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Bird is Assistant Professor of Public Policy and Political Science, W. Allen Wallis Institute of Political Economy, University of Rochester, Rochester NY 14627-0158, USA. Telephone: (716) 275-7840, Fax (716) 271-1616, email ejbd@troi.cc.rochester.edu.

Frick is Economist, Project Group 'The Socio-Economic Panel,' German Institute For Economic Research, Königin-Luise-Straße 5, D-14191 Berlin, Germany.

Wagner is Professor of Public Administration, Rühr-University of Bochum, and Project Director, 'The Socio-Economic Panel,' German Institute For Economic Research, Königin-Luise-Straße 5, D-14191 Berlin, Germany.

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Abstract: We use data from the East German sample of the German Socio-Economic Panel (GSOEP) to examine the fate of the old East German elite. As an extension of an ongoing western database, the data are extraordinarily rich and reliable relative to the data usually available for studies of Eastern European economies. The dataset's longitudinal structure allows us to compare income before and after the change, and its variables allow us to measure accurately such things as human capital and membership in the nomenklatura. We find that the old elites continue to enjoy significantly higher incomes during the transition, and that their advantages persist even when human capital is held constant. Our most recent data show that the elite's economic advantages have not diminished over time, but rather have grown by more than one-third since 1991.

Although one of the central aims of Socialist regimes was an equal distribution of earnings and incomes, in fact the income distribution in almost all of the Eastern European countries was far from equal. This inequality can be traced to a variety of causes.[1] Firstly, in socialist as in Western economies, differences in earnings were essential in providing incentives for workers. Hence some limited deviations from perfect equality were tacitly accepted by the central planners of the economy. Secondly, again as in Western societies, there existed a private and relatively uncontrolled rural sector in most of the Eastern European economies. The unregulated exchange of rural goods and services contributed implicitly to measured inequality. Thirdly, the low level of old age pensions widened the income distribution on the lower end. Lastly, the upper end of the distribution was widened by the existence of the privileged class, or *nomenklatura*,[2] with relatively high incomes topped up by hefty fringe benefits and access to western goods.

While western observers had long presumed some inequality in the east, and were aware of some of these causes, it is only recently that the opportunity has presented itself to examine the inequality in detail. For the political economy of Eastern Europe today, questions about the extent of the old inequality are much less important than questions about the current evolution of inequality. We will examine two such questions. First, is it true that the transition to capitalism has left the old elites largely in place at the top of society? Second, if so, to what extent is this development 'unfair' and inefficient from an allocative point of view? Have the elites maintain their status because of their ability (in a human capital sense) or merely because of their privileged position? To answer the first question, it is necessary to compare the income positions of elite individuals before and after the change

to capitalism. To answer the second, it is necessary to hold ability constant across individuals to see whether privileged status by itself contributes to economic success.

In this paper we answer these questions using extraordinarily credible data from the former German Democratic Republic (GDR). The GDR makes for an excellent test case. Before the transition, it was typical of other central and Eastern European economies in terms of income inequality (c.f. Atkinson and Micklewright 1992). Also, the GDR shared with its eastern neighbors a social system headed by the nomenklatura, whose well-being stood in sharp contrast to that of average workers as well as those disadvantaged persons who, although not jobless, were employed in low-prestige, low-wage segments of the labour market. Unlike other East European countries, however, the GDR had no significant private rural sector outside the public sector.[3] As a result, we can trace much more of the inequality there to the nomenklatura (either through its own advantages or through its design of the wage system), rather than any black-economy effect. Finally, while other socialist countries still find themselves mired in the transition phase, the GDR was forced to adjust rapidly to the new system. Therefore, what we observe in the GDR over the past few years may be a high-speed version of events that will play out over the next few years or even decades in other countries.

We use data from the German Socio-Economic-Panel Study (GSOEP) to examine these issues. The GSOEP is a uniquely high-quality data source for the study of income and well-being in the eastern transition economies. Its first wave in the GDR was conducted before unification, in June 1990. At that point in time the socialist employment structure, and hence the 'old' earnings distribution, were still mostly intact. Better still, the GSOEP is

a panel data set that has continued to interview GDR households yearly. This links the old socialist income distribution in the GDR with the new but rapidly maturing income distribution in the eastern states of unified Germany. Indeed, because the GSOEP is an individual-level panel, one can examine the new income distribution not only among continuing residents of the eastern states, but also among those who, since unification, have moved to western Germany. The data thus include everyone who used to live in the GDR, and as such it is directly relevant for other eastern countries, despite the obvious uniqueness of the unification experience.

The GSOEP has an additional advantage in terms of the variables it contains. It includes several indicators of individual ability, including schooling, unemployment experience during the transition, job quality before transition, and 'get up and go': the willingness to commute or even move in order to obtain high-wage employment. Moreover, the GSOEP has telephone ownership data, an unbiased indicator of elite status in the old system. Lastly, it has household-level income measures that are comparable throughout the transition period, and include all the components usually obtained in western studies: earnings, bonuses, social assistance, profits, interest, rents, retirement benefits, and so on.

Our results, based on robust statistics, suggest that membership in the pre-transition nomenklatura translates into significant income advantages during transition. These advantages remain even after ability is accounted for in a number of different ways. The paper has three sections. Section 1 describes the data and methods of analysis. Section 2 presents cross-tabular and regression results. Section 3 discusses possible interpretations of the findings.

1 Data and Methodological Issues

A. Sample definition. The empirical analysis is based on income data from the East German sub-sample of the GSOEP (cf. Wagner et al. 1993). The GSOEP is an individual-household microdata panel established in Western Germany in 1984. It is roughly comparable to the Michigan Panel Study of Income Dynamics (PSID) in scope and design. Unlike the PSID, however, the GSOEP allows random samples of individuals (the PSID allows random samples only of households or of husbands, wives, and individual householders). We will make use of both weighted cross-sections and weighted balanced panels. In both, our unit of observation is the individual. Our basic indicator of well-being is the well-being of the household in which the individual resides, with appropriate adjustments to be described below.

For regressions, we further restrict the sample by using household-level and personal-level information only from the highest wage-earner in a household. Households are excluded if no one was gainfully employed and under age 55 at the start of the panel (1990). The age restriction prevents the results from being affected by retirement behavior, which was drastically affected by unification and the associated pension policy changes. We choose only employed persons in order to allow age to proxy more closely for work experience, and because our interest is limited to individuals whose well-being is affected in some way by the labor market.

The analysis is restricted to the period from June 1990 to March 1994, encompassing the first five eastern waves of the GSOEP. In its first wave, the GSOEP sampled at random from the population then living in the GDR. The identity of this sub-sample of individuals

has been maintained after unification, even though many of its members now live in the western part of Germany, or commute there to work. Thus, the GSOEP-East subsample offers continuously updated information on the previous population of the GDR, before, during, and after the great change.

B. Definition of well-being. The inequality literature focuses on two indicators of well-being: earnings and incomes. We use the latter because our interest is in the distribution of overall well-being rather than just pay for work. Moreover, household incomes are the better overall measure of social success since they reflect the ability of all household members to secure employment and to gain access to income transfers and other income sources.

The GSOEP offers several ways of measuring household income. We choose to base our calculations on the variable "net income of the household in the previous month," obtained as a summary from the head of household.[4] As net income, this value includes all cash transfers and income taxes. We annualize this monthly summary income and add the value of one-shot payments, such as end-of-year bonuses, that are reported elsewhere in the survey. We then convert income into an individual measure of well-being by applying an equivalence scale. This "equivalent income" can be thought of as the well-being available to each person in the household. The equivalence scale used is derived from the German social assistance scheme, which assigns a weight of 1 to the household head and weights between 0.45 and 0.9 for additional household members, depending on age. Implicitly, this procedure assumes that income is equally shared among all persons within the household.

The net income measure, it should be noted, does not include the value of in-kind

subsidies (e.g low-price housing) or fringe benefits (e.g. a company car). We do not attempt to impute the value of subsidies and fringe benefits to the nomenklatura due to a lack of valid data. Furthermore it is not necessary to impute the rental value of homes because rents in East Germany remain very low even today. The omission of subsidies and fringe benefits might bias downwards our estimates of the nomenklatura's well-being, making it less likely that we will find a persistent income advantage for them. Yet statistical sensitivity tests published in Frick and Wagner (1993) show that the impact of their omission on the inequality of the income distribution is small in any case.[5]

C. Definition of key variables

1. Ability. To identify the effect of privilege on well-being, it is necessary to account as fully as possible for individual ability. We understand 'ability' in the sense of human capital, the income-earning potential of the individual in a relatively unrestricted labor market. Unfortunately, in the GDR as in other eastern economies, there are usually no decent measures of ability in this sense.

The GSOEP data are rich enough, however, that we are able to observe indirect indicators of ability. First, though there may be some distortions, one can use simple human capital variables like SCHOOLING and AGE. Second, one can use job qualification data. Though it had more to do with prestige than profit, in the GDR there was a distinct ranking of jobs, and one can presume that the regime tried to put high-ability workers in the production lines that were most important. Though the regime did not use the wage system to allocate the workers, it did use a training system such that some jobs required higher qualifications than others. The GSOEP reports the qualification levels associated with the

individual's employment. It is very likely that jobs requiring 'No qualifications' or 'Only brief on-the-job instructions' were filled by individuals with low ability (in the western, human-capital sense). We construct the variable LOWQUAL according to this definition, and take it as an indicator of latent ability.[6]

Unfortunately, all of these measures of ability are open to the criticism that they are drawn from a distorted economy that did no reward ability in the way a capitalist economy would. Therefore we use a second set of ability measures based on the assessments of the emerging capitalist system. We are able to observe whether individuals commuted to the west, or even moved there, during the transition period. We take this as a measure of ability and initiative, or 'get up and go.'

We also construct a measure of labor-market difficulty, called the 'AU-INDEX' (the 'affected by unemployment index'). This is a time-invariant measure that summarizes the amount of unemployment experienced in the individual's household throughout the entire transition period, 1991 to 1994. Our assumption is that lack of access to employment during the transition period is a good indicator of low ability before the change (cf. Mueller et al. 1994). The AU-Index takes on values between zero and one, and equals the months of employment for the household's members, divided by the total number of possible months of employment during the transition. The index has value 0 for those who spend the entire time in households in which all employable persons actually have employment. It equals 1 if no employable person has employment at any time in the entire period of investigation. An AU-Index above 0.30 will be taken to indicate very low ability. By this definition, about 10 percent of the sample is low ability.

Of course, ability measures observed during transition are also open to criticism, in that they measure not only ability but outcomes as well. Unfortunately, all ability measures during the transition will be at best indirect and imperfect. We believe that the combination of pre-change and intra-change measures available in the GSOEP provides a set of ability controls whose credibility is extraordinary for East European data.

2. Elite status. Similar data problems plague the researcher trying to identify the nomenklatura. The GSOEP does not contain information on the membership of respondents in the Socialist Unity Party. Such sensitive questions were presumed to reduce the willingness of respondents to remain in the survey sample and so were not asked.[7] Yet the GSOEP does provide a unique alternative indicator for the privileged class in the GDR, namely, information on private access to a telephone.[8] In the GDR the availability of a telephone was a very restricted privilege and it can be assumed that it was linked very closely to the nomenklatura class. Moreover, a phone is a more credible indicator of elite status than party membership, because it requires the state to expend real resources; printing a party card is relatively inexpensive.[9] The phone indicator is not perfect because access to private phones was somewhat more open in larger cities. Communication networks in the GDR were much less advanced in rural areas. Nevertheless, of any two households in the same residential area, the one with the telephone is far more likely to be part of the nomenklatura. Thus, provided one controls for size of residential community, phone ownership identifies the nomenklatura with reasonable accuracy. Indeed there is not much possibility for error, as only roughly 20% of all private households in the GDR had a telephone in June 1990, as compared to about 97% in West Germany.[10]

The data also allow us to identify separately persons who had phones before unification from those who acquired them afterwards. Like the AU-Index, status as a 'new phone owner' indicates to some extent the human capital of the individual, because a more able person is more likely to get a new phone. Newly self-employed people, for example, may buy a mobile phone if they still cannot get a phone through regular channels. Thus though it also reflects outcomes during transition, it provides us with another indirect measure of pre-transition ability.

2 Empirical Evidence

We provide two kinds of statistics, tailored to answer the two main questions of the study. Using cross-tabulations, we first examine the economic fortunes of the GDR elite in the transition period. Using regressions, we then explore the extent to which the elite's success (or lack of it) can be traced to their status as elites per se.

A. Cross-tabulations. Our first step is to provide a description of the overall income distribution in East and West Germany from a global perspective. Table 1 displays some inequality measures for the period from 1990 to 1994. It shows that because of the economic upheaval of unification, the eastern Gini coefficient increased from 0.185 to 0.221, a statistically significant increase that is also large relative to the yearly changes typically observed in western Gini coefficients. Table 1 suggests that eastern Germany is on its way to becoming as unequal as western Germany, although it still has a long way to go (cf. Mueller et al. 1994).

Table 2 reveals the impact of phone ownership before and after unification on relative

income positions within the entire population. Old phone owners begin in the best position, with incomes at an average of 18 percent higher than the GDR population mean. Their income advantage remains at 16-19 percent throughout the transition period. Those with no access to a phone at any time begin in the worst position and remain there, averaging about 92-95 percent of mean income. Those who acquire a phone begin at the mean income level and become only slightly better off during transition.

Table 3 traces the income mobility of the GDR elites, comparing relative income positions in 1990 and 1994. Among all persons, 36 percent of those whose incomes were above 50 percent of the mean in 1990 had incomes that were above 50 percent of the mean in 1994. Among rich old phone owners, however, almost one-half (46 percent) maintain their relatively high income positions. While 15 percent of rich GDR phone owners fell below 100 percent of mean income in 1994, 21 percent of rich no-phone persons did so. Other figures in the table confirm that upward mobility was more likely, and downward mobility was less likely, for people who had phones in the GDR. Tables 2 and 3 are evidence that members of the GDR elite have done quite well during the transition, and that their success has not diminished with time.

Table 4 considers the relationship of income positions to one measure of ability, the AU-Index. It shows, not surprisingly, that persons with a high AU Index tend to have low relative income positions. More important for our argument is the fact that this is true in 1990, before the transition, as well as in later years. Recall that the AU Index is a longitudinal measure, a four-year summary of unemployment experience. Yet those whose AU Index exceeds 0.30 over the transition period had pre-transition incomes that were on

average only 91 percent of the 1990 GDR mean. Persons whose AU Index is 0 had 1990 incomes 10 percent higher than the GDR mean. The table suggests that the unemployment experience of an individual during the entire panel period is correlated with income position at the start. This supports the view that western and eastern perceptions of ability were not independent of one another. Those who have done observably poorly during transition already were doing poorly in a more hidden manner in the GDR.[11]

This raises the possibility that elite success is more related to ability than to elite status per se. Table 5 relates elite status to ability through phone ownership and the AU Index. Perhaps not surprisingly, phone owners in the GDR held the best labor market position throughout the period. Only 3.5 percent of old phone owners have an AU Index above 0.31, while about 13 percent of those with no phone have this amount of unemployment. 43 percent of old phone owners experienced no unemployment during transition, while only 32 percent of those with no phone did so.

The conclusions that can be drawn from this are not clear. On the one hand, the AU Index measures economic success, so these results can be interpreted like those of Table 2: If you are a member of the elite, you do well under transition. On the other hand, though, the AU Index can be seen as a measure of inherent, permanent ability. As a longitudinal summary of unemployment experience, the AU Index should not be influenced to any great degree by transitory economic shocks. The fact that phone owners in the old GDR system have a lower AU Index may indeed suggest that they have a higher inherent level of ability. It is unfortunate that the AU Index is not a perfect ability measure, but as we said in the introduction, decent ability measures are very hard to find. Because the AU Index is at least

an indirect measure of inherent ability, however, we are led to conclude from Table 5 that elite status and ability were related under the GDR system.

B. Regressions. Given that any one ability measure will be weak, we turn to regression analysis so that we can account for ability in many ways at once. We can also account for other factors that might explain individual economic success.

Among the ability variables, we include standard human capital measures. GDR human capital is a strong predictor of economic success during the transition (Bird, Schwarze and Wagner, 1994), so we are comfortable using it as a measure of ability. We have five variables that account for human capital. The first two are common: years of schooling and age. The third and fourth are more unique to our sample. The unification and transition period has produced in our eastern German data a group of individuals who commute to western Germany for work. Furthermore, those eastern Germans who moved to western Germany after unification were kept in the eastern subsample of the GSOEP. We use status as commuters and migrants as indirect indicators of otherwise unobservable initiative and motivation. Status as a new phone owner plays a similar role as the fifth human capital variable.

Finally, we use the AU-Index and LOWQUAL as evidence of ability based on the assessments of the transition economy and the pre-transition economy, respectively. We will focus on results based on the AU Index, our preferred latent ability measure. We will also consider the sensitivity of our results to changes in the ability variables. Considering all the variables that account for ability in some way, we are reasonably confident that our regressions will identify the effect of elite status on economic success.

Among the other factors that can influence incomes, we should account for the size of the community in which a respondent lives. As mentioned above, this can affect the accuracy with which phone ownership identifies membership in the nomenklatura. It also affects job market opportunities before and after unification. Thus we include measures of city size to account for these effects. We also control for gender and marital status.

Table 6 shows descriptive statistics for the variables used in the regressions. In all, we run five regressions, one in each year from 1990 to 1994. In each case, the dependent variable is the log of the individual's relative income position in that year.

Table 7 shows regressions that contain AU Index but omit LOWQUAL. In general, the variables have the expected signs in all the regressions. The coefficients for schooling have the expected positive signs and grow in size during most of the transition. By 1993, each year of GDR schooling increase the relative income position of the individual by more than two percent. Migration and commuting play an important role only at the midpoint of the transition (1991 to 1993).

Work experience, measured by age, shows the expected positive and significant effect. Nonetheless, when interpreting the coefficients for age one has to keep in mind that the dependent variables are not earnings but equivalent income positions. Thus it is not surprising that younger (16 to 25 years of age) as well as older employees (45 to 55 years of age) are better off than middle-aged persons (reference group 26 to 45 years of age). Middle-aged persons mostly live in households with children, which in turn reduces the equivalent income on which relative incomes are based. This argument also explains why married respondents have below-average income positions.

The bigger the city a person lives in, the higher the respective income position. This is a result also known from Western economies. Thus, it is not surprising that this relationship remains valid in the course of transition.

The impact of the AU-Index on relative income positions is, as expected, negative in all years, and it grows in significance as the transition proceeds. Most important for our interpretation of this variable is the 1990 coefficient. Substantively, it is by far the largest coefficient, and it is negative and statistically significant. Employment experience *during* the transition is the most powerful predictor of low relative incomes *before* the transition, even after accounting for many other factors. This strongly supports our contention that the AU Index is a reasonable measure of latent ability. That the coefficient on AU Index grows larger as the transition proceeds is not surprising. As time progresses, the AU Index comes to reflect labor market outcomes relatively more, and inherent ability relatively less. Put another way, the correlation between the AU Index and the error term is zero in 1990 but strongly negative in 1994, and the bias is evident in the coefficient in the later year.

Looking now at the variable of greatest interest, phone ownership has a statistically significant and substantively important affect on income before and especially during the transition. GDR phone owners have income positions 8.5 percent above average in 1990, even holding ability constant. In 1991, the first full transition year, the advantage is 9.4 percent. By 1994, the nomenklatura have income positions 12.7 percent above average, an increase of more than one-third in the three full years of transition. New phone owners have much less significant income advantages. Acquiring a phone during transition is evidently less valuable than having one in the GDR. The table strongly suggests that elite status by

itself contributes significantly to economic success.

Tables 7a and 7b test whether this conclusion holds when the measures of ability are changed. Table 7a relies on only schooling, age, migration, commuting, and new phone ownership; the AU Index is dropped. The coefficients on GDR phone ownership become more important, which indicates that AU Index was picking up some of the latent ability of the GDR elites. Table 7b returns AU Index to the regression and adds as well the pre-transition ability measure, Lowqual. The results are not substantively different from those in Table 7. Overall, our findings are robust to changes in the measurement of ability. Therefore we are reasonably confident that the economic success of GDR elites is related to their elite status per se.

3 Summary; Political Implications

We have found extraordinarily credible evidence that membership in the socialist elite often translates into economic success under the transition to capitalism. The effect is in addition to any advantage the elites may have in terms of human capital and latent ability. We do not necessarily know why elite status translates into economic success, though one can imagine a number of explanations. First, our phone-ownership variable may just be measuring unobserved ability. The market system is supposed to reward ability, and the regression coefficients on education and other ability indicators show that it does so. If the old elites also possessed more unobserved economic talent, the transition to capitalism should provide them with some unexplainable economic success. On this interpretation, the continued success of the elite is 'fair,' and no cause for criticism of the market system.

On the other hand, the effect may be the result of some 'unfair' advantage maintained by the old elites. They may have put themselves in favorable positions for jobs with newly-private firms, for example. Or perhaps they improperly directed new government contracts to benefit their own employment. On this interpretation, one might properly accuse the new economic system of maintaining past injustices.

The data do not allow us to rule out either of these interpretations completely. Reasonable people can differ about them, and that is why the findings are meaningful for the ongoing politics of Eastern Europe. As long as the old elites continue to have economic successes that are inexplicable in terms of measurable ability, the market system will remain embroiled in debates about fairness and justice. In many eastern countries, leading figures accuse the market system of promoting immorality, and one can only wonder about the long-term consequences of the lack of civic support for the new democratic and free-market systems (Mueller, 1995). Warranted or not, our results leave room for such accusations.

Moreover, the fact that our results come from East Germany makes them all the more striking for other countries. In East Germany, the old elites faced intense competition from aggressive, well-financed individuals and firms from western Germany. The Federal Government in Bonn had a clear policy of rapid transition. If despite these obstacles the GDR elites maintained some control over the economic terrain, the elites in other eastern countries have probably done much better. Civic faith in these other new societies is probably that much weaker.

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Endnotes

1. For an overview cf. Atkinson and Micklewright (1992, pp. 36).

2. The nomenklatura were mostly members of the Socialist Unity Party (SED) and included bureaucrats and managers, the military and police services, as well as the secret service. See Atkinson and Micklewright (1992, p. 38).

3. In Poland this sector was and still is of major importance (cf. Frick et al. 1994).

4. This so-called "income screener" question is used in many microdata surveys. It asks the head of the household to give an overall estimate of monthly household income. The alternative income source is to ask each household member income information and then add. The "screener" approach is often criticized as leading to systematic underestimates of income. We ensure that this would not be a problem here by examining incomes relative to average incomes in the sample. Thus, even if the deviation of screener income from actual income is randomly distributed with nonzero mean, our substantive conclusions will be unaffected (cf. Schwarze, 1996).

5. This is because the two types of omission cancel themselves out. Leaving out subsidies lowers the well-being of pensioners, who already have low incomes, while leaving out fringe benefits lowers the well-being of the nomenklatura, who have high incomes. The net effect on inequality turns out to be minimal.

6. It is wise, though, to remember that Vaclav Havel was employed as a sack-carrier in a brewery. He is currently President of the Czech Republic.

7. It might become possible to ask for an indication of such a membership in a future wave.

8. The question about access to a phone generated little resistance on the part of respondents. It was part of a question concerning the availability of a list of durables in the household, which was asked in the first and third wave of the GSOEP.

9. Fry and Vecernik (1994) use party membership in their study of Czechoslovakian earnings, and show that its economic advantages decay over time. As argued in the text, however, we believe that our measure of elite status is less biased than party membership. Indeed we think phone ownership it is almost perfectly accurate since it is based on real resource expenditures of the regime. We also think that overall income is a more appropriate dependent variable than earnings. Nevertheless, the disparity in outcomes warrants further investigation.

10. With respect to being disadvantaged, the size of the residential community also controls for job market opportunities before and after unification.

11. See also Landua (1993, p. 45) and especially Licht and Steiner (1994).

TABLE 1 -- INEQUALITY OF EQUIVALENT INCOME IN EAST AND WEST GERMANY, 1990-1994

Inequality Measures	East Germany					West Germany				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
Gini Coefficient	.185	.198	.200	.216	.221	.268	.263	.264	.261	.265
Quintile Shares, in percent:										
Lowest	11.8	11.3	11.1	10.6	10.2	9.4	9.5	9.5	9.2	9.1
Second	15.8	16.1	16.0	15.5	15.5	14.0	14.0	14.0	13.8	13.7
Third	19.2	18.9	19.1	18.8	18.9	17.7	17.8	17.8	17.7	17.4
Fourth	22.9	22.3	22.5	22.7	23.0	22.6	22.8	22.8	22.8	22.6
Highest	30.3	31.4	31.3	32.4	32.4	36.3	35.9	35.9	36.5	37.2
All	100	100	100	100	100	100	100	100	100	100

Note: The equivalence scale used is derived from the German Social Assistance system.

Source: Author calculations from the GSOEP, 1990-1994; weighted cross-sections.

TABLE 2 -- RELATIVE INCOME POSITION ACCORDING TO TELEPHONE OWNERSHIP IN EAST GERMANY SINCE 1990

Telephone Ownership of Households:	Relative Income Position in:				
	1990	1991	1992	1993	1994
All Persons	1.00	1.00	1.00	1.00	1.00
No Private Phone at Any Time	.95	.94	.93	.93	.92
Private Phone Prior to the Transition Period	1.18	1.16	1.16	1.19	1.16
Private Phone Acquired During the Transition Period	1.01	1.02	1.04	1.02	1.01

Note: The figures in the table are the average of relative income positions within the group. Thus in 1990, among persons who had no private phone at any time, the average of the ratio of individual equivalence income to the national mean income was 0.95.

Source: Author calculations from the GSOEP, 1990-1994, weighted and balanced longitudinal panels.

TABLE 3 -- INCOME MOBILITY ACCORDING TO TELEPHONE OWNERSHIP IN EAST GERMANY SINCE 1990

Rows: Relative Equivalent Income in 1990	Columns: Relative Equivalent Income in 1994			
	Below 1.00	1.00-1.50	Above 1.50	All Persons
	All persons			
Below 1.00	71	26	3	100
1.00-1.50	45	43	12	100
Above 1.50	21	42	36	100
	Persons with no phone at any time			
Below 1.00	73	25	2	100
1.00-1.50	53	41	6	100
Above 1.50	21	45	34	100
	Persons with a phone only the during transition period			
Below 1.00	69	27	4	100
1.00-1.50	40	47	13	100
Above 1.50	32	46	22	100
	Persons with a phone prior to the transition period			
Below 1.00	64	30	6	100
1.00-1.50	34	45	21	100
Above 1.50	15	39	46	100

Source: Author calculations from the GSOEP, 1990-1994, balanced and weighted longitudinal panel.

TABLE 4 -- RELATIVE INCOME POSITION AND THE EXPERIENCE OF UNEMPLOYMENT IN EAST GERMANY SINCE 1990

Household Unemployment Experience of Persons	Relative Income Position in				
	1990	1991	1992	1993	1994
All Persons	1.00	1.00	1.00	1.00	1.00
Persons in households with no gainfully employed members at any time	.73	.90	.97	.98	1.04
Persons in households with an AU index of:					
0	1.10	1.09	1.10	1.12	1.10
.01 - .15	1.03	1.03	1.05	1.06	1.02
.16 - .30	1.01	.95	.90	.87	.86
.31 and above	.91	.80	.73	.70	.68

Note: The AU Index is the number of months of unemployment of all household members, expressed as a percentage of the maximum possible number of such months during the period from June 1990 to Spring 1994. An individual with an AU Index of .25 lives in a household whose members were unemployed during one-quarter of the months of possible employment in the time frame of the data.

Source: Author calculations from the GSOEP, 1990-1994, weighted and balanced longitudinal panels.

TABLE 5 -- EXPERIENCE OF UNEMPLOYMENT ACCORDING TO TELEPHONE OWNERSHIP IN EAST GERMANY SINCE 1990

Telephone Ownership	Persons in households with no gainfully employed members at any time	Persons with an AU Index of: 0	.01 - .15	.16 - .30	.31 and above	All Persons
All Persons	10.1	45.2	30.0	14.6	10.1	100
No Private Phone at Any Time	12.9	31.8	26.7	15.8	12.8	100
Private Phone Prior to the Transition Period	7.3	43.1	33.4	12.8	3.5	100
Private Phone Only During the Transition Period	6.5	36.4	34.0	13.6	9.6	100

Note: The AU Index is the number of months of unemployment of all household members, expressed as a percentage of the maximum possible number of such months during the period from June 1990 to Spring 1994. An individual with an AU Index of .25 lives in a household whose members were unemployed during one-quarter of the months of possible employment in the time frame of the data.

Source: Author calculations from the GSOEP, 1990-1994, weighted and balanced longitudinal panels.

TABLE 6 -- DESCRIPTIVE STATISTICS OF REGRESSION VARIABLES

Variable	Mean	Standard Deviation	Definition
Dependent variable: ln (relative equivalent income)			
Wave 1, 1990	0.01	0.31	Natural logarithm of equivalent income relative to average equivalent income among all persons in the current wave
Wave 2, 1991	-0.04	0.38	
Wave 3, 1992	-0.03	0.37	
Wave 4, 1993	-0.03	0.40	
Wave 5, 1994	-0.07	0.41	
Independent Variables			
PHONE_OLD	0.220	D	Phone owner before transition
PHONE_NEW	0.262	D	New phone owner in 1993
AU INDEX	0.103	0.136	Unemployed months of all household members, as a fraction of all potentially employed months between 1990 and 1993
SCHOOLING	12.797	3.073	Years of schooling in 1990
LOWQUAL	0.069	D	Low job qualification in 1990
MIGRANT	0.029	D	Individual's household had migrated to West Germany by 1994
COMMUTER	0.084	D	Individual commutes for work to West Germany in 1994
AGE 16-25	0.088	D	Age 16-25 in 1990
AGE 46-55	0.274	D	Age 46-55 in 1990
SIZE2	0.226	D	City size 2,000 - 20,000
SIZE3	0.236	D	20,000-100,000
SIZE4	0.118	D	100,000-500,000
SIZE5	0.148	D	Above 500,000
MARRIED	0.775	D	Married in 1990
SEX	0.719	D	Gender (Male = 1)

Sample size 1,064. 'D' indicates a {0, 1} discrete variable.

TABLE 7 -- OLS REGRESSIONS OF RELATIVE EQUIVALENT INCOME POSITION ON INDIVIDUAL CHARACTERISTICS INCLUDING THE AU INDEX, EXCLUDING LOWQUAL

Variables	1990		1991		1992		1993		1994	
	β	t	β	t	β	t	β	t	β	t
Phone _Old	.0854	3.60	.0944	3.19	.0756	2.81	.1186	4.13	.1270	4.32
Phone_New	.0227	1.06	.0126	0.47	.0211	0.86	.0313	1.20	.0550	2.07
AU_Index	-.3873	-5.92	-.6522	-8.00	-.9573	-12.77	-1.114	-14.07	-1.089	-13.49
Lowqual	-	-	-	-	-	-	-	-	-	-
Schooling	.0164	5.44	.0166	4.40	.0218	6.29	.0242	6.60	.0231	6.14
Migrant	.0597	1.13	.0733	1.11	.1968	3.25	.1717	2.69	.1113	1.70
Commuter	.0380	1.22	.1226	3.14	.1518	4.23	.0880	2.32	.0899	2.32
Size 2	.0835	3.43	.0560	1.84	-.0007	-0.02	.0227	0.77	.0075	0.25
Size 3	.0830	3.41	.1404	4.63	.1098	3.94	.0815	2.77	.0720	2.39
Size 4	.1025	3.40	.1256	3.34	.1015	2.94	.0940	2.57	.0921	2.46
Size 5	.1038	3.60	.1237	3.44	.1188	3.59	.1205	3.45	.1390	3.89
Married	-.0749	-3.37	-.0304	-1.10	-.0488	-1.91	-.0518	-1.93	-.0634	-2.30
Sex	.0318	1.63	.0411	1.69	.0403	1.80	.0371	1.57	.0200	0.83
Age 16-25	.1452	4.45	.1385	3.41	.1188	3.18	.1186	3.00	.1500	3.71
Age 46-55	.2053	10.16	.1411	3.14	.1723	7.45	.1652	6.75	.1789	7.14
Constant	-.2954	-6.16	-.3576	-5.98	-.3584	-6.52	-.3678	-6.34	-.3810	-6.41
Adjusted R-Squared	.1910		.1634		.2767		.2920		.2844	

Sample size 1,064

Source: Author calculations from the GSOEP, 1990-1994, unweighted balanced longitudinal panel.

TABLE 7A -- OLS REGRESSIONS OF RELATIVE EQUIVALENT INCOME POSITION ON INDIVIDUAL CHARACTERISTICS EXCLUDING THE AU INDEX AND LOWQUAL

Variables	1990		1991		1992		1993		1994	
	β	t	β	t	β	t	β	t	β	t
Phone _Old	.0978	4.08	.1153	3.80	.1072	3.69	.1543	4.95	.1620	5.11
Phone_New	.0277	1.27	.0212	0.77	.0336	1.27	.0458	1.62	.0692	2.41
AU_Index	-	-	-	-	-	-	-	-	-	-
Lowqual	-	-	-	-	-	-	-	-	-	-
Schooling	.0194	6.38	.0215	5.61	.0290	7.87	.0325	8.25	.0312	7.78
Migrant	.0387	0.72	.0381	0.56	.1451	2.24	.1116	1.61	.0525	0.74
Commuter	.0474	1.49	.1384	3.45	.1751	4.55	.1150	2.79	.1163	2.77
Size 2	.0827	3.34	.0546	1.75	-.0027	-0.09	.0204	0.64	.0052	0.16
Size 3	.0781	3.16	.1321	4.23	.0976	3.26	.0673	2.10	.0582	1.78
Size 4	.1074	3.50	.1338	3.45	.1136	3.06	.1080	2.71	.1058	2.61
Size 5	.1131	3.68	.1393	3.77	.1417	3.99	.1472	3.78	.1651	4.27
Married	-.0693	-3.07	.1321	4.23	-.0349	-1.28	-.0357	-1.22	-.0477	-1.60
Sex	.0349	1.76	.0464	1.85	.0450	2.00	.0461	1.79	.0288	1.10
Age 16-25	.1340	4.23	.1296	3.10	.1058	2.64	.1034	2.41	.1352	3.09
Age 46-55	.1983	9.67	.1293	4.99	.1549	6.24	.1450	5.45	.1592	5.88
Constant	-.3814	-8.21	-.5024	-8.56	-.5709	-10.14	-.6150	-10.20	-.6229	-10.16
Adjusted R-Squared	.1647		.1132		.1651		.1593		.1619	

Sample size 1,064

Source: Author calculations from the GSOEP, 1990-1994, unweighted balanced longitudinal panel.

TABLE 7B -- OLS REGRESSIONS OF RELATIVE EQUIVALENT INCOME POSITION ON INDIVIDUAL CHARACTERISTICS INCLUDING THE AU INDEX AND LOWQUAL

Variables	1990		1991		1992		1993		1994	
	β	t	β	t	β	t	β	t	β	t
Phone _Old	.0826	3.48	.0949	3.20	.0756	2.77	.1165	4.05	.1234	4.20
Phone_New	.0201	0.94	.0132	0.49	.0203	0.83	.0294	1.13	.0517	1.94
AU_Index	-.3669	-5.54	-.6563	-7.93	-.9507	-12.50	-1.098	-13.68	-1.004	-12.95
Lowqual	-.0660	-1.86	.0134	0.30	-.0213	-0.53	-.0488	-1.14	-.0843	-1.92
Schooling	.0157	5.12	.0168	4.40	.0216	6.15	.0236	6.37	.0220	5.81
Migrant	.0661	1.25	.0720	1.09	.1988	3.28	.1675	2.76	.1196	1.83
Commuter	.0377	1.21	.1227	3.14	.1517	4.23	.0877	2.32	.0894	2.31
Size 2	.0847	3.47	.0558	1.83	-.0029	-0.01	.0236	0.80	.0090	0.30
Size 3	.0831	3.42	.1403	4.62	.1099	3.94	.0816	2.77	.0722	2.40
Size 4	.1023	3.39	.1256	3.34	.1015	2.93	.0938	2.57	.0918	2.46
Size 5	.1060	3.67	.1233	3.42	.1195	3.61	.1221	3.49	.1417	3.97
Married	-.0769	-3.46	-.0299	-1.08	-.0494	-1.94	-.0533	-1.98	-.0660	-2.40
Sex	.0291	1.49	.0417	1.71	.0394	1.76	.0352	1.49	.0166	0.69
Age 16-25	.1463	4.49	.1383	3.40	.1191	3.19	.1193	3.02	.1514	3.75
Age 46-55	.2047	10.14	.1412	5.60	.1721	7.42	.1647	6.73	.1782	7.12
Constant	-.2784	-5.71	-.3611	-5.93	-.3529	-6.31	-.3552	-6.01	-.3593	-5.95
Adjusted R-Squared	.1929		.1626		.2762		.2962		.2862	

Sample size 1,064

Source: Author calculations from the GSOEP, 1990-1994, unweighted balanced longitudinal panel.

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