MAX-PLANCK-INSTITUT FÜR BILDUNGSFORSCHUNG
FORSCHUNGSBEREICH
BILDUNG, ARBEIT UND GESELLSCHAFTLICHE ENTWICKLUNG

Arbeitsberichte aus dem Projekt

Ostdeutsche Lebensverläufe im Transformationsprozeß

Market Transition, Institutions, and the Restructuring of Earnings: East Germany and Poland During the First Five Years of the Transformation Process

Martin Diewald and Bogdan W. Mach

Arbeitsbericht 2/1999

LENTZEALLEE 94, D-14195 BERLIN

Das Projekt "Ostdeutsche Lebensverläufe im Transformationsprozeß" ist Teil des Forschungsprogramms "Lebensverläufe und historischer Wandel" (Leiter Karl Ulrich Mayer).
Die wissenschaftlichen Mitarbeiter des Projekts sind: Martin Diewald, Anne Goedicke, Britta Matthes, Karl Ulrich Mayer, Heike Solga und Sylvia Zühlke.

Market Transition, Institutions, and the Restructuring of Earnings: East Germany and Poland During the First Five Years of the Transformation Process

Martin Diewald and Bogdan W. Mach

Arbeitsbericht 2/1999

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:

Since late in the 1980s, institutions of former state-socialist countries have been gradually replacing state-controlled redistribution with market-controlled exchange. Changes in earnings distribution patterns directly reflect this societal reshaping. Using panel data from East Germany (in 1990 and 1995) and Poland (in 1988 and 1993), we document changes in the earnings determination process between two points in time as well as individual earnings changes during this 5-year-period. The time spans between 1990 and 1995 in East Germany and between 1988 and 1993 in Poland represent the first five years of the market transition processes. East Germany and Poland are especially interesting to compare because they represent both sharply contrasting cases of both former types of socialist regimes and means by which state socialism is abandoned and the market economy is adopted. We draw on human capital theory as well as on the institutionally oriented "market transition theory" to explain how a common pattern of transition as well as historically grown path dependencies contribute to earnings changes.

1. The Research Problem

In this paper we address the question of how East Central European societies have recently changed their earnings structure by moving away from state-controlled redistribution towards market-type exchange. We compare two transformation processes unfolding under distinctly different conditions, namely in East Germany and Poland, during the first five years of their transition period. The aim of this comparison is to show to which degree these changes can be attributed to a common pattern of transition from socialism to capitalism or to different pathways of transition shaped by different institutional profiles and political arenas. The aspect of earnings is crucial in this respect, since the remuneration rules address questions of market autonomy (or the degree of market penetration), of the bargaining power of old and new interest groups, and of labor market institutions generating different patterns of labor market inequalities.

Is there any general theory of market transition, or market penetration, which allows us to assess the degree to which socialist planned economies have changed to some form of capitalism? Victor Nee (1989) has proposed to define market penetration by the amount to which the former cadres were able to maintain or move ahead of the overall rate of earnings, and by the amount to which entrepreneurs and self-employed could improve their profits. His declining-significance-of-redistributive-power hypothesis suggests that the more markets become institutionalized, the more any advantages of former cadres will vanish, even if they enter private entrepreneurship. And with market forces becoming more relevant, the higher should be the growth of earnings for private businesses. We doubt, however, that the fate of former cadres, even when compared to that of entrepreneurs, is a valid indicator of the amount of market penetration. We agree with the critique by Andrew Walder (1996:1063) that such changes do not tell us in themselves what kinds of transactions created the new opportunities, and that valid indicators for market penetration should be based precisely on the particular type of economic transactions and property rights in question. An analysis of the development of earnings and earnings determination is useful in this respect, insofar as it reveals indirectly the relative importance of regulation, negotiation, and exchange in affecting wage differentials and returns for private entrepreneurship. As we will argue, a human capital approach is a useful starting point for that purpose but must be supplemented by theories addressing the institutional embeddedness of markets.

Standard economic human capital theory predicts that the move from a planned economy to a market economy is primarily characterized by a relaxation of political control on earnings and a growing importance of human capital considerations in the earnings determination process. According to this theory, wages are determined by the qualities of the employee as the "capital" he or she can negotiate with in a free labor market, and these qualities are approximately defined by his or her schooling and training, general labor force experience, and firm-specific experience (Mincer 1974). In communist command-and-control economies, however, wages are supposed to be set completely by government fiat, so that wage determination implies explicitly a *non*-human capital model (Bird, Schwarze, and Wagner 1994:392). In these economies, the earnings opportunities for entrepreneurs were restricted in many respects. There existed neither one-to-one negotiations between employers and employees, nor did the unions, as the prolonged political arm of the communist party and the government, exert any influence on the wage determination process. Political considerations of the government in fixing the wages were driven by two major factors. First, the egalitarian communist doctrine was supposed to lead to a flatter earnings curve than would be expected under human capital assumptions. Second, due to the political and cultural hegemony of the working class in communist ideology, this group should be favored especially where it was prototypically visible: the skilled workers in heavy industry.

In practice, however, human capital factors played a considerable role in the wage determination in planned economies, and there existed to some extent what we would call a labor *market* (Atkinson and Micklewright 1991:7, Domanski 1997, Domanski and Heyns 1995, Phelps Brown 1977:43, Szydlik 1993, Vecernik 1991). Several factors are relevant for these observations. First, firms had more autonomy in setting incentives for job shifts than assumed by the standard theory (Atkinson and Micklewright 1991:14, Phelps Brown 1977:41). Second, socialist systems, too, had to establish some incentives for human capital investments to develop the qualifications needed for production, services, and administration (Schwarze 1993:92), and to mobilize effort and ability within the occupational system. Nevertheless, earnings differentials seemed to be too small to mobilize sufficiently, as discussions about this issue in East Central European socialist countries make evident (Lötsch 1981, Poznanski 1996). Further, there is common agreement that the "correct" returns for human capital in terms of earnings are "distorted" by the criterion of political loyalty (Eyal, Szelenyi, and Townsley 1997:69-72).

Seen from this angle, market penetration seems to be better operationalized as the degree to which human capital returns become accentuated during the transition process. But is the fate of the former nomenclatura, relating to the last argument, also a valid indicator for market penetration? Though we are ready to admit that the correction of formerly politically distorted status allocation processes and a devaluation if not abolition of the situation rents of former cadres is one aim of the transition from socialism to capitalism, this is hardly a question of market penetration. A shift from political loyalty to meritocracy during transition can be best achieved for new cohorts starting education and training, or entering the labor market for the first time. Yet, for people who are already in the labor market, it is quite difficult to disentangle the effects of ability, qualification, and political patronage in accumulating human capital as well as in reaching the position held at the turning point of system change. Despite the distorting effects of the political loyalty criterion, socialist schools and training institutions were maybe even more selective with respect to cognitive abilities than most capitalist ones (Schnabel, Baumert, and Roeder 1996). And during their careers, workers may have accumulated experiences which may be valuable simply in terms of market exchange. Thus, relative earnings losses of former members of the nomenclatura may or may not be congruent with human capital-driven exchange.

These considerations lead us to one more general problem in analyzing the changing impact of human capital for earnings determination: since most of the people at the labor market during the first years of a transition have acquired their human capital stock under socialism, observed continuities and changes may confound two effects: an accentuation of the value of human capital in general, and a specific devaluation, „a windfall loss“, of human capital acquired under socialism different from that acquired under capitalism (Bird, Schwarze, and Wagner 1994:395). The more context-specific the human capital acquired under socialism is, the more it should be devaluated. Irrespective of some exceptions, the level of schooling and training should be less context-specific than general labor force experience, and labor force experience should be less context-specific than firm-specific experience. Thus, according to the theory of the (new) human capital regime replacing the (old) government fiat, observed changes in human capital returns are a net effect of a system effect and a life course effect: the system effect is the (expected) accentuation of human capital returns, the life course effect is the (possible) devaluation of assets acquired under socialism in a capitalist system. Therefore, the usefulness of changes in human capital returns as indicator for market penetration can be severely restricted.

Changes in the rules of earnings determination are at the same time relevant as changes in the rules of generating social inequalities, and for identifying winners and losers of the labor market transformation. One could object, however, to the use of earnings for these purposes on the grounds that they did not play the same role in socialist economies as in capitalist ones. It is true that, because of the non-market, redistributive character of state socialism, the role of monetary income was less pronounced than in market societies on various grounds: at the macro level by subsidized collective consumption, and at the micro level by firm-based access to goods and provisions, by patronage, and by the redistributive character of social networks (Gabor 1979, Gabor and Galasi 1981, Diewald 1995). Nevertheless, seen from the within-system perspective, earnings were undoubtedly the most important single factor shaping individual opportunities under state socialism. They were a more important factor in differentiating life chances than many Western approaches, which focus on a non-market character of state socialism, assume. Therefore we argue that the development of earnings and earnings determination reliably reveals significant changes in the rules of remuneration as well as tells us a lot about who the winners and losers of the labor market transition are.

A further serious objection to the standard human capital approach is that it ignores institutional and structural factors of earnings determination, and the embeddedness of the labor market in the whole political economy. Therefore, the impact of market reforms on earnings is not rooted in markets as abstract rules of action but in markets as country-specific, historically developed, institutional arrangements shaped by feed-back type relations among economy, state, and society. Earnings are not simply returns to former investments in different types of human capital under standard free-labor-market assumptions. They are also shaped by the balance between labor demand and labor supply; by structural characteristics of the job (e.g., the skill level of jobs and the profitability of firms or industries); by the rules of matching which reflect a whole bundle of underlying processes of selection and adaptation (e.g., employer's preferences, employees' bargaining power, and the fit between schooling and training levels and abilities); and by several local- and national-level wage-setting regulations, in part deeply rooted in institutional traditions: union-industry negotiations and the links between training and occupational systems (e.g., Farkas, England, and Barton 1988:109, Tilly and Tilly 1998:202, Diewald 1999b:ch.3).

The "new institutional paradigm" in economics and sociology has been adopted by most research on market transition (Symposium on Market Transition 1996). Almost ten years of research have shown convincingly that the transitions in East Central Europe do not follow uniformly well-defined trajectories of "market modernization" but rather progress along quite diverse routes determined by country-specific path dependencies and institutional contexts (v. v. Beyme 1994; Blanchard 1997; Elster, Offe, and Preuss 1998; Gross and Steinherr 1995; Kovacs 1994; Lane 1996; Linz and Stepan 1996; Parrott 1997). As Andrew Walder (1996: 1061, 1079) has argued, "[M]arkets per se are not the issue. What matters are the variable institutions and conditions that define markets, and our theory and research must put them at center stage. ... Any view of these transitions has to be grounded in the current politics and institutions of these societies."

To assess the impact of structural and institutional factors, only a comparative perspective can provide the necessary variation in these factors. In this paper, we do this for two transition countries, namely East Germany and Poland, which differ from one another in many respects.[2] Following a useful categorization of factors shaping a transition (Mayer, Diewald, and Solga 1999), we refer to (1) the „society of origin" as the starting point of the transition, (2) the „society of destination" as the real or ideal point of reference for the direction of developments, and (3) the specific rules and conditions of the transformation process itself (section 2). Based on this differentiation, we generate a set of hypotheses about cross-national universals and national particularities in the determination of earnings and earnings changes in both countries. Our hypotheses refer to two different aspects of earnings change. First, a cross-sectional comparison between the first and the fifth year of the transition refers to the question of how, in a situational perspective, the returns for different kinds of human capital and for different types of jobs have changed. Second, individual changes in earnings between the first and the fifth year are investigated. Hypotheses building upon this perspective refer to questions of "capital conversion" (Bourdieu 1977) from one system into the other under different conditions. The term "capital" is here not confined to the standard human capital but includes also situation rents from former positions, as well as from political and social capital (section 3). Section 4 describes the data, variables and methods. Empirical results of the analysis are presented in section 5: What factors structure to what extent the level of earnings in East Germany and Poland under late state socialism? What factors

[2] We are well aware that a comparison between only two countries can not provide a test for single factors in view of the fact that there is more than one different factor between the two countries. Thus, the historical processes of market transition in both countries must be seen as examples of McMichael's (1990) „dynamic self-forming whole" consisting of several national patterns embedded in their own specific institutional contexts and structural settings which are intertwined in a way not allowing to isolate „single factors."

determine the extent to which earnings in these countries change to market-type patterns after the first years of the transition? Which patterns of individual overtime earnings mobility during this period can be observed in East Germany and Poland? Finally, we summarize and discuss our results in section 6.

2. Origin, destination and transformation: Basic country profiles

The society of origin

Pre-transition East Germany and Poland differed in many respects. With regard to the type of state socialist political regime, pre-transition East Germany was an example of "frozen post-totalitarianism" (Linz and Stepan 1996) -- a political system characterized by strong constraints on individual freedom and weak political opposition, while Poland was an example of "mature post-totalitarianism" -- a system characterized by relatively weak constraints on individual freedom and a strong political opposition.

Under both regimes the economy was subject to strict political control. However, while East German authorities, forced to build the country's new identity in strong competition with West German capitalism, were reluctant to experiment with market-type economic reforms, Polish authorities--lacking the problem of "one nation, two systems" -- were more open in this respect. As far as market reforms before transition are concerned, East Germany did not attempt any significant market arrangements during that time. It remained till its end what economists call a strong state (in terms of property rights and economic coordination), oriented towards a strict bureaucratic control over economic activity and earnings. The second economy was only poorly developed there.

In Poland, especially since the early 1970s, there had been many attempts at market reforms (Poznanski 1994). They were, however, rather inconsistent and resulted in no more than strengthening the power of dominant industries and weakening the state control over incomes of private owners who got more opportunities for action than was possible under conditions of a „frozen post-totalitarianism." While "spoiling" bureaucratic wage control, however, they did not create any economy-wide, transparent mechanism of market-type earnings determination.[3] The second economy was more developed than in East Germany.

[3] Poznanski (1996: XI), writing from the perspective of institutional economics, evaluates these reforms as follows: "the post-1970 period in Poland's economy has been characterized by a relatively slow, often inconsequential,

Formal rules and everyday practices of wage-setting and patterns of labor market segmentation differed between the GDR and socialist Poland. In Poland, inconsistent market reforms and a weak state helped to turn industries into special economic interests, additionally strengthening industry-centered wage-setting and labor market segmentation. In the German Democratic Republic, too, political considerations favored heavy manufacturing over other industries. At the same time, however, a more elaborate system of vocational training was, to a higher degree, structured according to occupational lines than in the Polish post-war economic system. This outcome was due to the long-lasting institutional German tradition of well defined, educationally delineated occupational categories (Diewald and Solga 1996, Diewald 1999a), wage-setting and segmentation

Under both regimes, party loyalty led to direct and indirect wage premiums. Direct wage premiums were obtained by the fact that work in the so-called „X-Bereich" (e.g., state departments, secret service, or party academies) was better paid just because of the fact that the workplace was there.[4] More important, however, was the indirect effect that the party had by effectively controlling the access to higher positions and position- and wage-enhancing factors like education and organizational skills (Mach and Solga 1997).[5]

The society of destination

For the East German transformation, the West German society was and is the society of destination by political decision-making and popular consent. Aside from more general market economy characteristics, some institutional peculiarities of what has been called the "German or Rheinish" model of a capitalist society have to be highlighted for the purposes here: a neo-corporatist structure of industrial relations, labor market policies and social security provisions,

disintegration of the planning regime and the parallel reemergence of capitalist markets. Much of these systemic transition has been brought about unintentionally by the communist leadership responding to a variety of pressures coming from a disaffected society. The mid-1989 negotiated relinquishment of political control by the communist party did not make the end of this institutional transition, but it did accelerate it by opening additional avenues for reform. The lengthy, still unfinished, process of remaking the economic system has weakened the mechanisms of coordination and ownership structure through most of the period in question. This institutional deterioration in the dominant(=state) is here found to be one of the main reasons for Poland's volatile pattern of economic development...." Focusing on the period before political change he describes Poland's economic arrangements as "systemic hybridization" in which "neither plan nor market provided real guidance, 'imperfect' plans lost their traditional ability to mobilize production increases, while 'imperfect' markets permitted monopolistic pricing, which resulted in inflation" (Poznanski 1996: 256).

4 One should not forget, however, that also in West Germany civil servants working in departments receive an extra premium („Ministerialzulage") just for their workplace being in a department.

5 All regression analyses with communist party membership as predictor of transition wage or wage performed for East Germany show no significant party effect net of current occupation and industry. Results can be obtained upon request. Similar results were found for Poland by Domanski and Heyns (1995) and by Pohoski (1995).

highly developed and highly segregated vocational training and occupational labor markets, strong semi-public bodies in the professions and in health provision, a hierarchical educational system and a still high gender division of labor, a large public sector and 50% state-mediated GNP (Streeck 1995). There are also some hints at a post-industrial decline, especially high levels of structural unemployment and a dualism between insider high wage career workers and outsiders on social wages.

For Poland, the society of destination is less well defined. Therefore, in our view it would be misleading to highlight the importance of any *ideal* society of destination parallel to the East German transformation with West Germany as a *real* society of destination. The reason for this caution is given in the next paragraph about the rules of the transformation process itself.

The rules and conditions of the transformation process itself

Poland and East Germany differ markedly in the way their state socialist systems have been dismantled. In East Germany -- via national unification, incorporation into the FRG, and unconditional surrender of the former SED regime -- the institutional structure of state socialism was replaced rapidly and completely by the new ready-made structure imported from "outside." Thus, the old East German system perished almost instantly, making room for a West German institutional transfer that was accompanied by a considerable import of political and economic elites and professionals (e.g., v. v. Beyme 1996). In contrast, the Polish transition can be best characterized as a negotiated transition in which there were no organized attempts to keep the Communists out. In Poland, we have, therefore, a situation in which the socialist system, while fading away, controlled to a substantial extent the very conditions under which the new system came into being. The Round Table Talks were to a great extent the (Communist) Party's idea, and the political capitalism was the party's policy since the mid-1980s (Staniszkis 1995). At the most general level, market transition in Poland can be depicted as a gradual recombination and reshaping of locally existing resources and institutional practices by local state and non-state actors. This means much more institutional continuity in Poland than in East Germany, with the East German transition being faster and more radical than the Polish one in many respects.

This greater continuity of the Polish transformation at the level of the society is reflected in the slower pace of various changes in the economic structure, bearing directly on possible wage changes by defining feasible career paths. In East Germany, privatization (and liquidation) of the initial stock of 7,894 state owned enterprises was almost fully accomplished by the end 1994 when the Treuhand (a holding company to which ownership of GDR enterprises was transferred) ended its operations (Gross and Steinherr 1995: 247-52). This extraordinary structural change was accompanied by a loss of about one third of all former workplaces during the first four years of the transformation process (Buttler 1997:52). In Poland, privatization has been much slower - to a great extent due to a strong position of enterprise insiders (directors and union officers) which originated under conditions of half-way market reforms undertaken already under Polish state socialism (Gesell and Jost 1997). Out of 8,441 enterprises owned by the state in December 1990, "up to December 1995 the privatization process has covered 5,119 SOEs, of which 1,610 have been privatized" (Balcerowicz, Blaszczyk, Dabrowski 1997:146). Since 1993, privatization has been losing momentum steadily (Prywatyzacja 1998). In addition, there are also dramatic East German-Polish differences in sectoral changes over transition years (see Fig.1). In East Germany, the trend towards tertiarization of the economy, which is one of the declared goals of transformation, is much more visible than in Poland -- as are the trends towards a decline of industrial and agricultural employment. A noteworthy particularity of East Germany is the strong increase of employment in construction. This is due in large part to huge publicly financed programs to rebuild the housing and traffic infrastructure. Transition-induced sectoral developments which modernize the economic structure are, thus, by far more radical in East Germany than in Poland. In fact, the general impression made by sectoral change is rather one of moderate stability than of radical change in Poland.

[Fig.1 about here]

This information leads us to expect that socioeconomic change in East Germany should be more radical than in Poland with its gradual, locally "negotiated transition." Yet our general expectation must be properly put into context. Two points in particular should be mentioned here. First, the Unification Treaty provided that GDR educational credentials and vocational training were to be recognized as a rule on the new all German labor market, though some exceptions were made. This should have enabled more continuity in worklife careers of East Germans after 1989 than would have been expected otherwise. Second, the same constraining effect on job mobility should result from another provision of the Unification Treaty, namely that within the public sector the former employees would not be dismissed after 1989 unless they were politically charged.

In turning our attention to the record of the two countries' economic change during transition, we want to point to several factors crucially differentiating East Germany from Poland. One point is that since 1993 the rate of unemployment is consistently lower in Poland than in East Germany.[6] Second, Figure 2 depicts the relationship between the development of GNP and earnings in East Germany and Poland over the first years of transition. It is uncommon in comparative social sciences that one gets such a clear-cut picture of fundamental inter-country differences. In East Germany, earnings sky rocketed even at the time of the initial 1991 dip in the GNP and have been far ahead of subsequent increases in the GNP ever since. In sharp contrast to that East German pattern, earnings in Poland rose in 1989 when economic changes were still for the most part the effect of former (ineffective) communist economic policies. They plummeted in 1990 to a much greater extent than did the GNP at that time, and were declining until the end of 1993 when they started to rebound. The GNP began to increase in 1992, and increased at a substantially higher rate since then. Moreover, while in 1997 the GNP exceeded its 1988 level by more than 10%, 1997 earnings were still at roughly 90% of their 1988 level. This is the consequence of macroeconomic stabilization by budget deficit reduction and curbing inflation. These extraordinary differences in developmental trajectories between East Germany and Poland reflect the emphasis of Polish governmental policies on macro-economic stabilization and on internal investments rather than consumption. This effect was successfully implemented by institutional solutions such as wage indexing and tax penalties on wage increases in non-private firms. In East Germany, however, the currency union and huge financial transfers from West Germany (more than 100 billion DM each year) obliterated the need for painful stabilization measures and allowed for the consumption level to be unrelated to productivity and economic growth.

[Fig.2 about here]

[6] See *Aktywnosc ekonomiczna* (1998) and *Trends in Employment* (1996), and Figure 8.1 in Diewald 1999b. In May 1998 the unemployment rate in Poland was 9.8%. It was the lowest level of unemployment in seven years. It was also lower than the EU average at the end of 1997 (10.2%). Comparing Poland, Czech Republic and Hungary (between 1989 and 1992), Olivier Blanchard pointed to what may be a specific facet of Polish unemployment. He found that in Poland "...the larger the decline in sales, the more willing firms were to cut wages to limit the required decline in employment." (Blanchard 1997: 70). "The evidence from Poland points to a dominant role of workers and more willingness to maintain employment through wage cuts than elsewhere. In East Germany, similar tendencies can be observed, but it does not seem to be a general trend like in Poland. Rather, there appear to be only a few cases of firm-specific negotiations.

3. Market penetration and country profiles: Specific hypotheses

The presumed common logic of market penetration described in section 1 and the comparison of institutional profiles of East Germany and Poland from the previous section suggest a number of testable hypotheses about earnings structuration induced in these countries by the transition to a market economy. In our hypotheses, we concentrate on institutional effects on wages that operate at the macro level, including those that influence wage dynamics per se as well as those that distinguish the two countries in terms of factors operating at the individual, firm, and other levels. Focusing on such effects we join the research tradition of Kalleberg and Lincoln (1988) and DiPrete and McManus (1996) who in comparisons between the U.S. and Japan and between the U.S. and West Germany have shown convincingly how institutional effects at the country level can determine earnings.

3.1 Hypotheses about pre-transition earnings determination

(A1) In all socialist countries, there existed earnings differentials according to human capital investments and the skill level of jobs, though they were lower than in most capitalist societies (Diewald and Solga 1995:269-273, Eyal, Szelenyi, and Townsley 1997:69-72). Middle and higher level managers, forming the administrative fraction of the socialist service class in both countries, should have earned the highest wages.

(A2) In the GDR, the relatively more occupation-centered character of the labor market should have led to more pronounced earnings differentials according to levels of education and training. Because of the strong link between the systems of training and occupation, earnings differentials favoring professionals over skilled labor and skilled labor over unskilled labor should have been more accentuated than in Poland, too.

(A3) Bearing in mind the mainly industry-centered character of the Polish pre-transition labor market, we hypothesize that industrial sectors influence earnings to a greater extent in Poland than in the GDR.

(A4) As the GDR labor market has been firm-segmented to a considerable degree, we expect that firm tenure has been especially important there, too.

(A5) The earnings opportunities of self-employed and entrepreneurs vis-a-vis other occupational groups should have been better in Poland because of some pre-transition market reforms which did not occur in East Germany.

(A6) Gender-specific wage differentials should have been lower in East Germany due to a conscious policy to include women fully into the labor market (Sørensen and Trappe 1995) -- a policy much less pronounced in Poland with its still vital traditional catholic culture.

3.2 Earnings determination five years after transition's beginning

(B1) In comparison to pre-transition patterns of wage determination, the transition patterns found both in East Germany and Poland should be characterized by increasing effects of the skill level of jobs, of control position (middle and higher managers), and of education and training -- three marketable assets which should draw higher wages under the new capitalist system according to the theory presented in section 1. Especially in times of rapid social and economic change, visible and more or less standardized assets like educational and occupational certificates should become the most important signaling criteria (Spence 1974). The most profound positive changes in both countries are expected for managers and professionals. Nevertheless, we are more sure about positive changes for the skill level of jobs than for education and training, stemming mostly from the socialist past which might be devalued during the transition according to the arguments presented in section 1.

(B2) Because of the much faster pace of institutional change in East Germany, shifts should be more pronounced there than in Poland. This assumption is additionally strengthened by significant wage differentials according to the level of training and the skill level of jobs existing in East Germany before the Wall came down, and that there is a long-lasting pan-German tradition of occupational certificates structuring the labor market. The argument of a higher devaluation of "old" certificates in East Germany due the lower institutional continuity there should be counteracted by the formal acknowledgement of most certificates in the Unification Contract, too (see section 2).

(B3) In contrast to certified qualifications, we hypothesize that in both countries the importance of labor force and firm-specific experience carried over from state socialism should decrease because the contexts in which these experiences are valued have changed greatly (Schwarze 1993; Bird, Schwarze, and Wagner 1994; see section 1). Especially firm tenure until 1989 as a kind of specific human capital, as knowledge of firm-specific internal structures and market relationships have been devalued, since the firms' business connections and embeddedness have changed almost completely. Therefore, the devaluation of firm tenure should be stronger in East Germany where more firms have closed down and where the internal restructuring of firms has been greater.

(B4) Industrial sectors should generally decline in their power to determine wages, these decreases being especially marked in Poland where a strong industry-centered labor market existed under state-socialism. In both countries, however, the wage opportunities of the service and the administration sectors should increase as tertiarization of the occupational structure has been declared to be an important aim of the economic transformation. This effect should be stronger in Eastern Germany where the sectoral modernization of occupational structure has been more advanced than in Poland.

(B5) The relative earnings position of entrepreneurs and the self-employed should improve in both countries. The theory of market penetration presented in section 1 predicts clearly that these groups should be the winners of the transformation process. One can expect that they have increased their earnings more than other groups in the labor market insofar as former state control and systemic discrimination against owners no exists.

(B6) It has been disputed that moving from state socialism to capitalism necessarily means an increase in inequality. But most researchers agree now that inequality increases as market transition advances (Szelenyi and Kostello 1996). This argument remains open to empirical tests in different structural settings. Invoking once again arguments about less "local" and more radical transition in East Germany, we are inclined to predict that individual wage changes that occurred during the first five years of transition should have generated a greater increase in wage inequality there than in Poland.

3.3 Amount, direction, and determinants of individual earnings changes

(C1) As could already be seen in Figure 2, the urgent need for macro-economic stabilization in Poland should have put a strong constraining effect on at least upward earnings changes in Poland, whereas the financial transfers from West Germany should allow for a massive upgrading of earnings in East Germany. The overall development of earnings in East Germany should be much more positive than in Poland, irrespective of the structure and the degree of existing inequalities.

(C2) Because of a generally lower institutional continuity between the old and the new system in Eastern Germany, and because of stabilizing constraints on wage changes in Poland necessitated by requirements of macro-economic stabilization, we predict that the correlation between pre-transition and transition wages should be generally higher in Poland. The same can be expected because of a slower and less extensive pace of privatization and sectoral modernization. Therefore, less individual job and occupational mobility is expected in Poland, and both amounts and patterns of wage changes, which mostly occur as consequences of these processes, should be lower in Poland. By contrast, much more radical and extensive privatization, sectoral modernization and individual mobility in East Germany should have created more structural opportunities for wage changes to occur.

(C3) What positive or negative consequences do resources accumulated before transition have on individual's earnings changes during transition? For the various types of human capital accumulated under socialism, the hypotheses are necessarily the same as formulated in hypotheses B1 to B3. The second question, which is at the heart of our interest on individual wage changes, is whether situation rents resulting from previously held positions can be converted into additional earnings gains during transition, net of the other factors" (Bourdieu 1977, see also Rona-Tas 1994). In international market transition research, surely the most prominent aspect is the question of whether the chances of the old privileged classes erode. Because of the much higher influence of the former nomenclatura on the course of the transformation process in Poland compared to East Germany, we expect stronger gross positive effects of having been in the former administrative service class (higher and middle managers) on earnings mobility in Poland. With a considerable import of elites and also professionals from the Federal Republic, especially former managers must have lost a lot in East Germany, but former professionals, too.[7]

(C4) There are three different pathways to obtain an extra gain (or loss) in earnings stemming the formerly held position: (a) to stay, (b) to move into a new position, or (c) by making more out of one's business in comparison to other people when starting a business as self-employed or as an entrepreneur. In the first case, we concentrate on the former service class and hypothesize that the stayers in particular have experienced gains in earnings compared to movers into other positions. Country differences are supposed to consist mainly of a composition effect which means that the former service class in Poland had many more opportunities to stay in their positions than it was the case in East Germany. The opportunities

[7] The formerly privileged group may gain more income than average not only because of remaining positional advantages, by using their old connections and knowledge, but also because they have the highest amount of abilities and skills important to grasp the new chances. Without additional information, however, the question of what a successful conversion of old advantages might be due to is completely open: whether to situation rents like networks, specific knowledge linked with the position, or to favorable opportunities for action, or to skills developed during the career, or to hidden abilities as precondition for these careers. The statistical control for education is a poor measure to exclude interpretations related to abilities or skills, and therefore it is unclear by what additional income gains or losses linked with positions held at the starting point of the transformation process might be caused in theoretical terms.

of moves into "big business" self-employment should be less successful in both countries. At least the Hungarian experience has shown that such opportunities were very restricted due to the dominance of foreign capital and joint-stock companies (Szelenyi and Kostello 1996:1092). (C5) We have no idea of whether the „old" or the new entrepreneurs will do better during the transformation. Yet due to the market reforms in Poland before the transition, we hypothesize that the former self-employed there have accumulated more skills necessary for market success and are, therefore, more successful than in East Germany.

4. Data, Variables, and Methods

The data we analyze are from the nationally representative East German Socioeconomic Panel (GSOEP, East German sample of 1990, waves 1990 and 1995) and the Polish Social Structure and Social Mobility Panel (waves 1988 and 1993).[8] The first wave was gathered in Germany in May, 1990, that is shortly before the economic union was accomplished in July, 1990. In Poland, the first wave took place between November, 1987 and January, 1988. The second wave, as point of reference for the transformation process, was conducted in May, 1995 in Germany and in May and June, 1993, in Poland.[9] We assume that market reforms started in Poland earlier than in Germany, and that the time spans between 1990 and 1995 in East Germany and between 1988 and 1993 in Poland are approximately equivalent in capturing the respective starting points and the first five years of the economic institutional restructuring.[10]

Because we use panel studies, the cross-sectional comparisons of earnings determination in the first and the fifth year are not based on independent samples, but for the second point in time on a selection of the persons included already in the first wave. Only those persons who were members of the workforce already in the first wave, and were aged

[8] See Schupp and Wagner (1990) and Domanski and Slomczynski (1994) for detailed descriptions of these data sets.

[9] For the GSOEP, we also included information from the yearly waves between 1991 and 1994, as necessary.

[10] Locating the beginning of Polish transformation in historical time is not an easy task. It is undisputed, however, that some market-type fundamental systemic reforms took effect during the end phase of communist rule in 1988. The Antimonopoly Bill of January 1, 1988 and the Law on Economic Activity of December 23, 1988 passed by the Polish Sejm--at that time still firmly controlled by the communist party--depict important legal aspects of these reforms. These "first stage" reforms reflected a development of "political capitalism" and asset-stripping by members of the managerial staff ("nomenklatura privatization") rather than an introduction of effective regulation by autonomous markets. But they were "material" in their consequences and changed profoundly the adaptive strategies of enterprises and people. Thus, 1988 seems to us to be a good candidate for the first year of market transition in Poland, though it may not be the only candidate.

less than 65 in 1993 in Poland and in 1995 in East Germany were included in the working data sets for analyses reported here (N=2791 for East Germany and N=2268 for Poland).[11]

In all wage change and wage determination analyses we excluded in both countries the group of farmers[12] because no reliable income data were available for Polish farmers in 1988. Furthermore, we excluded all persons working less than 10 hours a week. Though we excluded farmers from our analyses due to unreliable income data, we kept entrepreneurs and the self-employed. This does not mean that we completely believe in the validity of self-reported income of this group. Like Rona-Tas (1994:53) we are ready to admit that incomes of entrepreneurs and self-employed in particular can be considerably underestimated.

The dependent variable in our analyses is the deflated[13] natural logarithm of the gross hourly earnings in the main job. By adjusting our earnings variable to hours actually worked, we provide the most reliable income indicator for market exchange relationships because it is closest to the idea of exchange of work for money. Some persons in the Polish 1993 sample had difficulties in distinguishing between gross and net earnings as the income tax was very new in Poland at the time of the 1993 survey. From all we know, however, it is highly improbable that this has introduced any systematic error into the Polish data. For some 4% of the Polish 1993 sample reporting multiple jobs in 1993, the main job wage was computed as a fraction of total work income -- the fraction being the ratio of hours worked on the main job to the total number of hours worked.[14] We use OLS regression to analyze the earnings determination and individual earnings changes. First, we separately calculate equations for pre-transition and transition wages. Then we equate for transition-induced individual wage changes.

There are possible objections to the use of simple OLS in this case due to some selectivity problems. The first one is selectivity of panel attrition: The survival rate for the

[11] In Poland an overrepresentation sample of 1988 entrepreneurs and university graduates, which was intentionally collected in 1993, was removed from the analysis. The resulting Ns are given in respective tables.

[12] This means that for Poland 15 percent of the active workforce is missing in our analyses. We know that the farmer's income situation was quite bad and grew even worse during transformation. About 70 percent of all farmers barely produce for the market and combine different sources of incomes from multiple jobs and social transfers (Zaborowski 1998). For East Germany, only 2 percent of the workforce of mostly cooperative farmers are excluded. This has to be kept in mind when interpreting the data.

[13] For the first two years of the East German transformation, deflation is almost impossible. We decided to use the index of purchasing power of the Deutsche Bundesbank to deflate earnings for this period.

[14] This procedure seems justified as neither the number of hours worked at the non-main 1993 job(s) nor the mere fact of having such job(s) exerts a significant (additive or interactive) effect on the 1993 total work income adjusted for the total number of hours worked. For general problems associated with comparing wages and incomes internationally see Hoffmeyer-Zlotnik and Warner (1998). For other analysis of earnings and earnings change in East Germany and Poland see: Domanski 1988; 1990; 1997b; Domanski and Hayns 1995;

Polish panel was 86% -- for the East German one it was 78%. In this paper we do not use standard procedures for correcting for possible selection effects (Heckman 1979) because earlier panel analysis of GSOEP data revealed no significant selection effects in comparing 1990 and 1994 waves (Steiner and Puhani 1997). We do not use any corrective procedure in Poland either, because our analysis showed that the 1993 wave was highly representative of the 1988 baseline in variables important to our analysis. A further objection concerns the group of the unemployed in the second wave. Whereas in the first year under observation there existed virtually no unemployment in both countries, the situation in the fifth year was characterized by mass unemployment of about 15 percent in East Germany and 11 percent in Poland in our samples. To obtain correct estimates of the returns to human capital for any individual, we would have to correct for selection. But our interest is less on human capital alone and more on the sub-group of employed persons and their location in the occupational structure, for which the OLS method is appropriate. To nevertheless include information about the selectivity of employment, we prefer to include some descriptive information of the risk of unemployment (see Table 1), because the error terms of the selection equation and the earnings equation do not fulfill the assumption of bivariate normal distribution. Therefore, the sample selection corrections would be misspecified, too (Rendtel and Pötter 1998).

Most explanatory variables used in the analysis are either self-evident or are explained in respective tables. The occupational status is measured mostly by the skill level of jobs and the differentiation between manual and non-manual work. It includes seven broadly defined categories: higher and middle managers, professional positions, skilled non-manual jobs, skilled manual jobs, unskilled non-manual jobs, unskilled manual jobs, and entrepreneurs including the self-employed. This last category is especially heterogenous but we do not have enough cases to subdivide it into more homogenous types of businesses. The category of middle and higher managers as well as the distinction between manual and non-manual work were additionally validated by looking at the single occupation codes. As far as education is concerned, we distinguish people without vocational training, with vocational training, with secondary general, and secondary technical education, and with a completed university degree. As we do not have any data in the East German panel about former or present party membership, we cannot include in our comparative analysis such an indicator. Some standard descriptions of the variables used in the following analyses are given in Table 1.

Hauser 1996; Pohoski 1995; Steiner and Kraus 1996; Steiner and Puhani 1997; Szydlik 1993 (ch.7).

[Table 1 about here]

5. Empirical Results

5.1 The pre-transition wage determination process.

In Table 2 we present OLS regressions of pre-transition wage determination. The dependent variable in this analysis is the natural logarithm of the gross hourly wage in the main job in East Germany in 1990 and in Poland in 1988. In accordance with hypothesis A1, there existed before transition in both the GDR and Poland high, significant returns to education and training investments, for managerial and professional, and skilled work, and -- in the usual non-linear relationship -- also for accumulated labor force experience. Taken together, the combined effects of education and occupational position confirm for both countries that the earnings distributions in socialist countries were relatively egalitarian compared to capitalist countries (Schwarze 1993, Diewald 1999b: ch.5, 7, and 8) but were not at all equal in absolute terms. Consistent with hypothesis A4, an additional return for firm tenure could only be found in East Germany.

Against our expectations formulated in hypothesis A2, human capital returns were not generally higher in East Germany. They were especially marked for secondary technical education there, and for a university degree in Poland. Both socialist countries differed sharply, however, in the effects of the skill level of jobs on earnings. In East Germany, but not in Poland, middle and higher level managers as well as professionals got significantly higher wages net of educational returns. The market reforms in pre-transition Poland mentioned in section 2 obviously did not secure higher wages for professionals and managers. Compared to skilled level jobs, in Poland unskilled non-manual jobs were even more disadvantaged than in the GDR. If one adds the coefficients for the level of qualification and the skill level of jobs in both countries, the lines of differentiation according to skill lines are not dramatic, but they are still more accentuated in East Germany than in Poland, and they are more mediated by the level of jobs than by human capital itself. Thus, hypothesis A2 is confirmed, too. And as suggested by hypothesis A5, pre-1988 market reforms and the resulting relative economic freedom in Poland secured there high incomes for entrepreneurs and self-employed. Whereas in East Germany this group did not earn more than skilled workers, in Poland it did significantly better.

[Table 2 about here]

Confirming our hypothesis A3 in regard to the more industry-centered character of the Polish pre-transition labor market, industries affected wages to a greater extent in Poland than in East Germany. This was mainly due to mining paying extremely well and services (especially consumer-oriented services) paying extremely badly in Poland. We take these two groups to be good examples of successful and unsuccessful special economic interests which were operating under conditions of inconsistent Polish market reforms of the 1970s and 1980s. In the GDR, industry categories were less differentiated with regard to wages. Controlling for other things, consumer services were paying even a tiny bit more than our reference category of "iron and machinery." In analyses using as independent variables industry dummies only (not reported in Table 2), variance explained in wages amounts to a mere 5% in East Germany and 9% in Poland--confirming, thus, the assertion that industries had greater impact on wages in pre-transition Poland. Work in the domain of the public sector did affect wages neither in Poland nor in East Germany.

It is true that, consistent with hypothesis A6, the amount of gender inequality in earnings was somewhat more pronounced in Poland than in the GDR. It seems, however, that in pre-transition Poland -- in which, partly because of the dominance of rather conservative catholic attitudes toward gender roles, gender inequality was a less pronounced goal than in the GDR -- the level of gender inequality was surprisingly similar to that found in East Germany.

5.2 Earnings determination after the first five years of transition

Table 3 depicts the results of analyses corresponding to those described above -- but this time relating to the year 1995 in East Germany and 1993 in Poland. In accordance with our predictions (hypothesis B3), in both countries the importance of general and firm-specific human capital in the form of labor force experience and firm-tenure carried over from state socialism has decreased. As predicted by hypothesis B1, the distances between the higher occupational positions -- particularly the middle and higher level managers -- on one hand, and the workers on the other became significantly greater in both countries. In addition to the widening professional-worker divide, in Poland (but not in East Germany) the distance between skilled and unskilled work likewise increases, mostly for unskilled non-manual work which is very badly paid even compared to unskilled manual work. Most salient for East Germany is perhaps the general reevaluation of non-manual compared to manual work. People in skilled non-manual work now gain substantially more than skilled workers which has not been the case during the times of the GDR. And contrary to Poland, where unskilled non-manual labor may now form the potential for the emergence of a service proletariat, in East Germany this group does not earn significantly less than skilled workers.

The net effects of education and training as marketable assets are accentuated in Poland as well. For East Germany, however, we observe a structural devaluation of educational degrees in terms of returns in earnings. In other words, the radical loss of about one third of all workplaces within the first four years of the transformation process in East Germany prompted obviously there, following hypothesis B2, a huge amount of undesired job mobility which led to a considerable loss of former investments in human capital not only in the form of high unemployment but also by downward moves into jobs for which the job movers are often overqualified (Mayer/Diewald/Solga 1999). Between the first and the fifth year in our period observation, the amount of downward mobility in occupational careers was about 24 percent in East Germany, but only 16 percent in Poland and 9 percent in West Germany (see Table 8.3 in Diewald 1999b). Upward mobility, however, was in all three countries between 13 and 14 percent. The unusual amount of downward mobility in East Germany compared to the other countries referred especially to the former managers and professionals (see Table 8.5 in Diewald 1999b).

[Table 3 about here]

Very much against all expectations (see hypothesis B5) are the changes in the relative earnings position of entrepreneurs and the self-employed. The distance between this group and the skilled workers decreased dramatically in Poland. In East Germany, their reported earnings were substantially lower than those of skilled workers.[15] Even when we admit that their reported earnings underestimate their real earnings, the amount and direction of changes remain remarkable. Two factors may explain this „mystery“ and especially the bad situation of this group in East Germany: the difficult economic situation during the transformation process and the internal composition of this category. The first argument refers to the increased

[15] Even if one prefers for the purpose of such comparisons to look at monthly earnings which are not adjusted for hours worked, the substance of our interpretations remains the same, though the size of the underlying

importance of foreign capital and foreign firms in controlling the market (in the case of East Germany above all West German firms). So the local players were driven out by superior, well-organized competitors from abroad from the very beginning of the transformation period. Therefore, the internal structure of the group of the entrepreneurs in both countries consists mostly of small businesses battling for survival on the basis of a low capital stock. Moreover, many of those who started their businesses during transition, with its sharp decline of workplaces, did this quite often in order not to become unemployed, and their prospects for high incomes were rather poor. This is especially true for East Germany. Thus, especially there a considerable part of the new self-employed can be seen as "hidden unemployment." In fact, in the East German sample there are hardly entrepreneurs having a solid capital stock and/or more than 1 employee, and this is consistent with the data of the Central Statistical Office as well as from other samples (Hinz 1998:64-87). The group of entrepreneurs in Poland consists mostly of small-scale owners of one-person or family businesses. 58 percent of them in our 1993 data did not employ any other person from outside the family. According to data collected by the Polish Central Statistical Office in 1996, about three quarters of the entrepreneurs belong to a cluster characterized by zero or 1 employees, low income, weak ties to financial institutions, low technology, and short-time scope of planning.[16]

What about the role of industrial divisions during transition? As expected, they lost part of their significance in Poland (see hypothesis B4). In 1993 they were explaining no more than 6% of variance in wages (not shown in Table 3, can be compared to 9% in 1988). The only division between industries that remains significant is one between mining and our reference category (iron and machinery). The relative position of mining has even considerably improved during the transition in Poland. This development is a very good example of an institutional effect in the wage determination process. Mining in Poland is being restructured under the extensive protective umbrella of the state. Obviously, after years of a privileged position as the strongest special economic interest operating within "socialist market economy" of yesterday's Poland, mining continues today to be in an advantageous position -- this time due to direct state support. In contrast to Poland, industrial divisions gained in significance in East Germany. In 1995 they were explaining some 12% of variance in wages (not shown in Table 3, can be compared to 5% in 1990). Consumer services seem to form a new basis for a service proletariat, comparable to the situation of unskilled non-manual labor in Poland. On

effects decreases.

[16] Other explanations concerning the differentiation between old and new entrepreneurs are discussed in

the other hand, construction, which is strategic to the German state's restructuration policies, has clearly improved its position.

As has been already noted by others in case of Poland (Domanski and Heyns 1995, Pohoski 1995), the amount of gender inequality in wages declines during transition. We find, against all predictions, a similar effect in East Germany, too. Obviously, some selectivity is at work here, though it can not provide a complete explanation.[17] Especially in East Germany unemployment of women is much higher than for men. It seems that during transition, women who are able to keep or to get a job, are better off vis-a-vis men than used to be typical of women before the transition process. This applies mostly to the fact that women, especially those in unskilled positions, went into unemployment -- in East Germany more than in Poland (Diewald 1999b:ch.8.2) -- and that many women in professional and semiprofessional social services located in the public sector were able to keep their job during transition (Mayer/Diewald/Solga 1999).

In hypothesis B6 we predicted that the less "local" and more radical transition in East Germany would generate more wage inequality than in Poland. Table 4, presenting Gini coefficients computed from the population of all our respondents who provided wage information at both time points studied in this paper, shows that earnings inequality has visibly increased in both countries. For our general population (farmers excluded) the coefficient increased during the first five years of transition from .209 to .236 in East Germany and from .235 to no less than .321 in Poland. The increase in Poland was, thus, definitely much sharper than in East Germany, suggesting perhaps that the "institutional transfer" from West Germany introduced a more "mature" or more "civilized" system than the shock therapy in Poland in the sense of not generating excessive amounts of inequality. These results are consistent with Szelenyi and Kostello's (1996) argument that the introduction of a market increases social inequality but adds an important factor to it. The type of capitalism which is introduced matters, too.

[Table 4 about here]

---

section 5.3.

17 Steiner and Puhaski (1997:203) found a similar result when analyzing monthly earnings with the same data set for East Germany between 1990 and 1994: „These gender-specific differences cannot be explained by potential selection effects or by changes in the industrial structure, and we could not find an intuitive explanation for these differences within this study".

5.3 Amount, direction, and determinants of individual earnings changes

In accordance with hypothesis C1, the diverging macroeconomic pathways in East Germany and Poland have produced completely different changes in earnings of the population. As Figure 3 shows, in 1995 in East Germany almost 80% of the population earned for one hour of work (in real terms) at least 25% more than in 1990, while declines and even low increases of earnings were very infrequent. Irrespective of changes in the distribution of earnings, East Germans, like those entering together an escalator, experienced an almost collective and considerable upward move in earnings. In sharp contrast, losses in real earnings between 1988 and 1993 were very frequent in Poland, and gains of 25% or more were found in no more than one third of the population. Thus, in Poland a separation of winners and losers is visible already at first glance.

[Fig.3 about here]

Because of lower institutional continuity in East Germany on one hand, and because of the monetary policies of macro-economic stabilization, the less extensive privatization, sectoral modernization and individual mobility in Poland on the other, we had predicted that the correlation between pre-transition and transition wages should be higher in Poland (see hypothesis C2). As Table 5 shows, rank order correlations over a five-year span are indeed generally higher in Poland. When private farmers are excluded (as in all our panel analyses) the correlation for men is .36 in Poland and only .27 in East Germany. For women the correlations are very close to each other -- .49 in Germany and .51 in Poland. Inter-country differences become more visible if another highly heterogeneous part of the population is excluded, i.e., those who were entrepreneurs or self-employed outside agriculture either before transition, five years into transition, or both. If these persons are excluded -- a reasonable procedure for studying changes in remuneration rules of employees' population which constitute the bulk of the labor force -- the correlations for men are .47 in Poland and .34 in East Germany. For women they are .57 and .49 respectively. It seems, thus, that the institutionally less radical character of Polish reforms has had real constraining effects on individual wage changes.

[Table 5 about here]

We move to the question of whether individuals and groups have succeeded in preventing losses of former investments and situation rents, and how they were able to grasp the new chances offered by the structural change during transition. In Table 6 our dependent variable is the natural logarithm of the ratio of transition to pre-transition wage, and one of the independent variables is the amount of pre-transition earnings which models a constraining effect of the initial earnings on the rate of wage change. In contrast to the former cross-sectional analyses, we do not include here the full range of occupational status groups but concentrate on those groups which are most relevant in the transformation discourse about capital conversion. We look specifically at (1) middle and higher managers, (2) professionals, and (3) former entrepreneurs and the self-employed. Do they have situation rents, besides their formal qualifications, which can be successfully used to gain higher earnings than average during the transformation process? Model 1 in Table 6 seems to confirm that former service class members in both countries could profit from their old status during the transformation process. Middle and higher managers as well as professionals gained significantly more than other groups at the labor market, especially professionals in Poland. Former entrepreneurs and self-employed in both countries face an earnings development considerably worse than our reference group (all employees except managers, professionals, and entrepreneurs). Our hypothesis (C5) that former entrepreneurs in Poland, due to the (incomplete) market reforms initialized there already before the transition, should have been better able to learn „capitalist behavior" is not confirmed, though the negative effect is lower than in East Germany.

The results presented in models 2 and 3 in Table 6 show that in both countries, net of occupational positions reached in the first and fifth year of the transformation process, gains in earnings were decisively highest for people holding secondary and tertiary educational certificates. Thus, the accentuation of education and training as important factors for structuring earnings inequality is proved not only at the aggregate level but also at the individual level of earnings mobility (see hypothesis C3). Contrary to labor force experience and firm tenure, they prove to be assets which, even if accumulated before the transition started, help to realize higher than average earnings gains. But though the German labor market is still segmented according to occupational lines and still relies on occupational certificates in comparison to many other countries (e.g., Shavit/Müller 1997), the returns for education are lower in East Germany than in Poland. This might be caused on one hand by the selective devaluations of GDR certificates when transforming the East German system of occupational formation into the West German system, and on the other hand by the already documented, unusual pressure for downward mobility in the context of the fast-shrinking East German labor market after 1989.

When controlling for education, training, and labor force experience the former professionals and managers in East Germany could not realize significant gains as situation rents from their former positions (see model 2). An explanation which suggests itself is the specific character of the East German transformation as exogenously driven German unification, and the accompanying elite and expert import from West Germany. It is, however, more surprising that also in Poland former service class positions do not seem to provide any extra benefits with respect to earnings development during the transformation. The Polish results thus contradict the explanation just given for the East German results. Taken together, they confirm the general theory formulated by Eyal, Szelenyi, and Townsley (1997). The post-socialist order means above all that "cultural capital" (and especially education) becomes the most single important factor of differentiation. This interpretation is also confirmed when controlling for the position in the fifth year of the transformation process and including the interactions between first year's and fifth year's position (see models 3 and 4). Again it is not only human capital per se which leads to high earnings gains but also the access to high-level positions. But when these high-level positions are reached, it does not matter whether these persons either occupied such positions already at the start of the transformation process or entered them during the transformation.

We also see that the low earnings perspectives of entrepreneurship in East Germany at the beginning of the transformation process are not confined to those who remain in private business also in the fifth year, and that, vice versa, the low incomes of the entrepreneurs in the fifth year of the transformation process are only to a minor degree due to (skill deficits of) entrepreneurs who possessed private businesses under socialism. Another subgroup of the former East German entrepreneurs, however, succeeded in moving into the category of managers and realized thereby especially high earnings gains. This points to a polarization within the group of entrepreneurs which does not seem to exist in Poland in the same manner.

In Poland, the inclusion of the situation in 1993 does not change much the negative effects of entrepreneurship at the beginning of the transformation process. This is due to the fact that the groups of entrepreneurs in 1988 and 1993 overlap by more than 80 percent, so that there is barely room for additional effects. In tendency, however, the „old" entrepreneurs not do better but rather do worse than the new ones, whereby this effect is smaller than in East Germany. In this restricted sense, hypothesis C5 is confirmed.

[Table 6 about here]

The last important inter-country difference relates to the effect of gender in shaping individual earnings changes. While in East Germany, gender does not have any discriminatory effect on earnings change, such an effect is clearly visible in Poland. Whereas in East Germany gender discrimination is mostly mediated by the selective exclusion of women from gainful employment, in Poland women are less excluded from labor force participation but lose ground in the pace of earnings development.

6. Summary and Conclusions

When talking about the changing structuring of earnings in East Germany and Poland during transition, we talk about clearly different real processes. Though the correlation between pre-transition and transition earnings did not show dramatic differences between the two countries, the underlying earnings development differs quite dramatically. For Poland we have documented a lot of upward and downward changes in (deflated) earnings, which means that in Poland there were massive losses on the background of already quite low incomes at the beginning of the transformation. In contrast, the situation in East Germany can be labeled as an almost undivided and substantial upgrading of all earnings. The question for Poland is whether and for how long the tough monetary policy of macroeconomic stabilization -- with earnings increases lagging behind the growth in the GNP and leading to heavy burdens for big parts of the population -- can still be pursued further without political turbulence. The question for East Germany, however, is how long wages can be provided which are not covered by productivity gains. Thus, already at this level our initial question of whether there is a (more or less) uniform pattern of the restructuring of social inequalities during transition can be clearly answered "no."

This perhaps most striking difference between the two transition countries does, however, not yet point directly to our principal question relating to market penetration and institutional differences in the reshaping of earnings inequalities. And in spite of the almost paradigmatic differences of institutions and pathways between the two countries, we find here some apparent similarities. First of all they relate to a clear accentuation of education and training as determinants of individual earnings, which confirms that human capital is becoming the most important line of differentiation in the post-socialist period, though it has been very important under socialism. The accentuation is mostly mediated by acquiring jobs appropriate to the level of education and training. Thus, the earnings distance between managers as well as professionals on one side, and skilled work on the other, widens in both countries. The obviously more context-specific labor force experience is, however, systematically devalued in both countries. Taken together these results support the interpretation that it is not accumulated human capital in general which is re-valued but rather abilities and competencies signaled by certificates. Second, the earnings distance between jobs with especially high skill levels (managers and professionals) and skilled work widens in both countries. This calls into question any interpretation that these groups had been especially privileged under state socialism – at least compared to market societies, and despite the fact that their former privileges are not fully captured by their relative earnings position.[18]

Third, contrary to the market transition theory put forth by Nee (1989), we found very severe relative losses of earnings opportunities for entrepreneurs and the self-employed in both countries. Maybe the most important factor for the expected but missing success story of this group is the very difficult macroeconomic situation during this historical period and the overwhelming power of foreign capital in self-preserving all the opportunities. Fourth, in contrast to the socialist period, non-manual work is favored over manual work in the segments of skilled and unskilled work. And fifth, we observed a considerable increase of earnings inequality in both countries, as expected by Szelényi and Kostello (1996).

However, some important differences between the two countries exist. They confirm our initial aim not to abstract "market transition" from national (and international) institutional contexts and structural settings but rather to see them as important conditions of markets coming into being. Some of these differences refer to the different intensity of the trends just described. Although one should be careful in interpreting these differences when the reliability and comparability of indicators used in the analyses is not perfect, some of them seem quite reasonable to us. The case of the East German entrepreneurs who had to face a strong competition from West German trade and industrial "conquerors" is a good example. Another important difference is that the transition-induced increase in earnings inequality and mobility was significantly greater in Poland than in East Germany. Institutional inter-country differences

[18] The overproportional percentage of the professionals and middle managers among the migrants from the GDR to the FRG before 1961 (the construction of the Wall) and during the late 1980s (Grundmann 1998:161)

seem to contribute to this development profoundly. We have argued that a plausible explanation for this should invoke the fact that because of the "institutional transfer" from West German welfare capitalism, East German market arrangements are more "mature" or more "civilized" than Polish ones in the sense of not generating excessive amounts of inequality.

Above that, path dependencies are especially visible in the impact of gender and of industries where former inequalities partly tended to persist or even become accentuated, as in the case of mining in Poland. The patterns were quite different before the transition, and they are now even more different. And our initial guiding theory for assessing "market penetration," human capital theory, has been shown to operate quite differently in both countries. Whereas in East Germany -- with its higher rate of unemployment returns for education and training – workers are very dependent on possessing high skill-level jobs, in Poland it is more education and training themselves which lead to higher earnings.

We are fully aware that our research does not cover all aspects of the restructuring of earnings inequality in a comparative perspective on post-socialist transition. We compare only two countries, and had to exclude farmers -- an important part of the Polish working population. Furthermore, the important problem of unemployment is only touched on here. Nevertheless the arguments and analyses presented seem to prove that reliable conclusions about patterns of post-socialist transition can only be drawn in a comparative perspective in which one does not abstract "market penetration" from national institutional contexts and settings.

points in the same direction.

BIBLIOGRAPHY

Aktywnosc ekonomiczna ludnosci Polski w listopadzie 1997. 1998. Warszawa: GUS.

Atkinson, Anthony B., and John Micklewright. 1992. Economic Transformation in Eastern Europe and the Distribution of Income. Cambridge: Cambridge University Press.

Balcerowicz, Leszek, Barbara B• aszczyk, and Marek Dabrowski. 1997. "The Polish Way to the Market Economy 1989 - 1994." Pp. 131 - 160 in *Economies in Transition,* edited by W.T. Woo, S.Parker, and J.D. Sachs. Cambridge, MA.: The MIT Press.

Beyme, Klaus von. 1994. *Systemwechsel in Osteuropa.* Frankfurt/Main: Suhrkamp.

Beyme, Klaus von. 1996. "Der kurze Sonderweg Ostdeutschlands zur Vermeidung eines erneuten Sonderwegs: Die Transformation Ostdeutschlands im Vergleich der postkomunistischen Systeme." *Berlin. J. Soziologie.* 3: 303-13.

Bird, Edward J., Johannes Schwarze, and Gert Wagner. 1994. "Wage Effects of the Move Toward Free Markets in East Germany." Industrial and Labor Relations Review 47: 390-400.

Blanchard, Olivier. 1997. *The Economics of Post-Communist Transition.* Oxford: Clarendon Press.

Bourdieu, Pierre. 1977. *Outline of a Theory of Practice.* Cambridge: Cambridge University Press.

Buttler, Friedrich. 1997. "Globales Arbeitsmarktungleichgewicht und Arbeitsmarktpolitik im Einigungsprozess." Pp. 51-71 in *Der ostdeutsche Arbeitsmarkt in Gesamtdeutschland: Angleichung oder Auseinanderdriften?,* edited by D. Beer, Christian. Brinkmann, A. Deeke, and S. Schenk. Opladen: Leske + Budrich.

Diewald, Martin.. 1999a. "Continuities and Breaks in Occupational Careers and Subjective Control: The Case of the East German Transformation." in *The Effect of Adverse and Challenging Circumstances on Life Course Trajectories in the New Germany and England,* edited by R. Silbereisen, and J. Bynner. London:McMillan (in press).

Diewald, Martin. 1999b. Entwertungen, Umwertungen, Aufwertungen. Ostdeutsche Erwerbsverläufe zwischen Kontinuität und Wandel. Habilitationsschrift am Fachbereich Sozialwissenschaften. Berlin: FU Berlin.

Diewald, Martin, and Heike Solga. 1995. Soziale Ungleichheit in der DDR: die feinen, aber deutlichen Unterschiede am Vorabend der Wende. Pp. 261-305 in: Johannes Huinink, Karl Ulrich Mayer et al., *Kollektiv und Eigensinn. Lebensläufe in der DDR und danach.* Berlin: Akademie Verlag.

Diewald, Martin, and Heike Solga. 1996. "Ordnung im Umbruch? Strukturwandel, berufliche Mobilitaet und Stabilitaet im Transformationsprozess." Pp. 765-780 in *Gesellschaften im Umbruch. Verhandlungen des 27. Kongresses der Deutschen Gesellschaft für Soziologie in Halle 1995,* edited by L. Clausen. Frankfurt/Main: Campus.

Diewald, Martin, and Heike Solga. 1997. "Nach dem Sturm folgte zwar Ruhe, jedoch nicht der Sonnenschein! Mobilitaetsprozesse und Allokationskriterien in Ostdeutschland nach 1989." Pp. 153-277 in *Ostdeutsche Erwerbsverlaeufe zwischen Kontinuitaet und Wandel,* edited by S. Schenk. Opladen: Leske + Budrich.

DiPrete, Thomas A., and Patricia A. McManus. 1996. "Institutions, Technical Change, and Diverging Life Chances: Earnings Mobility in the United States and Germany." *American Journal of Sociology* 102: 34-79.

Domanski, Henryk. 1997. "Distribution of Incomes in Eastern Europe." *International Journal of Comparative Sociology* 38(3-4): 249-270.

Domanski, Henryk. 1990. "Dynamics of Labor Market Segmentation in Poland, 1982-1987." *Social Forces* 69: 423-38.

Domanski, Henryk. 1988. "Labor Market Segmentation and Income Determination in Poland." *The Sociological Quarterly* 29(1): 47-62.

Domanski, Henryk, and Barbara Heyns. 1995. "Toward a Theory of the Role of the State in Market Transition: From Bargaining to Markets in Post-Communism." *Archives Europeennes de Sociologie* 56: 317-351.

Elster, Jon, Klaus Offe, and Ulrich Preuss. 1998. *Institutional Design in Post-Communist Society.* Cambridge: Cambridge University Press.

Eyal, Gil, Iván Szelényi, and Eleanor Townsley. 1997: The Theory of Post-Communist Managerialism. *New Left Review* 222, 60-92.

Farkas, George, Paula England, and Margaret Barton. 1988: "Structural Effects on Wages. Sociological and Economic Views." Pp. 93-112 in *Industries, Firms, and Jobs,* edited by G. Farkas, and P. England. New York and London: Plenum Press.

Gabor, Ivan 1979: The Second (Secondary) Economy. *Acta Oeconomica* 22: 291-309.

Gabor, Ivan and Peter Galasi 1981: The "Second Economy. Budapest.

Gesell, Rainer, and Torsten Jost. 1997. "The Polish State Enterprise System - An Impediment to Transformation?" *Discussion Paper 12/97.* Frankfurt/Oder: Frankfurter Institut fuer Transformationsstudien.

Gross, Daniel, and Alfred Steinherr. 1995. *Winds of Change: Economic Transition in Central and Eastern Europe.* London: Longman.

Grundmann, Siegfried. 1998. Bevölkerungsentwicklung in Ostdeutschland. Demographische Strukturen und räumliche Wandlungsprozesse seit 1945. Opladen: Leske+Budrich

Hauser, Richard. 1996. "Die Entwicklung der Einkommensverteilung in den neuen Bundeslaendern seit der Wende." Pp.165-188 in *Zwischenbilanz der Wiedervereinigung,* edited by M. Diewald, and K.U. Mayer. Opladen: Leske + Budrich.

Heckman, James. 1979. Sample Selection Bias as a Specification Error. *Econometrica* 47, 153-161.

Hinz, Thomas 1998: Betriebsgründungen in Ostdeutschland. Berlin: edition sigma.

Hoffmeyer-Zlotnik, Jürgen H.P., and Uwe Warner. 1998. "Die Messung von Einkommen im nationalen und internationalen Vergleich." *ZUMA-Nachrichten* 42: 30-65.

Huinink, Johannes, Karl-Ulrich Mayer et al. 1995. *Kollektiv und Eigensinn: Lebensverlauufe in der DDR und danach.* Opladen: Leske + Budrich.

Kalleberg, Arne L., and James R. Lincoln. 1988. "The Structure of Earnings Inequality in the United States and Japan." *American Journal of Sociology* 94: S121-S153.

Kovacs, Janos Matyas, Ed. 1994. *The Communist Legacy in Eastern Europe.* New Brunswick: Transaction Publishers.

Lane, David. 1996. *The Rise and Fall of State Socialism: Industrial Society and the Socialist State.* Cambridge: Polity Press.

Linz, Juan J, and Alfred Stepan. 1996. *Problems of Democratic Transition and Consolidation.* Baltimore: The Johns Hopkins University Press.

Lötsch, Manfred 1981. Sozialstruktur und Wirtschaftswachstum. Überlegungen zum Problem sozialer Triebkräfte des wissenschaftlich-technischen Fortschritts. *Wirtschaftswissenschaft* 29, 56-69.

Mach, Bogdan W., and Heike Solga. 1997. "Political Loyalty and Career Mobility in the German Democratic Republic and Poland." *Arbeitsbericht 7/1997.* Berlin: Max-Planck-Institut für Bildungsforschung.

Mateju, Petr. 1993: "Determinants of Economic Success in the First Stage of the Post-Communist Transformation. The Czech Republic 1989-1992." Working Papers of the Research Team on Social Stratification. Prague: Instiute of Sociology, Academy of Sciences of the Czech Republic.

Mayer, Karl Ulrich, Martin Diewald, and Heike Solga. 1999. "Social Change and Transformation. Findings and Lessons from The East German Case." *Acta Sociologica* (in press).

McMichael, P. 1990. "Incorporating Comparison within a World-Historical Perspective: An Alternative Comparative Method." *American Sociological Review* 55: 385-97.

Mincer, Jacob 1974: *Schooling, Experience, and Earnings.* New York: Columbia University Press.

Nee, Victor. 1989. "A Theory of Market Transition: From Redistribution to Markets in State Socialism." *American Sociological Review* 54: 663-81.

Nee, Victor. 1996. "The Emergence of a Market Society: Changing Mechanisms of Stratification in China". *American Journal of Sociology* 101: 908-49.

Nee, Victor, and Rebecca Matthews. 1996. "Market Transition and Societal Transformation in Reforming State Socialism." *Annual Review of Sociology* 22: 401-35.

Offe, Klaus. 1996. *Varieties of Transition. The East European and East German Experience.* Cambridge: Polity Press.

Parrott, Bruce. 1997. "Perspectives on Postcommunist Modernization." Pp.1-39 in *The Consolidation of Democracy in East-Central Europe*, edited by K. Dawisha, and B. Parrott. Cambridge: Cambridge University Press.

Phelps Brown, H. 1977. *The Inequality of Pay.* Oxford.

Pohoski, Michal. 1995. "Nierownosci spoleczne w Polsce - kontynuacje i zmiany w okresie transformacji ustrojowej," Pp. 345-367 in *Ludzie i instytucje: Stawanie si• ladu spolecznego*, edited by A. Sulek, and J. Styk. Lublin: Wydawnictwo Uniwersytetu Marii Curie-Sk• odowskiej.

Pozna• ski, Kazimierz Z. 1996. *Poland's Protracted Transition: Institutional Change and Economic Growth 1970-1994.* Cambridge: Cambridge University Press.

Prywatyzacja przedsi• biorstw pa• stwowych wed• ug stanu na 31.12.1997r. 1998. Warszawa: GUS.

Rendtel, Ulrich, and Ulrich Pötter. 1998. *The behavior of OLS, the Heckman 2-Step procedure and ML Estimates when the sample selection model is mis-specified.* University of Frankfurt/Main. Mimeo.

Rona-Tas, Akos. 1994: "The First Shall Be Last? Entrepreneurship and Communist Cadres in the Transition from Socialism." *American Journal of Sociology* 100, 40-69.

Rose, Richard. 1991: "Between State and Market. Key Indicators of Transition in Eastern Europe. Studies in Public Policy." Working Paper No. 196. Glasgow: Centre for the Study of Public Policy.

Schnabel, Kai, Jürgen Baumert, and Peter M. Roeder. 1996. „Zum Wandel des Schulsystems in den neuen Bundesländern". *Neue Sammlung* 36, 4: 531-544.

Schupp, Jürgen, and Gert Wagner. 1990. Die DDR-Stichprobe des Sozio-ökonomischen Panels – Konzept und Durchführung der 'Basiserhebung 1990' in der DDR. *Vierteljahreshefte zur Wirtschaftsforschung*: 152-159.

Schwarze, Johannes 1993. Qualifikation, Überqualifikation und Phasen des Transformationsprozesses. In: *Jahrbuch für Nationalölonomie und Statistik*, Bd. 211/1-2, Stuttgart: G. Fischer Verlag, 90-107.

Shavit, Yossi, and Walter Müller (eds.). 1997. *From School to Work. A Comparative Study of Educaional Qualifications and Occupaational Destinations*. Oxford: Oxford Universiy Press.

Sørensen, Annemette, and Heike Trappe. 1995. "The Persistence of Gender Inequality in Earnings in the German Democratic Republic." *American Sociological Review* 60: 398-406.

Spence, Michael. 1974. *Market Signaling*. Cambridge, MA: Harvard University Press.

Staniszkis, Jadwiga. 1995. "In Search of Paradigm of Transformation." Pp.19-55 in *After Communism: A Multidisciplinary Approach to Radical Social Change*, edited by E. Wnuk-Lipinski. Warszawa: ISP PAN.

Steiner, Viktor, and Patrick A. Puhani. 1997. "Economic Restructuring, the Value of Human Capital, and the Distribution of Hourly Wages in Eastern Germany, 1990 to 1994." *Vierteljahreshefte zur Wirtschaftsforschung* 66(1): 197-204.

Steiner, Viktor, and Florian Kraus. 1996. "Aufsteiger und Absteiger in der ostdeutschen Einkommensverteilung: 1989-1993." Pp. 189-212 in *Zwischenbilanz der Wiedervereinigung*, edited by M. Diewald, and K.U. Mayer. Opladen: Leske + Budrich.

Streeck, Wolfgang. 1995. *German Capitalism: Does it Exist? Can it Survive?* Köln: Max-Planck-Institut für Gesellschaftsforschung.

Symposium on Market Transition. 1996. *American Journal of Sociology* 101: 908-1096.

Szelényi, Iván, and Eric Kostello, 1996. "The Market Transition Debate: Toward a Synthesis?" *American Journal of Sociology* 101:1082-96.

Szydlik, Marc. 1993. *Arbeitseinkommen und Arbeitsstrukturen*. Berlin: Max-Planck-Institut für Bildungsforschung.

Tilly, Chris, and Charles Tilly. 1998. *Work Under Capitalism*. Boulder/Oxford: Westview Press.

Trends in Employment and Unemployment in Germany and Other Early Industrialized Countries. 1996. Part I in *Employment and Unemployment in Germany: Trends, Causes and Measures*. Bonn.

Vecernik, J. 1991. *Earnings Distribution in Czechoslovakia: Intertemporal changes and International Comparison*. Mimeo.

Walder, Andrew G. 1996. "Markets and Inequality in Transitional Economies: Toward Testable Theories." *American Journal of Sociology* 101: 1060-73.

Wiener, Bettina. 1997. "Ausdifferenzierung im Erwerbssystem und Neustrukturierung von Erwerbsmustern - Ein Überblick." Pp.11-58 in *Ostdeutsche Erwerbsverlaeufe zwischen Kontinuitaet und Wandel*, edited by S. Schenk. Opladen: Leske + Budrich.

Zaborowski, Wojciech 1998: "Stara i nowa struktura spoleczna. Pp. 49-95 in: Aktorzy i klienci transformacji. Ifis PAN, Warzwawa.

APPENDIX: TABLES AND FIGURES

Table 1: Description of Variables and Bivariate Distributions of Earnings

	East Germany				Poland			
	1990		1995		1988		1993	
	n	Earnings: Mean/SD	n	Earnings: Mean/SD	n	Earnings: Mean/SD	n	Earnings: Mean/SD
Education and training:	2009		1614		1261		887	
(non) Primary	102	5.5/1.7	36	14.4/5.9	314	13.8/6.9	142	13.7/6.9
Vocational	1126	6.7/2.3	873	17.0/7.1	354	15.8/7.0	261	15.7/10.2
Secondary technical	431	8.6/3.1	383	20.1/7.3	320	16.2/7.7	250	18.9/12.3
Secondary general	117	8.0/2.1	110	21.5/8.6	116	15.9/7.1	90	18.3/9.3
University	233	9.9/2.9	212	27.1/11.6	157	22.8/9.0	144	31.2/19.5
Skill level of jobs:								
Middle and higher managers	81	9.4/2.8	66	32.5/11.7	40	22.7/7.6	33	36.1/20.2
Professionals	147	9.9/3.1	112	26.9/9.3	82	21.1/8.9	83	29.5/20.0
Skilled non-manual	727	7.6/1.7	533	21.2/6.3	426	15.8/6.5	286	19.6/9.9
Unskilled non-manual	183	5.6/1.4	158	15.8/6.7	141	11.3/4.9	92	11.1/4.8
Skilled manual	617	7.3/2.0	423	17.5/6.4	424	16.5/6.6	243	16.6/7.4
Skilled non-manual	203	5.7/1.6	220	14.6/4.9	102	13.4/5.3	63	12.0/5.0
Entrepreneurs/Self-employed	50	9.7/9.7	102	18.7/17.6	46	25.6/14.4	87	23.3/21.9
Industry:								
Agriculture	129	6.7/2.8	51	16.3/7.1	86	15.3/7.9	23	13.2/5.4
Mining/Energy	99	8.5/2.5	44	22.9/5.5	69	24.2/11.9	26	28.3/10.1
Iron/Machinery	242	7.7/2.3	136	20.5/8.4	122	17.7/7.7	73	18.3/9.5
Chemicals	104	7.6/1.9	47	19.5/8.3	58	17.4/5.6	20	16.9/7.4
Electrotechnics	152	7.7/2.5	53	20.3/8.4	32	16.1/8.0	42	16.9/9.8
Other production	159	6.7/2.3	70	15.6/6.4	140	14.4/6.5	99	16.5/13.2
Construction	135	7.9/2.2	221	19.2/7.8	100	18.2/8.1	53	23.5/24.3
Distribution/Communication	387	7.0/3.0	371	17.9/9.1	265	13.9/5.0	210	18.5/13.8
Social Services	339	8.0/2.7	241	23.2/8.7	222	17.0/9.4	178	20.3/14.8
Consumer Services	31	6.9/3.0	33	10.5/5.1	31	13.3/5.2	33	16.6/8.8
Administration	131	7.4/2.1	129	20.3/5.5	130	15.8/6.2	91	19.7/9.3
Public sector:								
no	1302	7.4/3.0	1098	18.1/8.8	764	16.6/8.1	582	18.8/14.1
(1=yes)	707	7.6/2.4	516	21.9/7.7	497	15.8/7.5	305	19.6/12.3
Gender:								
men	998	8.3/3.1	872	19.9/8.8	689	18.3/8.4	495	20.7/14.9
(1=woman)	1011	6.8/2.3	742	18.7/8.4	572	13.9/6.4	392	17,0/11.2
	n	Mean/SD	n	Mean/SD	n	Mean/SD	n	Mean/SD
Labor force experience (years)	2115	19.2/9.6	1613	25.1/9.8	1298	18.3/10.6	947	24.2/10.6
Firm tenure (years)	2111	13.1/10.6	1613	8.4/9.7	1315	10.5/8.9	952	12.6/9.9

Table 2: Determinants of Gross Hourly Wage in Main Job Job in the First Year of the Transformation Process: Unstandarized Regression Coefficients from Equations Predicting Ln (Wage in 1990) in East Germany and Ln (Wage in 1988) in Poland [1]

	East Germany		Poland	
	B	t-ratio	B	t-ratio
Education and training				
(Non) Primary			Reference	
Vocational	.092	2.979	.086	3.079
Secondary Technical	.261	7.456	.174	5.131
Secondary General	.195	4.841	.205	4.883
University	.334	7.801	.484	10.432
Labor force experience (years)	.016	3.594	.025	6.551
Labor force experience sq./100	-.021	-3.949	-.048	-5.712
Firm tenure (years)	.002	5.030	-.004	-.984
Firm tenure sq./100	-.014	-2.760	.019	1.669
Skill level of jobs				
Middle and higher managers	.133	3.788	.022	.442
Professionals	.134	3.841	-.034	-.644
Skilled non-manual	-.046	-2.525	-.036	-1.009
Unskilled non-manual	-.124	-5.152	-.204	-5.141
Skilled workers			Reference	
Unskilled workers	-.114	-4.729	-.095	-2.431
Entrepreneurs/Self-employed	.001	.017	.334	6.156
Industry				
Mining/Energy	.093	3.137	.285	5.511
Iron/Machinery			Reference	
Chemicals	.038	1.293	.080	1.485
Electrotechnics	.002	.061	-.060	-.866
Other Production	-.057	-2.297	-.113	-2.668
Construction	.013	.475	.001	.003
Distribution/Communication	-.036	-1.771	-.071	-1.540
Social Services	-.010	-.378	.035	.568
Consumer Services	.052	1.084	-.225	-3.151
Administration	-.048	-1.548	-.030	-.519
Agriculture	-.111	-4.076	-.084	-1.744
Public Sector (1 = Yes)	.027	1.518	-.068	-1.557
Gender (1=Women)	-.164	-12.221	-.196	-7.915
Constant	1.515	16.559	2.447	50.576
Explained Variance (%)	39.2		37.4	
N	2007		1229	

[1] Farmers and those working less than 10 hours a week excluded.

Table 3: Determinants of Gross Hourly Earnings in Main Job in the Fifth Year of the Transformation Process: Unstandarized Regression Coefficients from Equations Predicting Ln (Wage in 1995) in East Germany and Ln (Wage in 1983) in Poland[1]

	East Germany		Poland	
	B	t-ratio	B	t-ratio
Education and training				
(Non) Primary			Reference	
Vocational	.063	.994	.001	.014
Secondary Technical	.106	1.590	.171	2.948
Secondary General	.166	2.263	.197	2.737
University	.311	4.349	.605	8.110
Labor force experience (years)	.002	-.152	.009	1.079
Labor force experience sq./100	.000	.001	-.006	-.399
Firm tenure (years)	.001	4.757	.000 -	.021
Firm tenure sq./100	-.030	-2.934	.003	-.161
Skill level of job				
Middle and higher managers	.355	6.764	.239	2.905
Professionals	.242	5.140	.053	.601
Skilled non-manual	.160	5.242	.049	.858
Unskilled non-manual	-.040	-1.078	-.332	-4.981
Skilled workers			Reference	
Unskilled workers	-.118	-3.707	-.213	-2.968
Entrepreneurs/Self-employed	-.160	-3.663	.033	.506
Industry				
Mining/Energy	.140	2.326	.435	4.534
Iron/Machinery			Reference	
Chemicals	.038	-.657	.086	.770
Electrotechnics	.012	-.172	-.029	-.328
Other Production	-.123	-2.491	-.101	-1.470
Construction	.096	2.865	.132	1.628
Distribution/Communication	-.062	-2.047	.052	.844
Social Services	-.047	1.182	-.031	-.327
Consumer Services	-.474	-6.954	-.026	-.256
Administration	.005	.109	.069	.750
Agriculture	-.168	-2.974	-.135	-1.186
Public Sector (1 = Yes)	.119 -	4.062	.019	.281
Gender (1=Women)	.113	-5.193	-.146	-3.679
Constant	2.704	12.632	2.498	21.521
Explained Variance (%)	33.7		31.9	
N	1613		947	

[1] Farmers and those working less than 10 hours a week excluded.

Table 4: Gini Coefficients for Distributions of Gross Hourly Earnings in the First and the Fifth Year of the Transformation Process: East Germany (1990, 1995) and Poland (1988, 1993)

	East Germany		Poland	
	1990	1995	1988	1993
Farmers Excluded	.209	.236	.235	.321
Farmers and Owners Excluded	.203	.245	.226	.302

Sources: Own Calculations: GSOEP (East Germany) and Polish Social Structure and Social Mobility Panel (Poland)

Table 5: Overtime Rank Order Correlations of Gross Hourly Earnings (Ln) in East Germany (1990-1995) and Poland (1988-1993)

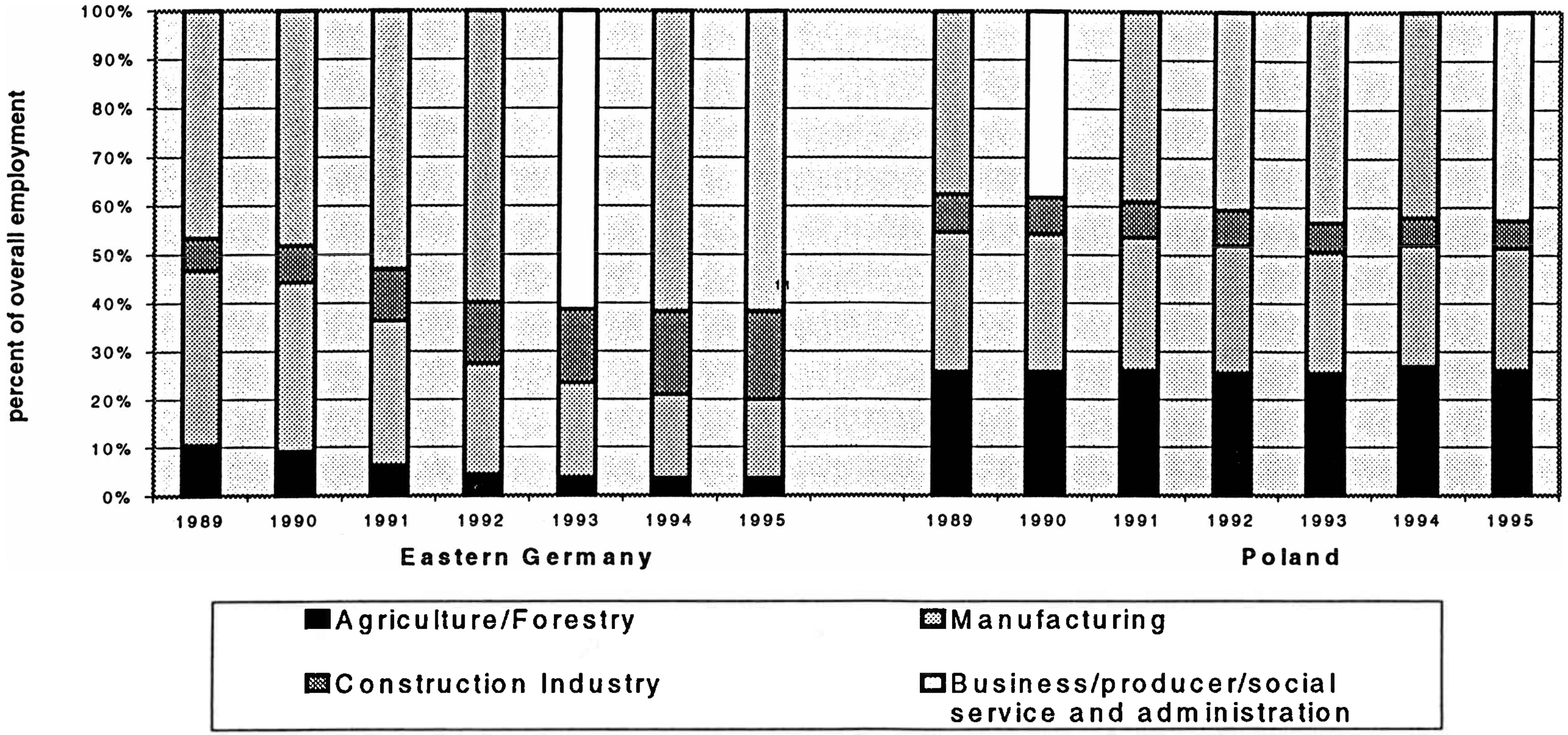
	Females		Males		Females + Males	
	East Germany	Poland	East Germany	Poland	East Germany	Poland
Farmers Excluded	.499	.521	.274	.349	.377	.423
Farmers and Owners Excluded	.494	.581	.350	.458	.419	.538

Sources: Own Calculations: GSOEP (East Germany) and Polish Social Structure and Social Mobility Panel (Poland)

Table 6: Determinants of Individual Change in Gross Hourly Earnings (Main Job) in East Germany and Poland: Unstandarized Regression Coefficients for Predicting Ln (1995Wage/1990 Wage) in East Germany and Ln (1993 Wage/1988 Wage) in Poland (Farmers and those working less than 10 hours a week excluded)

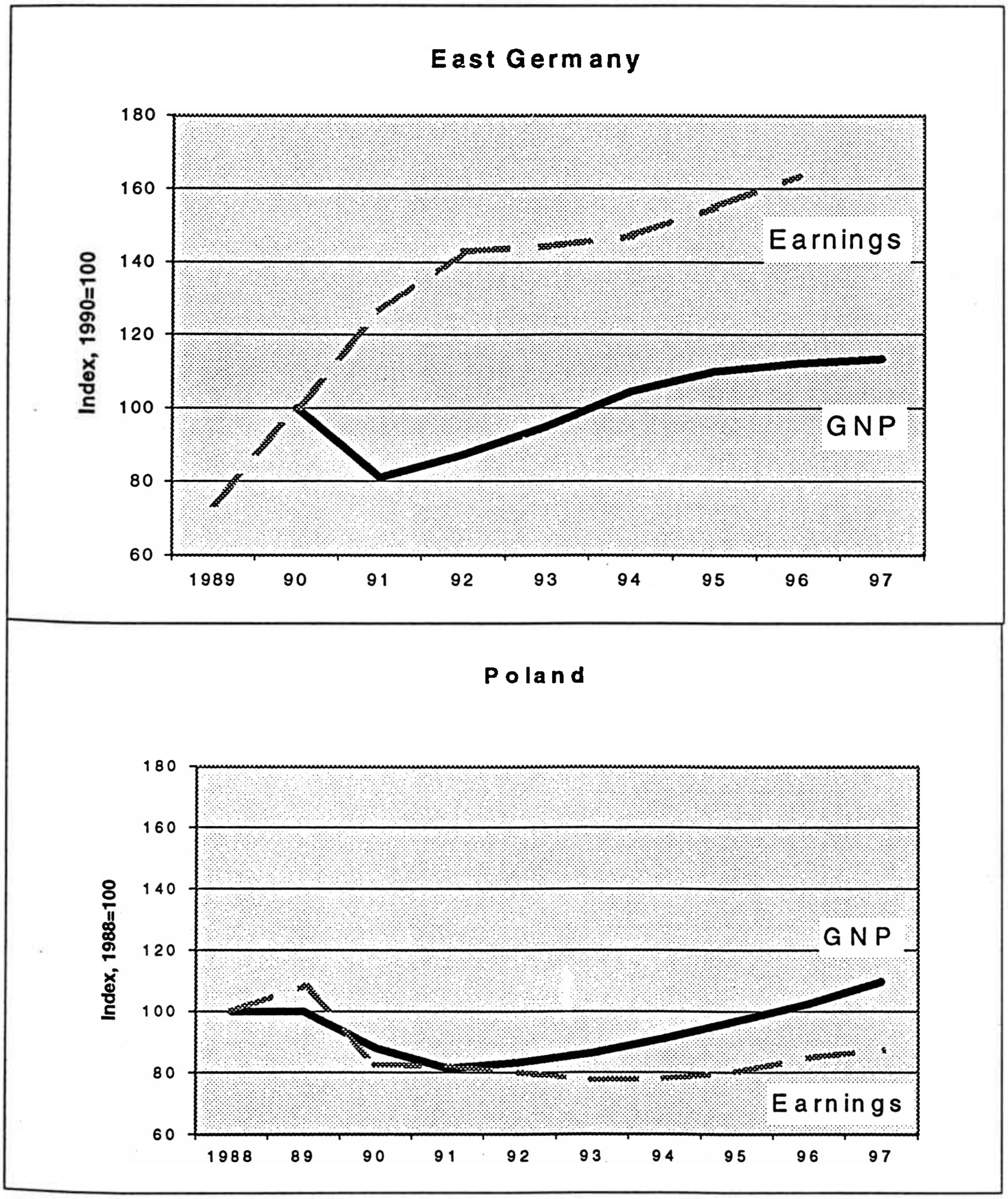
	Model 1				Model 2				Model 3				Model 4			
	East G.		Poland		East G.		Poland		East G.		Poland		East G.		Poland	
	B	t-ratio	B	t-ratio	B	t-ratio	B	t-ratio	B	t-ratio	B	t-ratio	B	t-ratio	B	t-ratio
Ln(earnings in 1990(88)	-.551	-14.085	-.418	-8.857	-.644	-15.666	-.546	10.079	-.648	-16.025	-.548	-11.602	-.632	-15.453	-.549	-11.575
Education in 1990(88)																
Primary							Ref.				Ref.				Ref.	
Vocational					.085	1.257	.051	1.013	.086	1.293	.047	.949	.084	1.274	.046	.912
Secondary General					.256	3.299	.277	4.096	.248	3.254	.251	3.719	.246	3.230	.239	3.509
Secondary Technical					.202	2.843	.252	4.909	.184	2.629	.237	4.615	.185	2.648	.229	4.423
University Degree					.404	4.818	.567	8.150	.342	4.107	.492	6.598	.337	4.046	.500	6.652
Occupational Experience (years) in 1990(88)	-.005	-.448	-.007	-1.054	-.014	-1.227	-.002	-.298	-.010	-.910	-.003	-.380	-.010	-.895	.003	-.356
Occupational Experience sq./100	.005	.328	.019	.970	.016	1.051	.01	.576	.011	.717	.013	.692	.010	.724	.012	.693
Firm Tenure (years) in 1990(88)	-.001	-.282	-.000	-.028	.002	.484	.002	.276	.001	.345	.009	.134	.001	.499	.001	.125
Firm Tenure sq./100	.004	.359	-.002	-.067	-.002	-.179	-.007	-.277	-.002	-.130	-.005	-.209	-.003	-.274	-.005	-.220
Gender (1=women)	.005	.215			-.008	-.378	-.117	-3.110	-.012	-.557	-.102	-2.707	-.010	-.438	-.107	-2.662
Occupational Position in 1990(88)																
Middle and Higher Managers	.196	3.764	.195	2.680	.066	1.185	-.03	-.400	.024	.432	-.140	-1.765	.044	.572	-.111	-.866
Professionals	.193	4.869	.307	4.839	-.023	-.403	.02	.281	-.031	-.022	-.042	-.549	-.104	-1.466	.070	.618
Entrepreneurs/Self-employed	-.307	-4.322	-.206	-2.511	-.339	-4.821	-.217	-2.758	-.259	-3.415	-.249	-2.721	-.193	-1.549	-.136	-.717
Other			Ref.				Ref.				Ref.				Ref.	
Occupational Position in 1995(93)																
Middle and Higher Managers									.224	4.230		3.607	.154	2.184	.398	3.697
Professionals									.167	3.791	.282	1.690	.096	1.588	194	1.516
Entrepreneurs/Self-employed									-.183	-3.851	.145	.971	-.115	-1.902	.066	.907
Other											.062					
Interaction Position 1990(88)x1995(93)											Ref.					
Manager*Manager													.070	.525	-.171	-.903
Manager*Professional													-.002	-.017	-.136	-.546
Manager*Entrepreneurs													-.196	-1.103	.082	.342
Professional*Manager													.129	.877	-.380	-1.792
Professional*Professional													.203	2.086	-.175	-.958
Professional*Entrepreneurs													-.013	-.102	-.114	-.405
Entrepreneurs*Manager													.759	2.558	.000	.000
Entrepreneurs*Professional													.035	.119	.000	.000
Entrepreneurs*Entrepreneurs													-.241	-1.481	-.132	-.605
Constant	1.730	8.269	1.233	8.874	1.933	8.951	1.388	10.079	1.884	8.879		14.515	1.843	8.648	1.393	10.119
Explained Variance (5)	16.5		13.2		19.9		21.0		23.1		1.392		24.1		22.8	
N	1283		825		1283		825		1283		22.3		1283		825	
											825					

Figure 1: Employment by Sectors in Eastern Germany and Poland between 1989 and 1995



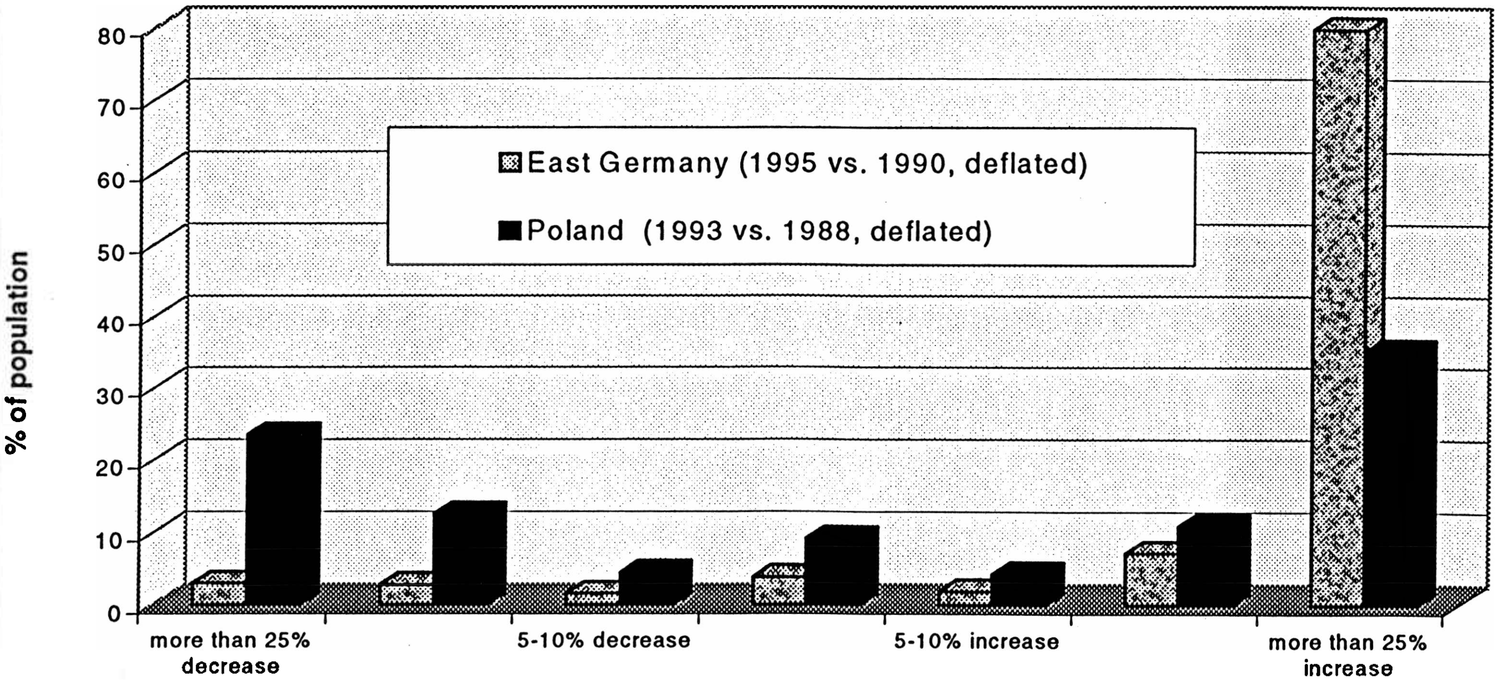
Source: Own calculations;
Poland: Statistical Yearbook of Poland 1994 and 1997;
East Germany: Wiener (1997).

Figure 2: Development of GNP and Earnings (deflated) in East Germany and Poland



Sources: Own calculations;
Poland: Statistical Yearbook of Poland 1997 + Socioeconomic Development of Poland in the First Quartal of 1998, Warsaw: 1998;
East Germany: Central Statistical Office.

Figure 3: Change of Earnings (Gross Hourly Wage) After First 5 Years of Transformation



Source: Own calculation;
Poland: Polish Social Structure and Social Mobility Panel;
East Germany: GSOEP, East German Sample in 1990.

Bisherige Veröffentlichungen des Projekts

Diewald, M.: Persönliche Netzwerke in der DDR und ihre Veränderung nach 1989. In: Jahrbuch der Max-Planck-Gesellschaft. Vandenhoeck & Ruprecht, Göttingen 1996, 597-604.

Diewald, M.: Neu-Rekrutierung oder Anpassung? Zur Erklärung von Kontinuitäten und Brüchen in ostdeutschen Berufsverläufen nach der Wende. In: Wirtschaftliche Transformationsprobleme zwischen Markt, Staat und Drittem Sektor, Hrsg. M. Corsten, H. Voelzkow. Metropolis, Marburg 1997, 107-124.

Diewald, M.: Aufbruch oder Entmutigung? Kompetenzentfaltung, Kompetenzentwertung und subjektive Kontrolle in den neuen Bundesländern. In: Veränderungserfahrungen im wiedervereinigten Deutschland: Gerechtigkeitserleben und Befindlichkeiten, Hrsg. L. Montada, M. Schmitt, (im Druck).

Diewald, M.: Continuities and Breaks in Occupational Careers and Subjective Control: The Case of the East German Transformation. In: The Effect of Adverse and Challenging Circumstances on Life Course Trajectories in the New Germany and England, Hrsg. R. Silbereisen, J. Bynner, MacMillan, London (im Druck).

Diewald, M.: Brüche und Kontinuitäten. Erwerbsverläufe, persönliche Entwicklung und die Veränderung der Lebensbedingungen in Ostdeutschland nach 1989. In: Individuum, Familie und Beratung in einer sich verändernden Welt, Hrsg. L. Marschner. Juventa Verlag, München (im Druck).

Diewald, M.: Persönliche Bindung oder Bedeutungsverlust? Verwandtschaftsbeziehungen in Ostdeutschland nach der Wende. In: Familie und Verwandtschaft im Lebensverlauf, Hrsg. Michael Wagner und Yvonne Schütze. Enke Verlag, Stuttgart 1998, 183-202.

Diewald, M. und J. Huinink: Berufsbezogene Kohortenschicksale und Kontrollüberzeugungen ostdeutscher Erwachsener nach der Wende. In: Gesellschaften im Umbruch. Verhandlungen des 27. Kongresses der Deutschen Gesellschaft für Soziologie in Halle 1995, Hrsg. L. Clausen, Campus, Frankfurt 1996, 259-274.

Diewald, M., J. Huinink und J. Heckhausen: Lebensverläufe und Persönlichkeitsentwicklung im gesellschaftlichen Umbruch: Kohortenschicksale und Kontrollverhalten in Ostdeutschland nach der Wende. In: Kölner Zeitschrift für Soziologie und Sozialpsychologie (1996) 2, 219-248.

Diewald, M., J. Huinink, H. Solga und A. Sørensen: Umbrüche und Kontinuitäten - Lebensverläufe und die Veränderung von Lebensbedingungen seit 1989. In: Kollektiv und Eigensinn. Lebensverläufe in der DDR und danach, v. J. Huinink, K.U. Mayer et al. Akademie Verlag, Berlin 1995, 307-348.

Diewald, M. und D. Konietzka: Beschäftigungsverhältnisse und die Analyse von Arbeitsmarktprozessen in den 90er Jahren. Probleme der Messung von Karrieremobilität in einer sich verändernden Arbeitswelt. In: Arbeitsmarktstatistik zwischen Realität und Fiktion. Hrsg. J. Schupp, F. Büchel, M. Diewald, R. Habich, Sigma, Berlin 1998, 269-298.

Diewald, M. und K. U. Mayer (Hrsg.): Zwischenbilanz der Wiedervereinigung. Strukturwandel und Mobilität im Transformationsprozeß. Leske + Budrich, Opladen 1996.

Diewald, M. und H. Solga: Ordnung im Umbruch? Strukturwandel, berufliche Mobilität und Stabilität im Transformationsprozeß. In: Gesellschaft im Umbruch. Verhandlungen des 27. Kongresses der Deutschen Gesellschaft für Soziologie in Halle an der Saale 1995, Hrsg. L. Clausen. Campus, Frankfurt/M., New York 1996, S. 259-274.

Diewald, M. und H. Solga: Nach dem Sturm folgte zwar Ruhe, jedoch nicht der Sonnenschein! Mobilitätsprozesse und Allokationskriterien auf dem ostdeutschen Arbeitsmarkt nach 1989. In: Ostdeutsche Erwerbsverläufe zwischen Kontinuität und Wandel, Hrsg. S. Schenk. Leske + Budrich, Opladen 1997, 153-277.

Diewald, M. und H. Solga: Berufliche Transformationsprozesse in Ost- und Westdeutschland. Ergebnisse und Desiderate der sozialstrukturellen Transformationsforschung. In: Einheit und Differenz. Die Transformtion Ostdeutschlands in vergleichender Perspektive, Hrsg. J. Wielgohs, H. Wiesenthal. GSFR Berliner Debatte INITIAL, Berlin 1997, 221-238.

Diewald, M. und A. Sørensen: Erwerbsverläufe und soziale Mobilität von Frauen und Männern in Ostdeutschland. Makrostrukturelle Umbrüche und Kontinuitäten im Lebensverlauf. In: Zwischenbilanz der Wiedervereinigung. Strukturwandel und Mobilität im Transformationsprozeß, Hrsg. M. Diewald, K.U. Mayer. Leske + Budrich, Opladen 1996, 63-88.

Huinink, J., M. Diewald und J. Heckhausen: Wendeschicksale nach 1989 und ihr Zusammenhang mit Kontrollüberzeugungen, Kontrollstrategien und dem Selbstwertgefühl. In: Zwischenbilanz der Wiedervereinigung. Strukturwandel und Mobilität im Transformationsprozeß, Hrsg. M. Diewald, K.U. Mayer. Leske + Budrich, Opladen 1996, 251-275.

Mayer, K. U.: Lebensverläufe und Transformation in Ostdeutschland - eine Zwischenbilanz. In: Zwischenbilanz der Wiedervereinigung. Strukturwandel und Mobilität im Transformationsprozeß, Hrsg. M. Diewald, K.U. Mayer. Leske + Budrich, Opladen 1996, 329-345.

Mayer, K.U., M. Diewald und H. Solga: Social Change and Transformation - Findings and Lessons from the German Case. Acta Sociologica (im Druck).

Mayer, K. U., H. Solga und M. Diewald: Kontinuitäten und Brüche in den Erwerbs- und Berufsverläufen nach der deutschen Vereinigung. In: Der ostdeutsche Arbeitsmarkt in Gesamtdeutschland: Angleichung oder Auseinanderdriften? Hrsg. D. Beer, Ch. Brinkmann, A. Deeke, S. Schenk. Leske & Budrich, Opladen 1997, 73-113.

Schömann, K., R. Becker, S. Zühlke: Further Education and Occupational Careers in East Germany. Vierteljahreshefte zur Wirtschaftsforschung 66, 1: 187-196 (1997).

Schupp, J., F. Büchel, M. Diewald und R. Habich (Hg.): Arbeitsmarktstatistik zwischen Realität und Fiktion. Sigma, Berlin 1998.

Solga, H.: Der Elitenimport nach Ostdeutschland. Transformationstypen und Veränderungen in der Elitenrekrutierung. In: Zwischenbilanz der Wiedervereinigung. Strukturwandel und Mobilität im Transformationsprozeß, Hrsg. M. Diewald, K.U. Mayer. Leske + Budrich, Opladen 1996, 89-109.

Solga, H.: Der Verbleib der Angehörigen der oberen Dienstklasse der DDR nach 1989: Heißt ihr Schicksal nach der Wende beruflicher Abstieg? In: Aufstieg für alle? Hrsg. S. Hradil, E. Pankoke. Leske + Budrich, Opladen 1997, 321-382.

Solga, H.: The Fate of the East German Upper Service Class After 1989: Types of System Transformations and Changes in Elite Recruitment. In: Eliten, politische Kultur und Privatisierung in Ostdeutschland, Tschechien und Mittelosteuropa, Hrsg. I. Srubar. Universitätsverlag, Konstanz, Konstanz 1998, 97-117.

Arbeitsberichte

Diewald, M.: Aufbruch oder Entmutigung? Kompetenzentfaltung, Kompetenzentwertung und subjektive Kontrolle in den neuen Bundesländern. Arbeitsbericht 5, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1997.

Diewald, M.: Continuities and Breaks in Occupational Careers and Subjective Control: The Case of the East German Transformation. Arbeitsbericht 6, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1997.

Diewald, M. und H. Solga: Convergence or Divergence? Structural Change and Occupational Mobility in East and West Germany after the Unification. Arbeitsbericht 2, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1997.

Mach, B.W. und H. Solga: Political Loyality and Career Mobility in the German Democratic Republic and the People's Republic of Poland. Arbeitsbericht 7, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1997.

Mayer, K.U., M. Diewald und H. Solga: Social Changes and Transformation - Findings and Lessons from the East German Case. Arbeitsbericht 4, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1997.

Solga, H.: The Study of Social Change and Longitudinal Studies: A Comparison of Panel and Cohort Design. Arbeitsbericht 3, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1997.

Uunk, W., B. Mach und K.U. Mayer: Job Shift Patterns in the Former German Democratic Republic and the Federal Republic of Germany: Convergence, System Contrast or Institutional Variation? Arbeitsbericht 1, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1998.

Zühlke, S. und A. Goedicke: Arbeitsmarktinstitutionen, Arbeitsmarktsegmentation und Erwerbsverläufe in der DDR. Arbeitsbericht 1, Projektgruppe Ostdeutsche Lebensverläufe im Transformationsprozeß, Max-Planck-Institut für Bildungsforschung, Berlin 1999.