less negatively related to labor force experience, and gender, class and sectoral differences in favorable and unfavorable job moves were visibly weaker. These findings lend credit to predictions derived from the institutional context model.

1. Introduction

An important question in sociology concerns the impact of state-socialism on social inequality and mobility chances. Stratification analysts have answered this question frequently with respect to the transfer of status across generations (intergenerational social mobility), but far less frequently with respect to the transfer of status within generations (intragenerational social mobility). We would argue with Sørensen (1986) and Kalleberg (1988) that the concentration on intergenerational mobility surprises. Processes underlying intergenerational mobility are of a complex nature. They involve the links existing between parent's statuses and children's education and between children's education and socioeconomic achievement. Country differences existing in any of these links could be canceled out by differences in others, and this could be one obvious reason that research on intergenerational social mobility has failed to provide a clear-cut answer to the socialism question. Intragenerational social mobility (also termed career, job or work life mobility), on the other hand, can be conceived as a more transparent process that is more inherently tied to labor market mechanisms (Kalleberg 1988: 208). As such, it lends itself better than intergenerational processes of mobility for an assessment of the role of political and institutional factors (Teckenberg 1987).

This paper tries to fill in the apparent gap in stratification literature by comparing job shift patterns in the former German Democratic Republic (GDR; also known as East Germany) and Federal Republic of Germany (FRG; also known as West Germany) in the period from World War II until the fall of the Berlin Wall in 1989. Although only two in number, these countries are particularly well-suited for a test that socialism influenced social mobility processes because after having shared a common history and culture, quite suddenly (as of the end of World War II) they began to live under distinct political systems, --welfare-capitalism (FRG) and state-socialism (GDR). We have, in other words, a quasi-experimental design for testing the impact of political, structural, cultural and institutional factors on job mobility.¹

In studying job shift patterns in the two former German states, we build upon previous empirical work. For West Germany several studies exist (see for example, König and Müller 1986, Carroll and Mayer 1986, Mayer and Carroll 1987, DiPrete, de Graaf, Luijkx, Tählin and Blossfeld 1997). These studies point to a relatively strong link between education and first job, as well as (in comparison to the U.S.) low levels of job shifting and job changes across employers. Studies on East Germany are scarcer since data have become available only recently. Grünert (1996) provided a comprehensive picture of the functioning of the former East German labor market. Using data that were partly gathered by official institutions of the GDR, she showed that the East German labor market was a strong case of a firm-centered labor market: "...an agglomeration of firm-internal labor markets strongly protected against the outside world with high firm tenure of employees and relatively low rates of across-firm mobility" (Grünert 1996: 41, translation by authors). Researchers of the Max Planck Institute for Human Development (Huinink and Solga 1994, Huinink, Mayer and Trappe 1995, and Zühlke and Goedicke 1997) weakened this characterization of the East German labor market. Using more reliable and representative survey data, they showed that despite a relatively greater amount of firm-internal job mobility in East than in West Germany, for East German employees the chances of mobility to other firms had always been greater, not smaller than the chances to be mobile within the firm.

¹ We do not have data on pre-war mobility patterns in East and West Germany. Post-transition developments in career mobility have been described elsewhere (see for example Huinink and Mayer 1995, Kropp 1998).

However valuable existing studies on job mobility in East and West Germany are, we think that they left many questions open and unanswered. This paper addresses three such questions. The first question is descriptive. It addresses cross-country similarities and differences in (firm-internal and firm-external) job mobility as well as historical trends. With this question, we aim to book progress on earlier comparative studies on job mobility in former East and West Germany. Due to data restrictions and methodological problems, the findings of these studies were incomplete and possibly misleading.² With the use of event history techniques, we reassess job mobility over the entire working life of former East and West German employees in the historical period from World War II until the fall of the Berlin Wall in 1989.

The second question of this paper is explanatory and addresses the role of labor market composition for job shifting (cf. DiPrete et al 1997). In analogy to questions on structural mobility in research on intergenerational social mobility, we ask to what extent observed job shift rates can be explained by compositional effects with regard to characteristics influencing job mobility. A particularly influential compositional effect here may be firm size. Because in the former East Germany the average size of firms was substantially greater than in West Germany, and because it is known that large firms provide more opportunities for firm-internal mobility than small firms, this labor market difference may help to explain the earlier observed finding of relatively greater firm-boundedness of job moves in the GDR.³ In a similar fashion, the success of East German socialism in promoting mobility within firms and in discouraging so-called 'fluctuation of labor' across employers, can partially be attributed to the state policy of merging firms and increasing their size.

The third research question addresses the very mechanisms of job mobility, in particular the role of human capital (for which we take labor force experience, education

² In order to properly compare job mobility of people from succeeding (birth) cohorts, researchers who studied job mobility in East and West Germany quantified the number of job shifts people experienced in their career until a specific age, or until a certain point in the career. If, however, the timing of job shifting historically changes from early to late in the job career, the above method would fall short. It could notice, for example, a historical decrease in job shifting and ignore the fact that the decrease is compensated thereafter. Event history techniques provide a solution to this problem. These techniques allow one to assess the chances individuals have to shift a job as of the time people entered a given job. In this manner, one does not need age or time restrictions but can make use of full job history data.

³ Grünert (1996) already suggested a compositional effect of firm size on job mobility. Yet, she also noted that it did not suffice as an explanation since in East Germany after 1983 firm-internal mobility decreased, despite a continuous rise in the average size of firms.

and vocational training as indicators) and labor market segmentation (for which we take gender, social classes, industrial sector and firm size as indicators; cf. Mach, Mayer and Pohoski 1994).⁴ Studying the joint impact of these factors can show in greater detail than in previous studies how mobility depended on characteristics other than individual abilities (human capital) --in particular, gender and institutional location within the labor market (Kalleberg and Sørensen 1979, Sørensen and Tuma 1981, Tuma 1985, Carroll and Mayer 1986, Mayer and Carroll 1987, Hachen 1990, Mach, Mayer and Pohoski 1994).

Knowledge of the job shift patterns of countries that have ceased to exist is not of purely historical interest, but is still highly relevant as it could help to understand contemporary socio-economic problems and developments in the German labor market. There are popular suggestions, for example, that the presently high unemployment rate among former East Germans workers can be attributed to their inexperience in changing jobs and firms, and the uselessness of knowledge and skills acquired under state-socialism. They are supposed not to know how to react to the new circumstances, how to make the best of it, how to decide fast between more or less risky options. We want to assess the validity of such suggestions. Given substantial path-dependence of structures, mentalities and institutions characterizing the forty years of state-socialist regulated economy, "the archival work to reconstruct the past" is one way to understand both the present and the future (Stark 1992: 85).

2. Theoretical Models

Questions on similarities and differences in mobility patterns in capitalist and socialist societies can be answered in several ways (see also Mach, Mayer and Pohoski 1994). A first approach, inspired by the concept of 'system convergence', assumes basic similarity of the occupational structures and mobility regimes of industrial societies (Kerr 1983).

⁴ In distinguishing human capital and labor market segmentation, we do not claim these factors to be independent of each other. On the contrary, job shifts are created by a process in which the opportunity structure facing an individual, and her or his individual resources and characteristics, as well as time (in the labor force) interact (Rosenfeld 1992: 41). It is therefore difficult to disentangle structural from individual effects. A positive effect of having a higher education on chances of promotion may, for example, both reflect a person's individual human capital investments as well as a more favorable job market for higher educated. The factors are in interaction. Yet, each factor has a distinct effect that should be studied.

Socialist and capitalist employment structures should have converged because both systems were committed to efficiency and productivity as a major economic goal, and because the functional division of labor was similar in all industrial societies. They can be seen as 'achievement' societies where universalistic criteria of achievement prevail. With respect to job shift rates in East and West Germany (question 1 of this paper), the system convergence model predicts equality: any inter-country difference in these rates is temporary, and will likely disappear as countries develop, modernize, industrialize, or otherwise converge toward a common institutional order of the economy (Form 1979). The prediction regarding composition effects (question 2) is that discrepancies in the labor market structure of the two countries --indicating distinct levels of industrialization-- can fully account for possible cross-country differences in job shifting. Given the assumed similar functioning of the East and West German labor markets, the impact of human capital and labor market segmentation on job mobility (question 3) would also be cross-nationally similar.

A second approach, that of 'system contrast', contradicts convergence ideas. According to this approach, cross-country similarity in the patterns of work-life mobility is highly unlikely given the fundamentally distinct political systems and goals of East and West Germany. Whereas the FRG is seen as a democratic state with free speech and open labor market competition, the GDR is portrayed as a hierarchical and all-pervasive bureaucratic system of control ranging from top to bottom, including not only the second line of command of the party in all domains of life, but also a triple line of command of paid STASI-informers and intelligence officers. These system differences must have had -- according to the system contrast approach-- apparent consequences for work-life mobility in the two German states. The prediction regarding the job shift rates (question 1) is that the East German command economy should have been able to realize its political aim to lower rates of job mobility across employers. West Germany, in contrast, should be characterized by much higher rates of firm-external mobility because flexibility of labor -- in terms of a high rate of regional, occupational and firm mobility-- was seen as a necessary condition for a modernizing economy.⁵ The system contrast model predicts that

⁵ In East Germany, firm-external mobility was in certain periods also pushed. During the fifties it was promoted because a reallocation of labor was needed to build up heavy industry. In the mid eighties, it was stimulated because of the apparent failures of the firm-centered labor market policies.

the lower firm-external mobility rate in East Germany than West Germany cannot be attributed to discrepancies in the composition of the two labor markets (question 2), but is fundamental. The same can be said about the role of human capital and labor market segmentation (question 3): these must have been cross-nationally different. Given East Germany's permanent and strong policy to promote social equality among formerly deprived groups, the role of labor market segmentation should have been weaker and the role of human capital stronger than in West Germany.

A third approach, which we call the 'institutional context approach', holds that neither system convergence, nor system contrast ideas are very useful in explaining patterns of job mobility in former East and West Germany. Both models rely on an ideal-typical reconstruction of the past, but in reality national labor markets differed in some aspects and were similar in others. According to the institutional context model, (cross-country) patterns of work-life mobility cannot be explained by a single overall process or a single institutional difference, but are due to the specific interactions among economic, political, institutional and social factors (Anselme and Weisz 1985: 35). There should be as many variants of socialist economies and capitalist labor markets as there were state-socialist and capitalist countries. National and cultural differences, historical contingencies and circumstances play the decisive role and must therefore be reconstructed case by case and period by period (Kalleberg 1988, Nee 1996, Mayer 1996; also see DiPrete et al 1997). Below, we will explicate the institutional context approach. We derive comparative hypotheses on job shift rates, composition effects and the role of human capital and labor market segmentation, by discussing relevant historical, structural and cultural institutions of the labor markets of the two German states.

3. Distinctive Features of the East and West German Labor Markets

Historically, post-WW II East and West Germany inherited a similar educational and occupational structure. Both could be portrayed as labor market systems in which vocational training played an important role. Characteristics of these systems were nationally standardized education, a high differentiation of hierarchically organized educational levels and training in certified occupations, as well as a mix of occupational training within the firm and theoretical learning within the school (Konietzka and Solga

1995: 8). At the same time, however, there also existed clear differences in the functioning of the two labor markets.⁶

The most fundamental, and perhaps for job mobility most influential difference in the functioning of the labor markets was --in line with ideas of the system contrast approach-- that East Germany introduced *tight central economic planning* along with *subordination of firms to the state administration*. Following Soviet example, the GDR developed as of the late 1940s central industry planning (*Zweijahrplan* 1948-1950, first *Fünfjahrplan* 1950-1955) with explicit output aims. Controlling supply of and demand for labor was seen an instrument for efficient use of resources and for economic growth. In the planning schemes, enterprises lacked autonomy in shaping their developmental strategies and solving their organizational problems. They were effectively controlled through centralized redistribution of investment capital, salary funds, and other financial means.

We want to stress, though, that the GDR had never been a fully developed command economy. Because total planning proved impossible and because employers had to be motivated to use labor efficiently and to achieve output aims, managers of East German enterprises had quite a bit of freedom in planning and using the labor forces they had at their disposal. Subject to general institutional constraints 'from above', they could influence employment policies, regulations pertaining to job transfers, salary ranges, promotion regimes, etc. Centrally enforced transfers (*Umsetzungen*) of employees from one firm to another and the closure of firms were exceptional.⁷

The second major factor distinguishing the East German labor market from the West German was that each citizen of the GDR had the *constitutional right to work and an unlimited guarantee of employment*. The individual was free to choose his or her work place. Once employed, he or she agreed upon a personal labor contract with the firm with far-reaching employment rights, including the right on employment appropriate to acquired

⁶ For a description of institutional differences and similarities of the (pre-transition) East and West German labor markets, we rely on previous studies of job mobility for the FRG and GDR (Grünert 1996, Huinink and Mayer 1995, Solga 1995, Huinink, Mayer and Trappe 1995), as well as Mach, Mayer's and Pohoski's (1994) study on West Germany and Poland. Of course, our description is by no means exhaustive. Other institutional differences were, for example, a permanent shortage of labor and relatively low wage differentials in East Germany. We think, however, that these differences were not central, but rather resulted from the institutional differences described above.

⁷ In this sense, the East German labor market was as a regular labor market with (some degree of) inter-firm competition for labor power and inter-person competition for wages.

skills, and the right of payment according to quantity and quality of the work done (Grünert 1996). If employees were not satisfied with their job, alternative employment was soon offered and found. Unemployment was therefore practically absent in the GDR.

The third major institutional difference between the East and West German labor market was the *extensive system of social provisions* in East Germany. This system covered free child care, sports, health, cultural institutions, holiday arrangements, and seniority premiums. The social provisions were partly tied to firms because the state followed a firm-centred social policy of integrating social goals with the goals of state enterprises. In West Germany, social provisions were less extensive and less strongly tied to firms.⁸

4. Substantive Hypotheses Derived From the Institutional Context Model

JOB SHIFT RATES

According to the institutional context model, the distinctive features of the East and West German labor markets produced society-specific patterns of work-life mobility. Our first prediction from this model relates to the rate of job shifting, in particular to the extent of job mobility within and between firms (question 1). We expect that East German employees had higher chances of job mobility within the firm and lower chances of job mobility to other firms than West German employees.

The reason for this prediction lies in the institutional differences of the East and West German labor markets, in particular the typical East German mix of central planning and extensive employment guarantees and social provisions. Accompanied by a state policy aimed at reducing inter-firm mobility and rewarding expanding firms, East Germany's central planning and state control led to a tendency on the side of firm managers to try to keep employees within the firm and to possibly attract new workers. The loss of an employee was something to be avoided not only because of the expected loss of invested human capital, but also because of the potential penalties firms faced once their firm showed too much mobility of workers to other firms. The East German firm managers

⁸ As we illustrate further below, in East Germany there also existed differences in the level of social provisions across firms, industrial sectors and social classes. Well supported were workers in large-scale (heavy) industry and workers in the main departments (*Hauptbetriebe*) of *Kombinate* (cf. Deich 1997).

tried to bind their employees to the firm by offering extensive social provisions. This made it attractive for East German employees to indeed be loyal. In doing so, they could not only profit from 'normal' human capital-related benefits such as prospects of career advancement, but also from performance premiums, regular bonuses, free child care and housing. If individual mobility was strived for, for example because a worker was not satisfied with the job, changing jobs with the firm was probably a better and more feasible strategy.

For West German employees the costs of inter-firm mobility and benefits of firm loyalty must have been weaker. Mobility to other firms was less costly given the possibilities of upward (income) mobility that were created by strong inter-firm competition. Firm loyalty was less beneficial for West German employees because seniority premiums were not a standard agreement within firms. A (life-)long bond with the firm was furthermore less probable since individual workers in West Germany were not offered alternative employment within the firm as often as East German workers.

EFFECTS OF LABOR MARKET COMPOSITION

The second prediction from the institutional context model regards the effects of labor market composition on job mobility (question 2). We hypothesize that cross-country differences in job mobility can --next to the above mentioned (politically driven) institutional differences-- partly be accounted for by discrepancies in the labor market structure of the two countries. Of the factors we review --education, gender, class, industrial sector, and firm size-- firm size should have the greatest explanatory power because cross-country differences in this factor are largest and because firm size has a strong, positive relationship with firm-internal mobility and a strong negative relationship with firm-external job mobility. That is, the earlier observed (and above anew predicted) finding of relatively greater firm-boundedness of job moves in the GDR, may be understood by the on average greater size of East German firms and the opportunities large firms provide for firm-internal mobility.

The establishment of so-called *Kombinate* in East Germany, very large enterprises that comprise many previously smaller firm, may especially have been influential. These giant firms offered a lot of firm-related benefits and alternative employment possibilities enhancing firm loyalty. The *Kombinate* functioned as a kind of local labor markets, the

more so if they covered large geographical areas or more local mono-employers.

According to the institutional context model cross-country differences in firm size or in any other of the compositional factors mentioned, cannot fully account for cross-country differences in (firm) mobility. Even in equally sized firms –or in a more general sense, even in similarly structured labor markets--, chances of firm switching must have been lower in East Germany due to the institutionally determined greater benefits of firm loyalty and higher costs of firm switching.

THE ROLE OF HUMAN CAPITAL AND LABOR MARKET SEGMENTATION

The third prediction from the institutional context model relates to the determinants of job shifting in East and West Germany, in particular the role of human capital and labor market segmentation (question 3). With regard to the role of *human capital*, we expect in both countries a similar patterning in the effects of labor force experience and education -- two human capital indicators. Yet, in their size the effects should have been weaker in East than West Germany.

The effect of labor force experience should have been similarly patterned in the GDR and FRG because of the alike rationale of employers and employees. Employers should in both countries be interested to hold experienced workers because these workers have gained firm-specific skills and knowledge that are crucial to the production level as well as for qualification of young workers and because these workers are --in line with conceptions of internal labor markets (Kerr 1954, Doeringer and Piore 1971, for Germany: Lutz and Sengenberger 1974)-- better candidates for internal promotion than persons from outside the firm. Because rewards increase as job and firm experience is cumulated, employees in the two countries will also have an interest to stay with the job and the firm. New workers, on the other hand, do not have to fear to loose much and might more easily switch to other firms. Thus, we predict both for East and West Germany a job shift decreasing effect of labor force experience.

Regarding the strength of the negative effect of labor force experience on job shifting we predict a cross-country difference, however. Because of the organizational rationality to increase firm size rather than production and efficiency, East German employers were probably much more than their colleagues from the West interested in binding inexperienced workers to the firm. Correspondingly, labor force experience must have been

a less important factor for job shifting in the GDR than in the FRG.

Cross-country similarity in the role of education and vocational training --our second indicator of human capital--, can be understood by the common historical roots of the educational and occupational structure of East and West Germany. Higher education and occupational training should in both countries have increased the chances of favorable job movements and decreased the chances of downward mobility because they are human capital investments of people who have foregone earnings during the time they were being educated and because they are signals for employers to screen and select workers. However, the size of the effect of education and vocational training on job shifting should --similar to the role of labor force experience-- have been weaker in East Germany. The reason for this prediction is that in the GDR an efficient and meritocratic allocation of persons to jobs was undermined by a strong commitment to eradicate or repress the former bourgeois society --the former self-employed and propertied classes and the former intelligentsia-- and by the edification of manual work in Marxist theory as the only kind of productive work.

With regard to the role of *labor market segmentation* for job shifting, the prediction of the institutional context model is a distinctively weaker differentiation in favorable and unfavorable job shift chances in East Germany among men and women and among distinct social classes, yet a distinctively stronger differentiation among industrial sectors.

Greater equality among men and women in the GDR can be expected because the opportunities as well as attitudes towards female labor and career advancement were more positive for East than West German women (Trappe and Rosenfeld 1998). East German women were stimulated to participate in the labor market because of a general and permanent shortage of labor that existed due to massive migration and extensive labor technologies. Female labor was promoted by infrastructural conditions such as free child care and (extended) education, as well as by negative measures such as the abolition of food-cards (1958), the abolition of pensions for widows that had not reached pension age, and the abolition of alimony for divorced women.⁹ In West Germany, these special needs and conditions for female labor only temporarily existed, during the period of the

⁹ As a consequence of the policies to promote female labor, the proportion of females in the East German labor force rose from 40% in 1950, to 45% in 1960 and 48% in 1970. It was especially strong in industry, traffic and professional service (Grünert 1996).

Wirtschaftswunder (early 1950s) and as of the late seventies. Gender stratification --with women having the worst and men the best prospects of career advancement--, should generally have been much larger in the FRG.

Social class differentials in favorable and unfavorable job movements were probably weaker in East Germany because in the bargaining over the plan that was taking place under state socialism, the basic unit used to be a state enterprise rather than social classes defined as groups based on economic interests that cut across firms (cf. Mach, Mayer and Pohoski 1994: 8). Class differentials in East Germany were, however, never absent. The ideological goal to reward those that have shown their work zeal (*Einsatzbereitschaft*) led to privileges for manual workers because this class was viewed as most productive in the sense of a Soviet model of economic growth, and also because it was the only one that could really break the 'bourgeois monopoly of education and labor'. In West Germany, in contrast, social class differentiation should have been a relatively important form of labor market segmentation. Strong labor unions there enforced better pay, labor rights and career opportunities for workers covered by unions, especially for members of the service and skilled manual class.

Greater sectoral variation in favorable and unfavorable job shift chances in East Germany, can be understood by differences in organizational rationality and national labor market policies. In lobbying in planning bodies 'from below' to get good financial and administrative treatment, large scale industries had been favored over other sectors in the distribution of resources.¹⁰ The privileged treatment made these industries attractive destinations for individual job mobility, whereas the less privileged ones --services and administration-- remained relatively unattractive. In West Germany, industrial sectors depended less on a national benefactor distributing resources. Their market position depended more on the demand for and supply of goods and labor. An exception, however, was the West German public sector. Because of permanent employment protection and extensive job advancement opportunities, job mobility chances should have been more attractive there than in other sectors of the West German industry.

< Table 1 about here >

¹⁰ In other periods, chemicals (in the 1960s in the area in around Halle and Magdeburg) and micro-electronics (in the 1970s in and around Jena) were favored in East Germany.

Table 1 summarizes the predictions we derived from the system convergence model, the system contrast model, and the institutional context model. The predictions from these models are clearly in competition. Our analyses will show whether the job shift patterns of the two former German states were (generally) similar (system convergence model), system-different (system contrast model) or both (institutional context model).

5. Data and Method

DATA

To ascertain job shift patterns in the former East and West Germany, we use data from the German Life History Studies (GLHS) 1981/1982, 1988/1989 and 1991/1992 (see Mayer and Brückner 1989, Brückner and Mayer 1995, Solga 1996, Wagner 1996). The GLHS studies are retrospective surveys collecting data on career histories of East and West German men and women of selected birth-cohorts. The 1981/1982 GLHS study is a nationally representative, stratified sample of West German --excluding foreigners-- private households (Wagner 1996) of three birth cohorts: 1929-31, 1939-41, and 1949-51 (N=2,171 persons). The 1988/1989 GLHS study for West Germany has a similar design for two younger birth-cohorts 1954-56 and 1959-61. For reasons of comparability with the East German data, we use from the latter study the 1959-61 cohort only (N=1,001 persons). The 1991/1992 GLHS study contains life history data of East-German men and women of four birth cohorts: 1929-31, 1939-41, 1951-53, and 1959-61 (N=2,323 persons). The East German sample is a random sample taken from the central population register (*Zentrale Einwohnermelderegister*) of persons who lived in the GDR at the beginning of October 1990 (see Hess and Smid 1995; Huinink and Mayer 1995, Solga 1996). East Germans who moved to West Germany in the first migration phase after the fall of the Berlin Wall --between mid-1989 and October 1990-- could not be interviewed.¹¹

¹¹ Our data cannot exclude recall problems. Because recall problems are presumably stronger the longer ago the job was held, this bias probably leads to an underestimation of job shift rates for the older birth cohorts, that were already higher than that of other cohorts. In general, however, we think that this problem is not substantial since compared with other countries job shifting is low in East and West Germany. Respondents therefore do not need to recall many job shifts (cf. Zhou, Tuma and Moen 1997: 346). For a discussion of retrospective measurement and other aspects of the GLHS-fieldwork, see Brückner and Mayer (1998).

Because our interest is in job mobility during state-socialism, we truncated East German life histories at the end of 1989. A further restriction is that we excluded persons who had any job in farming (farm-workers, self-employed and workers in the agricultural sector). These persons contributed too few spells for multivariate analyses and proportionally had many missing answers on question regarding wages. In total, our research population consists of 5,113 East and West German men and women. They reported 16,107 job spells (8,284 spells in West and 7,823 spells in East Germany), an average of somewhat more than 3 job spells per person. We define a job spell as an episode of employment in which a worker is engaged in one main, paid occupation for at least 20 hours a week during at least three months.¹²

Our 'dependent variables' in the analyses are job changes, within or between firms, in upward, lateral or downward direction. A job change is a reported change in the occupational activity, accompanied by a significant change in the contents of the occupational activity and the firm-specific work conditions of the activity.¹³ Job mobility within and between firms is

measured by whether respondent's job spell was within the same or another firm than his/her previous spell. We measure upward and downward job mobility by changes in net monthly wage between adjacent job spells.¹⁴ In line with Mach, Mayer and Pohoski (1994), we define an upward move as an increase in net monthly wage of at least 15 percent, a lateral move as a wage increase between 0 and 15 percent, and all downward wage decreases as downward moves.¹⁵ We believe that this wage measure of vertical

¹² Exceptions are part-time jobs that have been exercised for several years or short spells that have proven to be important for the further career: these spells are also counted as job spells (for details see Brückner and Mayer 1995).

¹³ About a third of all job spells ended with an employment interruption (back to school, pregnancy, military, illness, unemployment), especially among West German women. In exploratory analyses, we controlled for these interruptions by estimating a dummy variable indicating whether there was an employment interruption after the job was ended. The analyses showed substantially lower job shift rates for women when employment interruptions were controlled for. Yet, we do not estimate the dummy variable in our final analyses, since it aims at explaining why for certain groups (women) job shift rates were higher than for other groups (men). Such an explanation goes beyond the aim of our paper, but is central to Trappe and Rosenfeld's (1998) analyses.

¹⁴ There are relatively many missing answers on monthly net starting and ending wages (around 11%). Fortunately, reporting on the combination of the two variables --which is required for assessing upward, lateral and downward mobility-- is not selective in a substantial way.

¹⁵ We could not construct a reliable measure of wage rates per hour since we only had information on the number of hours respondents worked the last week before the end of the job, and not on the number of hours they usually worked, nor on the number of hours they should make. We can therefore not fully exclude

social mobility is preferable to status and class measures because it allows for vertical mobility at the extremes of the socio-economic hierarchy (the rich can still improve in income and the poor can still do worse), and because it probably was the most important stratification factor in West as well as East Germany.

The 'independent variables' in the analyses are labor force experience, education (as indicators of human capital), gender, social class, industrial sector, and firm size (as indicators of labor market segmentation). We measure labor force experience in three ways: (a) general labor force experience as time (in months) since entry into the first job up to entry into the present job (excluding periods of non-employment), (b) firm-specific labor force experience as time since entry into a firm up to entry into the present job, and (c) job-specific labor force experience as time since entry into the present job. To measure the complex system of educational and vocational training in East and West Germany, we made use of Blossfeld's classification of the German educational system (Blossfeld 1985). This classification recodes educational and vocational training into a metric based on the average number of years of schooling required to obtain a particular certificate. To take into account non-linearity in the effects of adjacent educational categories, we used a categorical version of the Blossfeld's educational scheme. We distinguished (a) *Volksschule* (lower secondary school) without vocational training (9 years in the metric of school years; reference category in analyses), (b) minimum education with vocational training (10-12 years), (c) *Abitur* (upper secondary school certificate) with or without vocational training (13-15 years), and (d) technical, professional or university degree (17-19 years) (Hannan, Schömann and Blossfeld 1990).

Social class is measured by Goldthorpe's (1980) class schema as adapted to German conditions by Walter Müller and his associates at the University of Mannheim on the basis of the International Standard Classification of Occupations (ISCO) of 1968 and the German *Berufliche Stellung* (occupational position) scale. The class categories are (a) Class I (higher professional, administrative and managerial), (b) Class II (lower professional, administrative and managerial), (c) Class III (routine non-manual), (d) Class V (lower

wage changes due to changes in hours worked. This may especially be a problem with regard to downward (wage) mobility because there is a greater tendency to reduce than to increase working hours. Exploratory analyses showed, however, a fairly low correlation between downward mobility and changes in number of hours worked (0.18). Actually, most of downward mobility took place under conditions of a stable number of hours worked.

technical and manual supervisory), (e) Class VI (skilled manual), and (f) Class VIIa (semi- and unskilled manual outside agriculture, the reference category in our analyses). Note that we have already excluded farmers, self-employed (Class IV) and farm-workers (Class VIIb).

To identify the industrial sector of jobs, we used Stinchcombe's (1979) sevenfold industry schema. This schema was constructed on the basis of competitiveness of product markets and the type of labor on which the industry depends on. We adapted the scheme to the East and West German by excluding 'agriculture and forestry' and by joining 'small competitive industries' with 'professional service'. The industry categories are (a) large-scale engineering-based industries (primary metals, electric machines, power and water supply, chemicals, coal and oil), (b) light industry (textiles, food and drink, wood products, plastics), (c) construction (construction, printing, metal goods), (d) professional service industries (education, health, religion, art, publishing), and (e) bureaucratic service industries (government, banking, insurance).

The size of firms is measured by the (natural) logarithm of the number of employees in a firm. We want to stress that respondents were asked to identify the size of their immediate work-setting. For workers in the bureaucratic service industry the question led to a proportionally high number of missing answers. In our analyses we tested whether excluding missing answers on this variable influenced the various job shift rates, but it did not.

Cohort membership, finally, is categorized in birth cohorts 1929-1931, 1939-41, 1949-51, and 1959-61. The oldest birth cohort (1929-31) serves as the reference category in event history analyses. For East Germany, birth cohort 1949-51 comprises persons born between 1951 and 1953.

Table 2 lists the distribution of the independent variables at labor force entry for East and West German employees by birth cohort. One can observe from this table historical developments that are common to both countries, such as educational and occupational upgrading, tertiarization, and firm size expansion, but also inter-country differences, such as the on average greater size of firms in East Germany, the smaller proportion of lower educated and lower skilled workers, and the greater proportion of workers in large-scale industry there.

< Table 2 about here >

METHOD

To study job shifting, we make use of event history models (cf. Tuma and Hannan 1984, Blossfeld, Hamerle and Mayer 1989). Event history analyses allow one to model the hazard rate --in our case the rate of leaving for another job-- as dependent on the time spent in the job, as well as on (time-varying) covariates. In our analyses we will use two kind of models. The model we use to describe the job shift rates and to test composition effects is the piecewise constant exponential model (for example, Kalbfleisch and Prentice 1980). These models are defined as:

$$\log r_{jkp}(t) = x(t)'\beta_{jkp}$$

where r_{jkp} denotes the hazard rate, for a specific type of job shift from j to k , for a given job duration p ; $x(t)$ denotes the set of explanatory and control variables used in the analysis; and β_{jkp} refers to the parameters of a particular job duration (duration-specific intercepts, cf. Zhou, Tuma, and Moen 1997).

We use the piecewise constant exponential model to describe the job shift rates, because the model does not require any assumption about the functional form of duration dependence. It allows a set of p parameters to define duration dependence and can therefore approximate the 'true' form of the duration dependence of the hazard rate better than other, continuous specifications. In our case, we use eleven duration-specific intercepts to describe duration dependence: ten parameters for the first ten years after job entry, and an eleventh open-ended interval.

The model we used to analyze the impact of human capital and labor market segmentation on the specific job shift rates is the method of episode splitting with quantitative covariates (Blossfeld, Hamerle and Mayer 1989; Blossfeld and Rohwer 1995: 139-143).¹⁶ Just like in the piecewise constant exponential model, the original job episodes are first divided arbitrarily into small subepisodes. In the second phase of the

¹⁶ We did not use the log-logistic model --a continuous model allowing for a bell-shaped form of duration dependence-- because it does not have a term that relates the hazard rate in a linear fashion to time spent in the job. As such, the model does not allow testing the hypothesis that for East Germans job-specific investments decreased job shift chances to a smaller extent than for West Germans (institutional context model). Comparison of the parameters of the independent variables under the method of episode splitting with the same parameters under the log-logistic as well as the piecewise constant model showed highly similar findings.

modeling, a quantitative time-dependent covariate 'job-specific labor force experience' is defined intermittently at the beginning of each of these subepisodes. In the third phase, its effect is estimated as a (log-)linear effect on the hazard rate (as such the model is then functionally equivalent to a Gompertz model). Because we know from previous studies that duration dependence of job shifting is often not linear, we also model a curvilinear term for job-specific labor force experience. This term allows for statements such as that for inexperienced workers a unit increase in job experience (a month in our example) has a stronger job stabilizing effect than a unit increase in job experience for workers that have already been long in the job.

Maximum likelihood procedures are used to estimate the piecewise constant exponential models and the exponential episode-splitting models. To take into account unobserved heterogeneity in the number of spells and the amount of job experience between persons, we controlled in all of our models the number of jobs persons previously held and general labor force experience (prior to the job).

6. Analyses

RATES OF JOB SHIFTING

Our first question addresses job shift rates in East and West Germany: to what extent were they similar? As a prelude to event history analyses, Table 3 shows the number of job shifts East and West German male and female employees of different birth cohorts experienced in the first ten years on the labor market. The numbers generally demonstrate higher job shift rates in East than West Germany: East German men and women experienced 1.7 job shifts early in the career, while this figure was 1.3 for West Germans (Panel C2). A closer look at the table shows that this inter-country difference is mainly due to low job instability of West German women: they only experienced 1.1 job shifts during the first ten years since labor market entry, whereas this figure is 1.7 for East German women (Panel B2). Job shift rates of East and West German men were fairly similar, respectively 1.7 and 1.6 shifts during the first ten years since labor market entry (Panel A2).

The mobility rates of successive birth cohorts in Table 3, demonstrate historical convergence: the rates stayed with 1.7 constant in the GDR, and increased in the FRG from

1.1 for birth cohort 1930 to 1.5 for birth cohort 1960 (Panel C1). According to the gender-specific rates of Panel A1 and B1 in Table 3, this trend towards increased cross-country similarity does not unequivocally hold for men and women: whereas East and West German women and West German men demonstrated a clear increase in job shift rates, this rate declined considerably for East German men from 2.0 for cohort 1930 to 1.5 for cohort 1960.

< Table 3 about here >

Table 3 also shows the extent to which job shifts in East and West Germany were firm-internal or firm-external. In line with predictions from the system contrast and institutional context model as well as findings from previous studies (cf. Zuehlke and Goedicke, 1997), the table demonstrates a substantially larger share of within-firm mobility in East than West Germany (respectively 41% and 24%) and a lower share of across-firm mobility (respectively 59% and 76%). Over historical time, the figures of Table 3 display cross-country divergence: the share of firm-internal job shifting strongly increased in East Germany from 31% in the 1930 cohort to 51% in the 1960 cohort, while this share was much more constant and remaining between 20 and 30% in West Germany. The strong rise of firm-internal job shifting in the GDR seems to be in line with the goals the East German state set for the labor market. In contrast to Grünert's suggestion of firm-internal labor markets, however, the share of mobility within firms in the GDR never exceeded --with one exception of the 1960 cohort for East German men-- the share of mobility across firms. For the oldest birth cohort, firm-external mobility was even more than two times as likely than firm-internal mobility.

The 'quality' of the job moves --in terms of increases (upward and lateral mobility) or decreases (downward mobility) in net monthly wage-- was in contrast to the ideal-typological system contrast approach, not uniformly better in East Germany, but varied with gender and birth cohort. Table 3 shows that East German women experienced relatively more often than West German women wage increases once they shifted within a firm, and relatively less frequently wage decreases (firm-internal upward mobility respectively 34% and 31%, lateral 49% and 40%, and downward 17% and 29%). East German men, on the other hand, were in this respect somewhat worse off than their male counterparts from the West (firm-internal upward mobility respectively 29% and 31%,

lateral mobility equal with both 55%, downward mobility respectively 16% and 11%). Over historical time, the countries became more similar in the 'quality' of job movements. Whereas in the oldest birth cohort (1930) upward mobility within and between firms had a much greater share in West than in East Germany, and firm-internal downward mobility a smaller share, in later birth cohorts these differences began to disappear. Inspection of within-country developments, shows that this convergence is mainly due to a deterioration of job shift chances for West German employees --sharply fallen upward and sharply risen downward mobility rates. In East Germany these rates remained much more constant.

< Table 4 about here >

How do the above results hold in an event history framework that makes use of complete career data? Table 4 shows results of event history analysis using the piecewise constant exponential model. For a more intuitive understanding, we presented the anti-logarithm of the parameters of the model (which then become odds ratios), subtracted one and multiplied them by 100% such that they are interpretable as relative chances. For example, the estimate 3.6 for West German men of birth cohort 1940 means that this group had a 3.6% higher chance to experience a job move than the reference group (West German men of birth cohort 1930).

The figures in Table 4 generally substantiate the earlier findings of Table 3. We notice (a) significantly higher (+11%) job shift chances for East than West Germans, (b) significantly higher (+25%) job shift chances for East than for West German women and equal job shift rates among East and West German men, (c) historical convergence in the job shift chances of East and West Germans, (d) significantly higher (+87%) chances of job mobility within firms and significantly lower (-11%) chances of mobility to other firms for East than West Germans, and (e) historically increasing rates of firm-internal job mobility in both countries.¹⁷

¹⁷ There are also differences, however, in findings between the descriptive method of Table 3 and the event history analysis of Table 4. The most important one is that whereas we noticed in Table 3 an increase of firm-internal job mobility in East Germany and stability in West Germany, Table 4 provides the opposite evidence: a much stronger increase of this type of mobility in West than in East Germany. The difference in results might be explained by the use of restricted (Table 3) versus full (Table 4) career data, but more likely it is attributable to the fact that Table 3 deals with relative shares and Table 4 with absolute probabilities. The stability in the share of firm-internal mobility in the FRG means that of all the job moves a historically stable

< Figure 1 about here >

Figure 1 shows the functional form of the job shift rate for East and West German employees by time since job entry. The lines in the figure demonstrate remarkable cross-country similarity in the duration dependence of job shift chances. For East and West German workers the chances to switch jobs strongly increase in the first and/or second year since job entry, but then soon --after about 2-3 years-- reach a maximum, after which the job shift chances monotonically decrease to a level of almost half the size of what they had been in the very first year. This bell-shaped curve has earlier been observed in the literature and interpreted as an interplay of two opposing causal factors, namely decreasing needs to resolve mismatches and increases in job-specific investments (Blossfeld and Rohwer 1995; 113, 114). That the shape of the form of duration dependence was so much alike for East and West German employees, seems to suggest that these processes functioned similarly in the two countries.¹⁸

EFFECTS OF LABOR MARKET COMPOSITION

The second question of our paper addresses the extent to which the observed cross-country and cross-temporal differences in job shifting can be attributed to discrepancies in the composition of the East German and West German labor markets. Table 5 provides an answer to this question. The table first presents in Panel A the 'uncontrolled' job shift rates that we earlier listed in Panel C of Table 4 (men and women jointly). In the other panels, Panels B to G, the cross-country and cross-temporal parameters are modeled again, but now under control of labor market differences, respectively education (Panel B), gender (Panel C), social class (Panel D), industrial sector (Panel E), firm size (Panel F), and all previous controls jointly (Panel G). The larger the difference between the 'uncontrolled'

percentage is of that type. However, since we know that job mobility increased over time in West Germany (both evidenced in Table 3 by an increasing number of job shifts during the first ten years after labor market entry and in Table 4 by an increased probability), the absolute chances of firm-internal mobility --at stable relative occurrence-- increased.

¹⁸ A test of inter-country differences in the duration dependence of the job shift rate (in piecewise constant exponential models with interactions of an East Germany dummy variable with time-specific constants), showed insignificant differences between East and West German men, but significant differences between East and West German women: for West German women the job shift chances in the first years after job entry were significantly lower than for East German women; thereafter the chances converged somewhat.

and 'controlled' parameters, the greater the compositional effect.

< Table 5 about here >

Table 5 first of all documents that the higher general job shift tendency of East German employees would be even more visible, if labor market composition in the GDR resembled that of the FRG: under control of education, gender, social class, industrial sector and firm size, the East Germany parameter increased from a 11% higher chance to switch jobs (Panel A2; first grey-shaded column) to a 15% higher chance (Panel G2). Inspection of the single contribution of the various composition effects shows that this underestimation of the job shift rate in East Germany is mainly due to social class (Panel D2), and firm size (Panel F2): these factors increased the 'uncontrolled' East Germany country parameter to the largest extent. The compositional effect of social class can be understood as an interaction of (a) a higher percentage of skilled classes in the GDR (see Table 2), and (b) greater job stability of these classes (see also next section, Table 6). The compositional effect of firm size can be understood as an interaction of (a) a relatively greater size of firms in the GDR (also see Table 2), and (b) greater stability of jobs in large firms (also see next section).

The above findings clearly speak against a strong version of the system convergence models that job mobility would be similar net of structural differences. A weaker version of this model may, however, not be rejected since Table 5 demonstrates that after control for composition effects, historically convergence was even greater than without controlling for composition effects (compare Panel A1 with Panel G1). Closer inspection shows that this increased trend towards convergence mainly resulted from strong occupational upgrading in the last birth cohort (1960) of West Germany (also see Table 2): when this upgrading is taken into account, the job shift likelihood of West Germans of birth cohort 1960 was 46% higher (Panel D1) instead of 37% higher (Panel A1) than the job shift likelihood of the oldest birth cohort (1930).

The second grey-shaded column of Table 5 shows composition effects on the likelihood of firm-internal job mobility. As expected from the institutional context model, the strongest factor to account for the greater firm-boundedness of job moves in East Germany was firm size. Once taken into account, the East Germany country parameter for

within-firm mobility drops from a 87% higher chance (than in West Germany; Panel A2) to a 74% higher chance (Panel F2). Another, but smaller composition effect pertains to education: once taken into account, the firm-internal job shift chance drops to a 78% higher chance in East Germany (Panel B2). Together, the composition effects of firm size and education cannot --in contrast to the system convergence model-- explain away East Germany's greater firm-boundedness of job moves: the likelihood of firm-internal job moves remained under control of education and firm size significantly higher in the GDR. Throughout historical time, composition effects are not substantial: although after control for developments in the labor market structure in each of the two countries some cohort differences cease to be significant, both countries still displayed a historical increase in the likelihood of firm-internal job mobility.

Firm-external mobility rates (third grey-shaded column of Table 5) provide stronger evidence in favor of composition effects. The lower probability of mobility across employers for East German employees can fully be accounted for by the on average greater size of firms in the GDR (and the smaller chances of jobs in larger firms to end in a job shift to another firm): the East Germany country parameter decreased from a significantly 11% weaker chance to switch firms (Panel A2), to an insignificant 3% under control of firm size (Panel F2). Had the distribution of firm size been cross-nationally similar, rates of firm-external job shifting in East and West Germany would have been the same. In contrast, country-specific inter-cohort differences do not disappear when differences in the labor market structures are controlled for. In East Germany, the historical decrease in the likelihood of firm-external job mobility remained largely unchanged throughout different controls. In West Germany, the trend toward an increasing likelihood of inter-firm mobility has also remained significant. Yet, had there not been occupational upgrading in the 1960 birth cohort and a strong firm immobility of higher social classes, the likelihood of inter-firm moves would have increased over cohorts even stronger (compare Panel A1 with G1).

THE ROLE OF HUMAN CAPITAL AND LABOR MARKET SEGMENTATION

The third and final question of this paper addresses determinants of job shift rates: to what extent were the various forms of job mobility in East and West Germany guided by human capital investments, and to what extent were they reflecting East and West German labor

market segmentation? In Table 6 we relate labor force experience, education (human capital indicators), gender, social class, industrial sector, firm size (labor market segmentation indicators) to the likelihood of job mobility and the probability of firm-internal and firm-external job shifting, also in combination with upward, lateral and downward wage mobility.¹⁹ The coefficients of the 'independent variables' are again interpretable as relative chances, where selected categories of variables are the reference. To display inter-country differences in the effects of independent variables, we provide in Table 6 between the 'country-columns' a sub-column (headed by a Δ sign) with indicators of statistical significance.²⁰

< Table 6 about here >

Human Capital. The effects of labor force experience --our first human capital indicator-- on job shift chances in Table 6 show basic cross-country similarity: in both countries the likelihood of job switching and of firm changing decreases as labor force experience --gained before a given job (general labor force experience), within the firm (firm-specific labor force experience), or within a given job (job-specific labor force experience)-- is cumulated, while the likelihood of within-firm mobility increases. The strength of the impact of labor force experience cross-nationally differed, however. In line with expectations from the institutional context model, its impact seems to have been weaker in East than West Germany, especially with regard to firm-specific labor force experience. Each additional month of experience within the firm decreased the job shift rate in West Germany by 0.4% and in East Germany by 0.1%; for each additional year these effects are respectively -4.7% $[(-0.4/100+1)^{12}-1.100\%]$ and -1.2%, and in five years' time -21.4% and -5.8%, a substantial difference for people who have been moderately long within the firm. Similarly, firm-specific labor force experience diminished chances of firm-external mobility

¹⁹ In exploratory analyses, we tested for first job on job shifting. Earlier studies on West Germany have found that the first job one is working in last longer than subsequent jobs (see for example Mach, Mayer and Pohoski 1994). In our analyses, we did not find a significant effect of that type. On the contrast, in East Germany first jobs did not last longer, but significantly shorter than later jobs.

²⁰ Cross-country differences in effects of variables with more than two discrete categories (education, class, sector and birth cohort) are tested by comparing fit statistics of models containing interactions between an East Germany dummy variable and all independent variables, with models containing no interaction for the variable of interest, but including all other interactions. Cross-country differences in continuous variables and categorical variables with less than three categories, are tested by inspecting the significance of the interaction of the East Germany dummy variable with the covariate of interest.

significantly less in East (-0.90%) than in West Germany (-1.59%), and increased the chances of firm-internal mobility also to a weaker extent (respectively 0.50% and 0.90%).

Inspection of the wage changes associated with these moves in Table 6, demonstrates that lateral moves were also more weakly related to labor force experience in East Germany. For example, an additional month within the firm in the FRG increased the likelihood of this type of move by 1.1%, but only with 0.6% in the GDR. This amounts with five years firm experience to a large difference of a 94% higher chance of within-firm lateral moves in West Germany, and a 43% higher chance in East Germany. Since lateral moves and its dependency on firm experience are given a central role in conceptions of internal labor markets, the findings imply that the East German labor market can --in contrast to suggestions in the literature-- to a lesser extent be characterized as a 'typical' internal labor market than the West German market. This implication is strengthened by other results in Table 6, especially the weaker protective effect of labor force experience against demotion in East than in West Germany: five years of firm experience decreased the likelihood of downward mobility to other firms in the FRG by 59.4% and in the GDR by 26.0%.

Our second indicator of human capital investments, the schooling/training construct, corroborates basic cross-country similarity. The parameter estimates in Table 6 are in most instances positive and significant, and did not differ significantly across the countries. This means that a higher educational certificate speeds up --net of labor force experience and other variables-- the chances to change jobs. People with middle schooling/training levels, for example, did in the FRG and GDR have a 11%, respectively 20% higher chance to change jobs than people with little or no education (the reference group); people with *Abitur* respectively 43% and 47%, and university educated 67% and 53%. These positive effects are in sharp contrast to the predominantly negative effects of labor force experience. They indicate that (higher) qualifications learned at school are more easily transferable to other jobs than skills learned on-the-job.

Labor Market Segmentation. What was net of human capital indicators the impact of labor market segmentation in the GDR and FRG? With respect to gender, we observed in Table 3 and 4 that women had worse career chances and greater demotion chances than men, though East German were markedly better off than West German women. Table 6 shows that these gender-based patterns hold when we take into account the, on average,

shorter labor market experiences of women, their lower educational levels, their lower social class position, as well distinct industrial location. Compared with their countrymen, East German women had equal chances to experience favorable job moves such as upward and lateral moves within the firm, but far greater chances of downward mobility across firms (a 46% higher chance); West German women had considerably smaller chances to experience firm-internal upward (49% less) and firm-internal lateral moves (55% less) than West German men and far greater chances of downward mobility (a 53% higher chance).

According to Table 6, labor market segmentation in East Germany also seemed to have been weaker with respect to social class. Although the ordering of classes in job shift chances was the same as in West Germany in that the highest social classes held on their job longest, class distances were substantially smaller in East Germany. The strongest cross-country difference pertains to the top of the class hierarchy: whereas in the GDR upper non-manual workers had a 39% lower rate to shift jobs than routine manual workers (the reference category), in the FRG this figure was almost double (69%). Also with respect to favorable forms of job mobility social class differentials were less visible in East Germany. In the GDR, all social classes 'waited' about equally long for upward or lateral job moves within the firm (except for routine non-manual workers who 'waited' significantly shorter on an upward firm-internal move). In the FRG non-manual and upper manual worker had a much lower rate of firm-internal upward and lateral job moves than other worker categories. That the rate of favorable job mobility was lower for the highest social classes in West Germany may seem surprising, but it merely indicates the already good position of these workers in the labor market latter and the impossibilities to make another great leap forward.²¹ Correspondingly, Table 6 shows that both in East and West Germany higher social classes were the classes that were best protected against firm-external demotion: they experienced these movements much later after job entry than lower social classes. Again, these class distances were clearly smaller in East than West Germany.

In contrast to our hypothesis from the institutional context model, sectoral variation in mobility chances had not been stronger in East Germany, but weaker. The only significant

²¹ Sørensen (1977) assigns this phenomenon of a pyramid-shaped reward structure a central position in his vacancy competition model. The magnitude of the negative effect of occupational status (the 'shape parameter') on upward movements measures how many jobs are vacant.

industrial sector effect in the GDR pertained to the bureaucratic sector. Workers in this sector had a significantly greater likelihood (47% higher) to experience firm-external lateral mobility than workers in large-scale industries (the reference category). In West Germany, sectoral variation was larger. In contrast to the East German equivalent, the West German bureaucratic sector offered by far the best career opportunities: the highest job stability (19% lower job shift chances than large-scale industry), the highest chances of firm-internal lateral mobility (64% higher chances), and the best protection against firm-external downward mobility (44% lower chances). Another favorable sector in the FRG was the professional service industry. This industry offered the best chances of firm-internal upward mobility (53% higher than large-scale industry), relatively high chances of firm-internal lateral movements, yet no additional protection against firm leaving and downward mobility. A disadvantaged industry in West Germany was the construction sector: it knew - probably because of seasonal character of the work-- considerable inter-firm mobility (a 16% higher chance than in large-scale industry), and high chances of downward mobility associated with these moves (61% higher than large-scale industry).

A final measure of labor market segmentation that we consider is firm size. As expected from our analyses of the impact of labor market composition on job shifting (see Table 5), Table 6 illustrates that in both German countries there existed substantial differences in job shifting between small and large firms: working in a larger firm diminished the general job shift rate, decreased the chances for firm-external mobility, and increased the chances for firm-internal job mobility. Surprisingly, firm size did in neither country significantly diminish the chances of downward mobility within or across firms. Large enterprises were not able to prevent these unfavorable downward job movements. In East Germany, workers in large firms even had a statistically higher probability of experiencing this type of mobility than workers in small firms. This finding may indicate that in East Germany large firms --especially the earlier mentioned *Kombinate*-- indeed functioned as a kind of local internal labor markets providing all sorts of alternative employment arrangements, including less-paying jobs.

5. *Conclusions and Discussion*

In this paper we investigated job shift patterns in the former East and West Germany. We assessed cross-country and cross-temporal differences and similarities in job shift rates -- both with respect to firm-internal and firm-external job moves--, estimated effects of labor market composition on these rates, and assessed the influence of human capital and labor market segmentation on various rates. The hypotheses we tested derive from three models describing similarities and differences between the former East and West German labor markets: a model postulating system convergence, a model postulating system contrast and an institutional context model (see Table 1).

Our analyses of career history data of East and West German men and women have first of all shown cross-country similarities in the basic structure of job mobility of the two countries, in particular (a) almost equal overall levels of job shifting, (b) historical convergence of the job shift rates, (c) similarly structured effects of human capital indicators, notably job stabilizing effects of labor force experience and job shift enhancing effects of a higher educational level and occupational training, and (d) an almost equal patterning of the effects of human capital and labor market segmentation on job mobility, where women, lower social classes and workers in small firms had distinctively lower chances of firm-internal mobility and higher chances of unfavorable, downward job moves than respectively men, higher social classes and workers in large firms. These cross-country similarities seem to support predictions from the system convergence model and clearly contradict system contrast ideas. Under very distinct political systems, the functional requirements of the modern economy created in both the GDR and FRG a basically similar structure of career chances.

System convergence is, however, only half the story. Our analyses have also shown cross-country differences in job shift rates. Three of them are especially noteworthy. Firstly, and most importantly, in East Germany job moves were clearly more firm-bounded than in West Germany: job shifts within a firm occurred at a much higher pace than in West Germany, while the transition to another firm occurred at a significantly lower pace. Although the smaller firm-external mobility can be accounted for by the larger size of firms in East Germany, the higher likelihood of firm-internal mobility can not: after control for firm size differences, East German employees still had a significantly higher probability

of switching jobs within firms than West German employees. Secondly, the strength of labor force experience on job shifting was notably different in the two countries: labor force experience had weaker effects on the firm switch in East Germany and had a stronger positive impact on favorable job moves within the firm. Thirdly, the GDR was characterized by visibly weaker labor market segmentation than the FRG. This pertains to gender, social class and industrial sector: the distances among the genders, social classes and industrial sectors in favorable and unfavorable job movements were distinctively smaller in East Germany.

With these three important differences in mind, there is much less to say in favor of an ideal-typical model of system convergence than it seemed appropriate after pointing out inter-country similarities. The simultaneous existence of similarities and differences in the job shift patterns of East and West Germans, clearly indicates a more complex structure of the labor market and job mobility. We have envisaged this complexity by formulating the institutional context model (see Table 1) stressing historical, cultural and institutional embeddedness of the two labor markets. Three institutional differences between the East and West Germany were given a central role: a strong central planning, individual rights of and guarantees on employment, and an extensive system of social provisions in the GDR. The mix of these institutions can explain the greater firm-loyalty of East German employees as well as the weaker role of labor force experience for job shifting: these features made it more attractive for East German workers than for West German workers to stay with the firm, while at the same time they led to a rationality on the side of East German employers to increase firm size rather than productivity and efficiency. In a similar fashion, the three institutional features can --in combination with more specific East German characteristics such as infrastructural conditions facilitating female labor and the absence of groups that bind interests of social classes-- explain why gender and class differentials in favorable and unfavorable career chances were weaker in East than in West Germany.

A rather unexpected finding in the light of our predictions derived from the institutional context model was the role of industrial sectors for job shifting. We predicted that the influence of these sectors would have been higher in East Germany because central plans treated sectors differently and sectors had distinct bargaining power in relation to the central bureaucracy. Our analyses did, however, not display significant sectoral differences in the GDR. An explanation of this unexpected finding may be the fact that the East

German state favored different sectors at different time points (cf. note 11). Sectoral variation in West Germany, on the other hand, seemed to have played a more important role. The main difference there was between the public and the private sectors. Jobs in the public sector proved to be the most attractive destinations for job mobility: they offered high job stability, good promotion chances and extensive protection against demotion. In fact, this sector in West Germany corresponds much more closely to the notion of a firm-centered labor market than any of the East German sectors.

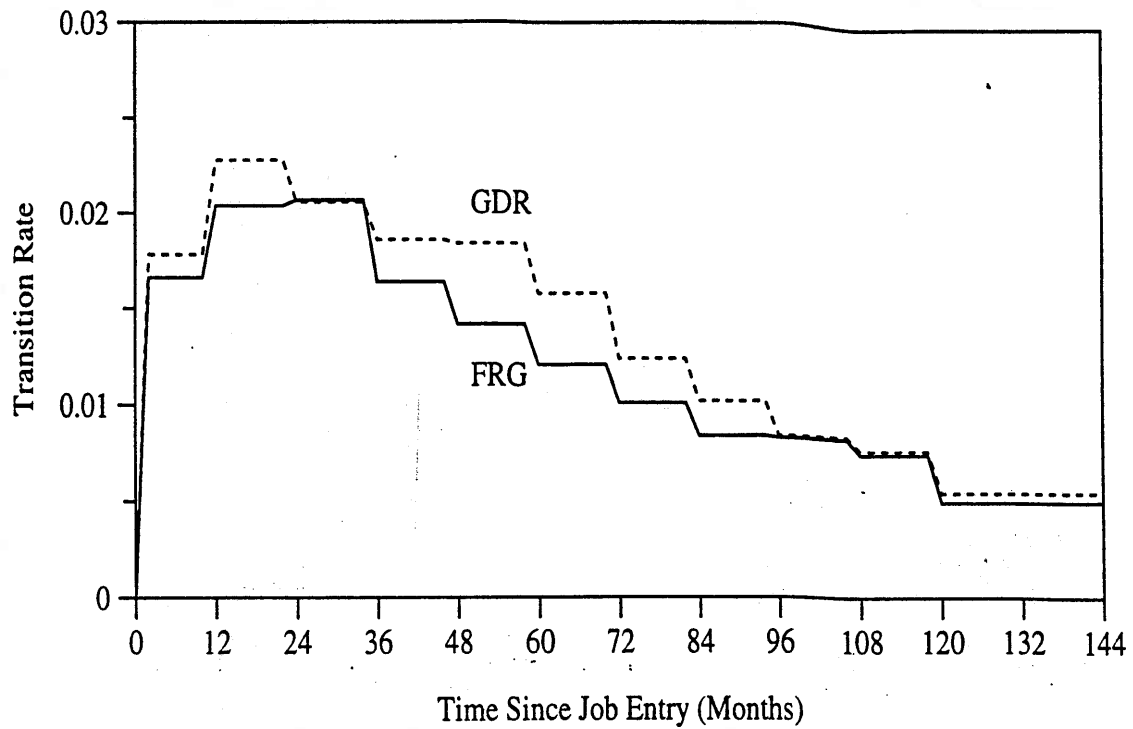
A coherent firm-centred labor market or a true classless society had never been established in East Germany, but relative to West Germany and in comparison to its starting period East Germany made some unquestionable progress. We think, that these developments did not stem from direct goal-directed state interventions, but were rather indirect and often unintended consequences of policies aimed at securing other aims. Firm size expansion, for example, was a policy that was primarily aimed at strengthening state control over the economy. However, indirectly it led –combined with a favoring of large firms in the distribution of resources--, to a consistent behavioral pattern on the side of employers and employees ‘pushing’ mobility processes to occur within firms. This was quite different from the situation West German employers and employees were facing. The question to what extent this unique East German pattern has survived the collapse of state socialism cannot be unequivocally answered yet.

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Figure 1: Probability of job shifting (transition rate) by time since job entry for East German (GDR) and West German (FRG) employees



Notes: Estimates derived from a piecewise constant exponential model with eleven duration-specific intercepts (ten parameters for the first ten years after job entry, and an eleventh open-ended interval), controlling for labor force experience and number of jobs prior to job entry.

Source: German Life History Studies 1981/2, 1988/9, 1991/2, non-agricultural population

Table 1. Theoretical Models and Predictions on Job Shift Patterns in East and West Germany

MODEL	CONCEPTIONS OF CAPITALIST AND SOCIALIST SOCIETIES	MAIN PREDICTIONS ON PATTERNS OF JOBMOBILITY
<i>System Convergence</i>	East and West Germany were both 'achievement-oriented' societies; with ongoing modernization differences in occupational structures and mobility regimes should disappear	<p>(a) <i>rates</i>: equal chances of job shifting; if difference then historical convergence</p> <p>(b) <i>labor market composition</i>: can fully account for possible differences in job shift rates</p> <p>(c) <i>determinants</i>: a similar role of human capital and labor market segmentation</p>
<i>System Contrast</i>	East and West Germany were distinct systems with different political goals and different occupational structures and mobility regimes	<p>(a) <i>rates</i>: smaller chances of firm-external mobility in the GDR</p> <p>(b) <i>labor market composition</i>: cannot account for differences in job shift rates</p> <p>(c) <i>determinants</i>: in the GDR a stronger impact of human capital, and a weaker impact of labor market segmentation</p>
<i>Institutional Context</i>	East and West Germany were similar in some aspects but different in others due to specific interactions among economic, political, institutional and social factors	<p>(a) <i>rates</i>: in the GDR higher chances on firm-internal and smaller chances on firm-external mobility</p> <p>(b) <i>labor market composition</i>: can partially explain differences in job shift rates; firm size should account for differences most</p> <p>(c) <i>determinants</i>: the effects of human capital and labor market segmentation should be similarly patterned, but in size be weaker in the GDR; an expectation is greater sectoral variation in the GDR</p>

Table 2. Description of Education, Gender, Social Class, Industrial Sector, and Firm Size for West and East German Employees at the time of Labor Force Entry¹ by Birth Cohort (Column Percentages)

	FRG (N=2389 persons)					GDR (N=1518 persons)				
	Cohort 1930 (N=419)	Cohort 1940 (N=550)	Cohort 1950 (N=613)	Cohort 1960 (N=807)	All cohorts (N=2389)	Cohort 1930 (N=230)	Cohort 1940 (N=395)	Cohort 1950 (N=435)	Cohort 1960 (N=458)	All cohorts (N=1518)
Schooling/Training ²										
minimum (<10 yrs)	29.1	21.9	14.4	8.0	16.6	17.1	4.1	2.1	3.5	5.3
middle (10-12 yrs)	55.5	63.8	61.9	58.2	60.0	61.0	72.3	71.9	75.4	71.4
Abitur (13-15 yrs)	6.3	5.3	6.5	19.9	10.6	9.2	9.9	9.7	8.6	9.3
university (17-19 yrs)	9.1	9.1	17.2	13.9	12.8	12.7	13.7	16.4	12.5	14.0
Gender										
Male	54.7	50.7	47.6	49.1	50.1	63.5	49.4	50.6	44.3	50.3
Female	45.3	49.3	52.4	50.9	49.9	36.5	50.6	49.4	55.7	49.7
Social class										
upper non-manual	2.4	2.0	4.4	3.1	3.1	4.3	7.1	12.6	8.1	8.6
lower non-manual	11.7	14.9	23.5	28.4	21.1	12.6	18.5	20.9	22.5	19.5
routine non-manual	15.8	23.5	26.3	21.8	22.3	10.4	13.9	7.8	11.8	11.0
upper manual	1.7	2.9	3.8	3.6	3.1	3.0	3.5	4.6	6.6	4.7
lower manual	32.7	34.9	29.2	27.3	30.5	47.4	44.6	45.1	42.8	44.6
routine manual	35.8	21.8	12.9	15.9	20.0	22.2	12.4	9.0	8.3	11.7
Industrial sector										
large-scale industry	19.8	24.4	17.3	17.2	19.3	26.1	27.3	27.1	25.5	26.5
light industry	28.6	25.6	18.6	17.5	21.6	26.5	20.3	19.5	16.4	19.8
construction	9.1	7.8	4.6	7.9	7.2	10.0	9.9	14.7	13.5	12.4
services/trade	34.6	37.8	48.3	42.1	41.4	33.0	39.0	35.2	40.4	37.4
bureaucratic services	7.9	4.4	11.3	15.2	10.4	4.3	3.5	3.4	4.1	3.8
Firm size ²										
1-5 employees	22.4	21.3	18.5	13.2	18.0	20.0	13.7	3.5	1.5	8.0
6-25 employees	31.0	26.8	26.0	28.3	27.8	25.7	20.4	11.3	11.9	16.0
26-100 employees	17.8	21.1	22.1	21.2	20.8	16.2	16.8	24.3	21.5	20.3
101-1000 employees	19.7	21.7	23.2	25.5	23.0	22.9	29.7	35.3	39.2	33.1
> 1000 employees	9.2	9.3	10.2	11.8	10.4	15.2	19.3	25.8	25.9	22.5

Notes: ¹We presented distributions at the time of entry into the labor force rather than at the time of the last 1989-job because changes across cohorts are better interpretable as historical changes in the first than latter situation; ² Of the non-agricultural population, 1.2% respondents did not report on schooling/training and 8.4% on firm size.

Source: own calculations, German Life History Studies 1982/3, 1988/9, 1991/2, non-agricultural population (N=3907 persons; 12108 job spells).

Table 3. Mean Number of Job Shifts and Relative Shares of Firm-Internal and Firm-External Job Mobility for West and East German Employees During the First Ten Years After Labor Force Entry, by Gender and Birth Cohort¹

	FRG					GDR				
	Cohort 1930	Cohort 1940	Cohort 1950	Cohort 1960	All cohorts	Cohort 1930	Cohort 1940	Cohort 1950	Cohort 1960	All cohorts
A. MEN										
<i>Mean Number of Shifts/Person:</i>	1.4	1.6	1.6	1.7	1.6	2.0	1.8	1.6	1.5	1.7
<i>Percentage of Job Shifts:</i>										
% Job Shifts Within Firm	27.3	23.7	26.6	34.5	28.3	33.1	41.2	45.2	55.5	42.2
% upward move	43.0	39.8	41.5	23.4	34.1	31.7	30.9	29.4	20.3	28.6
% lateral move	45.2	53.8	48.9	62.0	54.4	51.2	48.5	55.8	69.9	55.4
% downward move	11.8	6.5	9.6	14.6	11.4	17.1	20.6	14.7	9.8	16.1
% Job Shifts Across Firms	72.7	76.3	73.4	65.5	71.7	66.9	58.8	54.8	44.5	57.8
% upward move	44.0	47.8	39.5	35.0	41.7	36.7	37.6	32.4	35.2	35.8
% lateral move	39.4	34.4	38.2	36.0	36.8	37.0	31.7	37.8	39.2	35.8
% downward move	16.6	17.7	22.3	28.9	21.5	26.3	30.7	29.8	25.6	28.4
B. WOMEN										
<i>Mean Number of Shift/Person:</i>	0.8	1.1	1.2	1.3	1.1	1.4	1.6	1.8	2.0	1.7
<i>Percentage of Job Shifts:</i>										
% Job Shifts Within Firm	12.0	16.0	16.9	23.4	17.9	25.1	37.7	42.6	48.4	40.3
% upward move	65.2	42.9	23.9	20.8	30.8	52.4	36.6	31.5	29.1	34.1
% lateral move	30.4	34.7	47.8	41.5	40.2	40.5	46.2	49.3	53.9	49.0
% downward move	4.3	22.4	28.3	37.7	29.0	7.1	17.2	19.2	17.0	16.9
% Job Shifts Across Firms	88.0	84.0	83.1	76.6	82.1	74.9	62.3	57.4	51.6	59.7
% upward move	56.5	47.1	41.7	33.8	43.2	48.2	35.5	29.9	32.9	35.4
% lateral move	18.5	28.9	32.0	36.3	30.3	30.1	37.9	37.4	36.7	36.2
% downward move	25.0	24.0	26.2	29.9	26.5	21.7	26.7	32.7	30.4	28.4
C. MEN AND WOMEN										
<i>Mean Number of Shift/Person:</i>	1.1	1.3	1.4	1.5	1.3	1.7	1.7	1.7	1.7	1.7
<i>Percentage of Job Shifts:</i>										
% Job Shifts Within Firm	22.2	20.5	22.2	29.6	24.0	30.5	39.4	43.8	51.1	41.2
% upward move	47.4	40.8	35.7	22.5	33.0	35.9	33.7	30.4	25.2	31.1
% lateral move	42.2	47.2	48.6	54.7	49.9	49.0	47.4	52.8	61.1	52.5
% downward move	10.3	12.0	15.7	22.8	17.1	15.0	18.9	16.8	13.8	16.4
% Job Shifts Across Firms	77.8	79.5	77.8	70.4	76.0	69.5	60.6	56.2	48.9	58.8
% upward move	48.4	47.5	40.7	34.5	42.4	40.8	36.5	31.0	33.7	35.6
% lateral move	32.1	32.0	35.0	36.2	33.9	34.5	34.9	37.6	37.6	36.0
% downward move	19.5	20.5	24.3	29.4	23.7	24.7	28.6	31.4	28.7	28.4

Notes: ¹Percentages job shifts calculated from entire job careers. Exploratory analyses have shown that the cutting point of ten years after labor force entry does not affect the relative shares.

Source: own calculations, German Life History Studies 1981/2, 1988/9, 1991/2, non-agricultural population (N=12108 job spells).

Table 4. Trends and Country-Differences in Job Shift Rates by Gender; Parameters (Relative Chances) of Piecewise Constant Exponential Models¹

		Any Job Move		Within Firm Move		Across Firm Move	
		FRG	GDR	FRG	GDR	FRG	GDR
A. MEN							
A1.	Cohort 1940 ²	3.60	-14.18**	-1.03	5.35	5.73	-22.18**
	Cohort 1950	15.40*	-24.29**	26.95	6.95	11.68	-38.61**
	Cohort 1960	42.48**	-17.89**	136.41**	44.82**	19.83**	-46.40**
A2.	Country parameter ³		1.77		50.91**		-15.46**
B. WOMEN							
B1.	Cohort 1940	27.16**	8.19	128.64**	61.82**	16.78	-9.34
	Cohort 1950	22.31*	8.27	124.75**	84.01**	11.15	-13.79
	Cohort 1960	38.00**	28.38**	291.02**	170.88**	13.93	-16.26
B2.	Country parameter		23.64**		168.80**		-7.29
C. MEN AND WOMEN							
C1.	Cohort 1940	10.52**	-6.11	16.30	18.77*	9.75	-16.64**
	Cohort 1950	15.60**	-11.40*	34.18**	28.27**	10.96	-27.31**
	Cohort 1960	36.89**	2.43	143.03**	83.86**	16.42**	-31.41**
C2.	Country parameter		11.18**		86.64**		-11.04**

Notes: ¹ Piecewise constant exponential models with eleven period-specific intercepts (ten one-year intervals and an eleventh open-ended), controlling for labor force experience (general and firm-specific) and previous number of jobs; ² Comparison among cohorts in each country, where cohort 1930 is the reference group; ³ Comparison among countries where the FRG is the reference group; **, p<0.01; *, 0.01<p<0.05; Parameters are defined as odds-ratios minus 1 times 100%; the estimate 3.60 for West German men of birth cohort 1940 means, for example, that this group had a 3.60% higher chance to experience a job move than the reference group (West German men of birth cohort 1930); Standard errors available from the authors.

Source: German Life History Studies 1981/2, 1988/9, 1991/2, non-agricultural population (N=12108 job spells).

Table 5. Trends and Inter-Country-Differences in Job Shift Rates (Men and Women Jointly) Before and After Controlling for Differences in the Labor Market Structures; Parameters (Relative Chances) of Piecewise Constant Exponential Models¹

		Any Job Move		Within Firm Move		Across Firm Move	
		FRG	GDR	FRG	GDR	FRG	GDR
A. NO CONTROL STRUCTURE²							
A1.	Cohort 1940 ³	10.52**	-6.11	16.30	18.77*	9.75	-16.64**
	Cohort 1950	15.60**	-11.40*	34.18**	28.27**	10.96	-27.31**
	Cohort 1960	36.89**	2.43	143.03**	83.86**	16.42**	-31.41**
A2.	Country parameter ⁴		11.18**		86.64**		-11.04**
B. CONTROL EDUCATION							
B1.	Cohort 1940	10.74*	-6.76	16.30	13.20	10.19	-15.72**
	Cohort 1950	16.18**	-12.10**	32.58**	22.14**	12.08*	-26.43**
	Cohort 1960	35.26**	1.92	135.37**	78.43**	16.07**	-30.93**
B2.	Country parameter		10.74**		77.54**		-10.06**
C. CONTROL GENDER							
C1.	Cohort 1940	11.07*	-7.60	19.01	17.94*	9.75	-18.62**
	Cohort 1950	17.23**	-12.98**	42.48**	27.38**	10.96	-29.04**
	Cohort 1960	38.96**	0.10	159.35**	82.39**	16.42**	-33.50**
C2.	Country parameter		11.18**		88.14**		-11.40**
D. CONTROL SOCIAL CLASS							
D1.	Cohort 1940	12.98**	-5.82	17.59	17.82*	12.52*	-15.89**
	Cohort 1950	21.53**	-9.97*	37.30**	28.02**	17.47**	-25.25**
	Cohort 1960	45.79**	2.43	148.93**	82.58**	25.48**	-30.93**
D2.	Country parameter		14.00**		86.26**		-7.60**
E. CONTROL INDUSTRY SECTOR							
E1.	Cohort 1940	9.97*	-6.39	17.47	17.12	13.26	-16.64**
	Cohort 1950	17.94**	-11.57*	31.39**	27.51**	14.68*	-27.31**
	Cohort 1960	40.49**	1.71	137.03**	82.21**	21.65**	-31.82**
E2.	Country parameter		10.52**		86.45**		-11.49**
F. CONTROL FIRM SIZE							
F1.	Cohort 1940	10.19*	-6.01	16.53	18.77*	8.87	-16.47**
	Cohort 1950	15.49**	-10.15*	35.26**	25.11**	10.41	-23.89**
	Cohort 1960	37.85**	4.39	138.93**	77.71**	17.7**	-26.73**
F2.	Country parameter		15.03**		74.02**		-2.86
G. ALL CONTROLS							
G1.	Cohort 1940	13.31**	-8.70	27.00*	10.30	10.74	-16.64**
	Cohort 1950	23.74**	-11.93*	45.06**	17.59	19.01**	-23.74**
	Cohort 1960	49.78**	0.40	154.21**	64.38**	29.95**	-27.60**
G2.	Country parameter		15.14**		70.40**		-1.39

Notes: ¹ Piecewise constant exponential models with eleven period-specific intercepts (ten one-year intervals and an eleventh open-ended), controlling for labor force experience (general and firm-specific) and previous number of jobs; ² Since this table is for men and women jointly, Panel A contains the same parameters as Panel C of Table 4; ³ Comparison among cohorts in each country, where cohort 1930 is the reference group; ⁴ Comparison among countries where the FRG is the reference group; **, p<0.01; *, 0.01<p<0.05; Parameters are defined as odds-ratios minus 1 times 100% (see Table 4); Standard errors available from the authors.

Source: German Life History Studies 1981/2, 1988/9, 1991/2, non-agricultural population (N=12108 job spells).

Table 6. Determinants of Job Shift Rates in East and West Germany; Parameters (Relative Chances) of Exponential Episode-Splitting Models¹

Determinant	Any Job Move			Within Firm Move			Across Firm Move			Within Firm Upward Move			Within Firm Lateral Move		
	FRG	Δ	GDR	FRG	Δ	GDR	FRG	Δ	GDR	FRG	Δ	GDR	FRG	Δ	GDR
Constant	-97.69**		-97.73**	-99.78**		-99.77**	-97.76**		-97.18**	-99.89**		-99.89**	-99.93**		-99.89**
A. HUMAN CAPITAL															
General labor force experience	-0.70**		-0.60**	-0.90**		-0.80**	-0.70**		-0.60**	-1.00**		-1.09**	-1.00**		-1.00**
Firm-specific experience	-0.40**	◇	-0.10	0.90**	◇	0.50**	-1.59**	◆	-0.90**	0.20		0.40*	1.11**	◇	0.60**
Job-specific experience (linear)	-0.90**		-0.80**	-0.40*		-0.60**	-1.00**		-0.90**	-0.50		-0.80**	-0.30		-0.70**
Job-specific experience (squared)	0.10		0.00	0.00		0.00	0.10		0.00	0.10		0.00	-0.40		0.00
Previous number of jobs	13.54**	◆	7.04**	5.65		6.18*	16.65**	◆	9.20**	-1.19		3.77	14.11*		12.98**
Schooling/training ²															
middle (10-12 yrs)	10.74		19.60*	19.72		56.36**	10.74		13.66	1.71		39.51	-9.52		31.00
Abitur (13-15 yrs)	42.90**		47.11**	90.98**		131.64**	34.04**		16.07	86.64*		74.37	71.77*		117.28**
university (17-19 yrs)	67.20**		52.96**	103.2**		85.34**	59.84**		55.43**	132.33**		59.84	3.56		71.60
B. LABOR MARKET SEGMENTATION															
Female	-12.01**	◆	14.22**	-38.86**	◆	15.49*	-1.49		11.96*	-48.73**	◆	11.29	-55.2**	◆	-8.24
Social class ³		◆			◆			◇							
upper non-manual	-69.39**	◆	-38.49**	-68.59**	◆	-13.06	-70.24**	◆	-50.24**	-82.50**	◇	-29.95	-71.41**	◆	-3.05
lower non-manual	-35.60**	◇	-21.89**	-36.68**	◆	0.30	-34.82**		-30.93**	-39.65		-2.08	-44.95**	◆	11.29
routine non-manual	-12.37*		-8.33	-16.81	◇	21.9	-12.10		-22.28**	-2.27		81.48**	-21.73		1.61
upper manual	-37.12**		-25.62**	-49.54**	◇	-14.62	-31.95**		-28.82**	-52.62*		3.15	-40.19*		-22.74
lower manual	-12.01*		-7.87	-16.05		11.63	-11.49*		-16.89*	-23.28		-11.66	-11.13		30.87
Industrial sector ⁴		◇						◆							
light industry	-2.08		-4.11	-23.20*		-10.15	4.08		1.82	-10.86		-7.13	-11.40		-13.93
construction	8.98		4.60	-14.96		3.15	15.95*		7.57	-4.50		29.82	4.92		-25.02
services/trade	1.31		8.44	23.61*		14.80	-5.45		3.98	52.81*		19.48	43.05*		23.24
bureaucratic services	-19.27**	◆	9.09	28.53*		-1.88	-36.93**	◆	13.54	30.73		3.25	64.05*		3.05
Firm size	-4.78**	◇	-2.27**	7.68**		8.87**	-9.15**		-9.70**	7.36*		11.18**	12.52**		11.18**
C. TREND															
Birth cohort ⁵		◆						◆						◆	
cohort 1939-41	13.31**	◆	-8.70	27.00*		10.30	10.74	◆	-16.64**	3.36		-7.78	54.34*		5.02
cohort 1949-51	23.74**	◆	-11.93*	45.06**		17.59	19.01**	◆	-23.74**	0.00		-29.46*	87.01**	◇	9.53
cohort 1959-61	49.78**	◆	0.40	154.21**	◆	64.38**	29.95**	◆	-27.60**	25.48		-25.62	299.48**	◆	82.94**

Table 6. Continued

Determinant	Within Firm Downward Move ⁶			Across Firm Upward Move			Across Firm Lateral Move			Across Firm Downward Move		
	FRG	Δ	GDR	FRG	Δ	GDR	FRG	Δ	GDR	FRG	Δ	GDR
Constant	-99.98**		-99.99**	-97.98**		-97.98**	-99.47**		-99.54**	-99.83**	♦	-99.59**
A. HUMAN CAPITAL												
General labor force experience	-1.59**		-0.50*	-0.90**		-1.00**	-0.60**		-0.40**	-0.70**		-0.70**
Firm-specific experience	0.90		0.50**	-1.19**		-1.00**	-2.66**	♦	-1.09*	-1.49**	◇	-0.50**
Job-specific experience (linear)	-0.10		-0.50	-1.39**		-1.19**	-1.09**	♦	-0.40*	-0.60**		-0.90**
Job-specific experience (squared)	0.00		0.00	0.10		0.00	0.20**	♦	-0.20	-0.10		0.10*
Previous number of jobs	11.29		15.95*	2.94		3.25	20.20**	♦	3.87	30.47**		20.32**
Schooling/training ²												
middle (10-12 yrs)	94.84		561.94**	2.22		11.85	21.41		5.87	21.65		23.49
<i>Abitur</i> (13-15 yrs)	103.20	◇	912.17**	32.84*		10.30	44.63*		49.93	23.37		-10.15
university (17-19 yrs)	66.53		731.45**	79.86**		66.36*	49.33*		62.42*	40.07		-13.32
B. LABOR MARKET SEGMENTATION												
Female	24.11		38.96	-23.43**	◇	3.98	-12.8	♦	22.38*	53.27**		45.94**
Social class ³												
upper non-manual	-43.33		-64.19**	-82.83**	◇	-60.47**	-62.47**	◇	-16.72	-72.11**		-46.53**
lower non-manual	-23.81		-51.66**	-50.04**		-33.03**	0.80		-2.47	-45.66**		-50.88**
routine non-manual	-36.93		-24.95	-9.79		-2.66	2.63		-12.28	-34.62**		-49.64**
upper manual	-72.03*		-64.8**	-42.94**		-39.83*	-25.1		-19.59	-29.11		-28.18
lower manual	-39.41		-28.11	-20.86*		-11.13	6.72		-8.24	-16.05		-29.74**
Industrial sector ⁴								♦				
light industry	-6.95		-28.82	8.55		4.39	4.50		21.41	-10.60		-15.8
construction	-28.82		7.79	-10.33		1.61	24.36		23.00	61.12**		25.61
services/trade	9.75		-8.97	14.68		7.90	-17.63	♦	25.48	-6.20		-9.15
bureaucratic services	5.65		-52.67	-15.80		18.53	-46.47**	♦	47.40*	-44.12**		-5.73
Firm size	-1.69	◇	12.19**	-12.98**		-14.62**	-8.06**		-7.04**	-0.90		-2.57
C. TREND												
Birth cohort ⁵					♦			◇			♦	
cohort 1939-41	4.60		44.77	7.68	♦	-23.05*	10.74		-12.8	25.86		3.15
cohort 1949-51	98.77		35.12	-11.84	♦	-40.79**	31.52*	◇	-8.42	68.37**	♦	7.25
cohort 1959-61	429.63**	◇	81.48*	-18.29**	◇	-44.35**	46.52**	♦	-8.61	125.24**	♦	-4.88

Notes: ¹ Exponential models controlling for job duration (with a linear and curvilinear term) via episode splitting (see text); ² Reference category 'Volksschule without vocational training (9 years)'; ³ Reference category 'routine manual workers (Class VIIa)'; ⁴ Reference category 'large-scale industries'; ⁵ Reference category 'birth cohort 1930'; ⁶ Due to a small number of events, parameters and standard errors for firm-internal downward mobility are not reliable; * significant, 0.01 < p < 0.05; ** significant, p < 0.01; ◇ indicates difference in parameter (or categorical) variable between East and West Germany, 0.01 < p < 0.05; ♦ idem, p < 0.01; Parameters are defined as odds-ratios minus 1 times 100% (see Table 4); Standard errors available from the authors.

Source: German Life History Studies 1981/2, 1988/9, 1991/2, non-agricultural population (N=12108 job spells).

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