DEPARTMENT OF SOCIAL POLICY AND
INTERVENTION

BARNETT PAPERS IN SOCIAL RESEARCH

Educational inequality after state socialism: The effect of German unification revisited

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WORKING PAPER 17-09

September 2017

Educational inequality after state socialism: The effect of German unification revisited

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ABSTRACT: *In 1990, German unification led to an abrupt and extensive restructuring of the educational system and economy of the German Democratic Republic (GDR) as the latter was reintegrated into the Federal Republic of Germany (FRG). However, the consequences of this large-scale institutional change for the educational inequality between children from different social class backgrounds in East Germany continue to be poorly understood. This article seeks to shed new light on this question by using a quasi-experimental approach to examine the difference in educational inequality between East and West Germany before and after German unification. We compare changes in the class gradient in educational attainment in East and West Germany across six birth cohorts, including three cohorts of individuals who completed their schooling after unification. Contrasting with past findings, our results show that before unification, educational inequality at the mid-secondary, upper-secondary and tertiary level was substantially lower in East Germany than in West Germany and that unification led to a substantial and sustained convergence of the level of educational inequality in East Germany towards that of West Germany.*

Key words: Post-socialist transition, educational inequality, intergenerational social mobility, difference-in-difference design, Central and Eastern Europe, equality of opportunity, market transition, education policy, German reunification, state socialism

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Working paper published: 1 September 2017

Introduction

The ideological basis of the German Democratic Republic (GDR) as a 'worker and peasant state' mandated a strong commitment to educational equality and the promotion of educational opportunities for working-class youth (Fischer, 1992; Below, 1997). The ruling Socialist Unity Party of Germany (SED) sought to achieve this goal by fundamentally restructuring the GDR's educational system and economy during the post-war transition to communism (Connelly, 2000; Geißler, 1983). Accordingly, the *Law for the Democratization of the German School* that was passed in 1946 stated that "[…] the new school system must be structured in a way that guarantees to all youth, girls and boys, children from urban and rural areas, independent of the economic resources of their parents, an equal right to education and its realization according to their ability and predisposition" (as cited in Fischer, 1992, p. 34, author translation).

The substantial restructuring of the educational system and economy that occurred in the GDR and other state-socialist regimes of Central and Eastern Europe renders them a large-scale historical experiment in increasing equality of opportunity by way of institutional reform (Szelényi, 1998). Amongst all state-socialist countries, the reform trajectory of GDR is particularly well suited for empirical analysis. Not only were the educational system and the economy of the GDR fundamentally restructured under state socialism, but this restructuring was then abruptly reversed with German unification in 1990, when the GDR was reintegrated into the Federal Republic of Germany (FRG). Moreover, the strong institutional continuity of the FRG's education system and economy throughout the second half of the twentieth century makes the FRG a robust control case, demonstrating the development of educational inequalities in the absence of state-socialist reforms and their reversal with unification.

Despite the unique reform trajectory of East Germany, there continues to be little evidence on the extent to which the GDR succeeded in reducing educational inequality between children from different social class backgrounds, and on whether these achievements were subsequently

reversed after unification. Some studies found a decline in educational inequality in the early years of the GDR (see e.g., Below, 1997; Geißler, 1983). Yet, these studies tend to draw on official statistics from the GDR that are of questionable reliability and do not allow for a precise measurement of individuals' parental class background.[1] Moreover, there is some evidence of an increase in educational inequality in the GDR starting in the mid-1970s (Solga, 1997; Geißler, 1983). This finding is consistent with the 'socialist transformation hypothesis', which expects an initial decline in educational inequality as socialist reforms are implemented, but suggests that these early gains in educational inequality are lost as parents in advantaged positions adapt to the changed institutional context and find new ways to advantage their children (see Blossfeld and Shavit, 1993; Szelényi, 1998). However, it is not clear whether in the late phase of the GDR, the level of educational inequality in the GDR had reverted fully towards that of the FRG, or whether working class children in the GDR still had better educational prospects than their peers in the FRG.

Evidence on changes in educational inequality in other state-socialist countries is mixed. With regards to Hungary, Bukodi and Goldthorpe (2010) find a decline in educational inequality in the early period of state socialism and a subsequent increase in later years as the country transitioned to a market-based economy (also see Szelényi and Aschaffenburg, 1993, and Szelényi, 1998). A similar pattern is found in Russia by Gerber and Hout (1995). However, with regards to Czechoslovakia and Poland, Mateju (1993) and Heyns and Bialecki (1993) find that educational inequality between individuals from different social backgrounds did not decline or may even have increased compared to the pre-socialist period.

[1] GDR statistics tend to be based on a very broad definition of 'the working class', which at times includes state bureaucrats. Furthermore, rather vague categories such as 'the intelligence' (*die Intelligenz*) are used to describe privileged social groups (see, Below, 1997; Geißler, 1983).

Aside from the lack of comparable evidence on the level of educational inequality in the GDR and the FDR before unification, few studies have systematically examined whether and to what extent the level of educational inequality in the GDR changed with the fundamental restructuring of the GDR's educational system and economy in the wake of German unification. A notable exception is the study by Kesler (2003), published in this journal, which seeks to examine the level of educational inequality in East and West Germany before and after unification. However, Kesler acknowledges several serious limitations of her study. First and most importantly, in Kesler's study the sample of individuals who obtained their schooling in East Germany before unification is comprised of only 270 individuals and the sample of individuals who obtained their schooling in East Germany after unification is comprised of only 152 individuals (Kesler, 2003, p. 474). Given that the study further subdivides respondents into groups of individuals from six distinct social class backgrounds, this small sample size puts Kesler's study at risk of making a type II error (false negative), i.e. concluding that there are no differences between her comparison groups, when in fact such differences exist. This casts doubt on the robustness of Kesler's findings that there was little difference in educational inequality between East and West Germany before unification, and that unification did not increase educational inequality in East Germany.

A second limitation of the study by Kesler—in part due to the study having been conducted only about a decade after German unification—is that it compares only one pre-unification cohort and one post-unification cohort, as opposed to examining over-time change across multiple cohorts in East and West Germany. This prevents her study from identifying whether a potential change in educational inequality after unification reflects only a short-lived effect that may be due to the economic crisis triggered by unification, or whether unification had a sustained effect on educational inequality which may be attributed to the institutional restructuring of the East-German educational system and economy.

Third, Kesler's study is limited in that it only considers educational inequality in terms of individuals' completion of upper-secondary education. Therefore, it remains unclear whether potential differences in educational inequality between East and West Germany pre- and post-unification apply to the upper-secondary level only, or whether they are already visible at the mid-secondary level and carry through to the tertiary level. This is problematic, particularly considering the substantial reforms of mid-secondary schooling in East Germany—discussed in further detail below—and given the known importance of tertiary qualifications for individuals' labour market chances in Germany (Müller et al., 1998).

Kesler's finding that educational inequality did not increase with German unification contrasts with studies of other post-socialist countries, which generally find an increase in the intergenerational transmission of inequality after the post-socialist transition (see Gerber and Hout, 2004, on Russia, Lippényi and Gerber, 2016, and Bukodi and Goldthorpe, 2010, on Hungary; and the cross-national study by Jackson and Evans, 2017). However, as discussed in further detail below, these studies are themselves limited in that they tend of to only focus on one or more (post-)socialist countries, and thus lack a control case that would permit them to identify the observed over-time changes in inequality as resulting from the post-socialist transition *per se*, as opposed to other prominent over-time trends at the time that are not primarily related to the post-socialist transition, such as the trend of educational expansion or the growth of the service economy (see Hadjar and Becker, 2009; Wren, 2013).

The main aim of this article is to overcome the abovementioned limitations of the existing literature in order to address the following two research questions: First, was educational inequality lower in East Germany than in West Germany before unification? Second, if such east-west difference in educational inequality existed before unification, did the level of educational inequality in East Germany increase and converge towards the level of educational inequality in West Germany after unification? In order to address these two questions, we

compare the level of educational inequality between individuals from different social class backgrounds in East and West Germany across six five-year birth cohorts: 1960-64, 1965-69, 1970-74, 1975-79, 1980-84, 1985-89. This multiple cohort design and the use of West Germany as a comparison case allows us to distinguish the unification effect from potentially confounding over-time trends in educational inequality. Furthermore, it enables us to examine both the short and long-term consequences of German unification. Rather than relying on official statistics from the GDR, we work with data from two German survey programmes which provide comparable information on the social class backgrounds and educational careers of a large sample of East and West-German individuals.

Why expect educational inequality to be lower in the GDR than in the FRG?

With the goal of breaking the 'educational privilege' of the middle and upper classes and to advance the educational and labour market chances of individuals from working-class backgrounds the Socialist Unity Party of Germany (SED) radically restructured the educational system and economy of East Germany after the Second World War (Geißler, 1983; Below, 1997). This interventionist approach by the GDR leadership stands in sharp contrast to the liberal educational and economic policies of the FRG, which largely upheld the institutional structure of the pre-war period.

One key reform implemented by the GDR leadership was the universalization of education up until the mid-secondary level and the abolishment of the traditional tripartite structure that allocated students into a lower-secondary, mid-secondary and upper-secondary school track after primary school (Below, 1997). This tripartite system had been in place before the war and prevailed in the FDR thereafter (Cortina et al., 2008). In the GDR, it was replaced by a comprehensive school, the *Polytechnische Oberschule* (POS), which jointly schooled all

children until grade ten (Below, 1997). Contrasting with the universalisation of mid-secondary education, upper-secondary education in the GDR continued to be highly selective. Importantly however, the GDR administration implemented a series of 'counter-privileging' measures that were designed to facilitate the access of children from working-class backgrounds to the upper-secondary school, the *Erweiterte Oberschule* (EOS). Accordingly, the selection of pupils into upper-secondary school was not only based on their performance, but also depended on their social background—by way of a quota system that positively discriminated in favour of children from working-class backgrounds—and on the 'political attitude and societal engagement' of children and their parents (Marggraf, 1993). Moreover, the GDR provided several alternative avenues for obtaining the *Abitur*, including via advanced dual vocational training (the *Berufsausbildung mit Abitur*) and via so-called Worker and Farmer Colleges (*Arbeiter-und-Bauern-Fakultäten*) (Geißler, 1983). By contrast, in the FRG alternative routes to the *Abitur* were relatively scarce and admission to the upper-secondary school track was primarily based on teacher recommendations as well as parents' preferences (Cortina et al., 2008).

Both the universalization of mid-secondary education and the 'counter-privileging' measures at the upper-secondary level can be expected to have decreased cross-class inequalities in educational attainment at the mid- and upper-secondary level in the GDR. This may be expected to further have translated into increased educational equality at the tertiary level, which is likely to have been reinforced by the provision of stipends for children from working-class backgrounds and targeted publicity campaigns (*Bildungswerbung*) that informed members of the working class and the rural population of the benefits of pursuing higher education (Geißler, 1983).

Aside from the educational reforms discussed above, the flattening of the income distribution in the planned economy of the GDR (Speder and Habich, 1999) can also be expected to have

had a bearing on the educational inequality between children from different parental class backgrounds. The reduced level of inequality in the economic resources that parents in different social class positions in the GDR could devote to the development and education of their children—e.g., via providing additional tutoring and learning materials—is likely to have further decreased educational inequality. By contrast, the higher level of economic inequality in the 'social market economy' of the FRG (ibid.) is likely to have reinforced cross-class differences in educational attainment.

While the educational and economic characteristics of the GDR reviewed above would lead one to expect a lower level of educational inequality in the GDR, as compared to the FRG, it is important to note potentially countervailing forces that may have muted or offset potential advances in equalizing educational opportunity in the GDR. As suggested by the abovementioned socialist transformation hypothesis (Blossfeld and Shavit, 1993), parents from higher social class positions may have adapted to the counter-privileging reforms in the GDR by finding new ways of leveraging their economic, political and cultural resources to advantage their children. This expectation has received some support by research suggesting that that the political elite in the GDR used their political clout to advance their children's educational and labour market career (see Solga, 1994). Such dynamic may have been reinforced by the substantial in-kind privileges—such as luxury homes and goods—that accompanied high political office in the GDR (Lenski, 1994) and by the founding of 'special schools' (*Spezialschulen*) that predominantly admitted students from privileged social backgrounds (Optiz, 1979; Meier and Reimann, 1977).[2] It thus remains an empirical question to what extent

[2] These *Spezialschulen* were designed to support exceptionally well performing children in achieving outstanding performances in the sciences, arts and sports. Only about 2-5 percent of pupils were enrolled in these *Spezialschulen* (Opitz, 1979; Meier and Reimann, 1977).

the GDR succeeded in realizing its ideological commitment to reducing the level of educational inequality, relative to that of the FRG.

Why expect a unification effect on educational inequality in East Germany?

German unification in 1990 led to an abrupt reintegration of the educational system of the GDR into that of the FRG. Starting in 1991 pupils in East Germany found themselves attending the same type of schools as their West-German peers. Similarly, the East-German variant of the 'shock therapy' meant that the institutional architecture of the East-German economy was remoulded along the lines of West Germany's social market economy in a rushed process of economic liberalization. The radical institutional reconfiguration of the East-German educational system and economy contrasts with what can be described as a 'frozen landscape' of institutional stasis in West Germany at the time of unification (see, e.g., Cortina et al., 2008).

The assimilation of the East-German educational system into the West-German model meant that universal schooling until the mid-secondary level was abolished and ability tracking into different school types after fourth grade was reintroduced.[3] At the same time, the abovementioned measures of positive discrimination in favour or working class youth at the secondary and tertiary level were abandoned (Mintrop and Weiler, 1994). Considering the likely equalizing effects of the reforms of the educational system in the GDR discussed in the previous section, the reversal of these reforms with German unification can be expected to have led to an increase in educational inequality in East Germany (i.e. the former GDR) after unification. Given the known class-gradient in lower-secondary attainment in West Germany (Blossfeld, 1993; Betthäuser, 2017), the re-introduction of the lower-secondary school track

[3] The upper-secondary school track (*Gymnasium*) was reinstated as a school form in all East-German states and even in states where the lower and mid-secondary tracks (*Hauptschule* and *Realschule*) were combined in one school—this was the case in Saxony and Thuringia—pupils were separated into distinct ability groups. The lower-secondary qualification (*Hauptschulabschluss*) after ninth grade was re-established as a school leaving qualification.

and the lower-secondary qualification (*Hauptschulabschluss*) is likely to have increased the proportion of children from working-class backgrounds who leave school before obtaining a mid-secondary qualification, thus increasing educational inequality at the mid-secondary level. Similarly, the abolition of positive discrimination in favour of working-class youth and the removal of the vocational route to obtaining the *Abitur* can be expected to have led to an increase in educational inequality at the upper-secondary and tertiary level.

Alongside the rapid overhaul of the East-German educational system, the East-German economy was fundamentally reshaped according to the rulebook of free-market capitalism (Mayer 2006; Gebel, 2011). In sharp contrast to the planned economy of the GDR, prices and trade were liberalised and previously state-run businesses were privatised in the span of four years (Windorf, 1996). As was the case for most other former member states of the soviet bloc, the East-German 'shock therapy' was more shock than therapy and led a to a deep economic recession that was accompanied by a vast increase in unemployment, economic insecurity and income inequality (Hunt, 2008; Hauser and Becker, 2000; Gebel, 2011). Given the likely rigidifying consequences of economic inequality for educational inequality (see Jackson and Evans, 2017), the crisis may have reinforced the effects of the educational restructuring on educational inequality in East Germany after unification. In our analysis, we therefore examine both the short-run effect of German unification on educational inequality, which may be magnified by the effects of the economic recession, and the long-run effect, which can be taken to reflect the institutional changes that occurred with German unification.

Method, data and variables

The abrupt assimilation of the institutional structure of the East-German educational system and economy into that of West Germany with unification constitutes a unique quasi-

experimental setting for studying the effects of large-scale institutional change on educational inequality. We examine the effects of this institutional restructuring by way of a *difference-in-difference* design, comparing the difference in educational inequality in East and West Germany before and after unification (Angrist and Pischke, 2009; Gangl, 2010).[4] Using West Germany as a control unit allows us to examine whether any over-time change in educational inequality in East Germany is due to the institutional restructuring in the wake of unification, as opposed to other potentially confounding over-time changes, such as educational expansion. For this reason, using a *difference-in-difference* design constitutes an advantage over existing studies of the post-socialist transition which lack a comparison unit (cf. Jackson and Evans, 2017; Gerber and Hout, 2004, Lippényi and Gerber, 2016, Bukodi and Goldthorpe, 2010).

We examine the level of educational inequality between individuals from different social class backgrounds in East and West Germany across six five-year birth cohorts: 1960-64, 1965-69, 1970-74, 1975-79, 1980-84, 1985-89.[5] The 1970-74 cohort is the last cohort of individuals who received their full schooling before unification. We therefore use this cohort as the reference category in all our analyses. All members of the 1975-79 cohort made the transition to upper-secondary education after unification and the younger members of this cohort received their full secondary education in unified Germany. Similarly, all members of the 1980-84 and 1985-89 cohorts received their full secondary education after unification. Accordingly, if the institutional restructuring of the East-German education system and economy with unification had an effect on educational inequality, we would expect to see a convergence in the level of educational inequality between East and West Germany in the younger three cohorts.

[4] A similar research design has been used by Goldstein and Kreyenfeld (2011) to study the effects of German unification on fertility.

[5] Individuals were allocated to these cohorts based on their year of birth and whether they attended school in East or West Germany.

Individuals were coded as East and West Germans based on the region in which they received their schooling.

We use the German Socio-Economic Panel (SOEP) as the primary dataset for our analyses (see Wagner et al., 2007). In order to avoid any potential bias due to survey specificities, we replicate our results by running all our models on a secondary dataset. For this purpose, we use the German General Social Survey (ALLBUS/GGSS) (see Wasmer et al., 2014). While most previous studies on educational and labour market inequalities in Germany use the 'complete case analysis' approach and thus rely on the assumption that missingness in the data is completely at random (White et al., 2010), we impute missing data points using multiple imputation by chained equations and thereby limit the risk of potential bias related to systematic item missingness in our data.[6]

The dependent variables of our analyses are three binary educational threshold variables, measuring first, whether individuals have attained a school qualification at the mid-secondary level or above, second, whether they have attained a school qualification at the upper-secondary level, and third, whether they obtained a tertiary level qualification. Our focal independent variable, parental class, is operationalised using the European Socio-Economic Classification (ESeC). The ESeC schema allocates individuals to different social class positions based on their occupation and employment status (Wirth et al., 2010; Rose and Harrison 2010). This clear and transparent allocation principle allows for a consistent classification of parents in East and West Germany and permits us to avoid issues of comparability due to different interpretations of the meaning and scope of social class categories, which constituted a serious limitation of previous studies of social inequality in the GDR (see, e.g., Below, 1997, and Geißler, 1983).

[6] For a detailed discussion of the advantages of multiple imputation using chained equations in research on social stratification see Kuha (2013).

We measure parents' social class position using a four-category version of the ESeC schema, differentiating between (1) the unskilled working class, (2) the skilled working class, (3) the intermediate class and (4) the salariat. We differentiate between individuals from unskilled and skilled working-class backgrounds, as past research has shown a substantial difference in the educational attainment between these two groups in Germany (Betthäuser, 2017). We derive the parental class position from fathers' and mothers' class positions using the dominance approach. This approach allocates parents to a social class position according to the higher social class position of the two spouses. Parents' social class position is measured at age fifteen of the cohort members. We control for individuals' gender and age in all our models.[7]

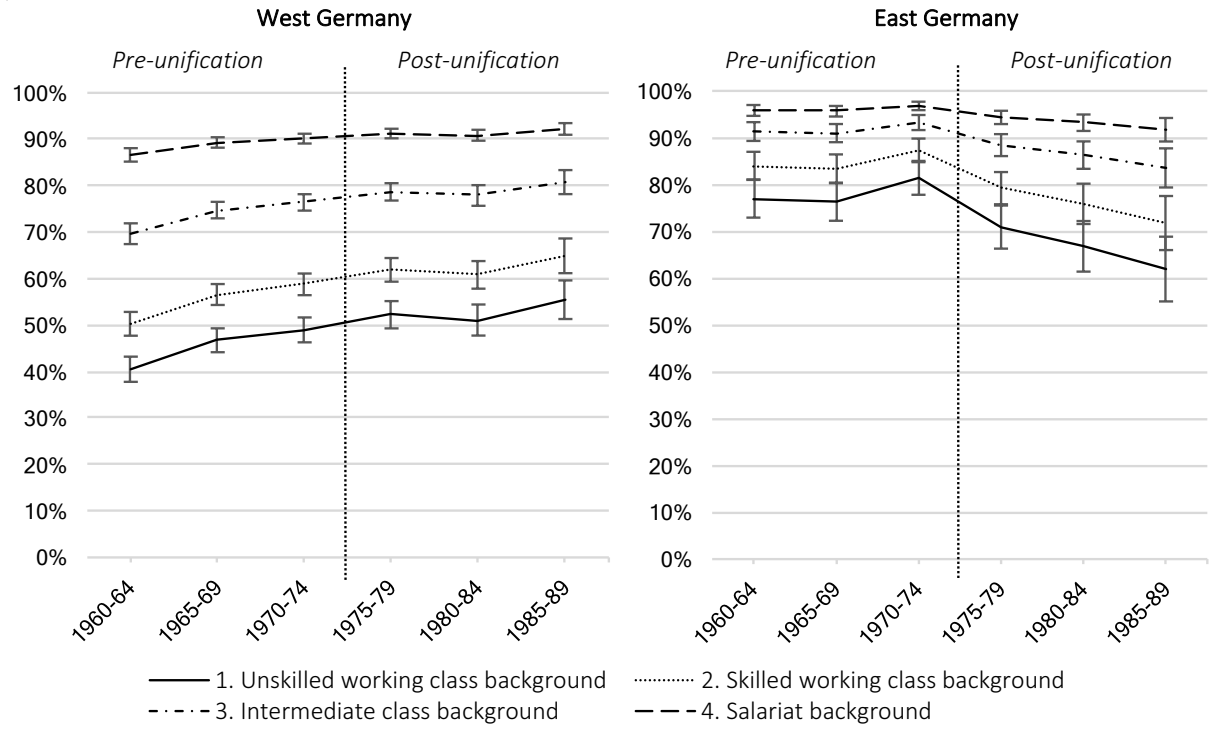
Results

The first aim of this paper is to assess whether and to what extent educational inequality was lower in the GDR than in the FRG before unification. Second, we seek to examine whether, if such east-west difference in educational inequality existed before unification, the level of educational inequality in the East Germany increased and converged towards the level of educational inequality in West Germany after unification. To address these questions, we run a series of binary logit models for East and West Germany respectively with our three binary educational thresholds as the outcome variables. Our focal explanatory variables are individuals' parental class background and birth cohort. We present our results in the form of a series of figures showing the predicted probabilities of crossing the three educational thresholds for different social origin groups in East and West Germany. Tables reporting average marginal effects and their statistical significance are given in Tables A1-A6 in the Online Appendix. We

[7] We also ran all our models separately by gender and found that our findings hold for both women and men. Controlling for age is important particularly in the East-German context, given the prominence of alternative avenues for obtaining secondary and tertiary qualifications (Geißler, 1983).

replicated all our results using the ALLBUS data (see Tables A7-A12 in the Online Appendix). The results are highly consistent between the SOEP and the ALLBUS and bear out the same conclusions.

Figure 1. Predicted probabilities of obtaining a mid-secondary education for different birth cohorts in West and East Germany



Notes: Predicted probabilities based on M2 and M4 of Table A1.

Figure 1 shows the predicted probability of children from different social class backgrounds to obtain a qualification at the mid-secondary level or above, for each birth cohort in East and West Germany respectively. For the three birth cohorts of children who completed their schooling before unification, we observe, first, that the total share of pupils attaining an educational qualification at the mid-secondary level or above was higher in the GDR than was the case in the FRG. Second, we observe that educational inequality was substantially lower in the GDR than was the case in the FRG.[8] Both the higher overall level of mid-secondary

[8] To confirm the statistical significance of the difference in educational inequality between East and West Germany before unification, we run a binary logit model for the combined pre-unification cohorts including an interaction between parental class and a dummy variable indicating whether individuals received their schooling in East or West

attainment and the lower level of educational inequality between individuals from working class background and children from higher class backgrounds at the mid-secondary level are likely to be the result of efforts in the GDR to universalise education up until tenth grade. However, it can also be seen that even in the late phase of the GDR, there was a substantial proportion of students who did not attain the mid-secondary qualification and a considerable class gradient in mid-secondary attainment.

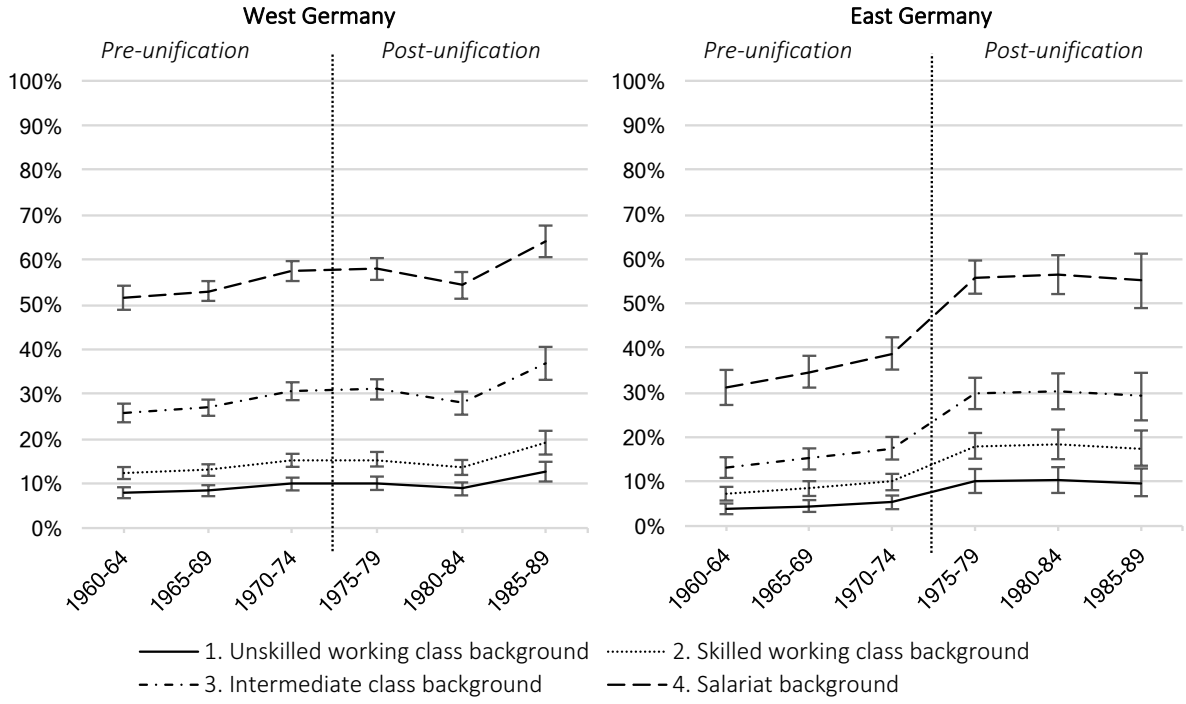
With regards to the effect of unification, we observe a notable drop in the overall proportion of pupils who obtain a qualification at the mid-secondary level or above between the third and fourth birth cohort in East Germany. This development likely reflects the reintroduction of the lower-secondary school track (*Hauptschule*) and the lower-secondary leaving qualification (*Hauptschulabschluss*) after unification. Importantly however, the drop in mid-secondary attainment appears to have been concentrated amongst children from working-class backgrounds, thus leading to an increase in the educational inequality between this group and individuals from intermediate class and salariat backgrounds.[9] This increase in educational inequality appears to persist across the three birth cohorts who completed their schooling after unification, suggesting that it is not primarily a result of the post-unification economic crisis, but instead can be attributed to the institutional changes that occurred with unification. It is important to note, however, that despite a clear convergence in the level of inequality in mid-secondary attainment in East Germany towards that of West Germany, educational inequality

Germany (See M2 in Table A2 in the Online Appendix). The statistically significant interaction terms confirm the difference in educational inequality at the mid-secondary level between East and West Germany that we observe in Figure 1.

[9] M4 of Table A1 in the Online Appendix shows a substantial and statistically significant rise in the inequality between children from unskilled working-class backgrounds (the reference category) and children from intermediate class and salariat backgrounds for the last three cohorts. While the average marginal effects also suggest a rise in the educational inequality between children from unskilled and skilled working-class backgrounds, this is not statistically significant.

at the mid-secondary level remained higher in West Germany compared to East Germany even after unification.[10]

Figure 2. Predicted probabilities of obtaining an upper-secondary education for different birth cohorts in West and East Germany



Notes: Predicted probabilities based on M2 and M4 of Table A3.

Figure 2 shows the predicted probabilities of attaining a qualification at the upper-secondary level for different social origin groups in East and West Germany respectively. In contrast to our findings for the mid-secondary level, for the three pre-unification cohorts we find that the overall share of pupils attaining an upper-secondary qualification appears to have been substantially lower in the GDR than in the FRG. This is likely to be a consequence of the restrictive admission requirements for upper-secondary enrolment in the GDR (Gebel, 2011). We also observe a considerable level of inequality in upper-secondary attainment in the GDR.

[10] The statistical significance of this post-unification difference is indicated by the interaction terms in M4 of Table A2.

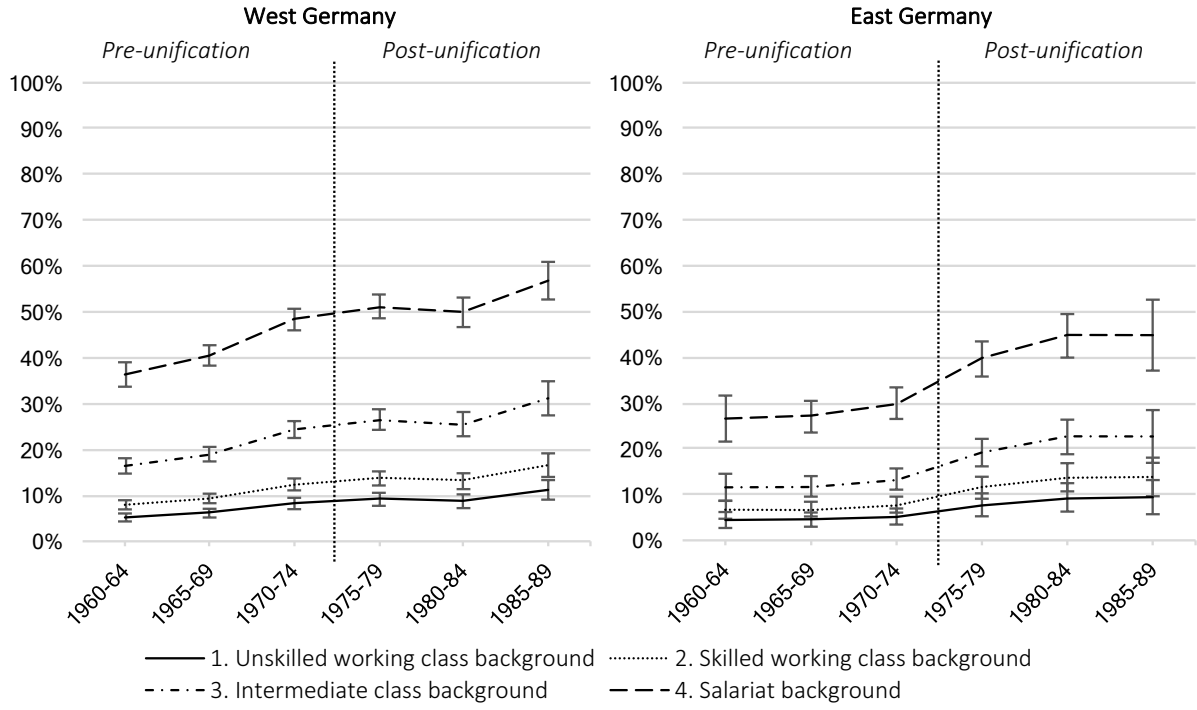
Children from salariat backgrounds were about 25 percentage points more likely to obtain an upper-secondary qualification than was the case for children from working-class backgrounds. However, the left-hand panel of Figure 2 shows that in the FRG the level of inequality in upper-secondary attainment between children from salariat and working-class backgrounds was larger yet, at about 40 percentage points.[11] Hence, while a considerable level of inequality in upper-secondary attainment remained in the GDR, the counter-privileging measures in the country appear to have succeeded in compressing cross-class inequality at this level, relative to the FRG.

Regarding the effect of unification, we observe a notable rise in the proportion of individuals who obtain the upper-secondary qualification between the third and fourth birth cohort in East Germany. This development is consistent with past findings and has been attributed to the relaxation of admission criteria and the founding of new upper-secondary schools (*Gymnasien*) in East Germany (Schreier, 1996; Below, 1997; Gebel, 2011). Importantly, the rise in upper-secondary attainment appears to have mainly benefitted children from salariat and intermediate class backgrounds, while the probability of obtaining an upper-secondary qualification only rose marginally for children from unskilled and skilled working-class backgrounds. Consequently, educational inequality at the upper-secondary level increased and after unification it all but resembled the level of educational inequality in West Germany.[12] Similar to the observed increase in inequality at the mid-secondary level, this rise in educational inequality after unification was sustained across all three post-unification cohorts. It can thus not be attributed primarily to the rigidifying effects of the economic post-unification crisis, but is likely to reflect the institutional changes that occurred with unification, particularly re-

[11] The statistical significance of this East-West difference is confirmed by the interactions terms shown in M2 of Table A4 in the Online Appendix.
[12] The statistical significance of this increase in educational inequality after unification is confirmed by the interactions terms shown in M4 of Table A3 in the Online Appendix.

introduction of early ability tracking and the abolishment of positive discrimination in favour of pupils from working-class backgrounds.

Figure 3. Predicted probabilities of obtaining a tertiary education for different birth cohorts in West and East Germany



Notes: Predicted probabilities based on M2 and M4 of Table A5.

Figure 3 demonstrates that the east-west differences and over-time development in educational inequality at the upper-secondary level are mirrored at the tertiary level. For the three pre-unification cohorts, we find that the overall share of individuals attaining a tertiary qualification appears to have been notably lower in the GDR than in the FRG. Again, this is consistent with previous findings and has been attributed to the lower share of individuals who obtained an upper-secondary qualification in the GDR (Gebel, 2011; Kehm, 2004). While we observe a considerable gap in tertiary-level attainment between different social origin groups in the GDR,

this gap was substantially larger in the FRG.[13] This difference in the inequality in tertiary-level attainment is likely to be a consequence of the lower degree of inequality in upper-secondary attainment in the GDR, relative to the FRG, and may also reflect the abovementioned provision of stipends for working-class youth and the publicity campaigns targeted at this group to inform them about the benefits of higher education.

With unification, we observe a notable rise in the proportion of pupils who obtain a tertiary-level qualification in East Germany. This development is likely to be a result of the increase in the share of individuals with an upper-secondary qualification and the founding of new tertiary level institutions, particularly technical universities (*Fachhochschulen*) (Kehm, 2004). As was the case for the expansion of upper-secondary education in East Germany after unification, the expansion of tertiary education appears to have mainly benefitted children from salariat and intermediate class backgrounds, while the probability of obtaining a tertiary qualification only rose marginally for children from unskilled and skilled working-class backgrounds. Consequently, educational inequality at the tertiary level increased after unification and almost completely converged towards the level of educational inequality in West Germany.[14] This rise in educational inequality at the tertiary level after unification is sustained across the three post-unification cohorts and as such is likely to results not primarily from the post-unification economic crisis, but from the sustained increase in inequality at the upper-secondary level and the abolishment of stipends and information campaigns targeted specifically at individuals from working-class background.

[13] The statistical significance of this East-West difference is confirmed by the interactions terms shown in M2 of Table A6 in the Online Appendix.
[14] The statistical significance of this increase in educational inequality after unification is confirmed by the interactions terms shown in M4 of Table A5 in the Online Appendix.

Conclusion

Using the FRG as a comparison case, our article has sought, first, to examine the extent to which state socialism in the GDR succeeded in reducing educational inequalities between children from different social class backgrounds. Second, we investigated whether the institutional assimilation of the (former) GDR into the FRG with German unification led to a convergence of the level of educational inequality in East Germany towards that of West Germany.

Our first main finding is that educational inequality at the mid-secondary, upper-secondary and tertiary level was substantially lower in the GDR than in the FRG, even in the late phase of the GDR. This lower level of educational inequality in the GDR is likely to reflect the efforts of the GDR leadership to universalise mid-secondary education, as well as a range of 'counter-privileging' measures that sought to promote the educational attainment of children from working-class backgrounds at the upper-secondary and tertiary level. These measures included a quota-system that positively discriminated in favour of working class children in the admission to upper-secondary schools (*Erweiterte Oberschulen*), as well as stipends and information campaigns targeted at increasing the participation of working class children in tertiary education.

Our second main finding is that educational inequality at the mid-secondary, upper-secondary and tertiary level in East Germany increased substantially after German unification and converged towards the level of educational inequality in West Germany. While the level of educational inequality at the mid-secondary level in East Germany remained somewhat below that of West Germany, the degree of educational inequality at the upper-secondary and tertiary level all but resembled that of West Germany after unification. Children from working-class backgrounds in East Germany lost out most in relative terms after unification. They were over-

represented in the increased proportion of children leaving school before completing mid-secondary education and they hardly benefitted from the educational expansion that occurred at the upper-secondary and tertiary level in the wake of unification.

Importantly, our multiple cohort design allowed us to examine whether this increase in educational inequality in East Germany after unification was merely a short-term phenomenon that may have been caused be the post-unification economic crisis, or whether the increase in educational inequality persisted in the long-run, reflecting the permanent changes in the institutional structure of the East-German educational system and economy that occurred in the wake of unification. We find the latter to be the case, as the post-unification increase in educational inequality in East Germany was sustained across the three post-unification cohorts we examine.

Our findings suggest that the results of the study by Kesler (2003) that showed little difference in educational inequality between East and West Germany before unification and no increase educational inequality in East Germany after unification are likely to be false negatives that are due to the very small sample size used in her study. To the contrary, our findings are in line with studies from other post-socialist countries that have shown an increase in the intergenerational transmission of inequality after the post-socialist transition (Gerber and Hout, 2004, Lippényi and Gerber, 2016, and Bukodi and Goldthorpe, 2010; Jackson and Evans, 2017).

Last, our findings also speak forcefully to the debate in social stratification research on the role of institutional change in the intergenerational transmission of inequality (Blossfeld and Shavit, 1993; Goldthorpe, 2016; Betthäuser, 2017; Esping-Andersen and Wagner, 2012). The tenor of much of the literature on this issue has been that educational inequality is highly persistent across-generations and largely immune to efforts to decrease educational inequality by way of

policy reforms. While our study does not allow us to identify the causal role of any specific institution in accounting for the observed east-west and over-time differences in educational inequality that we observe, it provides strong evidence that the combined institutional differences between the GDR and the FRG had a substantial effect on the relative level of educational inequality in the two countries and that the institutional restructuring of the East-German educational system and economy after unification led to a notable increase in educational inequality.

Acknowledgements

The author would like to express his gratitude to Erzsébet Bukodi for her invaluable comments on earlier drafts of this paper.

Funding

The research for this paper was funded by the Economic and Social Research Council (ESRC Grant ES/J500112/1).

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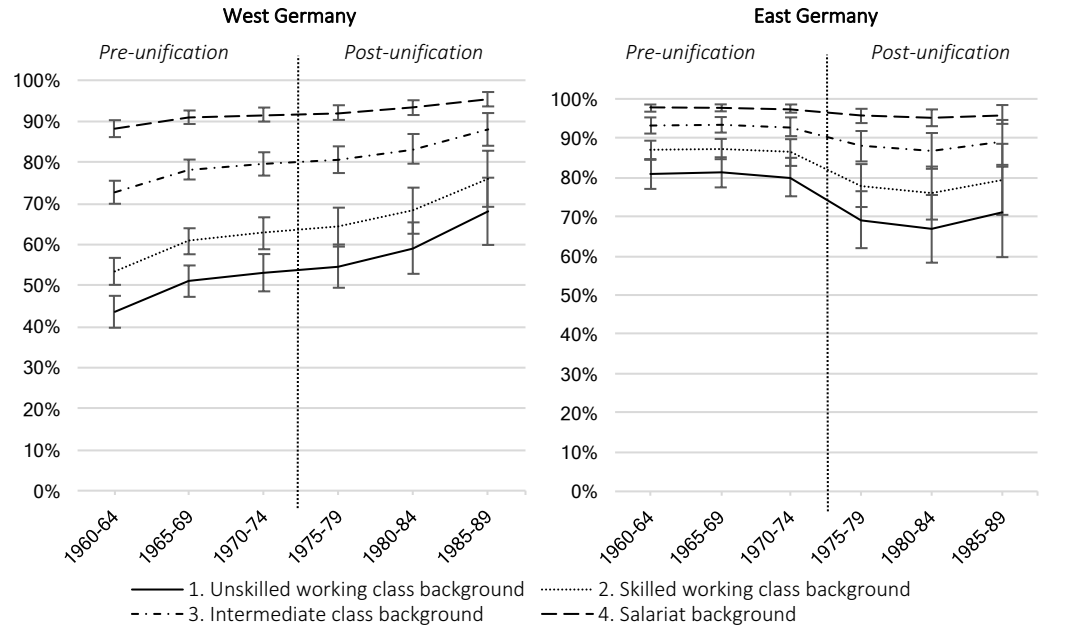
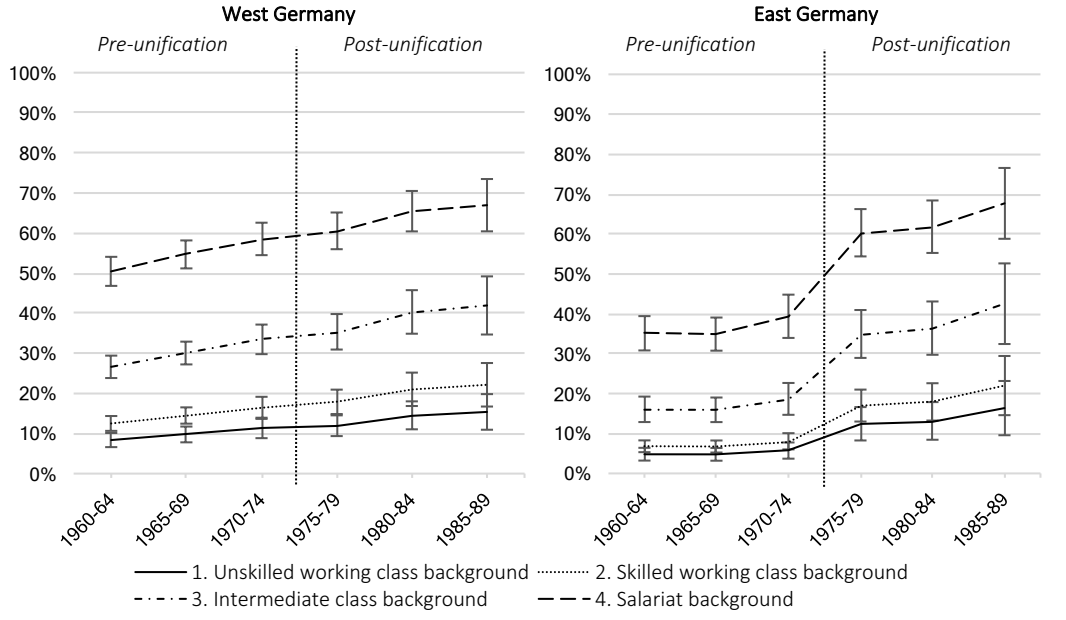
Appendix

Figure A1. Predicted probabilities of obtaining a mid-secondary education for different birth cohorts in West and East Germany (ALLBUS)



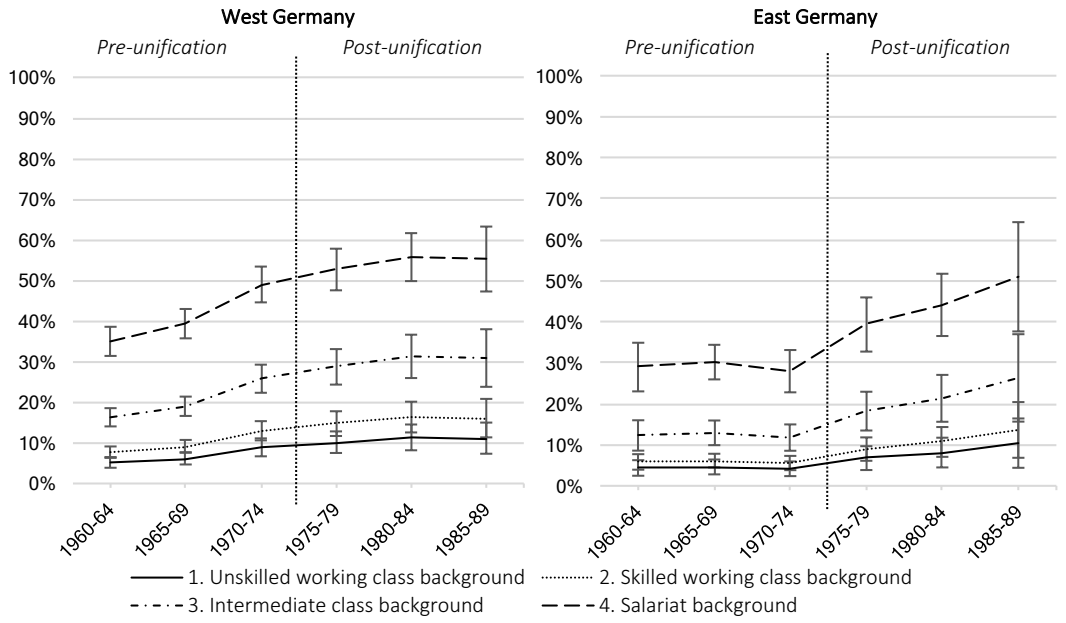
Notes: Predicted probabilities based on M2 and M4 of Table A7 (ALLBUS).

Figure A2. Predicted probabilities of obtaining an upper-secondary education for different birth cohorts in West and East Germany (ALLBUS)



Notes: Predicted probabilities based on M2 and M4 of Table A9.

Figure A3. Predicted probabilities of obtaining a tertiary education for different birth cohorts in West and East Germany (ALLBUS)



Notes: Predicted probabilities based on M2 and M4 of Table A11.

Table A1. Effect of parental class background on mid-secondary attainment in West and East Germany, binomial logit, avg. marginal effects (SOEP)

	West Germany		*East Germany*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (ref.)				
2. Skilled working class	0.098 ***	0.098 ***	0.076 ***	0.058 ***
3. Intermediate class	0.277 ***	0.274 ***	0.156 ***	0.116 ***
4. Salariat	0.419 ***	0.412 ***	0.206 ***	0.151 ***
Birth cohort				
1960-64	-0.069 ***	-0.085 ***	-0.020	-0.044
1965-69	-0.017	-0.022	-0.023 *	-0.052 *
1970-74 (ref.)				
1975-79	0.023 *	0.033 *	-0.050 ***	-0.106 ***
1980-84	0.015	0.021 **	-0.072 ***	-0.147 ***
1985-90	0.045 **	0.065 **	-0.100 ***	-0.196 ***
Gender				
Male (ref.)				
Female	0.096 ***	0.124 ***	0.054 ***	0.110 ***
Age	0.003 ***	0.004 ***	0.000	0.001
Parental class * 1960-64 birth cohort				
2. Skilled working class		0.000		0.011
3. Intermediate class		0.017		0.025
4. Salariat		0.050		0.035
Parental class * 1965-69 birth cohort				
2. Skilled working class		0.000		0.013
3. Intermediate class		0.006		0.030
4. Salariat		0.014		0.041
Parental class * 1975-79 birth cohort				
2. Skilled working class		-0.001		0.025
3. Intermediate class		-0.010		0.058
4. Salariat		-0.022		0.082 **
Parental class * 1980-84 birth cohort				
2. Skilled working class		-0.001		0.033
3. Intermediate class		-0.006		0.079 *
4. Salariat		-0.014		0.112 **
Parental class * 1985-90 birth cohort				
2. Skilled working class		-0.004		0.041
3. Intermediate class		-0.021		0.101 *
4. Salariat		-0.044		0.147 **

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 25,726*

Table A2. Effect of parental class background on mid-secondary attainment pre- and post-unification, binomial logit, avg. marginal effects (SOEP)

	Pre-unification		*Post-unification*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (ref.)				
2. Skilled working class	0.108 ***	0.113 ***	0.078 ***	0.081 ***
3. Intermediate class	0.257 ***	0.286 ***	0.241 ***	0.257 ***
4. Salariat	0.366 ***	0.427 ***	0.356 ***	0.389 ***
Region				
West Germany (ref.)				
East Germany	0.189 ***	0.318 ***	0.097 ***	0.160 ***
Gender				
Male (ref.)				
Female	0.089 ***	0.133 ***	0.077 ***	0.119 ***
Age	0.001	0.001	0.002 *	0.003 *
Parental class * East Germany				
2. Skilled working class		-0.044		-0.013
3. Intermediate class		-0.140 ***		-0.063
4. Salariat		-0.235 ***		-0.116 **

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 25,726*

Table A3. Effect of parental class background on upper-secondary attainment, binomial logit, avg. marginal effects (SOEP)

	West Germany		*East Germany*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (ref.)				
2. Skilled working class	0.050 ***	0.053 ***	0.053 ***	0.046 ***
3. Intermediate class	0.197 ***	0.208 ***	0.138 ***	0.121 ***
4. Salariat	0.462 ***	0.476 ***	0.366 ***	0.334 ***
Birth cohort				
1960-64	-0.047 ***	-0.019 ***	-0.044 **	-0.015 **
1965-69	-0.036 **	-0.015 **	-0.024	-0.008
1970-74 (ref.)				
1975-79	0.004	0.002	0.125 ***	0.048 ***
1980-84	-0.026	-0.011	0.130 ***	0.050 ***
1985-90	0.060 **	0.028 **	0.118 ***	0.045 ***
Gender				
Male (ref.)				
Female	0.005	0.002	0.031 **	0.011 **
Age	0.002 **	0.001 **	0.000	0.000
Parental class * 1960-64 birth cohort				
2. Skilled working class		-0.009		-0.012
3. Intermediate class		-0.029		-0.029
4. Salariat		-0.040		-0.062
Parental class * 1965-69 birth cohort				
2. Skilled working class		-0.007		-0.006
3. Intermediate class		-0.022		-0.016
4. Salariat		-0.030		-0.033
Parental class * 1975-79 birth cohort				
2. Skilled working class		0.001		0.033
3. Intermediate class		0.002		0.075 **
4. Salariat		0.003		0.124 ***
Parental class * 1980-84 birth cohort				
2. Skilled working class		-0.005		0.035
3. Intermediate class		-0.016		0.078 **
4. Salariat		-0.021		0.127 ***
Parental class * 1985-90 birth cohort				
2. Skilled working class		0.012		0.031
3. Intermediate class		0.035		0.071 **
4. Salariat		0.039		0.118 ***

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 25,726*

Table A4. Effect of parental class background on upper-secondary attainment pre- and post-unification, binomial logit, avg. marginal effects (SOEP)

	Pre-unification		*Post-unification*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (ref.)				
2. Skilled working class	0.056 ***	0.065 ***	0.040 ***	0.039 ***
3. Intermediate class	0.183 ***	0.208 ***	0.177 ***	0.176 ***
4. Salariat	0.422 ***	0.458 ***	0.459 ***	0.458 ***
Region				
West Germany (ref.)				
East Germany	-0.120 ***	-0.042 ***	0.008	0.004
Gender				
Male (ref.)				
Female	-0.003	-0.001	0.044 ***	0.020 ***
Age	0.000	0.000	0.000	0.000
Parental class * East Germany				
2. Skilled working class		-0.031 *		0.001
3. Intermediate class		-0.087 ***		0.004
4. Salariat		-0.143 ***		0.006

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 25,726*

Table A5. Effect of parental class background on tertiary-level attainment in West and East Germany, binomial logit, avg. marginal effects (SOEP)

	West Germany		*East Germany*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (rf.)				
2. Skilled working class	0.037 ***	0.042 ***	0.032 **	0.041 ***
3. Intermediate class	0.147 ***	0.161 ***	0.096 ***	0.117 ***
4. Salariat	0.378 ***	0.401 ***	0.275 ***	0.320 ***
Birth cohort				
1960-64	-0.076 ***	-0.030 ***	-0.020	-0.008
1965-69	-0.052 ***	-0.021 ***	-0.016	-0.007
1970-74 (rf.)				
1975-79	0.021	0.009	0.061 ***	0.026 ***
1980-84	0.011	0.005	0.095 ***	0.043 ***
1985-90	0.066 **	0.030 **	0.098 ***	0.044 ***
Gender				
Male (ref.)				
Female	-0.057 ***	-0.023 ***	0.029 **	0.013 **
Age	0.008 ***	0.003 ***	0.006 ***	0.002 ***
Parental class * 1960-64 birth cohort				
2. Skilled working class		-0.014		-0.004
3. Intermediate class		-0.049 **		-0.011
4. Salariat		-0.089 ***		-0.027
Parental class * 1965-69 birth cohort				
2. Skilled working class		-0.010		-0.003
3. Intermediate class		-0.033		-0.009
4. Salariat		-0.057 **		-0.022
Parental class * 1975-79 birth cohort				
2. Skilled working class		0.004		0.012
3. Intermediate class		0.013		0.032
4. Salariat		0.020		0.069
Parental class * 1980-84 birth cohort				
2. Skilled working class		0.002		0.019
3. Intermediate class		0.007		0.050
4. Salariat		0.011		0.102 *
Parental class * 1985-90 birth cohort				
2. Skilled working class		0.012		0.019
3. Intermediate class		0.038		0.051
4. Salariat		0.055 *		0.104 *

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 25,726*

Table A6. Effect of parental class background on tertiary attainment pre- and post-unification, binomial logit, avg. marginal effects (SOEP)

	Pre-unification		*Post-unification*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (*rf.*)				
2. Skilled working class	0.043 ***	0.048 ***	0.022 *	0.023 **
3. Intermediate class	0.135 ***	0.148 ***	0.130 ***	0.136 ***
4. Salariat	0.351 ***	0.374 ***	0.348 ***	0.358 ***
Region				
West Germany (*rf.*)				
East Germany	-0.072 ***	-0.029 ***	-0.031 **	-0.012 **
Gender				
Male (ref.)				
Female	-0.047 ***	-0.019 ***	-0.001	-0.001
Age	0.004 ***	0.002 ***	0.009 ***	0.003 ***
Parental class * East Germany				
2. Skilled working class		-0.016		-0.004
3. Intermediate class		-0.046 **		-0.019
4. Salariat		-0.088 ***		-0.035

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 25,726*

Table A7. Effect of parental class background on mid-secondary attainment, binomial logit, avg. marginal effects (ALLBUS)

	West Germany		*East Germany*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (ref.)				
2. Skilled working class	0.097 ***	0.096 ***	0.066 ***	0.062 ***
3. Intermediate class	0.273 ***	0.265 ***	0.136 ***	0.127 ***
4. Salariat	0.401 ***	0.385 ***	0.185 ***	0.172 ***
Birth cohort				
1960-64	-0.075 ***	-0.095 ***	0.004	0.008
1965-69	-0.015	-0.021	0.005	0.012
1970-74 (ref.)				
1975-79	0.011	0.016	-0.054 **	-0.109 **
1980-84	0.041	0.060	-0.067 **	-0.133 **
1985-90	0.094 ***	0.150 ***	-0.043	-0.089
Gender				
Male (ref.)				
Female	0.082 ***	0.108 ***	0.039 ***	0.083 ***
Age	0.000	0.000	-0.001	-0.001
Parental class * 1960-64 birth cohort				
2. Skilled working class		0.002		-0.002
3. Intermediate class		0.026		-0.005
4. Salariat		0.061		-0.007
Parental class * 1965-69 birth cohort				
2. Skilled working class		0.001		-0.003
3. Intermediate class		0.007		-0.007
4. Salariat		0.014		-0.010
Parental class * 1975-79 birth cohort				
2. Skilled working class		-0.001		0.025
3. Intermediate class		-0.006		0.060
4. Salariat		-0.011		0.091
Parental class * 1980-84 birth cohort				
2. Skilled working class		-0.005		0.030
3. Intermediate class		-0.023		0.072
4. Salariat		-0.043		0.110
Parental class * 1985-90 birth cohort				
2. Skilled working class		-0.017		0.021
3. Intermediate class		-0.066		0.050
4. Salariat		-0.112 *		0.074

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 10,720*

Table A8. Effect of parental class background on mid-secondary attainment pre- and post-unification, binomial logit, avg. marginal effects (ALLBUS)

	Pre-unification		*Post-unification*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (*rf.*)				
2. Skilled working class	0.087 ***	0.099 ***	0.086 *	0.090 *
3. Intermediate class	0.217 ***	0.271 ***	0.241 ***	0.263 ***
4. Salariat	0.303 ***	0.403 ***	0.342 ***	0.381 ***
Region				
West Germany (*rf.*)				
East Germany	0.203 ***	0.325 ***	0.062 ***	0.125 ***
Gender				
Male (ref.)				
Female	0.069 ***	0.108 ***	0.062 ***	0.089 ***
Age	-0.001	-0.001	-0.004	-0.009
Parental class * East Germany				
2. Skilled working class		-0.046		-0.015
3. Intermediate class		-0.150 ***		-0.061
4. Salariat		-0.243 ***		-0.104

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 10,720*

Table A9. Effect of parental class background on upper-secondary attainment, binomial logit, avg. marginal effects (ALLBUS)

	West Germany		*East Germany*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (*rf.*)				
2. Skilled working class	0.049 ***	0.053 ***	0.025 *	0.023 *
3. Intermediate class	0.210 ***	0.222 ***	0.138 ***	0.129 ***
4. Salariat	0.458 ***	0.473 ***	0.352 ***	0.336 ***
Birth cohort				
1960-64	-0.062 **	-0.029 **	-0.022	-0.009
1965-69	-0.031	-0.015	-0.023	-0.009
1970-74 (rf.)				
1975-79	0.017	0.009	0.144 ***	0.067 ***
1980-84	0.064 *	0.033 *	0.157 ***	0.074 ***
1985-90	0.079 *	0.041 *	0.215 ***	0.106 ***
Gender				
Male (ref.)				
Female	-0.010	-0.005	0.025 *	0.011 *
Age	0.000	0.000	0.001	0.000
Parental class * 1960-64 birth cohort				
2. Skilled working class		-0.012		-0.003
3. Intermediate class		-0.040		-0.017
4. Salariat		-0.052		-0.033
Parental class * 1965-69 birth cohort				
2. Skilled working class		-0.006		-0.004
3. Intermediate class		-0.019		-0.018
4. Salariat		-0.024		-0.035
Parental class * 1975-79 birth cohort				
2. Skilled working class		0.003		0.022
3. Intermediate class		0.010		0.096 *
4. Salariat		0.012		0.142 **
Parental class * 1980-84 birth cohort				
2. Skilled working class		0.012		0.024
3. Intermediate class		0.036		0.103 *
4. Salariat		0.036		0.150 **
Parental class * 1985-90 birth cohort				
2. Skilled working class		0.015		0.033
3. Intermediate class		0.043		0.132 *
4. Salariat		0.043		0.177 **

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 10,720*

Table A10. Effect of parental class background on upper-secondary attainment pre- and post-unification, binomial logit, avg. marginal effects (ALLBUS)

	Pre-unification		*Post-unification*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (*rf.*)				
2. Skilled working class	0.027 **	0.033 **	0.082 ***	0.085 ***
3. Intermediate class	0.155 ***	0.186 ***	0.278 ***	0.284 ***
4. Salariat	0.385 ***	0.432 ***	0.528 ***	0.534 ***
Region				
West Germany (*rf.*)				
East Germany	-0.107 ***	-0.051 ***	-0.026	-0.010
Gender				
Male (ref.)				
Female	-0.007	-0.003	0.051 *	0.021 *
Age	0.000	0.000	-0.007	-0.003
Parental class * East Germany				
2. Skilled working class		-0.015		-0.007
3. Intermediate class		-0.074 **		-0.016
4. Salariat		-0.126 ***		-0.016

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 10,720*

Table A11. Effect of parental class background on tertiary-level attainment, binomial logit, avg. marginal effects (ALLBUS)

	West Germany		*East Germany*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (*rf.*)				
2. Skilled working class	0.033 **	0.041 **	0.009	0.007
3. Intermediate class	0.142 ***	0.169 ***	0.086 ***	0.071 ***
4. Salariat	0.357 ***	0.401 ***	0.281 ***	0.243 ***
Birth cohort				
1960-64	-0.085 ***	-0.037 ***	0.018	0.009
1965-69	-0.061 ***	-0.027 ***	0.014	0.007
1970-74 (rf.)				
1975-79	0.027	0.013	0.057 **	0.029 *
1980-84	0.050	0.024	0.082 **	0.042 **
1985-90	0.047	0.023	0.128 **	0.068 **
Gender				
Male (ref.)				
Female	-0.043 ***	-0.019 ***	0.027 **	0.014 *
Age	0.008 ***	0.003 ***	0.005 ***	0.002 ***
Parental class * 1960-64 birth cohort				
2. Skilled working class		-0.016		0.001
3. Intermediate class		-0.058 *		0.011
4. Salariat		-0.103 **		0.029
Parental class * 1965-69 birth cohort				
2. Skilled working class		-0.011		0.001
3. Intermediate class		-0.041		0.009
4. Salariat		-0.069		0.023
Parental class * 1975-79 birth cohort				
2. Skilled working class		0.005		0.004
3. Intermediate class		0.017		0.033
4. Salariat		0.024		0.081
Parental class * 1980-84 birth cohort				
2. Skilled working class		0.009		0.005
3. Intermediate class		0.031		0.046
4. Salariat		0.043		0.108 *
Parental class * 1985-90 birth cohort				
2. Skilled working class		0.009		0.008
3. Intermediate class		0.028		0.070
4. Salariat		0.040		0.151 *

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 10,720*

Table A12. Effect of parental class background on tertiary attainment pre- and post-unification, binomial logit, avg. marginal effects (ALLBUS)

	Pre-unification		*Post-unification*	
	M1	*M2*	*M3*	*M4*
Parental class				
1. Unskilled working class (*rf.*)				
2. Skilled working class	0.022 *	0.025 *	0.023	0.026
3. Intermediate class	0.113 ***	0.125 ***	0.150 ***	0.166 ***
4. Salariat	0.320 ***	0.343 ***	0.358 ***	0.384 ***
Region				
West Germany (*rf.*)				
East Germany	-0.045 ***	-0.022 ***	-0.057 **	-0.021 **
Gender				
Male (ref.)				
Female	-0.022 **	-0.011 ***	0.017	0.006
Age	0.005 ***	0.002 ***	0.014 ***	0.005 ***
Parental class * East Germany				
2. Skilled working class		-0.006		-0.007
3. Intermediate class		-0.029		-0.040
4. Salariat		-0.060 *		-0.069

** p < 0.05, ** p < 0.01, *** p < 0.001, N = 10,720*

Table A13. Descriptive statistics of key variables

	SOEP		ALLBUS	
	N	*%*	*N*	*%*
Parental class				
1. Unskilled working class	3,237	11.17	1,870	14.69
2. Skilled working class	5,413	18.68	3,330	26.15
3. Intermediate	6,298	21.73	2,914	22.88
4. Salariat	7,712	26.61	3,091	24.27
Missing	6,320	21.81	1,529	12.01
School qualification				
1. Lower-secondary or less	7,066	24.38	2,692	21.14
2. Mid-secondary	11,128	38.40	5,492	43.13
3. Uppers-secodnary	10,313	35.59	4,398	34.54
Missing	473	1.63	152	1.19
Tertiary degree				
No	19,764	68.20	8,626	67.74
Yes	5,964	20.58	2,147	16.86
Missing	3,252	11.22	1,961	15.40
Region				
West Germany	20,868	72.01	7,745	60.82
East Germany	8,112	27.99	4,989	39.18
Birth cohort				
1960-64	5,730	19.77	3,545	27.84
1965-69	6,265	21.62	3,198	25.11
1970-74	5,121	17.67	2,109	16.56
1975-79	4,628	15.97	1,495	11.74
1980-84	4,241	14.63	1,417	11.13
1985-89	2,995	10.33	970	7.62
Gender				
Male	13,535	46.70	6,318	49.62
Female	15,445	53.30	6,416	50.38
Age (mean)	—	37.51	—	34.39
Total	28,980	100.00	12,734	100.00