The shadows of the socialist past:
Lack of self-reliance hinders entrepreneurship

Stefan Bauernschuster[a,b,*], Oliver Falck[a,b], Robert Gold[c], Stephan Heblich[d, e, f]

Abstract

We provide empirical evidence that the experience of a socialist regime leads to a lack of self-reliance by comparing East and West Germans conditional on regional differences in current economic development. This meaningful lack of self-reliance persists after the regime's breakdown and hinders the development of an entrepreneurial spirit, which might hamper the transition process. Since East Germany adopted the formal institutions of a market economy quasi overnight when reunifying with West Germany, we avoid simultaneity issues regarding current institutions and preferences. Further tentative evidence suggests that the socialist regime also affected the composition of the East German population by inducing selective migration before the construction of the Berlin Wall in 1961.

[a] *Ifo Institute – Leibniz Institute for Economic Research at the University of Munich, Poschingerstr. 5, 81679 Munich, Germany*

[b] *CESifo, Munich, Germany*

[c] *Max Planck Institute of Economics, Entrepreneurship, Growth, and Public Policy Group, Kahlaische Str. 10, 07745 Jena, Germany*

[d] *Division of Economics, University of Stirling, FK9 4LA, Stirling, UK*

[e] *IZA, Bonn, Germany*

[f] *SERC, London, UK*

* Corresponding author. Phone: +49-89-9224-1368. Fax: +49-89-9224-1608. *E-mail address:* bauernschuster@ifo.de (S. Bauernschuster).

1

1. Introduction

Countries in Central and Eastern Europe (CEE) have experienced dramatic changes in the last decades. After the Eastern Bloc collapsed, most of the currently existing states gradually adopted the rules of Western market economies, which triggered a dynamic catch-up process enabling CEE economies to modernize and grow. McMillan and Woodruff (2002) or Estrin et al. (2006) argue that, in the transition from a socialist regime to a market economy, entrepreneurs are the main actors of change while existing firms are less well placed to be the engine of structural transformation because they are outcomes of the planning system themselves.[1] According to Schumpeter (1912), the adopted institutions of a free market economy should unleash human inspiration and breed creative entrepreneurs who come up with new ideas leading to innovation and growth. Yet, "without a widespread individualistic mentality, free markets reveal only a fraction of their progressive power" (Caplan, 1994). Certainly, this vital individualistic mentality, most importantly self-reliance, is best learned by constant practice.

Most likely, the experience of more than 40 years of central planning not only heavily affected the economic structures in CEE countries but also crowded out productive self-reliance and redirected creativity into rent-seeking activities, which eventually led to the systems' economic collapse (cf. Baumol, 1990; Murphy et al., 1993; Hillman, 1994). Preferences developed over several decades of socialist education and socialization in a centrally planned economy do presumably not change overnight after the regime's breakdown.[2] Consequently, a lack of self-reliance may still be present today and have dampening effects on these countries' growth paths. However, the legacy of the socialist past is often difficult to pin down empirically since institutions change only slowly and therefore, a lack of self-reliant preferences might also be an outcome of still rather market unfriendly current institutions in CEE countries.

In this paper, we exploit the German reunification as an ideal setup where, in contrast to other socialist countries, the German Democratic Republic (GDR) adopted the institutions of a market economy quasi overnight when joining the Federal Republic of Germany (FRG). We can thus rule out simultaneity issues, i.e., current market-unfriendly institutions affecting

---

[1] For further discussions of entrepreneurship in the post-socialist transition economies, see Acs and Audretsch (1993), Bergmann and Sternberg (2007), Earle and Sakova (2000), Hanley (2000), Johnson and Loveman (1995), or Smallbone and Welter (2001).

[2] Kornai (1992) describes how socialist regimes deliberately manipulated the preferences in an intense way unthinkable in an individualistic society. The aggregate effect of this manipulation is shown for example by Alesina and Fuchs-Schuendeln (2007) redistributive preferences, by Rainer and Siedler (2009) for trust, and by Bauernschuster and Rainer (2012) for sex role attitudes.

individuals' preferences and vice versa. This gives us the chance of analyzing whether we still find shadows of the socialist past, i.e., persistent differences in preferences for self-reliance between East and West Germans, and investigating the extent to which a potential persistent lack in self-reliant preferences negatively affects entrepreneurship and could thus hamper the transition process.

Our analysis shows that East Germans (born and) living in the regions of the former socialist GDR are indeed less self-reliant than their West German counterparts who have always lived in the free market economy of the democratic FRG. These shadows of the past loom large and are not explained by individual characteristics or by differences in economic development between East and West Germany alone. To assess whether the analyzed preference differences affect individuals' entrepreneurial spirit, we test the impact of self-reliance in the context of an occupational choice equation (cf. Kihlstrom and Laffont, 1979). We find that self-reliance is indeed positively associated with the likelihood of being an entrepreneur. This association is particularly strong when looking at entrepreneurs with employees as compared to self-employed individuals who do not employ further employees. In this way, the shadows of the socialist past, i.e., a lack in self-reliance, hinder entrepreneurship and might thus slow down the transition process. Our finding can also cast light on results from the Global Entrepreneurship Monitor country report for Germany in 2000 (Sternberg et al., 2000). While experts evaluate the entrepreneurial prospects in East Germany even better than in West Germany, this feeling is not prevalent in the overall East German population. Our empirical analysis suggests that a lack of self-reliance bred by the socialist regime might at least partly be responsible for this puzzle.[3]

We are interested in persistent differences in self-reliant preferences between East and West Germans and whether a lack in self-reliance could negatively affect productive entrepreneurship and thus hamper the transition process. Thus, we do not focus on the question how exactly the socialist regime of the GDR shaped individual preferences. Nevertheless, we want to investigate one indirect channel through which the socialist regime could have had an effect on the distribution of individual preferences which has so far been neglected in the economic literature. Nearly 3 million individuals fled from the Russian occupational zone (which would later become the GDR) in the time span ranging from the end of World War II to the construction of the Berlin Wall in 1961. With communism looming, one could well imagine that individuals that escaped the Russian occupational zone

---

[3] This would also be in line with the findings of Runst (2012), who investigates differences in cultural and psychological traits between East and West Germany and assess their influence on entrepreneurship.

were more self-reliant and had stronger preferences for independence than the average East German. Consequently, the average person who remained in East Germany likely was less self-reliant than the average West German already before the full treatment with the socialist regime actually set in. We provide some first pieces of evidence for this indirect channel.

The remainder of the paper proceeds as follows. Section 2 introduces our data. Section 3 provides evidence for the persistent differences in self-reliance between East and West Germans. Section 4 investigates the association between self-reliant preferences and entrepreneurship. Section 5 discusses the indirect channel, i.e., out-migration before the Berlin Wall was constructed in 1961, through which the socialist regime could have had an impact on the East German population even before this regime was entirely established. Section 6 concludes.

2. Data on self-reliance and entrepreneurship

The German General Social Survey (ALLBUS) is a valuable data source for our research project. The data set is based on biennial, representative surveys of the German population conducted through personal interviews. ALLBUS covers a wide range of topics pivotal to empirical research in the social sciences. A core set of questions is asked in every wave of the survey, with various sets of additional questions complementing the survey in different years.[4] Since we are interested in the occupational choices of interviewees, we retain only entrepreneurs and employed workers in our sample and exclude non-working, unemployed or retired individuals. For entrepreneurs, we can observe whether the entrepreneur is merely "self-employed" without employees or whether the entrepreneur employs any workers. In a first step, we do not further exploit this information and count every self-employed respondent as entrepreneur; however, later in this paper, we will distinguish between these different kinds of entrepreneurs. In order to enhance our East versus West German comparison, we drop all observations of non-Germans from our sample as well as all observations of individuals living in Berlin.[5] We use the 1991, 1994, 1998, 2000, and 2004 waves, which contain unique information on individuals' preferences concerning self-reliance.

---

[4] Terwey et al. (2007) provide detailed information on the ALLBUS surveys in general and present all variables available in the cumulated data set from 1980 until 2006.
[5] In particular for our regional covariates, it would have been difficult to clearly distinguish between West Berlin (which was part of the former Federal Republic of Germany) and East Berlin (which was part of the former German Democratic Republic).

Table 1 presents descriptive statistics of the sample underlying this paper. Observations are distributed fairly across all German federal states with 36 percent living in East Germany and 64 percent in West Germany. We use this information on whether an individual currently lives in East or West Germany in our estimations. In alternative specifications, we also drew on the more precise information if an individual that currently lives in East Germany (West Germany) was actually born in East Germany (West Germany). Since this alternative specification does not affect our main results, we generally use the residence based East-West-identifier that provides us with more observations; this is because the birthplace based identifier is not available for the 1998 wave.

Table 1 about here

This paper focuses on a potentially persistent lack of individualistic mentality in former communist countries which might negatively affect entrepreneurship and thus hamper the transition process. With individualistic mentality we mean economic individualism as "a cultural orientation that emphasizes the values of individual autonomy, self-reliance, and achievement and is associated with support for capitalism and laissez faire and preference for a limited role of government in the economy" (Arikan, 2011). ALLBUS offers a rich set of variables along these dimensions. Table 2 provides an overview of the corresponding preference questions of interest, and the levels by which relevant subgroups of the sample agree on these questions. For the sake of brevity, we label these preferences self-reliant preferences.

Table 2 about here

Originally, interviewees could express their level of agreement with statements 1) to 6) in Table 2 by picking one of four responses: "fully agree," "rather agree," "rather don't agree," and "don't agree at all."[6] To ease interpretation, we group the two agreement levels "fully agree" and "rather agree" together to represent individuals who agree to the respective statement. The two disagreement levels "rather don't agree" and "don't agree at all" are grouped together to capture individuals who disagree. For the rest of the paper, we use this information by creating six dummy variables, which take on the value of unity for interviewee replies reflective of rather self-reliant preferences, and are zero for rather state-reliant preferences. To be more specific, we expect individuals having more self-reliant preferences to disagree to statements 1) and 2), whereas they should agree to statements 3) through 6).

---

[6] Although the preference variables are correlated with each other, the pairwise correlations are far from perfect (ranging from 0.024 to 0.465) which makes us confident that each variable measures a specific nuance of self-reliance without being redundant.

Before moving to our main analysis, we ask whether our self-reported preferences truly reflect what individuals believe. Bertrand and Mullainathan (2001) point out that survey answers are not always very meaningful. To test whether our preference variables correspond to actual attitudes and actions, we draw on a strategy employed by Alesina and Fuchs-Schuendeln (2007). They show that in those German states where people exhibit stronger preferences for redistribution, the vote share of the leftist party is much higher than in other states where people are less in favor of redistribution.[7] Thus if our attitude variables are meaningful, they should be strongly correlated with voting behavior. Those who are more self-reliant should be more likely to vote for the more rightist and liberal parties (CDU or FDP), whereas more state-reliant individuals should be more likely to vote for the more leftist parties (SPD, PDS[8], or The Greens). Our micro data set allows us to test the association between preferences expressing self-reliance and voting behavior on the individual level.

To this end, we exploit information in the ALLBUS survey, where individuals are asked which party they would vote for if there were general elections the subsequent Sunday ("Sonntagsfrage"). We create two dummies as our outcome variables. The first takes on the value of unity for those saying they would vote for the more rightist/liberal parties (CDU and FDP); zero otherwise. The second outcome variable is unity for individuals stating they would vote for the more leftist parties; zero otherwise. Then, we run probit models where we regress the expressed voting behavior on our preference variables, while including as covariates an individual's gender, age (and its square), education, previous unemployment spells, marital status, a dummy for house/flat owners, the logarithm of real personal income, year dummies, as well as the unemployment rate and GDP per capita on the state level. Table A.1 in the appendix presents the average marginal effects of these probit estimations.[9] As expected, we find positive associations between self-reliant preferences and voting for more rightist and liberal parties. These associations are highly significant for virtually all our self-reliance

---

[7] Moreover, AFS show that before World War I, World War II, and German separation, in 1898, the Social Democrats gained similar vote shares in East and West Germany. However, the Zentrum party, i.e., the largest party in the West at that time, was more in favor of state intervention than the Conservative party, which was the largest party in the East aside from the Social Democrats.

[8] PDS is the successor party of the SED, the ruling party in the former GDR, whereas SPD has been the big labor party in West Germany. CDU is the Christian Democrats, FDP is the Liberal Democrats.

[9] We present average marginal effects because the probit coefficients per se cannot be interpreted. Further, to make use of all information on the preference variables available over the years, we run three estimations, where every single estimation includes only those preference variables having a perfect overlap with respect to the years they were collected.

measures.[10] Thus, these results provide clear multivariate evidence that our preference variables are truly meaningful.

3. Self-Reliance in East and West Germany

We now turn to East-West differences in our six preference variables. The levels of agreement to the underlying survey questions for West Germans and for East Germans are presented in Columns (2) and (3) of Table 2. Altogether, East Germans show significantly lower levels of self-reliance than West Germans. Although these figures provide first evidence supporting the hypothesis that the socialist environment in the GDR made people less reliant on their own skills and abilities, they should be interpreted with caution. East and West Germans might differ in many other characteristics that are correlated with the preferences we are interested in. Unobserved heterogeneity could thus account for the preference differences rather than the socialist past.

To address the possibility that unobserved heterogeneity might drive the preference differences, we run multivariate probit regressions where we take the adjusted preference variables as our binary outcomes and include a wide range of individual level control variables. Specifically, we control for gender, age (and its square), education (lower secondary, medium secondary, higher secondary, or university), and family status (married and living with spouse or single). Furthermore, to proxy wealth, we include the logarithm of an individual's net monthly income[11] as well as a dichotomous variable that is unity for house or flat owners and zero for tenants to approximate mobility (DiPasquale and Glaeser, 1999). Moreover, we account for an individual's employment history by including a categorical control variable that describes the individual's unemployment spells during the 10 years preceding the interview (none, less than a year, more than a year).[12] Our variable of interest is a dummy variable that equals unity if a respondent is East German. The probit marginal effects with standard errors clustered at the state level are displayed in Table 3.

Table 3 about here

Controlling for a wide range of individual characteristics, the multivariate regressions show that East Germans exhibit less self-reliance than their West German counterparts. As can be

---

[10] To check the robustness of these associations, we used a different voting variable as outcome, where individuals were asked to state which party they voted for in the last general elections. The results are very similar to those presented in Table A.1.

[11] We compute real income by using the income in 2005 as the baseline and adjusting nominal income information from other years by the inflation rate.

[12] Keep in mind that our sample is restricted to entrepreneurs and employees; thus current unemployed individuals are not included in the sample.

seen from Column (1) of Table 3, the probability of disagreeing with the statement that the state should care for the sick, poor, and unemployed is by 10 percentage points lower for East Germans. As another example, in Column (4) we see that the likelihood of agreeing to the statement that rank differences are performance based and therefore acceptable is 9 percentage points lower for East Germans than for West Germans. Indeed, comparing the descriptive statistics from Table 2 and the point estimates of the multivariate regressions in detail, we find that the size of the preference gap is barely affected by the inclusion of individual control variables in a multivariate setting.

To this point, we can argue that the socialist regime in the GDR created an environment in East Germany in which we nowadays observe a lack of self-reliance. However, it could be argued that the substantial differences in preferences expressing self-reliance are mainly due to local labor market heterogeneity, since, e.g., the level of unemployment is much higher while GDP per capita is much lower in East Germany than in West Germany. We already control for a wide range of individual characteristics and restrict our sample to entrepreneurs and employed workers, i.e., unemployed individuals are not included in our sample. Nevertheless, even for those who are employed, economic conditions may differ a lot between East and West Germany, with the consequence that people living in East Germany might, for example, have a greater fear of unemployment than those living in West Germany, which might in turn influence their preferences. In short, we can imagine that individuals in economically poorer regions might have different preferences towards self-reliance than individuals living in more prosperous regions. Therefore, in a next step, we investigate whether the differences in self-reliance are driven merely by regional heterogeneity, i.e., regional economic conditions that differ between East and West Germany, or whether the shadow of the socialist regime reaches deeper and further.

To control for regional economic heterogeneity, we include the unemployment rate as well as GDP per capita by state in our multivariate regressions.[13] The data are provided by the German Federal Statistical Office. Similar to this approach, Alesina and Fuchs-Schuendeln (2007) use net payments between states from the German regional transfer system (*Laenderfinanzausgleich*) and other regional financial redistributions to control for regional heterogeneity in an investigation of preferences for redistribution. The figures of Alesina and Fuchs-Schuendeln (hereafter, AFS) are available for two years, 1997 and 2002, and are highly

---

[13] GDP per capita is expressed in real terms, i.e., we account for inflation and take 2005 as the baseline year.

correlated with our regional control variables.[14] The results of the regressions that account for regional heterogeneity are presented in Table 4.

Table 4 about here

For five out of six preference variables, we continue to find that East Germans differ from West Germans in the expected direction. Only for responses to the statement that everybody should get the money he needs (regardless of any performance), the East dummy switches its sign but is not significantly different from zero (Column (2) of Table 5). Although in some cases the size of the East German coefficient decreases once we control for regional heterogeneity, the differences are still economically substantial and in four out of six cases statistically significant at conventional levels. For example, the probability of agreeing to the statement the income differences give incentives to work hard is 8 percentage points lower for East Germans than for their West German counterparts. Overall, it seems that the shadow of the socialist past reaches deep and cannot be explained by mere differences in the economic prosperity between East and West Germany. Despite accounting for differences in unemployment rates and GDP per capita, East Germans are far less self-reliant than West Germans. In further regressions, which are available from the authors upon request, we find that individuals in every single East German state are less self-reliant than their West German counterparts.

As explained earlier, for ease of interpretation, we have coded our outcome variables as simple dichotomous variables. However, it is at least interesting to also exploit the full categorical information for all the preference variables in one specification. To this end, we run ordered logit regressions for all our outcome variables. Table A.2 in the Appendix presents the marginal effects of the ordered logit regressions separately for all categories of the outcome variables. To clarify interpretation, take column (1) of Table A.1 as an example where we can see that East Germans are 16.1 percentage points more likely to "fully agree" to the statement that the state should care for the sick, poor, and unemployed, while they are 10.5 percentage points less likely to "rather agree" with this statement, 4.9 percentage points less likely to tick "rather don't agree", and 0.7 percentage points less likely to tick "don't agree". Anyhow, these regressions do not provide substantial new insights and are in line with the probit results reported in Table 4. In summary, our multivariate results provide evidence that a lack of self-reliance was developed under the socialist regime and is still prevalent in

---

[14] Indeed, the pairwise correlation coefficient between the unemployment rate and the AFS net transfers on a federal state level for 1997 (2002) is -.94 (-.94); the correlation coefficient between real GDP per capita and the AFS net transfers for 1997 (2002) is -.64 (-.66).

East Germany even years after reunification; the past does indeed cast a long shadow upon the present. These differences in preferences between East and West Germans are meaningful and are not explained by individual characteristics or by regional economic heterogeneity alone.

4. Self-reliance and entrepreneurship

Column (4) and Column (5) of the descriptive statistics in Table 2 already give a first hint on how the analyzed preferences expressing self-reliance are associated with the decision to become an entrepreneur. We see that across all six preferences variables, entrepreneurs exhibit stronger self-reliance than employed persons. To assess whether the positive descriptive association between self-reliance and entrepreneurship is confirmed in a multivariate framework, we include our preference variables into an occupational choice equation while controlling for observable characteristics on the individual and regional level. The estimated occupational choice model is:

$$\Pr(y_i = 1 \mid \cdot) = \alpha + \beta_1 v_i + X_i \beta_2 + \varepsilon_i, \qquad (1)$$

where $\Pr(y_i = 1 \mid \cdot)$ is the conditional probability of being an entrepreneur. y is an indicator variable that takes on the value of unity if individual i is an entrepreneur and 0 if individual i is an employed worker. v is a dummy preference variable, which is unity for individuals who exhibit preferences expressing self-reliance, and which is zero for individuals with preferences rather expressing state-reliance. X is a set of control variables that might influence an individual's occupational choice and preferences. Here, we include the same control variables as in our earlier regressions—gender, age (and its square), education, marital status, previous unemployment spells, the house/flat owner dummy, and year dummies—as well as our regional controls, i.e., unemployment rate and real GDP per capita on the federal state level. In contrast to the previous specifications, we no longer include an individual's income since this variable is itself an outcome of occupational choice and thus would bias our results. Since the outcome is a dichotomous variable, the occupational choice equation is estimated by probit models using heteroskedasticity robust standard errors.

In column (1) of Table 5, we present the results of a simple occupational choice model without any regional controls and without any preference variables. The results are in line with previous empirical research in entrepreneurship. Women are less likely to become entrepreneurs than men. Education is positively associated with the likelihood of becoming an entrepreneur. Although not statistically significant, there is a tendency for experience to pay off, i.e., age is positively associated with entrepreneurship. Individuals with short

10

unemployment spells during the last 10 years are more likely to become entrepreneurs than those without any unemployment spells. This is in line with the fact that the eligibility for many public start-up subsidies is linked to previous unemployment of the applicant. It also seems that singles are more likely to become entrepreneurs, possibly because any risk involved in such an endeavor is theirs alone. Alternatively, one could say that being married shows a time allocation preference for family. House or flat owners are more likely to become entrepreneurs, perhaps due to the immobility implied by such ownership, which might well hinder an individual from changing occupational status.

In column (2) of Table 5, we additionally account for regional heterogeneity by including the unemployment rate and real GDP per capita at the state level as control variables. We can see that the regional unemployment rate tends to be positively correlated with entrepreneurship, although this association is statistically insignificant. The coefficient on GDP per capita, on the other hand, is highly significant and positively associated with entrepreneurship. Thus, we observe more entrepreneurship in wealthier regions. The coefficients of the individual level covariates are hardly affected by the inclusion of these regional level control variables.

Table 5 about here

We now use our preference variables to investigate whether the lack of self-reliance left by the socialist regime is an additional channel through which entrepreneurship is negatively affected. To make use of all information on the preference variables available over the years, we run three estimations, where each single estimation includes, in addition to all controls used in the estimations before, only those preference variables having a perfect overlap with respect to the years they were surveyed in. Specifically, we run a probit occupational choice model on repeated cross-sectional data of the years 1991, 1994, 2000, and 2004, where information on the preference variables (1) and (2) is available (Column (3) of Table 5). Column (4) of Table 5 presents the results for an occupational choice model using repeated cross-section data for the years 1991, 1994, 1998, 2000, and 2004, where we have information on our preference variables (3), (4), and (5). Another probit estimation is executed for the years 1994 and 2004 where we have information on the preference variable (6) (Column (5) of Table 5).

All coefficients of our preference variables show the expected sign, with five out of six being statistically highly significant. Again, the size of the value and attitude coefficients is economically substantial. For example, switching from agreeing with the statement that the state has to care for the sick, poor, and unemployed to disagreeing is associated with an

increase in the likelihood of becoming an entrepreneur of 5.5 percentage points. Remember that for this variable, the disagreement gap between East and West Germans was roughly 7.1 percentage points (Column (1) of Table 4). Accordingly, if East Germans developed the same preferences on this issue as West Germans, the share of entrepreneurs in East Germany would increase by 0.39 percentage points. Given that the unconditional difference in entrepreneurship rates for the subsample of individuals answering this preference question is 1.1 percentage points, eliminating the disagreement gap on this question would reduce the difference in entrepreneurship rates by 35 percent. With respect to the statement that differences in social status are just (by and large), switching from disagreement to agreement results in a 3.4 percentage point increase in the propensity to become an entrepreneur. In other words, if East Germans reached the average West German preference level on this issue, the share of entrepreneurs in East Germany would increase by roughly 0.44 percentage points and reduce the differences between East and West German entrepreneurship rates by 34 percent – the unconditional difference in entrepreneurship rates for the subsample of individuals answering to this preference question is 1.3 percentage points.

We ran several specification checks in order to test the robustness of our findings. One concern might be that, due to different connotations, East and West Germans understand the preference questions differently. To investigate this potential threat to our empirical results, we added an East dummy as well as interactions of the East dummy with the preference variables in a linear probability version of our occupational choice model. If there were systematic differences in the understanding of the survey questions between East and West Germans, we would expect the interaction terms to have a significant effect. But neither are the interaction effects of substantial size, nor are they of considerable statistical significance.[15] This gives us good confidence that East and West Germans do interpret the preference questions in a similar way. Another concern might be that an individual's unemployment history or regional unemployment might have different effects on an individual's decision to become an entrepreneur in East and West Germany. This could for example be the case when public start-up subsidies are more easily given to East German unemployed individuals than to West German unemployed individuals. To test this conjecture, we included an East dummy as well as interactions of the East dummy with an individual's previous unemployment history and with the regional unemployment rates in further specifications similar to the one

---

[15] The coefficients for the interaction terms range from 0.007 for preference question (2) (with main effects for the east dummy of 0.129 and the preference variable of -0.025) to -0.075 for preference question (1) (with main effects for the east dummy of 0.129 and the preference variable of -0.063). One out of six interaction terms is significant at the 10% level, i.e. the term for preference question (1).

presented in Columns (3) to (5) of Table 5. In one single specification, the interaction of the variable indicating individual unemployment of less than a year with the East dummy is significant at the 5 percent level and points in the same direction as the main effect. All the other interactions are far from conventional significance levels and of moderate size. This is an indication that East and West Germans do react to experiences of unemployment in a similar way. Further and most importantly, our finding of the positive effect of self-reliant preferences on entrepreneurship is not affected by this exercise. Thus we are confident that we do indeed measure differences in the preference structure between East and West Germany that turn out to be an obstacle to entrepreneurship in the former GDR.

Since ALLBUS provides us with information on whether an entrepreneur employs any workers or not, we can analyze whether we find any heterogeneity in the effects of self-reliance on entrepreneurship. To this end, we split the previous outcome variable to generate an alternative outcome variable that is unity for all entrepreneurs with more than one employed worker, and zero for employed workers. A further outcome variable is unity for all entrepreneurs with no or one employed worker, and zero for employed workers. We run probit models where we regress these two alternative outcome variables on the preferences expressing self-reliance, our individual level covariates, year dummies, and regional covariates. The results presented in Table 6 show that preferences expressing self-reliance are more strongly associated with being an entrepreneur with more than one employee (upper panel) than with being an entrepreneur with no or one employee (lower panel).[16] This supports the view that self-reliant preferences affect an individual's deliberate occupational choice and that the previous results do not just reflect the necessity to carve out an entrepreneurial career due to a lack of alternatives.

Table 6 about here

Our estimates yield average negative effects of the socialist regime on individuals' self-reliance which boil down to negative impacts on entrepreneurship. However, as nicely outlined by Wyrwich (2010), East German regions considerably differ with respect to the industrial history before and during German separation. Therefore, one might suspect that the impact of the socialist regime on preferences expressing self-reliance and in turn on entrepreneurship could be heterogeneous across East German regions. Unfortunately,

---

[16] Note that adding the preference coefficient from the upper panel to the respective coefficient of the lower panel gives the coefficient for the standard outcome variable entrepreneur (irrespective of the number of employed workers) since all outcome variables are dichotomous and therefore, the coefficients present percentage points.

ALLBUS does not allow any small scale regional comparisons. However, in an attempt to address potential regional heterogeneity due to differences in the industrial history, we draw on historic data on the share of entrepreneurs in 1925, i.e., before World War II and the German separation, at the federal state level. We run the preference estimations separately for the subsample of individuals living in federal states with above average shares of entrepreneurs in 1925 on the one hand and with below average shares of entrepreneurs in 1925 on the other hand. No clear picture emerges, i.e., we do not find that the impact of the socialist regime is systematically different in regions with a historically high share of entrepreneurs as compared to regions with a historically low share of entrepreneurs. This does not necessarily mean that there is no regional heterogeneity, but rather that, given the data at hand, we cannot satisfactorily address any issues concerning regionally heterogeneous impacts of the socialist regime in this paper. For future work, it would certainly be interesting to analyze the legacy of the socialist past with more refined, regionally small scale data.

5. The socialist regime and self-reliant preferences: Discussion of an alternative channel

Our research focus in this paper has been on persistent differences in self-reliant preferences between East and West Germans which negatively affect productive entrepreneurship and thus might hamper the transition process. Thus, we do not focus on the question how exactly the socialist regime of the GDR shaped individual preferences. Nevertheless, we would finally like to draw attention to a channel which has been neglected so far in the economic literature on the effects of the socialist regime on individuals' preferences. AFS analyze data from the general elections in 1898 and argue that before separation, individuals living in regions that would later become West Germany were, if anything, more in favor of state intervention than individuals living in regions that would later become East Germany. However, after the end of World War II, hundred thousands of people left what was then the Soviet zone of occupation (SZO) and should become the GDR in 1949. By 1961, when the Berlin Wall was built, more than 2.75 million people had left the SZO, or the GDR respectively, to live in West Germany (Falck et al., 2012). This constitutes a substantial fraction of the whole population living in the SZO in 1945 (roughly 17 percent). It seems natural to argue that those individuals who fled from the SZO are not a random draw from the whole population, but a self-selected sample.

Data from an additional retrospective survey in the German micro-census 1971, which covers a representative 1 percent sample of the whole German population, allows investigating some characteristics of those individuals that left the Soviet zone of occupation and the GDR in its

early days. The descriptive statistics from Table 7 reveal some peculiarities of those early East-West movers. They were clearly better educated than the average West German and far more often held white collar jobs or were civil servants.[17] Consequently, one can presume that the people who stayed in East Germany were less self-reliant than the average West German already before the socialist regime was thoroughly established. This could very well be interpreted as an alternative channel of how the socialist regime affected the preference structure of the East German population.

Table 7 about here

Unfortunately, we do not have any data on preferences expressing self-reliance of movers measured at the time these individuals fled. Such data could possibly provide further information on the potential selection effect. Yet, we can identify 129 individuals in the ALLBUS data who were born in East Germany and moved to West Germany before the Berlin Wall was built. For these early East-West movers, we can measure preferences expressing self-reliance in the 1990s and 2000s and compare their stated preferences to those of West Germans. Table 8 reports these statistics – first for all early East-West movers (Column (1)), then for all individuals born in and currently living in West Germany (Column (2)). In Column (3), we additionally calculate the preferences for a matched sample of West Germans. Here, we use nearest neighbor propensity score matching in order to ensure that individuals from both the East German mover group and the West German group are on average equally old.

Table 8 about here

The general picture of the difference between West Germans and the early East-West movers is very similar for the unmatched and the matched sample. Because the numbers of observations are very low, we do not draw any rigorous conclusions from this exercise. Still, the figures might provide some further tentative but suggestive evidence that the individuals who fled from the Soviet zone of occupation/ GDR were a selective sample of more self-reliant individuals. Early East-West movers more often than West Germans do disagree with the statement that the state should care for the sick, poor and unemployed, or that everybody should get the money he or she needs, regardless of any performance. Further, they are more likely than West Germans to agree to the statement that income differences provide incentives to work hard, and that rank differences are performance based and therefore acceptable. At

---

[17] It could well be that particularly civil servants fled from the East because they feared denazification might be more rigorous in the Soviet zone of occupation.

the same time, however, early East-West movers less often than West Germans think that the current welfare system reduces work incentives, which we would interpret as a rather state-reliant preference. Thus, in the end, the question to what extent the socialist regime already had an effect on the preference structure of its population even before the Berlin Wall was built remains somewhat open and gives room for future research.

6. Conclusion

Our analysis shows that East Germans living in the regions of the former socialist GDR express significantly lower self-reliant preferences than their West German counterparts do. These effects of the socialist regime are large in size and not explained by individual characteristics or by differences in economic development between East and West Germany alone. We find that the expression of self-reliant preferences documented in the ALLBUS survey is not only relevant for voting behavior but also for economically relevant and costly decisions. Thus, these survey data arguably do not only reflect expressive utility from individuals proclaiming preferences that they would oppose in a decisive situation (cf. Hillman, 2010). We investigate the economic relevance of the differences in individuals' self-reliance and find that self-reliant preferences are positively associated with entrepreneurship. If entrepreneurs are the agents of change in transition economies, our finding of a positive association between self-reliance and entrepreneurship suggests that a lack of self-reliant preferences persisting in East Germany as a shadow of the socialist past might slow down the transition process.

Although our paper collects some convincing pieces of evidence for a lack of self-reliance which hinders entrepreneurship in East Germany, we should keep the following caveats in mind. First, the rich individual level data of ALLBUS provides us with valuable and extensive information on individuals' self-reliant preferences. However, this comprehensive information comes at a cost since the data set does not allow us to address any questions of small-scale regional heterogeneity. One could for example imagine that the impact of the socialist regime was less strong in some smaller regions that are historically characterized by an entrepreneurial culture. With our data, these small-scale regional heterogeneities remain hidden as we determine an average effect of the socialist regime across all regions. A further caveat emerges from the fact that the ALLBUS data do not come with a panel structure. Therefore, we cannot observe transitions into entrepreneurship but can only exploit information on whether an individual is an entrepreneur at the time of the interview. Thus, we cannot completely rule out reverse causality, i.e., preferences being to some degree influenced

by occupational status. However, given that preferences are rather persistent over time while entrepreneurship is a highly dynamic process, reverse causality is arguably a minor issue.

Eventually, we challenge the idea that all preference differences between East Germans and West Germans are necessarily the outcome of being socialized under the socialist regime of the GDR. Our alternative explanation for observed differences between East and West Germans' preferences is that these differences were present before the socialist socialization actually set in. Precisely, we find that selective migration in the period between the end of World War II and the construction of the Berlin Wall in 1961 might have played a significant role. This argument has so far been ignored in the economic literature dealing with German separation and reunification. It seems worthwhile for future research to thoroughly explore differences in preferences, norms and attitudes between East and West Germany that were already in place before the socialist regime was actually established.

Appendix

Table A.1: Self-reliance and voting behavior ("Sonntagsfrage")

		Vote for SPD/PDS/The Greens				
		(1)		(2)		(3)
		mfx	std.err.	mfx	std.err.	mfx	std.err.
Preferences							
	(1)	-0.082***	0.024				
	(2)	-0.067***	0.016				
	(3)			-0.035**	0.015		
	(4)			-0.065***	0.016		
	(5)			-0.128***	0.017		
	(6)					-0.139***	0.022
Individual level controls		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes	
Regional level controls		Yes		Yes		Yes	
N		4,035		4,602		1,954	
Log pseudolikelihood		-2,684.92		-3,004.74		-1,252.71	

		Vote for CDU/FDP				
		(4)		(5)		(6)
		mfx	std.err.	mfx	std.err.	mfx	std.err.
Preferences							
	(1)	0.090***	0.022				
	(2)	0.070***	0.015				
	(3)			0.050***	0.015		
	(4)			0.085***	0.015		
	(5)			0.137***	0.015		
	(6)					0.124***	0.022
Individual level controls		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes	
Regional level controls		Yes		Yes		Yes	
N		4,035		4,602		1,954	
Log pseudolikelihood		-2,494.95		-2,723.27		-1,213.44	

Notes: The table reports probit average marginal effects (mfx) using robust standard errors. The following control variables are included: gender, age (and its square), education, previous unemployment spells, marital status, a dummy for house/flat owners, the logarithm of real personal income, regional unemployment rate, regional GDP per capita, and year dummies. Our value variables correspond to the six preference variables presented in Table 2 and are all coded as dummy variables that take on the value of unity for interviewee replies that are rather self-reliant, and zero for rather state-reliant preferences. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

Table A.2: Preference differences between East and West Germans: Ordered logit marginal effects

	Preference (1)		Preference (2)		Preference (3)		Preference (4)		Preference (5)		Preference (6)	
	mfx	std.err.	Mfx	std.err.	mfx	std.err.	mfx	std.err.	Mfx	std.err.	mfx	std.err.
Fully agree	0.161***	0.052	-0.025	0.017	-0.027**	0.012	-0.015	0.012	-0.034***	0.006	-0.072***	0.022
Rather agree	-0.105***	0.035	-0.043	0.028	-0.027*	0.013	-0.041	0.030	-0.105***	0.022	-0.104***	0.039
Rather don't agree	-0.049***	0.015	0.017	0.013	0.031**	0.014	0.019	0.014	0.037***	0.010	0.048***	0.015
Don't agree	-0.007***	0.003	0.051	0.033	0.022**	0.011	0.038	0.028	0.102***	0.022	0.127**	0.053
Individual level controls	Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Regional level controls	Yes		Yes		Yes		Yes		Yes		Yes	
N	5,100		5,025		5,914		5,916		5,966		2,424	
Log pseudo likelihood	-4,817.73		-6,357.12		-7,395.75		-7,276.53		-6,926.21		-3,082.41	

Notes: The table reports ordered logit marginal effects (mfx) separately for all categories of the outcome variables; standard errors are clustered at the state level. The following control variables are included: gender, age (and its square), education, previous unemployment spells, marital status, a dummy for house/flat owners, year dummies, the regional unemployment rate and real GDP per capita. Our outcome variables correspond to the seven preference variables presented in Table 2. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

References

Acs, Z., Audretsch, D.B., 1993. Small Firms and Entrepreneurship: An East-West Perspective. Cambridge University Press, Cambridge UK.

Alesina, A., Fuchs-Schuendeln, N., 2007. Good bye Lenin (or not?): The effect of communism on people's preferences. American Economic Review 97, 1507–1528.

Arikan, G., 2011. Economic individualism and government spending. World Values Research 4, 73–95.

Bauernschuster, S., Rainer, H., 2012. Political regimes and the family: How sex-role attitudes continue to differ in reunified Germany. Journal of Population Economics 25, 5-27.

Baumol, W. J., 1990. Entrepreneurship: Productive, unproductive, and destructive. Journal of Political Economy 98, 893-921.

Bergmann, H., Sternberg, R., 2007. The changing face of entrepreneurship in Germany. Small Business Economics 28, 205-221.

Bertrand, M., Mullainathan, S., 2001. Do people mean what they say? Implications for subjective survey data. American Economic Review 91, 67–72.

Caplan, B., 1996. Self-reliance and creative destruction. Submission to the Davis essay contest, Center for World Capitalism/Center for American Free Enterprise, Jacksonville FL. Available online: http://econfaculty.gmu.edu/bcaplan/davis2.htm. Retrieved May 14th 2012.

DiPasquale, D., Glaeser, E. L., 1999. Incentives and social capital: Are homeowners better citizens? Journal of Urban Economics 45, 354–385.

Earle, J.S., Sakova, Z., 2000. Business start-ups or disguised unemployment? Evidence on the character of self-employment from transition economies. Labour Economics 7, 575-601.

Estrin, S., Meyer, K., Bytchova, M., 2006. Entrepreneurship in transition economies. In: Casson, M., Basu, A., Yeung, B., Wadesdon, N. (Eds.), Oxford Handbook of Entrepreneurship. Oxford University Press, Oxford, pp. 693-709.

Falck, O., Heblich, S., Link, S., 2012. Forced migration and the effects of an integration policy in post-WWII Germany. The B.E. Journal of Economic Analysis & Policy 12, forthcoming.

Hanley, E., 2000. Self-employment in post-communist Eastern Europe: A refuge from poverty or road to riches? Communist and Post-Communist Studies 33, 379-402.

Hillman, A.L., 2010. Expressive behavior in economics and politics. European Journal of Political Economy 26, 403-418.

Hillman, A.L., 1994, The transition from socialism: An overview from an political economy perspective. European Journal of Political Economy 10, 191-225.

Johnson, S., Loveman, G., 1995. Starting Over in Eastern Europe: Entrepreneurship and Economic Renewal. Harvard Business School Press, Boston MA.

Kihlstrom, R. E., Laffont, J.-J., 1979. A general equilibrium entrepreneurial theory of firm formation based on risk aversion. Journal of Political Economy 87, 719–748.

Kornai, J., 1992. The Socialist System: The Political Economy of Communism. Princeton University Press, Princeton NJ.

McMillan, J., Woodruff, C., 2002. The central role of entrepreneurs in transition economies. Journal of Economic Perspectives 16, 153-170.

Murphy, K. M., Shleifer, A., Vishny, R.W., 1993. Why is rent-seeking so costly to growth? American Economic Review 83, 409-414. Reprinted in: Congleton, R.D., Hillman, A.L., Konrad, K.A. (Eds.), 2008. 40 Years of Research on Rent Seeking 2, Applications: Rent Seeking in Practice. Springer, Heidelberg, pp. 213-218.

MZU, 1971. Mikrozensus-Zusatzerhebung: Berufliche und soziale Umschichtung der Bevölkerung. GESIS, Cologne.

Rainer, H., Siedler, T., 2009. Does democracy foster trust? Journal of Comparative Economics 37, 251–269.

Runst, P., 2012. Post-socialist culture and entrepreneurship. The American Journal of Economics and Sociology, forthcoming.

Schumpeter, J. A., 1912. The Theory of Economic Development. Oxford University Press, New York NY.

Smallbone, D., Welter, F., 2001. The distinctiveness of entrepreneurship in transition economics. Small Business Economics 16, 249-262.

Sternberg, R., Otten, C., Tamásy, C., 2000. Global entrepreneurship monitor – Laenderbericht Deutschland 2000. Schumacher, Cologne.

Terwey, M., Bens, A., Baltzer, S., 2007. Datenhandbuch ALLBUS 1980–2006. ZA-No. 4241. GESIS, Cologne.

Wyrwich, M., 2010. Regional entrepreneurial heritage in a socialist and a post-socialist economy. DRUID Working Paper 10-20. DRUID, Copenhagen.

Tables

Table 1: Descriptive statistics

Occupational status	Employed worker	0.90	[10,622]	Living in…	Schleswig Holstein	0.03	[347]
	Entrepreneur	0.10	[1,231]		Hamburg	0.02	[197]
Gender	Male	0.58	[6,886]		Lower Saxony	0.08	[922]
	Female	0.42	[4,967]		Bremen	0.01	[66]
Schooling	No or lower secondary	0.33	[3,948]		North Rhine Westfalia	0.17	[1,986]
	Medium secondary	0.39	[4,544]		Hesse	0.06	[721]
	Higher secondary	0.09	[1,114]		Rhineland Palatinate	0.04	[468]
	University	0.19	[2,185]		Baden Wuerttemberg	0.10	[1,166]
Previous joblessness	None	0.79	[9,353]		Bavaria	0.14	[1,649]
	Up to a year	0.13	[1,481]		Saarland	0.01	[112]
	More than a year	0.08	[980]		Brandenburg	0.07	[839]
Marital status	Not married	0.35	[4,117]		Mecklenburg Western Pomerania	0.04	[526]
	Married	0.65	[7,734]		Saxony	0.11	[1,310]
House owner or tenant	Tenant	0.49	[5,732]		Saxony Anhalt	0.07	[780]
	House/flat owner	0.51	[5,933]		Thuringia	0.06	[764]
Age	Mean (in years)	40.32	[11,842]	East or West	East Germany	0.36	[4,219]
	Standard deviation (in years)	*11.03*			West Germany	0.64	[7,634]
Real income	Mean (in €)	1,550.50	[10,013]				
	Standard deviation (in €)	*1,019.68*					

Notes: Unless otherwise specified, the figures present percentage shares; numbers of observations are given in square brackets. Euro values are inflation-adjusted with 2005 as the baseline year.

Table 2: Questions revealing self-reliant preferences, and levels of agreement for relevant subgroups

	Agreement (in percent)				
	(1)	(2)	(3)	(4)	(5)
Do you agree?	All observations	East Germans	West Germans	Employed workers	Entrepre- neurs
1) "The state has to care for the sick, poor, old, and unemployed."	87.64	94.00	83.60	88.99	75.81
2) "Everybody should get the money he needs—regardless of any performance."	39.26	41.99	37.54	40.37	29.59
3) "Income differences give incentives to work hard."	56.78	48.53	61.66	56.03	62.95
4) "Rank differences are performance based and therefore acceptable."	48.33	40.24	53.16	47.24	57.35
5) "Differences in social status are just—by and large."	33.29	15.50	42.43	30.83	44.62
6) "The current welfare system reduces work incentives."	41.72	27.90	48.13	40.03	54.60

Notes: The table reports share of individuals that gave a positive answer ("fully agree" or "rather agree") on the respective survey question by subsample. Information on replies to statements 1) and 2) is available in the ALLBUS survey for the years 1991, 1994, 2000, and 2004. Information on replies to statements 3), 4), and 5) is available in the ALLBUS survey for the years 1991, 1994, 1998, 2000, and 2004, whereas information on replies to statements 6) is available in the ALLBUS survey for the years 1991 and 2004.

Table 3: Preference differences between East and West Germans

	Preference (1)		Preference (2)		Preference (3)		Preference (4)		Preference (5)		Preference (6)	
	mfx	std.err.	mfx	std.err.	mfx	std.err.	mfx	std.err.	mfx	std.err.	mfx	std.err.
East	-0.097***	0.009	-0.020*	0.011	-0.103***	0.012	-0.087***	0.016	-0.231***	0.020	-0.181***	0.043
Female	-0.015**	0.008	-0.016	0.015	-0.059***	0.019	-0.054***	0.020	-0.025**	0.012	-0.054***	0.017
Education												
Medium secondary	0.041***	0.012	0.120***	0.018	-0.090***	0.014	-0.092***	0.012	-0.005	0.015	-0.027	0.021
Higher secondary	0.045***	0.015	0.140***	0.027	-0.104***	0.026	-0.114***	0.029	-0.021	0.022	-0.060*	0.032
University education	0.050***	0.014	0.138***	0.027	-0.096***	0.019	-0.179***	0.017	-0.032**	0.013	-0.115***	0.021
Age	0.010***	0.001	0.006	0.004	-0.013***	0.004	-0.011***	0.004	-0.003	0.002	-0.012	0.008
Age squared (*1,000)	-0.090***	0.019	-0.086**	0.039	0.160***	0.051	0.157***	0.046	0.056**	0.028	0.160*	0.092
Unemployment in previous 10 years												
Less than a year	0.021	0.017	-0.015	0.027	-0.060***	0.023	-0.062***	0.024	-0.020	0.022	0.002	0.036
More than a year	-0.001	0.020	-0.092***	0.023	-0.071***	0.016	-0.049*	0.029	-0.067***	0.019	-0.067	0.042
Married	-0.000	0.010	0.013	0.014	0.026***	0.010	0.026*	0.014	-0.005	0.011	-0.028	0.018
House or flat owner	0.013*	0.007	0.055***	0.017	0.015	0.017	0.040**	0.019	0.036***	0.014	0.013	0.019
Log real personal income	0.032***	0.008	0.056***	0.009	0.024*	0.014	0.025**	0.013	0.093***	0.014	0.022	0.025
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
N	5,100		5,025		5,914		5,916		5,966		2,424	
Log pseudolikelihood	-1,721.59		-3,251.21		-3,940.48		-3,939.51		-3,399.06		-1,559.99	

Notes: The table reports probit average marginal effects (mfx); standard errors are clustered at the state level. The omitted categories are male, no/lower secondary education, no unemployment spells during the last 10 years, single, and tenant. Our outcome variables correspond to the six preference variables presented in Table 2 and are coded as dummy variables that take on the value of unity for interviewee replies that are rather self-reliant, and zero for rather state-reliant preferences. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

Table 4: Preference differences between East and West Germans including regional economic controls

	Preference (1)		Preference (2)		Preference (3)		Preference (4)		Preference (5)		Preference (6)	
	mfx	std.err.	mfx	std.err.	mfx	std.err.	mfx	std.err.	mfx	std.err.	mfx	std.err.
East	-0.071***	0.021	0.056	0.044	-0.079**	0.033	-0.062	0.045	-0.130***	0.033	-0.134**	0.063
Individual level controls	Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Regional level controls	Yes		Yes		Yes		Yes		Yes		Yes	
N	5,100		5,025		5,914		5,916		5,966		2,424	
Log pseudo likelihood	-1,718.02		-3,244.70		-3,938.32		-3,937.20		-3,393.23		-1,559.54	

Notes: The table reports probit average marginal effects (mfx); standard errors are clustered at the state level. The following control variables are included: gender, age (and its square), education, previous unemployment spells, marital status, a dummy for house/flat owners, the logarithm of real personal income, year dummies, the regional unemployment rate and real GDP per capita. Our outcome variables correspond to the six preference variables presented in Table 2 and are all coded as dummy variables that take on the value of unity for interviewee replies that are rather self-reliant, and zero for rather state-reliant preferences. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

Table 5: The association of preferences expressing self-reliance and entrepreneurship

	Entrepreneur (1)		Entrepreneur (2)		Entrepreneur (3)		Entrepreneur (4)		Entrepreneur (5)	
	mfx	std.err.	mfx	std.err.	mfx	std.err.	Mfx	std.err.	mfx	std.err.
Preferences										
(1)					0.055***	0.011				
(2)					0.024***	0.008				
(3)							0.010	0.008		
(4)							0.018**	0.008		
(5)							0.034***	0.008		
(6)									0.057***	0.012
Female	-0.036***	0.006	-0.035***	0.006	-0.027***	0.008	-0.032***	0.007	-0.029**	0.012
Education										
Medium secondary education	0.038***	0.006	0.041***	0.006	0.037***	0.009	0.051***	0.008	0.058***	0.014
Higher secondary education	0.074***	0.011	0.074***	0.011	0.078***	0.017	0.088***	0.016	0.069***	0.024
University education	0.086***	0.008	0.087***	0.008	0.071***	0.012	0.093***	0.011	0.088***	0.018
Age	0.002	0.002	0.002	0.002	0.004	0.002	0.006**	0.002	0.003	0.004
Age squared (*1,000)	0.020	0.019	0.019	0.019	-0.002	0.028	-0.025	0.027	0.000	0.000
Prev. Unemployment										
Less than a year	0.029***	0.010	0.030***	0.010	0.057***	0.015	0.053***	0.014	0.080***	0.022
More than a year	-0.018*	0.010	-0.017*	0.010	-0.012	0.014	-0.012	0.013	-0.011	0.020
Married	-0.012*	0.007	-0.010	0.007	-0.015	0.010	-0.012	0.009	-0.004	0.014
House owner	0.039***	0.006	0.038***	0.006	0.043***	0.008	0.047***	0.008	0.039***	0.012
Unemployment rate			0.001	0.001	0.003**	0.001	0.003***	0.001	0.005**	0.002
GDP per capita			0.154**	0.063	0.229***	0.087	0.272***	0.085	0.000**	0.000
Year dummies	Yes		Yes		Yes		Yes		Yes	
N	11,557		11,557		5,742		6,655		2,749	
Log pseudo likelihood	-3,642.48		-3,637.83		-1,768.80		2,104.50		-912.77	

Notes: The table reports probit average marginal effects using robust standard errors. The omitted categories are West Germany, male, no/lower secondary education, no unemployment spells during the last 10 years, single, and tenant. Our value and attitude variables correspond to the six values and attitudes presented in Table 2 and are all coded as dummy variables that take on the value of unity for interviewee replies that are rather self-reliant, and zero for rather state-reliant preferences. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

Table 6: The association between preferences expressing self-reliance and entrepreneurship/self-employment

		Entrepreneur (more than 1 employee)					
		(1)		(2)		(3)	
		mfx	std.err.	mfx	std.err.	Mfx	std.err.
Preferences							
	(1)	0.046***	0.008				
	(2)	0.013**	0.006				
	(3)			0.008	0.006		
	(4)			0.010	0.006		
	(5)			0.023***	0.006		
	(6)					0.061***	0.010
Individual level controls		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes	
Regional level controls		Yes		Yes		Yes	
N		5,443		6,288		2,579	
Log pseudo likelihood		-1,046.58		-1,230.74		-505.77	

		Self-employed (up to 1 employee)					
		(1)		(2)		(3)	
		mfx	std.err.	mfx	std.err.	Mfx	std.err.
Preferences							
	(1)	0.013	0.009				
	(2)	0.013**	0.007				
	(3)			0.002	0.006		
	(4)			0.010	0.007		
	(5)			0.015**	0.007		
	(6)					0.005	0.010
Individual level controls		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes	
Regional level controls		Yes		Yes		Yes	
N		5,439		6,294		2,598	
Log pseudo likelihood		-1,071.70		-1,298.05		-588.74	

Notes: The table reports probit average marginal effects (mfx) using robust standard errors. In the upper panel, the outcome variable is a dummy variable that is unity for entrepreneurs with more than one employee, and zero for employees. In the lower panel, the outcome variable is a dummy variable that is unity for entrepreneurs with no or at most one employee, and zero for employees. The following control variables are included: gender, age (and its square), education, previous unemployment spells, marital status, a dummy for house/flat owners, the logarithm of real personal income, year dummies, the regional unemployment rate, and the regional GDP per capita. Our value variables correspond to the six values and attitudes presented in Table 2 and are all coded as dummy variables that take on the value of unity for interviewee replies that are rather self-reliant, and zero for rather state-reliant preferences. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

Table 7: Characteristics of West Germans and early East-West movers

	Local West Germans	Early East-West movers
Demographics		
Female	60.4	57.4
Age 1950 (mean)	42.6	40.3
Married	64.9	70.4
Highest Education		
Basic school	64.3	44.6
Secondary school	25.8	38.9
High school	1.3	3.2
Technical school	4.8	9.1
University	1.4	3.0
Assets		
Real estate 1939	48.5	40.3
Occupation 1939		
Unemployed	0.3	0.2
Unskilled worker	20.5	15.4
Entrepreneur (agricultural)	3.6	2.0
Entrepreneur (non-agricultural)	4.9	5.4
Civil servant	2.7	3.9
Civil servant (qualified)	1.4	3.7
White collar worker	13.9	24.6
Craftsman	12.8	13.0
Pensioner, other non-employed	2.7	2.6
Family worker	7.7	4.4
Housewife	29.4	24.8
N	146,786	5,633

Notes: Unless otherwise stated, the table reports percentage shares. Early East-West movers are individuals who moved from East Germany to West Germany before the year 1961, i.e., before the construction of the Berlin Wall. The sample is restricted to those individuals who have completed education in 1939 and reported an occupation in 1939. Data: MZU (1971). The German micro census provides official representative statistics of the population and the labor market in Germany. It has a sampling fraction of one percent of the German population.

Table 8: Self-reliant preferences of West Germans and early East-West movers

Do you agree?	(1) Early East-West movers	(2) West-West full sample	(3) West-West matched sample
1) "The state has to care for the sick, poor, old, and unemployed."	80.28	83.18	84.00
2) "Everybody should get the money he needs—regardless of any performance."	33.80	37.07	45.21
3) "Income differences give incentives to work hard."	77.94	60.80	57.75
4) "Rank differences are performance based and therefore acceptable."	58.57	52.85	45.95
5) "Differences in social status are just—by and large."	43.66	44.27	54.67
6) "The current welfare system reduces work incentives."	34.29	48.88	48.65

Notes: The Table shows agreement to survey questions regarding self-reliant preferences for individuals born in East Germany that moved to West Germany before the Berlin Wall was built in 1961 (Early East-West movers) in Column (1) and for individuals born in and currently living in West Germany (West-West) in Column (2). Column (2) reports results for the whole West-West sample, whereas Columns (3) reports results for a nearest neighbor matched sample that ensures that individuals from both groups are equally old. Information on replies to preference statements for these subsamples is available in the ALLBUS survey for the years 1991, 1994, 2000, and 2004.