

Family Determinants of the Changing Gender Gap in  
Educational Attainment: A Comparison of the U.S.  
and Germany

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## **Abstract**

Using data from the U.S. decennial censuses, the General Social Surveys, and the German Socioeconomic Panel, we compare trends in the gender gap in college completion for the U.S. and Germany. The gender gap has closed in Germany as it has in the U.S., but, unlike the U.S., women have not yet achieved inequality in rates of tertiary degree attainment, let alone overtaken men. A central reason for this difference is the fact that the relationship between parental education and gender-specific rates of tertiary degrees has not changed over time in Germany as it has in the U.S. The lack of change in Germany is consistent with both environmental and family resource explanations for the reversal in the U.S., and provides additional support for resource and incentive-based theories of the female-favorable trends in rates of higher education completion in much of the industrialized world.

## Introduction

One of the most striking recent features of American higher education is the growing education gap between men and women. Young women now outperform young men with respect to high school graduation, college entry, and persistence to a four year college degree. Trend statistics in the United States reflect a striking reversal of a gender gap in college completion that once favored males. The American trends mirror similar trends in other industrialized countries. A higher proportion of women than men currently obtain tertiary education in most European countries as well as in Australia, Canada, and New Zealand. Out of 30 member nations of the Organization for Economic Cooperation and Development (OECD), men retain significant advantages in only Switzerland, Turkey, Japan and Korea (OECD 2006).

Several forces are probably driving this trend. The international women's movement produced a slow though uneven cultural transformation that created greater autonomy for women and more opportunity for work and careers, often even after marriage and sometimes even during the childrearing phase of adult life. Partly in response to the changing culture, the pay gap between men and women shrank from the late 1960s through at least 1990 in many European countries as well as the U.S. (Blau and Kahn 1995), and this may also have played a role in increasing the attractiveness of education to women. These changes have been uneven, however. One source of evidence for unevenness concerns cross-national variation in the female occupational distribution (Charles and Grusky 2004). More evidence comes from variation in the relative working hours of married men and women (Medalia and Jacobs 2007). A third source of evidence concerns the documented cross-national variation in the gender gap in cognitive achievement (Penner 2007). Differences in the structure of school systems can also play a role in the gender educational gap. Arum, Gamoran, and Shavit (2007) found that the gender gap in tertiary education become more female advantaged in countries where the higher educational system was growing more rapidly, which suggests that the size of the constraint on attending tertiary education might play a

role in producing heterogeneity in the size of the gender gap across countries.

This study addresses the possible role of family resources in the changing gender educational gap. That resources affect educational outcomes is beyond dispute. Our question concerns whether the family also plays a role in producing gender inequality and changes in this inequality over time. Gender inequality differs from class inequality in that daughters and sons have the same distribution across the class structure; neither gender is class disadvantaged relative to the other. Family can of course still play an important role in producing gender differences if families socialize sons and daughters differently or share resources between sons and daughters unequally. Either mechanism would produce gender inequality in educational outcomes.

American evidence demonstrates the potential importance of family as an explanation for gender. Some scholars (Bozick and DeLuca 2005, King 2000) have recently discovered that the gender gap is wider among working class than among middle class families. Buchmann and DiPrete (2006) determined that this pattern represented a reversal of the effects that previously linked families to the gender-unequal outcomes of their children. In the middle of the 20th century, the American pattern was for girls to do as well as their brothers only in the minority of families where both parents were highly educated. This pattern is consistent with evidence that higher educated people in both the U.S. and in Europe tend to have more gender egalitarian attitudes than do lower-educated people (Thornton and Freedman 1979; Cherlin and Walters 1981; Thornton et al. 1983; Alwin et al. 1992; Dryler 1998). A second potential explanation is that higher educated people, who have greater resources than most families, are better able to expend surplus resources on their daughters even if they were inclined to give their sons priority in their educational investments. Over about three decades, this pattern gradually changed from one where the sons of high school educated fathers had the largest advantage over their sisters to one where these sons were at the greatest educational disadvantage.

There are two major explanations for this transformation, one that focuses on the environment, and the other which focuses on the characteristics of the families themselves.

The environmental explanation builds from evidence that girls historically have better work habits and perform better in schools than boys (Buchmann et al. 2008), but that until very recently had lower educational attainment than boys. Expectations for educational attainment were lower for women, labor market opportunities for women were relatively limited, and they had good marriage prospects even with only a high school education. These environmental constraints offset female advantages in academic skills and work-habits and produced a net gain for boys. As the environmental factors which disadvantaged females gradually diminished, their academic advantages remained and boys increasingly found themselves at a net disadvantage relative to girls.

The family-based explanation for the changing relationship between parental education and female educational success emphasizes the more difficult position of blue-collar families in the globalized economy. In the 1940s and 1950s, families whose male breadwinner was a well-paid blue-collar worker with a high school education –often second generation immigrants – could aspire to a middle-class lifestyle for themselves and their children as real earnings steadily rose. Parents could hope that their sons would live better than they did through jobs that could but need not require a college education. Their daughters could also enjoy a higher standard of living by marrying men who had good white collar or blue-collar jobs, but in either case, college education was not a prerequisite for gaining access to this marriage market.

Through the 1960s, 1970s, and 1980s, however, the American population became increasingly well educated, and families with high school-educated fathers fell in relative terms in the socioeconomic hierarchy, even as the sons in these families may have used their fathers for role models for an occupational career that would be turn out to much less rewarding for them than for their fathers.<sup>1</sup> The daughters in these families, in contrast, would be aware of two facts. First, they may well have realized that the skilled blue-collar jobs that their fathers had were generally male-dominated and thus not an attractive career choice

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<sup>1</sup>The trend reversal in class effects was already underway by the 1970s, and these were years when the earnings ratio of college to high-school educated workers actually fell. As it turns out, this wage compression was entirely due to a temporary oversupply of college educated workers linked to the maturing of the baby boom compounded by the rise in college education as a strategy of avoiding the Vietnam War draft.

for them. Well-paying jobs for women –in contrast – required a college education. Second, they arguably realized that the marriage market was changing; declining labor market returns and growing inequality made college-educated men more desirable as marriage partners both in relative and absolute terms. They may also have realized that the chances of marrying a well-paid man with a white-collar job were substantially higher if they had a college education.

Paralleling these changes was the fact that the incentive for even traditionally minded parents to favor their sons over their daughters in educational investment was diminishing as the gender gap in earnings gradually diminished. Occupational sex-segregation, the changing marriage market, and the more forward-looking orientation of teenage girls relative to teenage boys would all mitigate the negative consequences of have a high school educated dad for daughters relative to sons.

Finally, the changing relative economic position of college and high-school educated parents may have importantly affected their relative ability to help daughters and sons achieve educational success. In a world where the educational opportunities for girls are no longer inhibited by traditional gender orientations of parents and schools, boys may have increasingly been at relatively greater risk for academic problems. College-educated parents are better situated to take appropriate (and often expensive) actions to raise the educational achievement of children who otherwise appear to have gotten into academic trouble. Working-class families are not in the same situation as middle-class families, and, indeed, their relative position has in fact declined. Their resource limitations may have more serious consequences for the educational attainment of their sons than of their daughters.

Our question is whether the American pattern is an example of a world-wide trend in which boys in relatively low-educated families would go from a position of relative advantage to a position of relative disadvantage in educational attainment. As a test case, we examine trends in the gender gap in college completion in Germany. Germany is similar to the U.S. and virtually all other industrialized countries in that women's rate of college completion has risen faster than that for men. It differs from the U.S., however, in several respects. First,

the relative position of women in Germany has lagged behind that of women in the U.S. Unlike in the U.S., the tertiary education rates of German women have not yet surpassed those of men.

Second, labor market opportunities for German women have certainly increased during recent decades, but not at the same pace as for American women. German has been considered by many to be more traditional in its attitudes towards gender than the U.S. (Alwin et al. 1992). Occupational sex-segregation in Germany is higher than in the U.S. (Charles (1992)). The gender gap in hourly pay is greater in Germany than in the U.S. even for full-time workers (Blau and Kahn 2000), while the gender gap in annual earnings is even more unfavorable in Germany because of the lower average work hours of German mothers with young children at home (OECD 2002).

Third, overall inequality has not grown as fast in Germany as in the U.S. In the U.S., the real wages of high school educated workers fell considerably with the onset of the industrial restructuring of the 1980s and the decline of the American labor movement. In contrast, the German labor movement remained strong during these years, and the real wages of blue-collar workers in Germany remained relatively stable in contrast to the American situation. Autor et al. (2006)

Fourth, the German educational system differs from the American system in several respects including the differentiation of post-primary education into three tracks of which one—the Gymnasium—traditionally has led to higher education, while the other two have often led to post-secondary apprenticeship training. Students who graduated from the Gymnasium with the Abitur could then pursue one of two different tertiary tracks: the traditional University, or the less prestigious *Fachhochschule*, which mainly offers degrees in applied sciences, engineering, management and business (Mayer et al. 2007).<sup>2</sup> The education system in Germany is mainly organized by the federal states, and compared to countries like the United States or Great Britain, Germany has only a relatively limited non-state tertiary sector. Finally, the traditional diploma degree at universities and the *Fachhochschulen* have

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<sup>2</sup>Furthermore, *Fachhochschulen* differ from universities insofar as they are characterized by a higher practical component including a longer internship and an overall shorter duration of the coursework

been the main degree of tertiary education for decades; only in recent years is the diploma replaced by Bachelor and Master degrees as part of the European standardization of educational systems. Mayer et al. (2007) note that class differences in educational attainment are high when compared with other industrialized countries. They also note that the decline in class inequality in the German educational system concerned changing class effects in the transition from elementary school to Gymnasium. In the German system, the first year of Gymnasium is a kind of probationary year when it is possible to fail out of Gymnasium, which might have been a particular concern for children from lower class backgrounds, given the general connection between class background and academic performance. A similar concern should not have applied to female advancement because, in Germany as in the U.S., German girls have generally outperformed German boys in school. Rodax and Hurrelmann (1986)

Our question concerns the implications of these country differences for how family effects produce gender-specific trends in college completion rates. We address this question in the following sections.

## Data

We compare trends across recent decades in the gender gap in higher education in the United States and Germany in order to (a) determine the similarities and differences in gender-specific educational trends, (b) compare the potentially changing effects of class background and family structure on the educational gender gap, and (c) measure the extent to which country differences arise from the distinctive structure of educational institutions in Germany and the U.S. The United States results build on Buchmann and DiPrete (2006) and DiPrete and Buchmann (2006), which were based on the U.S. Censuses for 1960-2000 and the cumulative 1972-2004 General Social Surveys. Research on the German case uses data from the Mikrozensus 1976-2005 as well as the German Socioeconomic Panel (GSOEP) for the years 1984 to 2006. Together with the Allbus, the GSOEP is the main German data source

which covers the last two decades and therefore provides a sufficient basis for long term trend analysis in regard to educational attainment of the respondent, family background such as the educational attainment of the parents and other measures Haisken-DeNew and Frick (2005).<sup>3</sup> Therefore, the German data are well-suited for a comparison with the American data.

The sample is restricted to West German respondents who are aged between 22 and 44 for Abitur (born 1940-1982) and between 30 and 44 for the later analysis of higher education (born 1940-1974). This restriction of the sample to German respondents who grew up in the post-war period Federal Republic of Germany attempts to focus the analysis on uniform processes. The experience of educational attainment is quite different in the U.S. for whites and for blacks or Hispanics, while in Germany there are significant differences between the educational experience of native Germans and of immigrants. The same is true for people who grew up in Eastern Germany. For this reason, we base our comparison on white Americans and native Germans. Definitions of all variables are provided in Table 1.

## **Trends in the Gender Gap in Education: Germany and the United States**

Figure 1 shows the trend in gender-specific college completion rates for 28 year old white Americans by year of birth from the 1960, 1970, 1980, 1990, and 2000 Public Use Microdata Samples (IPUMS). Figure 1 illustrates the now well-known overtaking of men by women in the middle 1980s. In the years since then, the gender gap has continued to grow in favor of women. Figure 2 shows how this overtaking occurred. Rates of completing high school have been very similar for males and females for many years. What changed was first a much higher rate of growth in the proportion of women than of men who went on to get at least

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<sup>3</sup>The Allbus is not included in the following analysis, since the overall school and higher education completion rate in the Allbus are significantly lower in the more recent birth cohorts than in both the Mikrozensus and the GSOEP. We note that Mayer et al. (2007) combined the GSOEP, the ALLBUS, the ZUMA Standarddemographie 1976-1982 files and the German Life History files for their analyses of changing class effects on post-secondary enrollment and completion in Germany.

some post-secondary education, and second, a higher *relative* growth in the probability of finishing four years of college, given some post-secondary education. These conditional rates actually fell for men across the 45 birth cohorts displayed in Figure 2, while they have risen slightly for women – a remarkable development in light of the tremendous relative expansion of two-year community colleges during these years.<sup>4</sup>

As noted above, the German route to a tertiary degree goes through obtaining an *Abitur*. Therefore, we first present trends in rates of earning an *Abitur* according to the Mikrozensus data. Figure 3 illustrates these trends for five-year birth cohorts between 1910 and 1983. In Germany, the gender gap in education favored men with nearly unchanged overall *Abitur* completion for those born before the mid 1930s. Starting with the expansion of the secondary and tertiary educational system in the 1950s, the overall completion rate began to rise rapidly in the birth cohorts since the late 1930s - a growth which initially showed little effect on the gender gap. Not until the cohorts of the 1950s did the gender gap begin to abate reaching parity for those born in the early 1970s. Since then, we observe a slight gender gap reversal from a favoring of males to a favoring of females. These changes in their gender gap of education took place during a period where completion of the *Abitur* became more common for men and women alike.<sup>5</sup>

Although less pronounced in regard to the overall growth, the trend for university completion, which is presented in Figure 4, shows a similar pattern: A period of near stagnation, followed by a rise in the overall completion rate without changes in the absolute gender gap, a closing of the gap starting with those born in the late 1950s, and lastly the begin of a reversal for those born in the early 1970s. The trends differ insofar as the beginning of the closing coincides with a period where university completion becomes less likely for men born in the 1950s. Such a catch up, however, is lacking for the *Fachhochschule* - the university of applied science - which is for pursuit of a more applied program of study as well as more technical majors. As Figure 5 shows, women close very little of the *Fachhochschule* gap

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<sup>4</sup>Andrews and Fonseca (1998) report that enrollment in community colleges increased by 42% from 1976 to 1994, compared with 19% for four-year colleges.

<sup>5</sup>This pattern corresponds to the educational expansion described by others (Hradil 2001; Geißler 2008)

across the entire range of cohorts visible with the Mikrozensus data. Because women have made almost no gains relative to men in *Fachhochschule* degrees, the overall rate of tertiary degrees obtained by German women continues to slightly lag behind the rate for German men (see Figure 6).

As outlined by Buchmann and DiPrete (Buchmann and DiPrete 2006: 515), the US trend shows a striking reversal of a gender gap in college completion from favoring men until 1982 to favoring women in recent decades. Accordingly, the German results resemble the American change but are clearly not the same: Similar to most other OECD nations OECD (2004), both countries show a clear trend in favor of women. In the US, however, women have surged past men in rates of tertiary degree completion, while in Germany they have not yet reached full parity with men. The rates of university and Abitur completion, however, suggests that women have the potential to overtake men in regard to post-secondary degrees.<sup>6</sup>

## Role of Family Background for the Changing Gender Gap in Education

To examine whether the German trends resemble the processes in the US, we replicate Buchmann's and DiPrete's analysis (Buchmann and DiPrete 2006: 522) in regard to the relationship between parents' education, birth cohort and male and female rates of college completion. Such an analysis allows us to examine the role of family processes for the changing gender gap in education and compare them with the US (Buchmann and DiPrete 2006). As the highest secondary school degree, the *Abitur*, which is usually obtained from the Gymnasium, constitutes a major step in the German educational system, and is a

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<sup>6</sup>The completion rates of the school year 2005/06 show that women continue to outperform men in Abitur completion; 56 percent of all *Abitur* graduates in West Germany were women (Bundesamt 2008). In addition, 64 percent of the students who left school without a school degree were men and 57 percent of those who only receive a Hauptschul degree - the lowest secondary school degree in the German school system. The trend, therefore, seems to continue for those born after the period covered by the Mikrozensus data and extends to the whole German tripartite system of secondary education.

near-prerequisite for accessing higher education in the German educational system.<sup>7</sup> As illustrated in figure 3, we examine two historical periods: The earlier cohort covers the birth years between 1940 and 1959 and embraces the period of rapid growth in higher secondary education without significant changes in the gender gap. The later birth cohort (1960-1982) includes the people who grew up after the gender gap began to close.

We begin by reviewing results for the U.S. from Buchmann and DiPrete (2006), which are reproduced in Table 2. In the early American cohorts, females lagged behind males in all family types except those in which both fathers and mothers had college education. In the later cohorts, in contrast, the rough gender equality of educational attainment of the sons and daughters of college-educated parents persisted. However, and in sharp contrast to the earlier period, daughters had opened up a considerable lead over sons in families where the father had a high-school education or less or was absent. The German results are different. The results for the earlier cohort in table 3 show that females' chances of *Abitur* completion were lower *regardless* of parents' education for those born before 1960. Moreover, Table 4 demonstrates that the odds ratio of gaining an *Abitur* was actually *lower* for families where both parents had relatively high education, which is the opposite pattern from that found in the U.S.

The later cohorts in Germany show an overall convergence between women and men in *Abitur* completion rates. Table 4, which shows the odds ratios of *Abitur* completion, demonstrates that girls in the later cohorts have caught or overtaken boys in families where the father had low education. This pattern bears some similarities to the American pattern, though the pattern is much weaker in Germany than in the U.S.. Table 5 shows logistic regressions for the effects of parents' education, birth cohort and gender on *Abitur* completion, higher education, university and Fachhochschule including all 2-, 3- and 4-way interaction effects. In model 1 for *Abitur* completion, only the two-way interaction term between cohort and female is statistically significant. The terms allowing for heterogeneity in this interac-

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<sup>7</sup>Indeed, there are alternative path-ways to higher education. The so called Fachhochschulreife or Fachabitur, for example, provides access to higher education at a Fachhochschule (university of applied science). These are, however, far less common and the Abitur remains the major pathway to higher education.

tion by family background are not significant. In Germany, the decreasing gender gap can not be attributed to a structural shift in the gender-specific effects of parents' education. Rather, the change seems to result from a general trend in favor of women that cuts across families with varying levels of parental education. In particular, even the observed stronger trend for families with low educated parents does not differ significantly from the trend for other families.

Model 3 for university completion reveals a similar picture with a stronger trend in favor of women in families with low educated parents compared to those with high educated mothers and low educated fathers. In contrast, model 2 and 4 for higher education and *Fachhochschule* do not show any significant cohort effects suggesting only slight trends towards a closing gender gap. Rather clearly, the lack of a cohort-gender interaction in the overall higher education model stems from the lack of significant change over time in the gender pattern of graduation from the *Fachhochschule*.

## Discussion

German gender trends are clearly moving in the same direction as American trends, with three clear differences. First, German women have closed the gap with German men, but have not overtaken them. Second, their failure to achieve parity with men in rates of higher education completion is due in large part to their failure to converge with men in rates of obtaining degrees from Fachhochschulen. Third, relative female gains have come about relatively independently of family type. In particular, while they have obtained a numerical advantage over males in families with lower-educated dads, these gains are small and statistically insignificant. If this difference can be understood, it may help explain both why the female-to-male gap in rates of college completion is so large in the U.S. and also what the likely prospects are for future trends in Germany.

Here we can only offer hypotheses for future exploration. Recall that we proposed both an environmental and a family-based explanation for female gains relative to males in the

U.S. Our environmental explanation noted that girls generally do better academically than boys, and therefore posited that girls will outperform boys in the absence of offsetting disadvantages or compensating investments by parents and schools. Discrimination against women has declined in Germany as in the U.S., but the potential for compensating investments particularly from lower-educated parents may be greater in Germany than in the U.S., for several reasons. First, income inequality has been and remains lower in Germany than in the U.S. and so, in both relative and absolute terms, German families at the lower end of the distribution may have more resources available to invest in their sons. This difference would be heightened to the extent that German families have fewer children on average than American families, and to the extent that German boys with lower-educated fathers spend a greater share of their childhood with two parents in the household. Available statistics suggest that all three of these statements are true.

It is also possible that discrimination against women is higher in Germany than in the U.S. in precisely those sectors of the educational system and the labor market in which the sons and daughters of lower-educated fathers would be found. The failure of women to make gains in the *Fachhochschulen*, which is the lower-status sector of the higher education system in Germany, is at least consistent with the possibility that barriers to female advancement remain greater in Germany than in the U.S. Finally, the German labor market remains more segregated than is the American labor market, and the barriers to combining work and family are greater in Germany than in the U.S. (DiPrete et al. 2003). The relative height of these barriers may be unequal across the socioeconomic hierarchy, with the expected gains from higher education perhaps being comparatively small for the daughters of lower-educated fathers relative to the daughters of highly-educated fathers, precisely because German women must sacrifice more labor market opportunities as the price for having children.<sup>8</sup> Finally, the incentives stemming from the value of education in the labor and marriage markets may vary in the two countries in ways that are consistent with the pattern we find. In the U.S., it is the daughters of lower-educated men whose incentive to “marry

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<sup>8</sup>This possibility would also imply that the fertility gap between German and American women would be greater for daughters of more highly educated fathers.

up” has grown because of the declining relative labor market earnings of the blue-collar men they otherwise might have married. In Germany, these incentives have not risen as much precisely because the earnings of blue-collar men have not declined as much.

In short, the differing pattern of family effects on gender-specific educational outcomes is consistent with our theory as to why these gender-specific trends exist. The next step is to establish that the hypothesized mechanisms producing these country-specific differences also work as predicted. This should be a focus for future research.

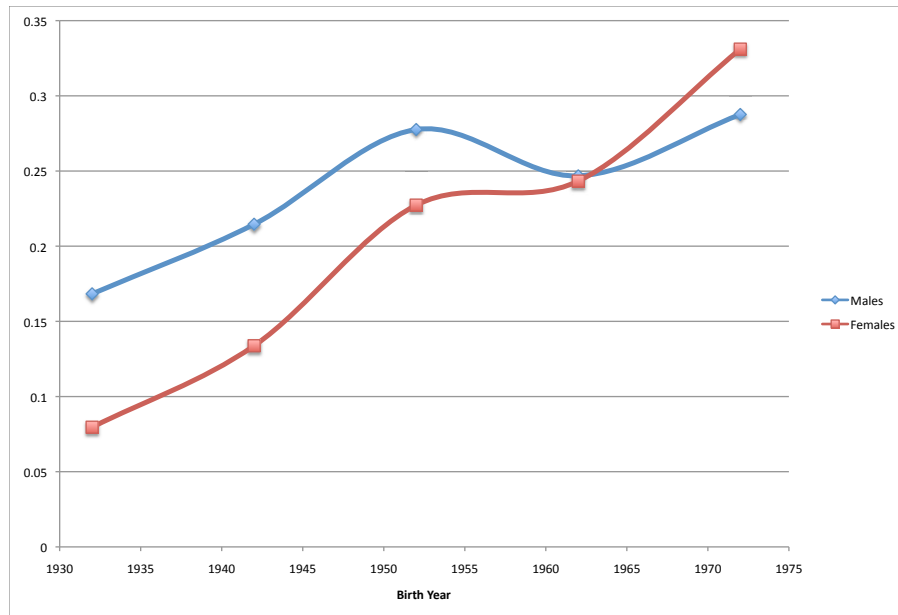
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Figure 1: Proportion of U.S. White Males and Females Who Completed Four-Year College by Age 28



Source: 1960, 1970, 1980, 1990, and 2000 IPUMS

Figure 2: U.S. Transition Rates Between Education Levels, by Gender

**Figure 5: Educational Transitions for Whites, Aged 26-28**

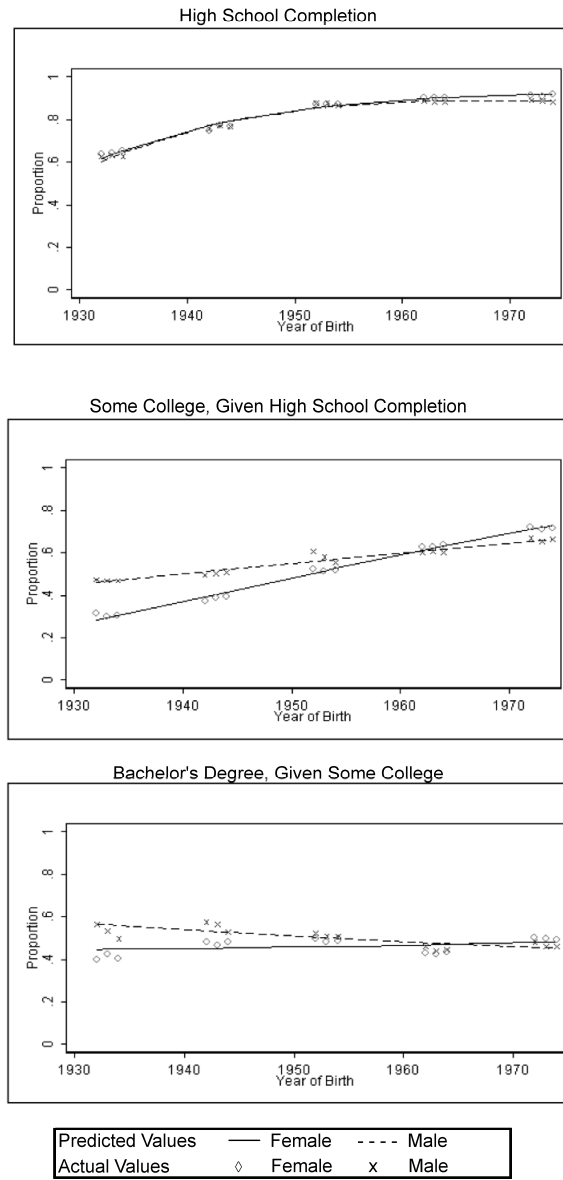
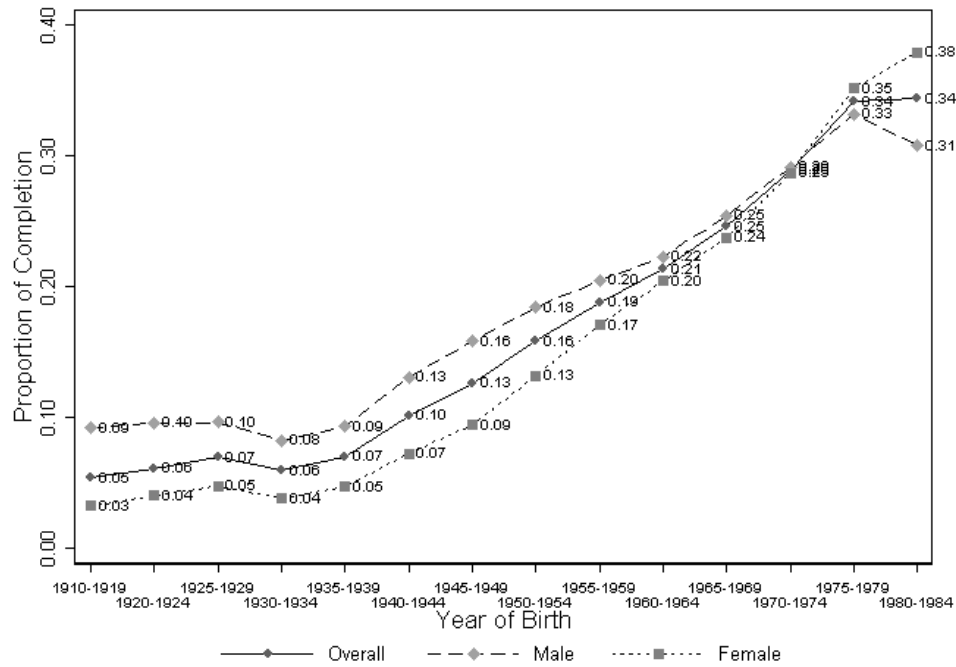
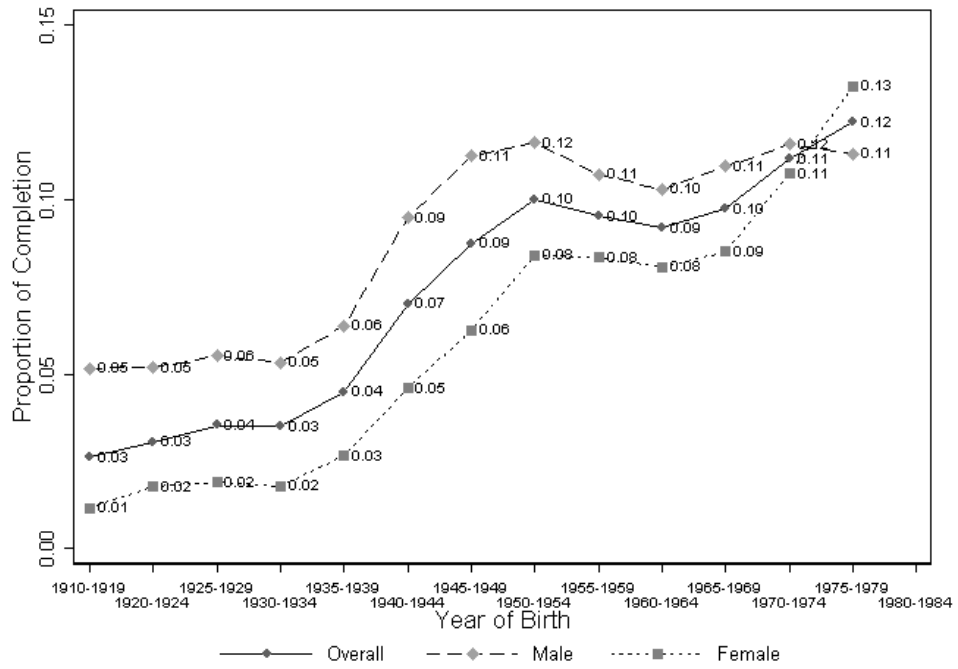


Figure 3: Proportion of Abitur Completion for Males and Females by Five-Year Birth Cohorts



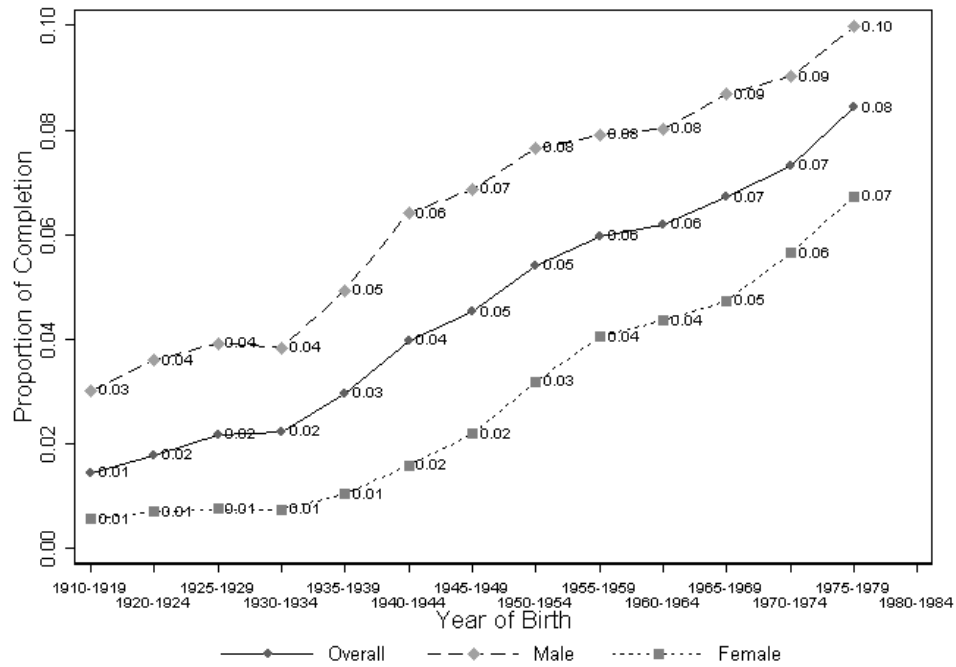
Source: Authors' calculation of the Mikrozensus 1976, 1980, 1989, 1995, 2000 and 2005  
 Sample: West German respondents aged 22-85 and born between 1910 and 1983

Figure 4: Proportion of University Completion for Males and Females by Five-Year Birth Cohorts



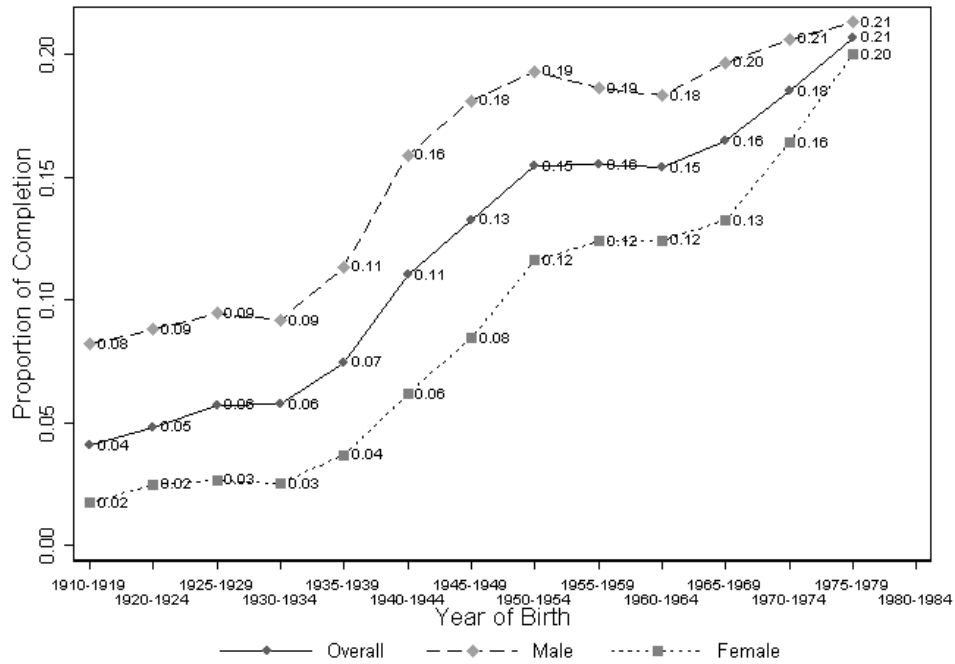
Source: Authors' calculation of the Mikrozensus 1976, 1980, 1989, 1995, 2000 and 2005  
 Sample: West German respondents aged 30-85 and born between 1910 and 1974

Figure 5: Proportion of Fachhochschule Completion for Males and Females by Five-Year Birth Cohorts



Source: Authors' calculation of the Mikrozensus 1976, 1980, 1989, 1995, 2000 and 2005  
 Sample: West German respondents aged 30-85 and born between 1910 and 1975

Figure 6: Proportion of Tertiary Degree Completion for Males and Females by Five-Year Birth Cohorts



Source: Authors' calculation of the Mikrozensus 1976, 1980, 1989, 1995, 2000 and 2005  
 Sample: West German respondents aged 30-85 and born between 1910 and 1975

Table 1: Variable Definitions for GSOEP Analyses

Dependent Variable	
Abitur	Completion of German Abitur
Higher Education	Completion of either university or Fachhochschul degree
University	Completion of university degree
Fachhochschule	Completion of Fachhochschul degree
Independent Variables	
Cohort	<p>Birth cohorts defined as:</p> <p>0=Born between 1940 and 1959 (Earlier Birth Cohort)</p> <p>1=Born between 1960 and 1982 for Abitur and between 1960 and 1974 for Higher Education, University or Fachhochschule (Later Birth Cohort)</p> <p>0=male; 1=female</p>
Female	
Father's Education	<p>Dichotomous variable coded as:</p> <p>1= Abitur (Upper Secondary School Degree), Fachabitur (Technical School Degree) or Realschule (Intermediate School Degree)</p> <p>0= Hauptschul degree (Lower Secondary School Degree) or no school degree</p>
Mother's Education	<p>Dichotomous variable coded as:</p> <p>1= Abitur (Upper Secondary School Degree), Fachabitur (Technical School Degree), Realschul degree (Intermediate School Degree) or Hauptschul degree with vocational training</p> <p>0= Hauptschul degree (Lower Secondary School Degree) without vocational training or no school degree</p>

Table 2: Rates of U.S. College Completion for Males and Females by Parents' Education and Birth Cohort

Mother's Education	Father's Education						
	High School or Less		Some College or More		Father Not Present		
	Male	Female	Male	Female	Male	Female	
1938-1965 Birth Cohorts							
High School or Less	%	19.5	14.3	41.6	34.6	19.3	13.5
	N	1,349	1,649	330	365	197	281
Some College or More	%	37.7	23.9	60.2	63.1	35.1	30.0
	N	183	239	374	429	77	70
1966-1977 Birth Cohorts							
High School or Less	%	12.4	16.6	38.8	33.6	13.7	13.1
	N	241	271	103	110	73	84
Some College or More	%	26.2	40.8	61.5	63.6	26.1	37.0
	N	65	71	174	195	46	54

Source: Buchmann and DiPrete (2006: 522)

Table 3: Abitur Completion Rates for Males and Females by Parents' Education and Birth Cohort (Percent of Completion)

Mother's Education	Father's Education				
	Low Education		High Education		
	Male	Female	Male	Female	
Earlier Birth Cohort (1940-1959)					
Low Education	%	0.13	0.07	0.39	0.25
	N	1,218	1,309	169	159
High Education	%	0.28	0.24	0.65	0.46
	N	129	146	196	186
Later Birth Cohort (1960-1982)					
Low Education	%	0.12	0.14	0.43	0.35
	N	1,547	1,548	257	250
High Education	%	0.28	0.28	0.59	0.58
	N	575	611	617	639

Source: Authors' calculation of the GSOEP 1984-2006

Sample: West German respondents aged 22-44 and born between 1940 and 1984

Table 4: Odds Ratios for Abitur Completion by Parents' Education and Birth Cohort

		Earlier Cohort (1940-1959)		Later Cohort (1960-1982)	
		Odds	Odds Ratio (Female/Male)	Odds	Odds Ratio (Female/Male)
MEdu Low/FEdu Low	Male	0.143	0.520	0.139	1.184
	Female	0.074		0.164	
MEdu Low/FEdu High	Male	0.652	0.523	0.758	0.705
	Female	0.341		0.535	
MEdu High/FEdu Low	Male	0.385	0.837	0.398	0.960
	Female	0.323		0.382	
MEdu High/FEdu High	Male	1.884	0.454	1.448	0.938
	Female	0.855		1.359	

Source: Authors' calculation of the GSOEP 1984-2006

Sample: West German respondents aged 22-44 and born between 1940 and 1982

Note: MEdu= Mother's Education; FEdu= Father's Education

Table 5: Logistic Regressions of Abitur, Higher Education, University and Fachhochschul Completion on Parents' Education, Birth Cohort and Gender

	(1) Abitur	(2) Higher Education	(3) University	(4) Fachhochschule
Cohort	-0.030 (0.147)	-0.240 (0.180)	-0.792*** (0.225)	0.372 (0.259)
Female	-0.654*** (0.174)	-1.131*** (0.187)	-1.156*** (0.237)	-0.947** (0.288)
MEdu. Low/FEdu. High	1.517*** (0.228)	1.345*** (0.222)	1.314*** (0.250)	0.863*** (0.319)
MEdu. High/FEdu. Low	0.991*** (0.257)	0.515 (0.264)	0.268 (0.340)	0.732* (0.353)
MEdu. High/FEdu. High	2.578*** (0.203)	2.091*** (0.207)	1.969*** (0.220)	1.151*** (0.330)
Female x MEdu. Low/FEdu. High	0.006 (0.331)	0.330 (0.347)	0.475 (0.393)	0.300 (0.577)
Female x MEdu. High/FEdu. Low	0.476 (0.378)	0.997* (0.390)	1.151* (0.494)	0.689 (0.543)
Female x MEdu. High/FEdu. High	-0.136 (0.302)	0.255 (0.325)	0.610 (0.368)	0.010 (0.506)
Cohort x Female	0.822*** (0.224)	0.525 (0.287)	1.265*** (0.353)	-0.477 (0.458)
Cohort x MEdu. Low/FEdu. High	0.181 (0.293)	-0.113 (0.361)	0.163 (0.405)	-0.121 (0.526)
Cohort x MEdu. High/FEdu. Low	0.062 (0.303)	0.299 (0.344)	0.739 (0.441)	-0.212 (0.457)
Cohort x MEdu. High/FEdu. High	-0.233 (0.250)	-0.378 (0.295)	0.256 (0.326)	-0.604 (0.455)
Cohort x Female x MEdu. Low/FEdu. High	-0.524 (0.437)	0.071 (0.614)	-0.205 (0.693)	-0.213 (0.990)
Cohort x Female x MEdu. High/FEdu. Low	-0.685 (0.443)	-0.986 (0.513)	-1.640* (0.642)	0.040 (0.733)
Cohort x Female x MEdu. High/FEdu. High	-0.096 (0.368)	0.290 (0.446)	-0.715 (0.504)	1.263 (0.709)
Constant	-1.945*** (0.112)	-1.705*** (0.107)	-2.210*** (0.133)	-2.845*** (0.167)
Observations	9556	7337	7337	7337
df	15	15	15	15

Source: Authors' calculation of the GSOEP 1984-2006

West German respondents aged 22-44 for model 1 (born btw. 1940-84) and aged 30-44 for model 2, 3 and 4 (born btw 1940-76)

Note: MEdu= Mother's Education; FEdu= Father's Education