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Gender and Youth Employment Outcomes
The United States and West Germany, 1984–1991

Francine D. Blau and Lawrence M. Kahn

3.1 Introduction

During the past 15 years, the labor market prospects facing less educated young workers in the United States have seriously deteriorated as part of a dramatic trend toward widening wage inequality. For example, Katz and Murphy (1992) find that real wages *fell* by 15.8 percent for young men with less than a high school education from 1979 to 1987, and a recent study by Burtless (1994) similarly documents the deteriorating wage prospects of young women with limited education. Perhaps as a result of their falling real wages, young, less educated men and women have also experienced decreasing labor market attachment relative to their more highly educated counterparts.[1]

In contrast to the poor and declining prospects of many, especially less

1. For other discussions of these trends, see Bound and Johnson (1992), Juhn, Murphy, and Pierce (1993), Juhn (1992), Blau (1998), and Blau and Kahn (1997).

educated U.S. youths, young workers in Germany appear to be well prepared for the labor market and to have better labor market outcomes. German youths typically have lower relative unemployment rates than youths in the United States. For example, in 1989, at a time when the overall unemployment rate in Germany was 8.0 percent, it was 8.1 percent among 15–20-year-olds and 7.4 percent among 20–30-year-olds. In contrast, in the United States, where the overall rate was 5.3 percent in that year, it was 15 percent for 16–19-year-olds, 8.6 percent for 20–24-year-olds, and 5.7 percent for 25–29-year-olds (Abraham and Houseman 1995, 400; ILO 1993, 653; USBLS 1990, 162). Further, the low-skilled in Germany were spared the declining relative and absolute real wages that afflicted those in the United States and several other OECD countries in the 1980s: wage inequality in Germany was stable to declining, and real wages of the low-skilled in particular rose. The relative earnings of young workers were also stable to rising over the 1980s (OECD 1993a; Abraham and Houseman 1995). Thus young workers and the low-skilled in general had better labor market outcomes over the 1980s in Germany than in the United States. This difference in labor market performance suggests that the United States may have much to learn from Germany's relative success.

In this paper, we examine differences between the United States and West Germany in employment outcomes of young workers over the 1984–91 period. In light of the employment problems of less educated youth in the United States, we place special emphasis on how those at relatively low educational levels fared in the labor market. We especially focus on less educated young women. Given recent U.S. welfare reform legislation, this group will be increasingly dependent on their own employment and earnings prospects. We use nationally representative databases for each country, which allow us to measure young workers' employment outcomes and also permit comparisons across age groups: principally the German Socioeconomic Panel for Germany and the Current Population Survey for the United States.

German society is structured in several ways to ensure relatively good outcomes for those at the bottom. For example, the vast majority of youths participate in Germany's vocational training system, although women do not participate to the same extent as men. In the United States, no corresponding training system on a large scale imparts skills to workers at the lower end of the educational distribution. However, not everyone in Germany completes an apprenticeship. In this paper, we emphasize a comparison of German youths who are left out of that system with a group in the United States who are also left out—high school dropouts.

Even for the group of Germans who drop out of the apprentice training system, institutions exist to improve labor market outcomes. First, the German educational system appears to provide better basic skills than the American system at the bottom of the distribution of academic achieve-

ment. Second, German wage-setting institutions disproportionately raise the wages of the low-skilled. The U.S. labor market is largely nonunion, while wages in Germany are set in industry-wide contracts that are extended by law to (or in almost all cases imitated by) the nonunion sector. In addition, the U.S. minimum wage is low by international standards and has generally been declining in real terms since the late 1970s (Minimum pay 1992). Thus we expect German wage-setting institutions to disproportionately raise the pay of young, less educated workers. However, there may be negative employment effects of this system, and we will attempt to determine whether this is the case. If such effects exist, they should be strongest for unskilled youths in general and young women in particular, since they are the ones most likely to be affected by wage floors. Third, Germany has a larger public sector than the United States, and government employment can be a mechanism for reducing potential adverse employment effects of administered wages (see Edin and Topel 1997; Björklund and Freeman 1997; Kahn 1998). We will investigate this possibility as well.

For women, while wage floors are expected to have demand-side effects on relative employment, public policy toward the support of children and maternity and parental leave may have supply-side effects.[2] For example, maternity and parental leave policies in Germany are considerably more generous than those in the United States, and became even more so over the late 1980s. While relatively short leaves are likely to increase women's labor force attachment, extended leaves may arguably do the opposite. And German schools do not provide lunch for students, forcing families to provide lunch at home; this feature of German society is also likely to reduce women's labor force attachment because mothers are usually the ones responsible for arranging lunch for children. In earlier work we indeed found higher labor force participation rates for U.S. than for German women (Blau and Kahn 1995). On the other hand, the U.S. welfare system places a particularly strong penalty on work for low-income, single mothers, implying possible negative employment effects for low-skilled women. Below we will attempt to shed light on the impact of the U.S. welfare system on young, hard-to-employ women.

We find that less educated youths do indeed fare considerably better in Germany, experiencing both higher employment rates and higher relative earnings than is the case in the United States. Both these differences are particularly pronounced for women. While welfare may play a role, our findings suggest that it accounts for very little of the U.S.-German difference in employment rates. It is also the case that the German women's

2. Of course, high wage floors can attract potential workers into the labor force in search of good jobs. In contrast, low and freely falling real wages for the less skilled may have led many U.S. workers to leave the labor force. See Mincer (1976) and Juhn (1992).

employment advantage exists despite Germany's more generous maternity and parental leave policies, which our results suggest do negatively affect German women's employment rates, especially their full-time employment rates, all else equal. This suggests that low and declining real wages are likely an important explanation for the lower labor force attachment of both young men and women in the United States. The relatively high employment rates of less educated German youths combined with their relatively high wages raise the question of how they are successfully absorbed into the labor market. Our findings suggest that the public sector in Germany in effect functioned as an employer of last resort during this period, absorbing some otherwise unemployable low-skilled youths.

3.2   Overview of West German and U.S. Labor Market Conditions and Institutions in the 1980s

3.2.1   Training and Wage-Setting Institutions

In designing policies to help young workers in the United States, analysts have looked increasingly to several aspects of the German educational system and its labor market institutions for guidance, including its basic formal secondary schooling system, its apprentice training programs, and its wage-setting mechanisms. First, its basic educational system has been found to produce a superior level of learning, particularly for those at the bottom of the ability distribution (Nickell and Bell 1996). For example, on international mathematics tests for 13-year-old students, young Germans outscored young Americans at both the top and the bottom of the distribution. Thus, in particular for those at the bottom of the distribution of math ability, Germany produces a more highly trained potential labor force.

Second, Germany's apprentice training system, which many believe greatly facilitates the school-to-work transition there, is often held up as an example for the United States to emulate (Buechtemann, Schupp, and Soloff 1993). Following secondary education in Germany, students typically locate themselves on one of two tracks: (1) higher education—universities and four-year technical colleges; or (2) one- to four-year full-time vocational schools and the "dual system" consisting of apprentice training and part-time attendance at vocational schools coordinated with firm-based training.[3] This arrangement is a partnership among government, training schools, and firms in which the transition from postsecondary education (vocational schools) to employment is enhanced. These programs have been credited with reducing youth unemployment, and as we

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3. This description of Germany's training institutions is based on Buechtemann et al. (1993), Soskice (1994), and Steedman (1993).

have seen, relative unemployment rates for German youths are indeed lower than those for U.S. youths (see also Buechtemann et al. 1993).

Finally, Germany's system of centrally determined industry wage bargains with contract extensions to nonunion workers has been shown to raise the pay of low-skilled workers disproportionately (Blau and Kahn 1996a). It is possible that German wage-setting institutions allowed its wage distribution to resist the effects of changing supply and demand conditions in the 1980s and to remain stable, in contrast to the widening U.S. distribution.[4]

These latter two aspects of the German labor market—its elaborate system of apprentice training and its union-negotiated industry-wide wage minima—resemble the kinds of policies advocated by Robert Reich, former U.S. secretary of labor, who in 1995 called for an expansion of investment in education and skills, a rise in the federal minimum wage, and changes in U.S. labor law to make it easier for unions to achieve recognition (Bureau of National Affairs 1995a, 1995b).

While participation in some form of postsecondary education or training is near universal in Germany, about 21 percent of German youths had not attained a training certificate or postsecondary education degree 12 years after leaving secondary school (Buechtemann et al. 1993, 8). It is these youths whom we categorize as "hard to employ" and who are the focus of this paper. A potential drawback to the German labor market setup, particularly for hard-to-employ youths, concerns the possible disemployment effects of administered wages. While in the United States, minimum wages have generally been found to have small or no employment effects,[5] several studies have found evidence consistent with the existence of disemployment effects of high wage floors in Europe, although this finding is not unanimous.[6]

While we expect wage floors to reduce the relative employment of the low-skilled, an alternative response is for the government to act as employer of last resort, as argued by Björklund and Freeman (1997) for the case of Sweden. They show that the share of all unskilled workers who were employed by the government rose during a period of severe wage

4. However, Abraham and Houseman (1995) find that while growth in the supply of highly educated workers decelerated in the 1980s in the United States, in Germany this growth rate appeared stable. Thus it is possible that some of the stability in the German wage distribution in the 1980s reflects more stable growth in the supply of highly trained workers there.

5. Card and Krueger (1995) find that minimum wages did not have negative employment effects for teenagers, while Neumark and Wascher (1992) find relatively small negative effects. Larger negative effects have been obtained by Deere, Murphy, and Welch (1995).

6. These include Edin and Topel (1997), Katz, Loveman, and Blanchflower (1995), Abowd et al. (chap. 11 in this volume), Blau and Kahn (1996a), and Kahn (1998). However, Card, Kramarz, and Lemieux (1995) find no evidence that inflexible relative wages in France over the 1982–89 period led to larger employment losses among low-wage workers there than in the United States. And Machin and Manning (1994) find that minimum wages in the United Kingdom did not have disemployment effects in the 1980s.

compression induced by Sweden's solidarity wage policy. Others have also found evidence of such government employment responses, including Edin and Topel (1997) for Sweden and Kahn (1998) for Norway. In light of possible public employment responses, we also examine this outcome below. Data in Nickell (1997) show that relative spending on active labor market policies during the 1989–94 period was about eight times as high in Germany as in the United States (this was defined as spending per unemployed person as a percentage of GDP per member of the labor force). To the extent that such policies are disproportionately directed at youths and provide public sector jobs, they may help to account for the relative success of German youths. We also note that such employment responses by the government need not solely reflect explicit policies. Rather, the pattern of government employment may be such that, for whatever reason, it has the effect of absorbing otherwise unemployable youths.

3.2.2   Gender and Labor Market Success: Germany versus the United States

The gender wage gap among employed workers was lower in West Germany than in the United States in 1979, when American women's wages were 60 percent of men's compared to 71 percent in West Germany. But by 1991, the gender ratio was virtually the same, about 74 percent in both countries, and by 1994, the ratio was actually somewhat higher in the United States (76.4 percent) than in West Germany (74.2 percent).[7] American women have considerably higher labor force participation rates than German women, especially among married women, and are more likely to work full time. They are also less occupationally segregated and outearn a larger percentage of men than their German counterparts, implying that U.S. women have higher relative qualifications or enjoy more favorable treatment by employers than German women (Blau and Kahn 1995).

It is possible that Germany's more generous maternity and parental leave policies play a role in producing these differences in women's labor market attachment. Provisions for parental leave in West Germany, according to the 1979 amendments to the Maternity Protection Act, call for 14 weeks of fully paid maternity leave, of which two months are mandatory, and protection of job security during pregnancy and through the end of the fourth month after childbirth. Beginning in January 1986, a 12-month parental leave with a paid allowance was additionally mandated (ILO 1988; Demleitner 1992). In 1990, the German parental leave provision was expanded to 18 months, and in 1992, which is outside our sample period, it was increased even further to three years. Moreover, German

7. See Blau and Kahn (1995), ILO (1993, 1995), and USBLS (1992, 1995). Figures for 1991 and 1994 are for average hourly earnings of nonagricultural employees in West Germany and for median weekly earnings of full-time wage and salary workers in the United States.

parental leave is paid as long as the parent taking the leave works no more than 19 hours per week, a provision encouraging part-time work. This is almost always the mother, as roughly 99 percent of people taking parental leave as of 1992 were women (Demleitner 1992).[8] In contrast, there was no mandated parental leave policy in the United States prior to the passage of the Family and Medical Leave Act in 1993, which requires up to 12 weeks of unpaid parental leave for women or men. However, prior to the passage of the act it was (and continues to be) required that pregnancy be treated the same as any other medical disability by the firm. Thus leave for the physical aspects of childbearing must be covered under a firm's medical disability plan, if it has one. And in the late 1980s, roughly 40 percent of employees of large and medium-size establishments worked at firms that voluntarily granted some kind of parental leave beyond this, 92 percent of them unpaid (Hyland 1990). While there was some provision for parental leave in the United States prior to the 1993 legislation, it is clear that parental leave policies were considerably more generous in Germany.

The impact of parental leave on women's labor force attachment is unclear a priori. On the one hand, by guaranteeing women's right to return to their jobs after pregnancy, parental leave may strengthen their labor force attachment. On the other hand, such policies, particularly if they are generously paid and of long duration, could increase the incidence or duration of workforce withdrawals associated with pregnancy. It is possible that by 1991 Germany's relatively generous parental leave policies— 18 months of partially paid parental leave after 14 weeks of fully paid maternity leave—encouraged labor force withdrawals among mothers of young children relative to the United States. In addition, the 19-hour provision unambiguously encouraged part-time work among employed women. Moreover, throughout our period, it was legal in Germany for employers to deny job offers to pregnant women (Demleitner 1992, 246). Finally, as noted earlier schoolchildren are sent home for lunch in Germany, making the family (usually the mother) responsible for arranging this meal (OECD 1988, 142). Each of these special features of the German labor market may be expected to discourage labor force attachment by women and, most particularly, full-time employment.

In addition to parental and maternity leave policies that likely reduce the incidence of employment or full-time employment among women, Germany maintains a system of child allowances. This is a universal system with increasing benefits paid to families with larger numbers of children. While the child allowance is less generous for high-income families,

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8. In fact, fathers had to get special permission to take family leave. Since firms bear some of the direct costs of the paid leave, it has been argued that they have an incentive to discriminate against women in hiring (Demleitner 1992). The 19-hour provision was part of the original legislation that went into effect in January 1986 (ILO 1988, 103–4).

it is available whether or not one works (U.S. Social Security Administration 1995). In contrast, in the United States, there were direct cash benefits paid only to low-income families with children, through the Aid to Families with Dependent Children (AFDC) program, as it was called until 1996. This program paid benefits almost exclusively to female-headed, low-income families and greatly penalized work among recipients by reducing benefits virtually dollar for dollar with increased earnings. Welfare has been found to have only moderate effects on labor supply in the United States (Moffitt 1992), but to the extent that it does have a negative effect, we would predict that it would disproportionately affect low-skilled, unmarried women with children in the United States.[9]

3.3   Data

Our data sources for examining gender differences in young workers' labor market outcomes are principally the German Socio-Economic Panel (GSOEP) and the March Current Population Survey (CPS).[10] The CPS has the advantages of large sample size and, like the GSOEP, coverage of all individuals. However, unlike the GSOEP, the CPS does not have information on actual labor market experience, a factor that has been found to be important in explaining the gender pay gap (Mincer and Polachek 1974; O'Neill and Polachek 1993; Blau and Kahn 1997). Because of this omission, we also perform some examination of actual experience using the Michigan Panel Study of Income Dynamics (PSID).[11] However, the PSID contains labor market information only on household heads and spouses, thus excluding those who are living in the homes of their parents or of other relatives. This is of particular concern in a study of youths. Moreover, as discussed below, actual experience is not available for new

9. In addition, the U.S. income tax system in effect rewards larger families through the personal exemption, which allows the family to exclude from taxable income a given amount of money ($2,550 as of 1996) per person in the family. This system is similar to the German universal system (at least among U.S. taxpayers), but the AFDC program for the United States with its work disincentives for low-income individuals was significantly different from the German system. AFDC was replaced in 1996 with a reformed welfare system that has strict limits on the duration of benefits. We expect the new system to encourage labor force participation and note that in the period we examine in this paper, 1984–91, the AFDC system was in place. Working in the opposite direction during our period was the expansion of the earned income tax credit starting in 1987, which worked to increase the participation rate of single mothers, all else equal (Eissa and Liebman 1996).

10. See Burkhauser (1991) for a detailed description of the GSOEP and Katz and Murphy (1992) for a discussion of the CPS.

11. The PSID is a nationally representative survey and is structured very similarly to the GSOEP; see Blau and Kahn (1997) for a description. In addition to the nationally representative portion of the sample, the PSID collected data on an oversample of those living in high-poverty areas. We used these data as well in order to have larger samples of hard-to-employ youths and applied the PSID's sampling weights in our analyses of these data to correct for the oversampling.

members of the GSOEP after 1984. Thus we focus on analyses comparing the CPS and the GSOEP.

We use the 1984 wave of the GSOEP because it has the largest sample size, is not affected by attrition, and is the only one for which we can compute actual labor market experience for all respondents. It is a nationally representative sample of the population living in West Germany, including West Berlin, in that year. In our main analyses, we use data only on Germans from the GSOEP, since education and training information is less detailed for immigrants.[12] However, we also present some findings for immigrants that suggest focusing on Germans gives an accurate picture of the labor market for less skilled youths in this country. We define "young" as aged 18–29, a relatively inclusive definition. We do this in part for reasons of sample size and in part because, in Germany, schooling and formal training usually continue into the middle to late twenties (Buechtemann et al. 1993). By extending our age cutoff to 29, we thus increase the chances of observing the school-to-work transition.

In view of the important changes in the labor market in the United States and other countries in the 1980s, and because we wish to observe what happens to young workers as they mature, we also examine the 1991 GSOEP and CPS. In examining what happens to young individuals as they age, we rely primarily on "synthetic cohorts." That is, we compare a random sample of 18–29-year-olds in 1984 to a random sample of 25–36-year-olds in 1991 to make inferences about what happened to people as they aged over the 1984–91 period. While it is possible to construct panels of individuals in the GSOEP (and of course the PSID), and we do so in a supplementary analysis, one loses about 45 percent of the GSOEP panel through attrition and the sample sizes become too small for meaningful analysis. Similarly, while it is possible to construct a 1991 sample with information on actual experience by following the original 1984 sample members, the small sample size problem precludes this.

A final data issue relates to employment. We use two measures of employment: the probability of being employed and the probability of being employed full time (both relative to the population). The measure of employment refers to current (survey week) employment status. Full-time employment corresponds to usual weekly hours for the currently employed of 35 or more in the preceding year (United States) or on the current job (Germany). We examine both variables because the latter gives additional information regarding the extent of labor force attachment.

Some data issues arise in defining "employment" in the presence of pa-

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12. In particular, the GSOEP does not include detailed information on basic schooling obtained outside Germany for immigrants. The survey asks whether the respondent earned a "degree," but it does not specify what kind of degree. There is better information on whether immigrants completed postsecondary training outside (or inside) Germany and whether they earned German basic school degrees, information we use below.

rental leaves. Neither the CPS nor the 1984 GSOEP separately identify such individuals. In the CPS, individuals on parental leave are considered employed ("with a job but not at work"; Klerman and Leibowitz 1997). The same likely applies to the 1984 GSOEP. Only the 1991 German data give the option of separately identifying individuals on "maternity leave." One question this raises is what is meant by "maternity leave." Since we found that a relatively high proportion of young women fell into this category, we assumed that this meant both maternity and parental leave.[13] A second question relates to how this category should be treated. Since our interest is in actual work, we chose to exclude individuals on maternity leave from the employed category. This raises some compatibility issues with the CPS, as well as the 1984 GSOEP. However, it may be recalled that only 14 weeks of maternity leave were mandated in Germany in 1984 and there were no mandates in place in the United States at this time. Thus the inclusion of women who were on leave as employed is likely to have had relatively little effect compared to the situation in Germany in 1991, when an additional 18 months of parental leave had become available. In terms of possible effects on our results, had we included women out on maternity leave in 1991 as employed, the German employment advantage that we find for less educated German women would have been still larger. On the other hand, the larger negative effect on employment of children that we estimate for German women in 1991 compared to 1984 would have been reduced.

3.4   U.S.-German Differences in Labor Market Preparedness and Outcomes of Youths

3.4.1   Education

Our major focus is on gender differences in the labor market for hard-to-employ youths in West Germany and the United States. Since, in each country, the less educated are the hardest to employ, comparing the two countries requires a standardized definition of education. For the United States, a measure of years of formal schooling completed is readily available in the CPS and PSID data sets. However, since classroom, vocationally related training is far more important in Germany than in the United States, it would be desirable to take into account both academic and vocational schooling in creating a comparable years of schooling measure for Germany. Krueger and Pischke (1995) have created a mapping from the GSOEP's educational and training measures into a years of school variable, and we use their scheme here.

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13. The following proportions of young women (aged 18–29) were in this category: .037 (low-education group), .089 (middle-education group), and .087 (high-education group). See the next section for definitions of the educational categories.

Based on German and U.S. measures of years of schooling, we create three educational groups for each country that encompass roughly the same proportions of the nonenrolled population and thus account for differences between the two countries in average years of schooling completed: Edlow, Edmid, and Edhigh, respectively, referring to groups with low, middle, and high education. For the United States, the groups are Edlow, less than 12 years; Edmid, 12–15 years; and Edhigh, 16 or more years. For Germany, the groups are Edlow, 9–10 years; Edmid, 11–12 years; and Edhigh, over 12 years.[14]

We chose educational groups according to categories instead of, say, quartiles of the distribution of educational attainment, for several reasons. First, we believe that for both countries, the Edlow category corresponds to an identifiable group made up of the hard to employ. In West Germany, individuals in that category had completed at most only basic secondary education and had no formal degree from a high school (gymnasium), university, college, or any vocational school. This group is outside the system of formal certification. In the United States, those in the Edlow category have less than a high school education, which surely places them at great risk of severe difficulties in the labor market. Second, because the distribution of years of schooling is lumpy, it is not possible to construct categories that correspond exactly to particular percentiles of the population, such as the middle two quartiles. For example, among American men aged 18–29 who were not in school, 48 percent had exactly 12 years of schooling in 1984 (CPS tabulation). Third, looking ahead to table 3.2, we see that among those not currently in school, the percentages of the 18–29-year-old population in the three educational categories as we have defined them are quite similar for the United States and Germany. Thus, for our target group, the educational categories we have created in fact correspond roughly to a breakdown by distribution percentiles.

Tables 3.1 and 3.2 provide evidence on educational participation and attainment by age-gender group. Several findings emerge that provide a picture of the relative labor market preparedness of men and women in each country. In table 3.1, we focus on current school attendance. The German data allow people with jobs to also report that they are in school, while the CPS asks respondents to state their "major activity." Thus, in the CPS, only those who say their major activity is school are reported as being in school. In contrast, in the U.S. Census of Population, people are asked if they are currently enrolled in school, whether or not employment is their major activity. Since it is possible for one to be employed and in

14. For Germany, we include those with an *Abitur* degree only (i.e., with no postsecondary schooling) in the middle-education group even though Krueger and Pischke (1995) code an *Abitur* as requiring 13 years of schooling. Our decision was based on our impression that these people, who made up only about 1 percent of the sample, were more similar in their employment experience to the middle- than to the high-education group. Because the group is so small, this coding did not affect our results.

Table 3.1 **Educational Participation and Attainment**

Country		Ages 18–29			Ages 25–36		
		Proportion in School	Years of School Completed	Sample Size	Proportion in School	Years of School Completed	Sample Size
Germany (GSOEP)							
1984	Men	.418	11.60	1,069	.157	12.59	973
	Women	.304	11.56	1,028	.063	11.95	958
1991	Men	.425	11.67	953	.183	12.71	883
	Women	.320	11.52	894	.065	12.25	857
United States (CPS)							
1984	Men	.175	12.46	16,271	.029	13.16	15,801
	Women	.154	12.49	17,062	.023	12.91	16,792
1991	Men	.175	12.45	13,241	.025	12.95	15,153
	Women	.171	12.61	14,381	.031	12.99	16,297
United States (PUMS)[a]							
1990	Men	.287	--	–	.101	--	–
	Women	.290	–	--	.111	--	–

[a]PUMS is the Census of Population Public Use Microdata Sample 1/100 sample.

school at the same time, we also report in table 3.1 U.S. figures for school enrollment using the 1990 Census of Population (PUMS) information.

Using either the CPS or the PUMS definition, among both 18–29- and 25–36-year-olds, German men are more likely than American men to be in school.[15] The differences are substantial. For example, in the younger group, the most likely to be in school, over two-fifths of German men were in school in each year, compared to 29 percent of American men in 1990 (PUMS). For women in the census data—that is, using a definition of being in school comparable to that in Germany—18–29-year-olds are slightly less likely than Germans to be in school (29 percent in the United States for 1990 and 32 percent in Germany in 1991). However, among 25–36-year-olds, American women are more likely than Germans to be in school (11.1 vs. 6.5 percent).

Among young men and women, aged 18–29, gender differences in years of schooling completed are small in both countries in each year. However, using either the CPS or the PUMS as the American comparison group, women are about equally likely as men to be currently in school in the United States but substantially less likely than men to be currently in school in Germany. The German gender gap in current school attendance implies that educational attainment differentials will increase as a cohort ages and finishes its schooling. This effect can be seen in table 3.1 by noting that among 25–36-year-olds in Germany in 1991, the gender gap in years of schooling was 0.46, while among 18–29-year-olds in 1984 (i.e., the same cohort seven years earlier), it was only 0.04 years. In contrast, in the United States, there was a negligible gender difference in years of school completed for men and women aged 18–29 in 1984, and this remained true as the cohort aged.

Table 3.2 explores educational attainment in more detail, focusing on those currently not in school. This population is the focus of our subsequent analyses. We again note that in both Germany and the United States, gender differences in years of school among 18–29-year-olds are small. However, in Germany, they widen with age, and in the full population (aged 18–65), women are considerably more likely than men to be in the low-education group and considerably less likely to be in the high-education group. Gender differences in educational attainment are small in all age groups in the United States, with the major difference in the full population being women's lesser likelihood of being in the high-education group and their greater likelihood of being in the middle group.

There is some evidence of an increase in women's relative educational attainment among recent cohorts in both countries. As may be seen in table 3.2, the gender gap in years of school completed for 25–36-year-olds

15. The longer period of German than American schooling has been noted by Buechtemann et al. (1993).

Table 3.2   Educational Attainment for Individuals Currently Not in School

Country	Years of School Completed	Proportion in Category			Sample Size
		Edlow	Edmid	Edhigh	
		A. Ages 18–29			
Germany (GSOEP)					
1984 Men	11.69	.122	.743	.135	622
Women	11.69	.209	.637	.154	716
1991 Men	11.77	.185	.622	.193	482
Women	11.71	.187	.667	.146	561
United States (CPS)					
1984 Men	12.39	.191	.668	.140	13,421
Women	12.43	.177	.688	.136	14,441
1991 Men	12.37	.198	.654	.148	10,926
Women	12.55	.180	.657	.163	11,924
		B. Ages 25–36			
Germany (GSOEP)					
1984 Men	12.37	.090	.638	.272	820
Women	11.78	.203	.626	.171	898
1991 Men	12.59	.108	.574	.318	721
Women	12.12	.160	.625	.215	801
United States (CPS)					
1984 Men	13.12	.139	.599	.262	15,343
Women	12.89	.143	.637	.220	16,400
1991 Men	12.91	.149	.619	.232	14,772
Women	12.97	.141	.624	.234	15,796
		C. Ages 18–65			
Germany (GSOEP)					
1984 Men	12.15	.112	.632	.256	2,971
Women	11.10	.344	.540	.115	3,267
1991 Men	12.36	.117	.599	.285	2,246
Women	11.50	.274	.578	.148	2,425
United States (CPS)					
1984 Men	12.52	.222	.561	.216	44,531
Women	12.24	.216	.630	.154	48,427
1991 Men	12.75	.188	.578	.234	43,645
Women	12.60	.180	.626	.193	47,177

and 18–65-year-olds in Germany was slightly smaller in 1991 than in 1984. And the gender gap in the incidence of Edlow among 18–65-year-olds fell from about 23 percentage points in 1984 to 16 percentage points in 1991.[16]

16. In table 3.2, the incidence of Edlow in Germany among 18–29-year-old men not in school actually rose between 1984 and 1991, from .122 to .185, while that for women fell from .209 to .187. These changes may reflect an improvement in the job market for young men over the 1980s. As noted above, male youth unemployment in Germany declined both absolutely and relatively over the 1980s (Abraham and Houseman 1995, 400).

However, among 18–29-year-olds in Germany, the gender gap in current school attendance was about the same in 1991 as in 1984, and the gender gap in school attendance among 25–36-year-olds in Germany was actually a bit larger in 1991 than in 1984 (table 3.1). These differences in school enrollment suggest that there will continue to be a gender gap in completed schooling among mature adults in Germany in the future. In the United States, the gender gap in schooling completed was never large and appears to be even smaller for newer cohorts (actually favoring women among 18–29-year-olds). Particularly notable is the rise in women's relative incidence of college graduation.[17] An implication of these findings is that the target group of this study, less educated youths, is one in which German, but not American, women are overrepresented.

3.4.2 Employment

Our goal in this paper is to compare how well less educated youths fare in the German and American labor markets and to attempt to provide some explanations for differences across the two countries. To do this we examine the employment and earnings of workers by age, education, and gender, beginning with the incidence of employment. The most striking pattern evident in the raw comparisons shown in table 3.3 and figure 3.1 is the relatively low employment rate of young, less educated Americans, particularly women, in comparison to their German counterparts.[18] In 1984, the employment rate of 18–29-year-old women in the Edlow group was only 35 percent in the United States, and their full-time employment rate (i.e., percentage of the out-of-school population with full-time jobs) only 21 percent, in comparison to rates of 55 and 43 percent, respectively, in Germany. This difference continued to hold in 1991 when the employment and full-time rates for this group were 38 percent and 23 percent in the United States compared to 57 and 42 percent in Germany. Young, less educated American men were also less likely to be employed or employed full time than Germans, particularly in 1991 but also in 1984. Similar, although smaller differences prevail for men in the middle-education group.

The differences between the United States and Germany for young, less educated women are particularly noteworthy, since among the other educational groups, young Americans tend to be at least as employable and often more so than Germans. And among the less educated population as a whole (Edlow for 18–65-year-olds), Americans fared much better than among youths. For example, in table 3.3, we see that among the full low-education group (aged 18–65), American women are about as likely as German women to be employed and actually more likely to be employed

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17. In addition, relative female enrollment in marketable degree programs in law, business, and medicine increased in the United States in the 1970s and 1980s (Blau and Kahn 1997).
18. This pattern was also found in the PSID.

Table 3.3　　　　　**Employment Measures by Selected Age and Educational Group**

		Edlow		Edmid		Edhigh	
Country		Employed	Full Time	Employed	Full Time	Employed	Full Time
A. Ages 18–29							
Germany (GSOEP)							
1984	Men	.750	.684	.900	.803	.905	.762
	Women	.553	.427	.664	.575	.782	.618
1991	Men	.899	.798	.947	.840	1.000	.911
	Women	.571	.417	.735	.591	.841	.756
United States (CPS)							
1984	Men	.687	.545	.855	.686	.936	.806
	Women	.353	.210	.678	.472	.867	.704
1991	Men	.696	.564	.861	.742	.950	.856
	Women	.375	.232	.720	.520	.888	.745
United States/Germany							
1984	Men	.916	.797	.950	.854	1.034	1.058
	Women	.638	.492	1.021	.821	1.109	1.139
1991	Men	.774	.707	.909	.883	.950	.940
	Women	.657	.556	.980	.880	1.056	.985
B. Ages 25–36							
Germany (GSOEP)							
1984	Men	.824	.689	.948	.883	.960	.771
	Women	.412	.209	.589	.342	.675	.448
1991	Men	.910	.855	.966	.927	.974	.928
	Women	.602	.291	.657	.378	.663	.482

United States (CPS)							
1984	Men	.743	.652	.890	.803	.961	.888
	Women	.388	.262	.655	.478	.802	.645
1991	Men	.743	.674	.886	.841	.958	.914
	Women	.419	.290	.710	.543	.838	.693
United States/Germany							
1984	Men	.902	.946	.939	.909	1.001	1.152
	Women	.942	1.254	1.112	1.398	1.188	1.440
1991	Men	.816	.788	.917	.907	.984	.985
	Women	.696	.997	1.081	1.437	1.264	1.438

C. Ages 18–65

Germany (GSOEP)							
1984	Men	.777	.687	.863	.782	.918	.742
	Women	.366	.179	.531	.300	.645	.387
1991	Men	.767	.710	.860	.816	.933	.876
	Women	.451	.229	.613	.349	.667	.442
United States (CPS)							
1984	Men	.675	.586	.846	.747	.934	.870
	Women	.382	.253	.630	.446	.773	.604
1991	Men	.659	.580	.844	.781	.923	.877
	Women	.402	.276	.678	.505	.813	.655
United States/Germany							
1984	Men	.869	.853	.980	.955	1.017	1.173
	Women	1.044	1.413	1.186	1.487	1.198	1.561
1991	Men	.859	.817	.981	.957	.989	1.001
	Women	.891	1.205	1.106	1.447	1.219	1.482

Note: Includes only those out of school.
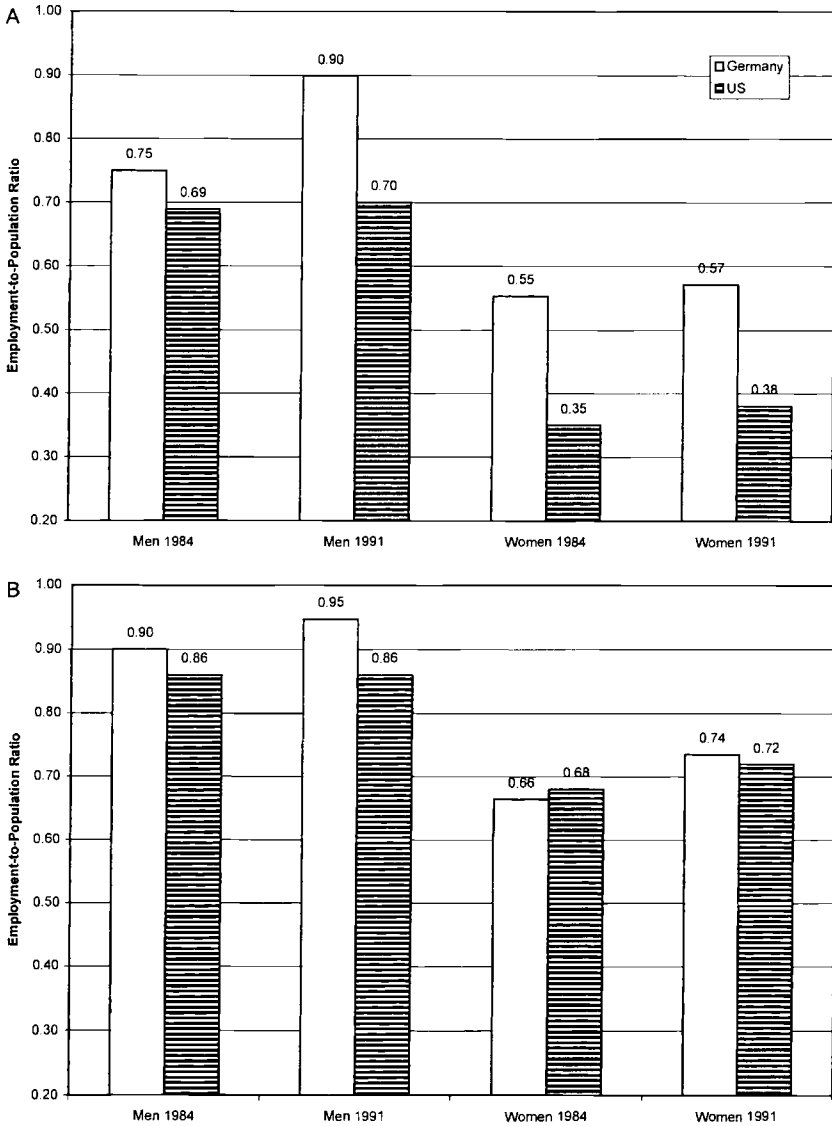
Fig. 3.1   **Employment rates by education, ages 18–29**
Note: A, Low education; B, middle education; C, high education.

full time, in a major contrast to the 18–29-year-olds. And while less educated German men aged 18–65 had higher employment rates than Americans, the German-U.S. differences were generally smaller than for youths. Thus, in an absolute and a relative sense, the low employment rates of less educated young people in the United States compared to Germany are particularly notable.
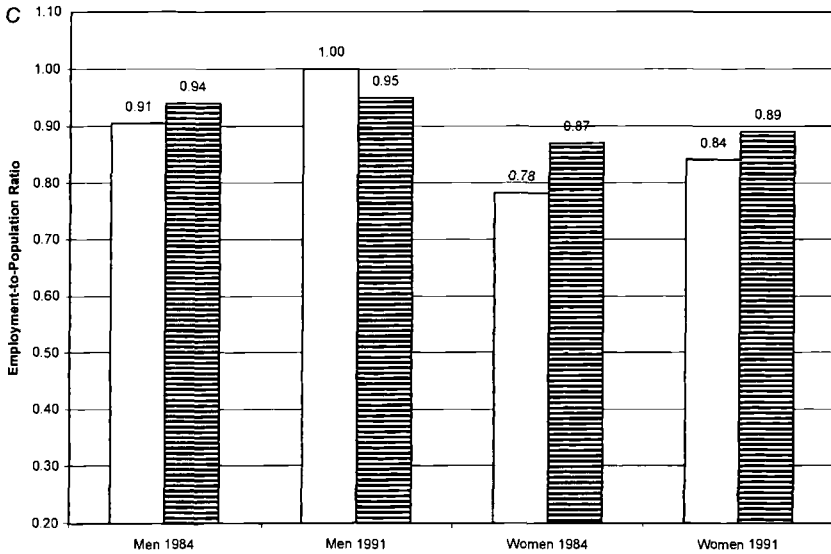
Fig. 3.1   (cont.)

Table 3.4 provides some evidence on the progress of the 18–29-year-old cohort over the 1984-91 period.[19] Focusing on the less educated, the table shows that employment-population ratios rose for men and women in both countries with age, with the largest increases for German men. Significantly, however, by the time its members reached their late twenties and early thirties (ages 25–36), the 1984 German youth cohort of less educated men and women remained considerably more likely to be employed than those in the United States. The same conclusions for full-time jobs hold for men. However, in all educational groups, including the least educated, German women's full-time attachment fell dramatically as they aged. By 1991, less educated German women were no more likely than Americans to have full-time jobs. In the other educational groups, American women either caught up to and surpassed German women or added to their 1984 lead in employment incidence and especially in their full-time employment rates. In contrast, American men in the middle- and high-education groups fell behind Germans in employment (but not as far as the Edlow group did) and had a mixed set of outcomes for full-time employment.

Overall, the synthetic cohort analysis shows that at least during the 1984–91 period, the employment disadvantage faced by less educated young men and women in America compared to Germany was not reversed with age. The one exception was that due to a strong general

19. Note that in this synthetic cohort analysis, the members of, say, the low-education group in 1984 are compared with those who remained in that educational category in 1991.

Table 3.4   **Employment Measures by Educational Group for Synthetic Cohort Aged 18–29 in 1984**

Country		Edlow		Edmid		Edhigh	
		Employed	Full Time	Employed	Full Time	Employed	Full Time
Germany (GSOEP)							
1984	Men	.750	.684	.900	.803	.905	.762
	Women	.553	.427	.664	.575	.782	.618
1991	Men	.910	.855	.966	.927	.974	.928
	Women	.602	.291	.657	.378	.663	.482
United States (CPS)							
1984	Men	.687	.545	.855	.686	.936	.806
	Women	.353	.210	.678	.472	.867	.704
1991	Men	.743	.674	.886	.841	.958	.914
	Women	.419	.290	.710	.543	.838	.693
United States/Germany							
1984	Men	.916	.797	.950	.854	1.034	1.058
	Women	.638	.492	1.021	.821	1.109	1.139
1991	Men	.816	.788	.917	.907	.984	.985
	Women	.696	.997	1.081	1.437	1.264	1.438

pattern of declining full-time employment rates with age among German women in all educational categories, the less educated American women's full-time rate equaled that of German women by 1991. This equality, however, stands in marked contrast to the considerably higher rates of full-time employment for American compared to German women in the middle- and high-education categories and thus still indicates considerable relative disadvantage for less educated American women.

The stronger association of education (particularly Edlow) with employment or full-time employment for American youths than for German youths shown in tables 3.3 and 3.4 holds up in probit analyses when we control for age, age squared, marital status, presence of children, and, for the United States, a race indicator. The point estimates and asymptotic standard errors are presented in appendix tables 3A.1 and 3A.2. Table 3A.3 calculates the estimated effects of education based on these results, both as partial derivatives of the employment probability with respect to education and as semielasticities (the derivative divided by the mean). Both absolutely and relative to the mean, we find that educational differences play a stronger role in leading to differences in employment opportunities or willingness to work in the United States than is the case in Germany.

So far we have analyzed labor market attachment solely by examining whether or not one is currently employed or employed full time. Table 3.5 takes a closer look at the workforce attachment of young workers by considering patterns of actual experience for panels of workers for whom experience during the 1984–91 period was observable. Recall that in the GSOEP, experience is collected only as of 1984. For the original panel members who remain, experience after 1984 can be computed. However, we cannot observe experience for those who join the GSOEP after 1984. For comparability, we construct a similar panel of individuals from the PSID. Table 3.5 shows experience and full-time experience as of 1984 and 1991. It should also be noted that since experience is measured from age 15 in the GSOEP and from age 18 in the PSID, the raw levels of experience are not directly comparable across countries. We can, however, compare relative levels of experience for educational groups.

The results are quite consistent with what would be expected based on the employment rates. For both men and women, Americans with low levels of schooling have lower relative experience levels (compared to those with middle or high levels of education) than those in Germany. The differences in amounts of experience across educational levels are particularly dramatic for young American women: less educated American women had only 40 percent of the total or full-time experience of middle educated women in 1984, while less educated German women had 11 to 18 percent more experience than middle educated women. These U.S.-German differences continue to be observed as the 18–29-year-old cohort

Table 3.5   Years of Experience and Full-Time Experience by Educational Group for Individuals Aged 18–29 in 1984

Work Experience		Edlow as of 1984		Edmid as of 1984		Edhigh as of 1984	
		Germany	United States	Germany	United States	Germany	United States
Total experience							
1984	Men	5.70	6.07	4.76	6.81	4.08	7.29
	Women	5.19	1.68	4.39	4.24	2.93	6.06
1991	Men	11.98	12.55	11.35	13.73	10.96	14.23
	Women	9.43	6.01	9.33	9.93	7.92	12.06
Full-time experience							
1984	Men	5.44	5.58	4.74	6.00	3.82	3.99
	Women	4.45	1.38	3.99	3.52	2.62	3.49
1991	Men	11.54	11.14	11.27	12.37	10.56	10.62
	Women	6.96	3.33	7.53	7.21	6.05	7.55

Sources: Panels for 1984–91 from the German Socio-Economic Panel and Michigan Panel Study of Income Dynamics.

Note: Includes only those out of school as of 1984.

aged into 1991, although the cross-country differences decline somewhat. Among men, the low-education group in the United States has about 90 percent of the total or full-time experience of the middle educated in each year, while in Germany the less educated men's advantage ranges from 2 to 20 percent depending on the year and measure. Overall, the data on experience levels reinforce our conclusion that less educated young men and women in America have relatively low labor market attachment compared to their German counterparts.

3.4.3   Earnings

In this section we consider the earnings of youths. Earnings are of course important in themselves as an indicator of economic well-being. In addition, an analysis of earnings may provide some evidence regarding the reasons for the lower labor market attachment of less educated American youths detailed above. For example, if these workers have particularly poor labor market opportunities (i.e., low wages), then movements along a supply curve would be a possible explanation for their low attachment to the labor force.

To analyze wages, we focus on people who are not currently self-employed and who did not have any self-employment income during the previous year. In both the GSOEP and the CPS, it is possible to compute average monthly wage and salary income over the previous year, including wages and salaries, as well as bonuses. Thus earnings for the 1984 and 1991 samples refer to 1983 and 1990. Unfortunately, it is not possible in the GSOEP to calculate hourly earnings since we lack information on weeks worked. However, both data sets contain information on hours worked per week. We use this information to simulate hours-corrected earnings as follows. Suppose that for each country and year we can express log monthly earnings of person i:

$$(1) \qquad \ln Y_i \; = \; a_1 PART_i \; + \; a_2 HRPART_i \; + \; a_3 HRFULL_i \; + \; B'X_i \; + \; u_i,$$

where Y is monthly labor income in 1983 U.S. dollars for both countries,[20] *PART* is a dummy variable for part-time workers (defined as working less than 35 hours per week), *HRPART* and *HRFULL* are interactions of work hours with part-time and full-time employment, X is a vector of explanatory variables, and u is a disturbance term. The following variables are included in X: age and its square, marital status (Mar), presence of children (Childyes), educational dummies (Edlow and Edmid), and, for the United States, a race dummy variable for whites (White). For the reasons discussed above, we are forced to use age rather than actual experience in equation (1). We include controls for marital status and especially children

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20. This is obtained using the OECD's (1996) index of purchasing power parity (German marks per U.S. dollar) for 1983 and 1990 and the U.S. consumer price index as deflator.

to pick up some of the effects of workforce interruptions for women associated with these events (e.g., Waldfogel 1998). Equation (1) is estimated separately for men and women in each age group.

We then simulate full-time earnings for each individual as follows:

$$(2) \qquad \ln YFULL_i = \ln Y_i - a_1 PART_i - a_2 HRPART_i$$

$$- a_3 (HRFULL_i - 40).$$

Equation (2) estimates what a worker's monthly earnings would have been had he or she worked 40 hours per week.[21]

Table 3.6 presents log real hours-corrected monthly earnings in 1983 U.S. dollars for both countries, by age-gender-education group for 1984 and 1991; figure 3.2 highlights the results for young workers. We see the same pattern among men and women: German youths with low education levels outearned Americans. In 1984, the German advantage was 11 to 15 percent and grew to 27 to 35 percent by 1991 (compare the first and second columns of table 3.6).[22] In American purchasing power, real wages of less educated German youths rose 9 to 12 percent between 1984 and 1991, while they fell by 7 to 8 percent for American youths over this period. Although American youths with middle levels of education also lost ground to inflation and relative to Germans, they remained closer to the German level of purchasing power in 1991 than American less educated workers. Finally, among highly educated youths, Americans started with a small advantage over Germans (1 to 5 percent) in 1984 that widened to 20 to 22 percent by 1991. The changes in relative wages by educational group for the labor force as a whole (ages 18–65) were similar to those for 18–29-year-olds but less dramatic. The changes in the relative purchasing power of high- and low-education groups illustrate the considerably greater widening of the American wage distribution in the 1980s compared to Germany (Abraham and Houseman 1995).

Table 3.7 shows the progress in real wages within the cohort of 18–29-year-olds as it aged during the 1984–91 period. Real hours-corrected earnings rose for all gender-education groups in this cohort within Germany and the United States; however, by 1991 less educated Germans outearned Americans by 15 to 22 percent. American men's real wages rose substantially less quickly than German men's among the low-education group, while American less educated young women maintained their position at roughly 15 percent lower purchasing-power-corrected wages than Germans. In contrast, young, highly educated Americans experienced very

21. In earlier work on international differences on the gender gap in pay, we used a similar procedure since we lacked data on hourly earnings there as well; see Blau and Kahn (1995, 1996b).

22. The percentage differences cited in the text are approximations based on the differences in the logs.

Table 3.6　　　**Log Real Hours-Corrected Earnings**

Gender	Edlow 1984	Edlow 1991	Edmid 1984	Edmid 1991	Edhigh 1984	Edhigh 1991	All 1984	All 1991
				A. Ages 18–29				
Men								
Germany (GSOEP)	6.834	6.926	7.002	7.067	7.305	7.148	7.019	7.059
United States (CPS)	6.724	6.652	7.020	6.940	7.316	7.347	7.020	6.963
U.S.-German difference	−0.110	−0.274	0.018	−0.127	0.011	0.199	0.001	−0.096
Women								
Germany (GSOEP)	6.653	6.777	6.745	6.867	7.029	6.989	6.776	6.875
United States (CPS)	6.504	6.423	6.768	6.752	7.075	7.213	6.801	6.820
U.S.-German difference	−0.149	−0.354	0.023	−0.115	0.046	0.224	0.025	−0.055
				B. Ages 25–36				
Men								
Germany (GSOEP)	6.915	7.093	7.186	7.175	7.450	7.364	7.226	7.224
United States (CPS)	6.979	6.869	7.306	7.230	7.545	7.571	7.333	7.268
U.S.-German difference	0.064	−0.224	0.120	0.055	0.095	0.207	0.107	0.044
Women								
Germany (GSOEP)	6.805	6.709	6.955	6.978	7.195	7.223	6.978	6.993
United States (CPS)	6.663	6.560	6.967	6.943	7.272	7.391	7.027	7.039
U.S.-German difference	−0.142	−0.149	0.012	−0.035	0.077	0.168	0.049	0.046
				C. Ages 18–65				
Men								
Germany (GSOEP)	7.022	7.057	7.198	7.235	7.577	7.566	7.269	7.313
United States (CPS)	7.047	6.938	7.301	7.266	7.668	7.709	7.339	7.326
U.S.-German difference	0.025	−0.119	0.103	0.031	0.091	0.143	0.070	0.013
Women								
Germany (GSOEP)	6.751	6.810	6.921	6.968	7.261	7.303	6.925	6.992
United States (CPS)	6.662	6.612	6.917	6.951	7.276	7.410	6.954	7.024
U.S.-German difference	−0.089	−0.198	−0.004	−0.017	0.015	0.107	0.029	0.032

Note: Earnings are in 1983 U.S. purchasing-power-equivalent dollars.
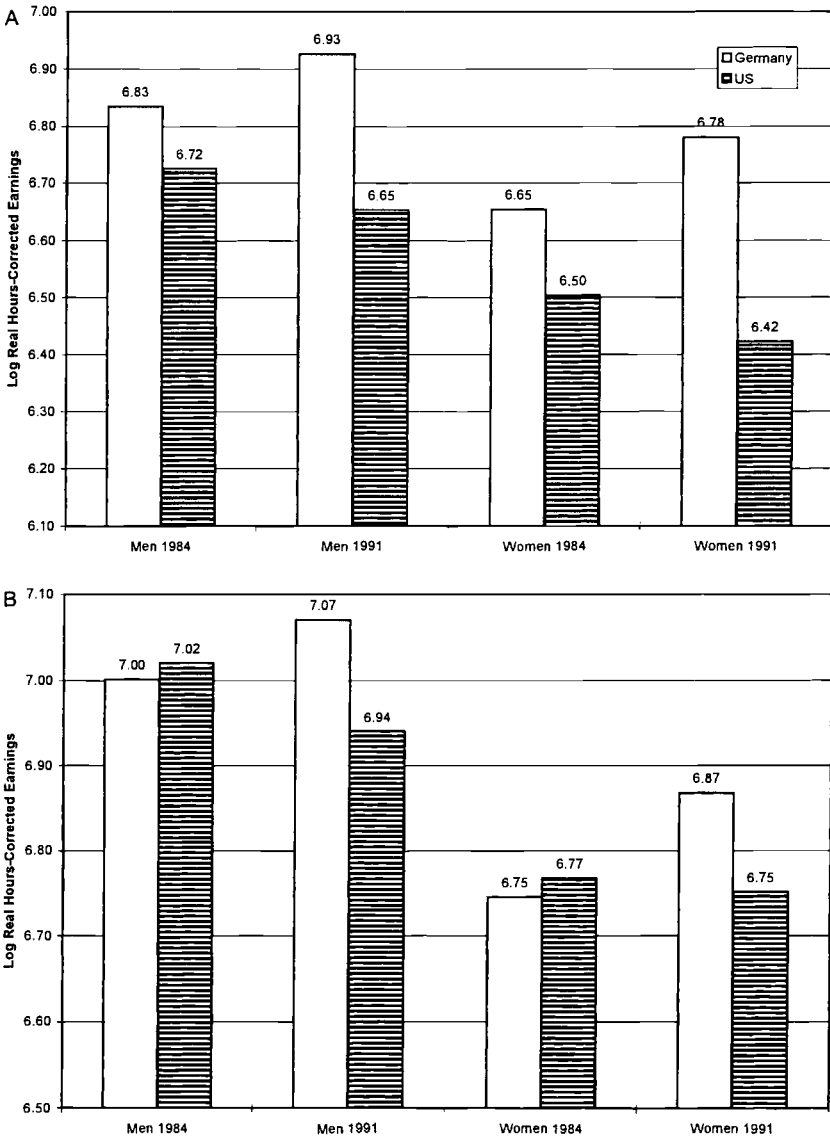
Fig. 3.2   **Log real hours-corrected earnings by education, ages 18–29**
Note: A, Low education; B, middle education; C, high education.

large gains relative to the Germans. As was the case for employment, less educated American workers did not close the gap with Germans as they aged but rather continued to do substantially worse than their German counterparts.

The general findings suggested by the tabulations in tables 3.6 and 3.7
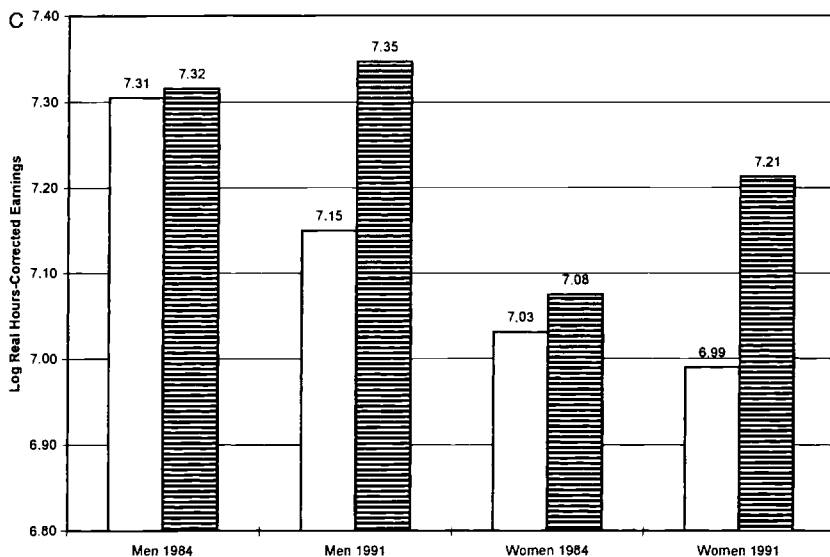
Fig. 3.2   (cont.)

are confirmed by the education effects obtained in regression analyses controlling for age, age squared, marital status, presence of children, and, for the United States, race, in addition to the hours variables. These results, which are shown in table 3.8, indicate the greater importance of education in determining American than German wages and the increased importance of education in the United States relative to Germany over the 1984–91 period. The rising returns to education in the United States occur both across cohorts over time and within the youth cohort as it ages from 18–29 in 1984 to 25–36 in 1991.

The gender gap in pay is explored in table 3.9, which shows male-female differences in the log of hours-corrected earnings by age-education group. Among the youth cohort overall, the gender pay gap was slightly smaller (by .024 to .041 log points) in the United States than in Germany in both years and fell by similar amounts in both countries. However, for the low-education group, the American gender pay gap was larger than the German gap, by .039 to .080 log points, reflecting the especially poor labor market position of less educated, young American women.[23] As expected based on published data and previous studies, for the labor force as a whole (ages 18–65, all), the gender pay gap was larger in the United States than in Germany in 1984 (by .041 log points), but by 1991, the German gap was a bit greater (by .019 log points). Interestingly, *within* each

23. However, within the cohort that was 18–29 years old in 1984, the U.S.-German gender gap difference fell between 1984 and 1991 (from .039 to −.075) for the less educated but rose for the other educational groups.

Table 3.7 **Log Real Hours-Corrected Earnings for Synthetic Cohort Aged 18–29 in 1984**

Gender	Edlow		Edmid		Edhigh		All	
	1984	1991	1984	1991	1984	1991	1984	1991
Men								
Germany (GSOEP)	6.834	7.093	7.002	7.175	7.305	7.364	7.019	7.224
United States (CPS)	6.724	6.869	7.020	7.230	7.316	7.571	7.020	7.268
U.S.-German difference	−0.110	−0.224	0.018	0.055	0.011	0.207	0.001	0.044
Women								
Germany (GSOEP)	6.653	6.709	6.745	6.978	7.029	7.223	6.776	6.993
United States (CPS)	6.504	6.560	6.768	6.943	7.075	7.391	6.801	7.039
U.S.-German difference	−0.149	−0.149	0.023	−0.035	0.046	0.168	0.025	0.046

Note: Earnings are in 1983 U.S. purchasing-power-equivalent dollars.

Table 3.8   **Ceteris Paribus Effects of Education on Log Earnings**

Country	1984		1991	
	Edlow	Edmid	Edlow	Edmid
	A. Ages 18–29			
Germany (GSOEP)				
Men	−.324	−.185	−.110	−.016
	(.070)	(.053)	(.077)	(.059)
Women	−.246	−.188	−.098	−.050
	(.083)	(.065)	(.076)	(.056)
United States (CPS)				
Men	−.423	−.158	−.565	−.303
	(.023)	(.018)	(.022)	(.017)
Women	−.424	−.193	−.634	−.345
	(.026)	(.017)	(.026)	(.017)
	B. Ages 25–36			
Germany (GSOEP)				
Men	−.506	−.253	−.237	−.180
	(.057)	(.034)	(.060)	(.037)
Women	−.377	−.225	−.463	−.199
	(.083)	(.063)	(.089)	(.066)
United States (CPS)				
Men	−.558	−.227	−.698	−.334
	(.019)	(.013)	(.017)	(.012)
Women	−.584	−.285	−.803	−.429
	(.024)	(.014)	(.022)	(.013)

Note: Other explanatory variables include age, age squared, marital status (Mar), presence of children (Childyes), *PART, HRPART, HRFULL,* and, for the United States, a race dummy (White).

educational group, the American pay gap for all workers (ages 18–65) was larger than the German pay gap in 1991, possibly reflecting a more egalitarian German wage structure. The fact that not controlling for education, the overall gender pay gap was smaller in the United States than in Germany reflects the superior relative educational qualifications of American women.

3.4.4   Patterns for Immigrants in Germany

As we noted earlier, the basic analyses for Germany in this paper are performed for German natives only, due to the lower quality of schooling information on immigrants. However, the GSOEP does provide some evidence on immigrants' education, as well as on their family status and labor market outcomes. In this section, we explore the schooling, employment, and earnings of young immigrants in Germany, with a special focus on those without German technical school, high school, or postsecondary

Table 3.9   **Gender Gap in Log Real Hours-Corrected Earnings**

Country	Edlow		Edmid		Edhigh		All	
	1984	1991	1984	1991	1984	1991	1984	1991
A. Ages 18–29								
Germany (GSOEP)	.181	.149	.257	.200	.276	.159	.243	.184
United States (CPS)	.220	.229	.252	.188	.241	.134	.219	.143
U.S.-German difference	.039	.080	−.005	−.012	−.035	−.025	−.024	−.041
B. Ages 25–36								
Germany (GSOEP)	.110	.384	.231	.197	.255	.141	.248	.231
United States (CPS)	.316	.309	.339	.287	.273	.180	.306	.229
U.S.-German difference	.206	−.075	.108	.090	.018	.039	.058	−.002
C. Ages 18–65								
Germany (GSOEP)	.271	.247	.277	.267	.316	.263	.344	.321
United States (CPS)	.385	.326	.384	.315	.392	.299	.385	.302
U.S.-German difference	.114	.079	.107	.048	.076	.036	.041	−.019

degrees. We conclude that even if one were to include immigrants in what we have termed the low-skilled group, young people without formal credentials living in Germany would still have employment and wage outcomes far superior to those of low-skilled young Americans.

Appendix table 3A.4 contains schooling, employment, and wage information for young immigrants in Germany for 1984 and 1991. Panels A and B show that in comparison to natives, immigrants are less likely to be in school and less likely to have postsecondary training or German technical or high school degrees (cf. tables 3.1 and 3.2 above). Thus, overall, immigrants tend to be a relatively low skilled group. Panel B examines employment and hours-corrected earnings for all young immigrants who are not in school. Overall, men are about as likely to be employed as German natives in the low-education group, while women are somewhat less likely to be employed than German natives; however, immigrant women are much more likely than low-skilled Americans to be employed. And German immigrants' wages are about the same as those of German natives with low levels of education.

If we treat all immigrants, regardless of their training, as competing with low-skilled native workers, then according to the GSOEP's weights, immigrants would make up only about 16 percent of the low-skilled population among individuals in Germany for 1984.[24] Under this assumption, we still conclude that young people with low skill levels (immigrants and natives aggregated) in Germany have much better employment and wage outcomes than Americans. However, panel B of table 3A.4 indicates that a considerable portion of the immigrant population had German schooling that would place them in the middle- or high-education group by our definition. A sharper comparison between immigrants and natives may be drawn by examining lower skilled immigrants, as we now do.

To focus on immigrants without German formal skills, we present labor market information on young immigrants without German technical, high school, or postsecondary degrees in panel C of table 3A.4. In panel D, we additionally exclude immigrants who have received vocational or university degrees from other countries. Our conclusions are the same in either case. We find the levels of male employment and wages to be quite similar to those for German low-skilled workers. However, while low-skilled immigrant women's wages are about the same as their native German counterparts, their employment rates are considerably lower than those of

24. The GSOEP immigrant files are an oversample of that population. While the GSOEP version we used had sampling weights for 1984, it did not include sampling weights for 1991, so we cannot produce a similar figure for that year. But according to the OECD (1993b), foreign individuals made up 7.4 percent of the population in West Germany in 1984 and 8.2 percent in 1990 (falling to 7.3 percent for eastern and western Germany combined for 1991). Thus our conclusions about the small relative size of the immigrant population in the youth labor market are likely to hold for 1991 as well.

natives. Young, low-skilled immigrant women in Germany are only a little more likely to be employed than low-skilled American young women in 1984, and equally likely to be employed in 1991; full-time employment rates are somewhat higher for low-skilled immigrant women in Germany than for low-skilled Americans. Nonetheless, since for 1984 immigrants without German formal skills were only 11 to 13 percent of all young Germans without formal skills, our basic finding that young, low-skilled individuals in Germany have much more labor market attachment than those in the United States would not be affected were we to include immigrants.

The finding that the hours-corrected earnings of low-skilled immigrants of both sexes are virtually identical to those of German natives is quite consistent with the high administered wages in Germany. The fact that employment rates of less educated male immigrants are similar to those of natives suggests that they too do not pay a price in terms of employment for these relatively high wages. While the lower employment rates of less educated immigrant women could indicate an employment cost of high wages for them, we strongly suspect much of the immigrant-native employment difference for women in Germany reflects cultural factors operating on the supply side. A substantial proportion of young immigrant women come from countries with relatively low female labor force participation rates, including 45 percent from Turkey and an additional 38 percent from Italy, Greece, and Spain.[25]

3.5 Explanations for the Low Labor Market Attachment of Less Educated American Youths

As we have seen, real wages are lower for less educated youth in America than in Germany, both absolutely and relative to their more highly educated counterparts. Our wage findings are consistent with the operation of high wage floors in Germany from which less educated employed youths disproportionately benefit. The low labor market attachment of Americans may reflect movements along a supply curve in response to these lower wages, and below, we use existing estimates of American labor supply elasticities to simulate the effect of raising American wages to German levels. However, to the extent that the higher relative wages of less educated German youths reflect high administered industry minimum wages, we would expect to observe demand-induced employment reductions in Germany. Yet we find that employment rates of less

25. All of these countries had a lower female-male labor force participation rate ratio than West Germany during the 1985–88 period (Blau and Ferber 1992, 300–304). While 12 percent of young immigrant women came from Yugoslavia, which had a female-male labor force participation rate ratio slightly higher than that in West Germany for the 1985–88 period, this group is far outweighed by those from countries for which the ratio favors Germany.

educated youths are higher in Germany. This pattern is particularly strik-
ing among young women, where Americans lag behind Germans substan-
tially in both wages and employment. At least two features of German
and American government policy may help to explain Germany's rela-
tively high youth employment rates, which occur despite its system of rela-
tively high, administered wages.

First, Germany has a larger public sector, which can potentially absorb
those who would otherwise be out of work. Second, the U.S. welfare sys-
tem, for which less educated women are most likely to qualify, strongly
penalizes market work. We attempt to shed light on these possible expla-
nations for German-U.S. differences in employment outcomes below. In
addition, it is of interest that the lower employment rates of less educated
U.S. women occur in the face of a countervailing factor that would work
to reduce labor market attachment among German women: Germany's
system of maternity and parental leave, which is considerably more gener-
ous than that in the United States and was expanded between 1984 and
1991. This could mean either that German family leave does not have
the expected negative effect or that other factors are sufficiently strong to
outweigh its impact among less educated women. We also investigate this
question below.

3.5.1 Government Employment

As several authors have argued, public employment can be an outlet for
the labor supply induced by high wages. The descriptive results in table
3.10, showing the fraction of workers in each gender-age-education group
who are government workers in each country, are consistent with this ar-

Table 3.10		Edlow		Edmid		Edhigh	
		Germany	United States	Germany	United States	Germany	United States
Year							
				A. Ages 18–29			
1984	Men	.158	.049	.161	.077	.208	.167
	Women	.218	.043	.229	.107	.442	.276
1991	Men	.189	.027	.188	.114	.241	.163
	Women	.267	.036	.256	.096	.304	.208
				B. Ages 30–65			
1984	Men	.164	.101	.245	.142	.359	.258
	Women	.236	.104	.235	.184	.561	.453
1991	Men	.158	.073	.242	.145	.318	.233
	Women	.274	.093	.260	.170	.503	.384

Table 3.10 **Fraction of Employment in Government: Levels**

Note: Includes only those out of school.

gument. Public employment is more extensive in Germany. While in both countries it is disproportionately taken by the highly educated, the less educated appear to have greater representation in the public sector in Germany than in the United States.

Table 3.11 subjects these impressions to greater scrutiny by comparing differences between the two countries in the incidence of public employment by age-education group. For government employment to explain the higher employment rates of less educated German youths, we expect to find that low education is less of a barrier to public employment in Germany than in the United States. Further, we might expect this effect to be particularly strong for young workers, who are potentially the most affected by wage floors, and to be strongest for young women, who are the lowest wage group. These expectations are at least partly borne out by the data.

Most significantly, the results in table 3.11 strongly suggest that low education is less of a barrier to public employment among less educated youths in Germany than in the United States: for each comparison (Edlow vs. Edmid and Edlow vs. Edhigh) and each year, the German-U.S. difference is positive, indicating that the treatment of less educated youths is more favorable in Germany than in the United States. However, this favorable effect does not tend to be larger for young women than for young men. Among males, our additional expectation that low education is more of a barrier to public employment among older than among young workers within Germany is confirmed as well: the Edlow-Edmid and Edlow-Edhigh differences by age group in panel C are larger for Germany than for the United States in all cases. This finding is consistent with a larger private sector disemployment effect of high wage floors on young male workers that provide a stronger impetus for government employment. Our additional expectations are not, however, consistently borne out among women. Less educated, younger workers face lower barriers than older workers to obtaining government employment only in the Edlow-Edhigh comparisons. In addition, in only one case—the 1991 Edlow-Edhigh comparison—is the relative advantage of younger women larger in Germany than in the United States. It may be that older, less educated German women are also minimum wage constrained so that they may seek government employment. In any case, the data in table 3.11 support the notion that in Germany the government potentially plays an important role in providing jobs for less educated, young workers even if in the case of women this effect is not necessarily greater than for older, less educated women.[26] We may note that we are not necessarily arguing that this reflects

26. These findings are largely confirmed when we estimate the probability of government employment as a function of educational group, age, age squared, marital status, presence of children, and, for the United States, a race indicator. The results are shown in appendix table 3A.5.

Table 3.11   Fraction of Employment in Government: Differences

Year		Edlow vs. Edmid						Edlow vs. Edhigh					
		Germany		United States		Germany-U.S.		Germany		United States		Germany-U.S.	
		Absolute	Divided by Mean	Absolute	Divided by Mean	Absolute	Divided by mean	Absolute	Divided by Mean	Absolute	Divided by Mean	Absolute	Divided by Mean
						A. Ages 18–29							
1984	Men	−.003	−.018	−.028	−.322	.025	.304	−.050	−.299	−.118	−1.311	.068	1.012
	Women	−.011	−.041	−.064	−.489	.053	.447	−.224	−.839	−.233	−1.779	.009	.940
1991	Men	.001	.005	−.087	−.806	.088	.811	−.052	−.260	−.136	−1.259	.084	.999
	Women	.011	.041	−.060	−.526	.071	.568	−.037	−.139	−.172	−1.509	.135	1.370
						B. Ages 30–65							
1984	Men	−.081	−.340	−.041	−.246	−.040	−.095	−.195	−.819	−.157	−.940	−.038	.121
	Women	.001	.003	−.080	−.611	.081	.614	−.325	−1.042	−.349	−2.664	.024	1.622
1991	Men	−.084	−.422	−.072	−.667	−.012	.245	−.160	−.804	−.160	−1.481	.000	.677
	Women	.014	.050	−.077	−.675	.091	.725	−.229	−.812	−.291	−2.553	.062	1.741
					C. Difference by Age: (Ages 18–29) − (Ages 30–65)								
1984	Men	.078	.322	.013	−.076	.065	.399	.145	.520	.039	−.371	.106	.891
	Women	−.012	−.044	.016	.122	−.028	−.167	.101	.203	.116	.885	−.015	−.683
1991	Men	.085	.427	−.015	−.139	.100	.566	.108	.544	.024	.222	.084	.322
	Women	−.003	−.008	.017	.149	−.020	−.157	.192	.673	.119	1.044	.073	−.371

Note: Includes only those out of school. "Mean" refers to the mean fraction employed by government for the relevant age-gender group.

an explicit government policy to function as an employer of last resort. It may simply be that, given the large size of the government sector and the composition of employment in it, these groups are more readily absorbed than in the United States.

To assess the potential size of the effect of government employment in causing young, less educated Germans' greater labor market attachment, we present table 3.12 showing the fraction of the population of less educated youths having government jobs. Among both young men and women, a much larger share of this population has government jobs in Germany than in the United States. Further, the percentage point gap between the two countries in this share (9 to 15 points for men and 11 to 14 points for women) is large compared to the German-U.S. differences in employment-population ratios shown in table 3.3. These latter differences are about 20 percentage points for women and range from 6 to 20 points for men. Of course, each government job may not add a total of one net new job for the population, but the large differences between the two countries shown in the table imply that government employment has a potentially important effect in increasing the employment rates of young, less educated Germans compared to their counterparts in the United States.

As noted above, we found that young German men with low education especially improved their relative economic status over the late 1980s. Their employment increased both absolutely and relative to young, low-skilled Americans, while their real earnings increased relative to less educated youths in the United States and more highly educated German youths. Our results suggest that public sector employment played a role in this improvement. Table 3.12 shows a sharp increase in the fraction of the population of young, less educated German men with government jobs (from 12 percent in 1984 to 17 percent in 1991). It is true that the Edlow-Edmid and Edlow-Edhigh comparisons for young German men in table 3.11 indicate that there was no *relative* increase in the government employment incidence of the less educated between 1984 and 1991. That is, less educated German young men appear to have benefited from a general increase in the incidence of government employment for young males in all educational groups. However, for the Edlow-Edmid comparison, the

Table 3.12   Fraction of the Population with Government Jobs for Ages 18–29 with Low Educational Levels

Year		Germany	United States
1984	Men	.119	.034
	Women	.121	.015
1991	Men	.170	.019
	Women	.152	.014

Note: Includes only those out of school.

German-U.S. difference did increase in absolute value. This suggests that low education had an increasingly important effect in the United States relative to Germany in keeping young men out of government jobs over the 1984–91 period. Thus, in this relative sense, we can say that the government played a role in raising young, less educated men's employment in Germany compared to that in the United States.

The sharply higher real wages, labor market attachment, and incidence of government employment among young, less skilled Germans than among Americans are consistent with the following scenario. German unions negotiate high wage floors, having a relatively large positive effect on wages of the low skilled. The government in effect functions as an employer of last resort and provides jobs for the additional workers looking for employment as a result of the higher wages, although this may or may not reflect an explicit government policy. The additional workers finding government jobs include those disemployed by the wage floors and those brought into the labor market by the prospect of high wages. An important question in interpreting our U.S.-German comparisons is the degree to which this scenario can account for the employment attachment differences of less educated youths in the two countries. In particular, given American labor supply elasticities, could German-level real wages, coupled with government jobs for those not able to find private sector work, entice enough Americans into the labor force to bring the employment-population ratio to the German level?

In order to answer this question, we need estimates of the wage elasticity of labor force participation for young, low-skilled workers in the United States. The labor supply literature typically estimates the supply elasticity for total work hours (Killingsworth 1983); however, we have found some studies of the participation elasticity that would allow us to simulate the effects of raising Americans' real wages. For women, Schultz (1980) finds for white married women in 1967 an elasticity of 1.5 for ages 14–24 and 1.0 for ages 25–34. A second study by Kimmel (1996) obtains a participation elasticity of 1.5 for single mothers aged 18–55 in 1987. While these samples are not identical to our low-skilled group, 1.5 seems a reasonable estimate for the female elasticity for simulation purposes. For men, Juhn (1992) estimates the derivative of the employment probability with respect to wages as a step function that depends on one's position in the wage distribution. For white men in the bottom 20 percent in 1970, a group comparable in relative size to our low-skilled group, she finds a derivative of .288. While Juhn (1992) does not report an elasticity for this group, we can approximate one by using as a base the employment-population ratio for white high school dropouts. When we do this, we obtain an employment-population ratio elasticity of 0.3 for low-skilled men.

For young, low-skilled women, table 3.6 shows that American real wages were lower than those for Germany by .15 log points in 1984 and

.36 in 1991. Applying the 1.5 elasticity to wage increases of this magnitude implies increases in the labor force participation rate of .079 in 1984 and .201 in 1991. These movements along the women's supply curve constitute about 40 percent of the German-U.S. employment rate gap in 1984 and 103 percent in 1991. However, these studies relate to labor force participation rather than employment. While the GSOEP did not collect unemployment information in 1991, it is available for 1984, allowing us to calculate labor force participation rates for the earlier year. We find that the labor force participation gap between the United States and Germany is slightly smaller than the gap for the employment-population ratios so, at least for that year, the proportion explained would be roughly the same were we to focus on participation.

For low-skilled young men, the U.S.-German real wage differences were .11 log points in 1984 and .27 in 1991. According to Juhn's (1992) estimates, these wage increases would raise the American employment-population ratio by .023 in 1984 and .057 in 1991, or about 37 percent of the German-U.S. employment gap in 1984 and 28 percent in 1991.[27]

These simulations of the effects of equalizing German and U.S. real wages among young workers with low educational levels imply that the high-wage, public employment demand response scenario could account for all of the German-U.S. difference in employment rates for low-skilled young women in 1991. But for young women in 1984 and young men in both years, something more is needed to explain higher employment rates among German low-skilled youths.

One possible explanation for the remaining differences for young males and for young females in 1984 is that German youths have lower unemployment rates than young Americans, and it is likely that labor force participation depends on unemployment as well as wages. As just noted, the GSOEP allows us to compare U.S. and German unemployment rates for 1984, and we find that less educated young men and women both have higher unemployment rates in the United States. For women, the unemployment rate was 11.8 percent in the United States and 10.0 percent in Germany, while for men it was 19.8 percent in the United States and 18.4 percent in Germany. What are the labor supply implications of these unemployment rate gaps between the United States and Germany? If the American unemployment rate were lowered to the German level for these workers and if the labor supply elasticity of the employment-population ratio with respect to the unemployment rate were .76 for men and 1.91 for women, then labor supply responses to unemployment rate and wage differences could together account for all of the employment-population

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27. Since Juhn's (1992) estimates are for employment (rather than for labor force participation), applying elasticities based on her results to our employment-population ratios is appropriate.

ratio gap between young, less skilled Germans and Americans in 1984.[28] And the higher incidence of public employment in Germany would allow the greater labor supply there to result in actual employment.

3.5.2   Welfare

While we have seen that higher government employment provides a plausible explanation for a substantial portion of the U.S.-German differences in the employment rates of the low skilled, it is also possible that the U.S. welfare system plays a role. As we see in table 3.13, single motherhood in the United States is highly negatively correlated with education. In 1984, for example, 33 percent of young U.S. women with low levels of education were single mothers, compared to 20 percent in the middle-education group and only 6 percent in the high-education group.[29] The United States also has a much higher incidence of single motherhood among women with low educational levels than is the case for Germany. In 1984, the German rate of single motherhood was about 10 percentage points lower than the U.S. rate in the low- and middle-education groups and about the same in the high-education group. Moreover, between 1984 and 1991, the incidence of single motherhood in the United States increased by a bit more (4 percentage points) in the Edlow group than in the Edmid group (3 points) while actually declining slightly for women in the Edhigh group. In Germany, if anything, single motherhood appears to have diminished. The difference between the United States and Germany in female headship may itself be due in part to AFDC in the United States, although research generally does not indicate a strong welfare effect on fertility or marital status within the United States (Ellwood and Bane 1985; Moffitt 1992).

In addition to possibly affecting family formation decisions (we attempt to assess the employment consequences of family structure below), the welfare system could also of course reduce labor market attachment among recipients. Tables 3.14 and 3.15 shed light on this issue by examining the employment rates of young women in each country by family composition and education. If the welfare system is important in reducing employment, we expect this impact to be primarily confined to those who

28. These implied elasticities were computed as follows. Taking the case of men for illustrative purposes, we note that wage differences between Germans and Americans account for 2.3 percentage points of the 6.3 percentage point differential in the employment-population ratio. Thus unemployment rate differences would have to account for the remaining 4.0, which would imply a 5.8 percent increase on the U.S. base employment-population ratio of 68.7 percent. The American unemployment rate in 1984 for young, low-skilled men was 7.6 percent higher than that for Germans (i.e., .198/.184). Thus the required American elasticity of the employment-population ratio with respect to the unemployment rate is 5.8/7.6, or 0.76. An analogous computation leads to a required elasticity for women of 1.91.

29. The heavy concentration of single motherhood among less educated women in the United States is particularly emphasized by Blau (1998).

Table 3.13 Family Composition of Women Aged 18–29

Country		Marital Status		Children Present			No Children Present		
		Married	Not Married	Total	Married	Not Married	Total	Married	Not Married
United States (CPS)									
1984	Edlow	.510	.490	.761	.436	.325	.239	.073	.166
	Edmid	.509	.491	.550	.349	.200	.450	.160	.290
	Edhigh	.500	.500	.272	.215	.057	.728	.285	.443
1991	Edlow	.430	.570	.736	.365	.371	.264	.066	.199
	Edmid	.451	.549	.537	.312	.225	.463	.139	.324
	Edhigh	.457	.543	.223	.183	.040	.777	.274	.503
Germany (GSOEP)									
1984	Edlow	.500	.500	.613	.393	.220	.387	.107	.280
	Edmid	.559	.441	.465	.362	.103	.535	.197	.338
	Edhigh	.464	.536	.310	.255	.055	.691	.209	.482
1991	Edlow	.408	.592	.562	.359	.203	.437	.049	.388
	Edmid	.450	.550	.401	.306	.095	.599	.144	.455
	Edhigh	.451	.548	.183	.159	.024	.817	.293	.524

Table 3.14   **Employment by Family Composition and Education for Women Aged 18–29: Levels**

	1984				1991			
	Not Married		Married		Not Married		Married	
Country	Without Children	With Children	Without Children	With Children	Without Children	With Children	Without Children	With Children
United States (CPS)								
Employment-population ratio								
Edlow	.526	.308	.455	.303	.526	.316	.468	.335
Edmid	.842	.645	.791	.508	.846	.660	.842	.578
Edhigh	.957	.856	.898	.642	.949	.885	.923	.670
Full-time employment-population ratio								
Edlow	.303	.157	.342	.192	.325	.175	.333	.220
Edmid	.606	.398	.642	.326	.619	.433	.710	.396
Edhigh	.796	.649	.756	.457	.793	.679	.831	.499
Germany (GSOEP)								
Employment-population ratio								
Edlow	.643	.667	.875	.339	.850	.476	n.a.	.243
Edmid	.883	.787	.856	.321	.970	.657	.943	.301
Edhigh	.887	n.a.	1.000	.429	.953	n.a.	.958	.231
Full-time employment-population ratio								
Edlow	.619	.545	.750	.136	.800	.286	n.a.	.027
Edmid	.844	.745	.833	.133	.929	.371	.811	.053
Edhigh	.774	n.a.	.826	.143	.860	n.a.	.875	.154

Note: n.a. = cell size equal to 10 or fewer observations.

Table 3.15   **Employment by Family Composition and Education for Women Aged 18–29: Differences**

	1984				1991			
	Not Married: With Children vs. Without Children		With Children: Not Married vs. Married		Not Married: With Children vs. Without Children		With Children: Not Married vs. Married	
Country	Absolute Difference	Divided by Mean	Absolute Difference	Divided by Mean	Absolute Difference	Divided by Mean	Absolute Difference	Divided by Mean
United States (CPS)								
Employment-population ratio								
Edlow	−.218	−.618	.005	.014	−.210	−.560	−.019	−.051
Edmid	−.197	−.291	.137	.202	−.186	−.258	.082	.114
Edhigh	−.101	−.116	.214	.247	−.064	−.072	.215	.242
Edlow-Edmid	−.021	−.327	−.132	−.188	−.024	−.302	−.101	−.165
Edlow-Edhigh	−.117	−.501	−.209	−.233	−.146	−.488	−.234	−.293
Full-time employment-population ratio								
Edlow	−.146	−.695	−.035	−.167	−.150	−.647	−.045	−.194
Edmid	−.208	−.441	.072	.153	−.186	−.358	.037	.071
Edhigh	−.147	−.209	.192	.273	−.114	−.153	.180	.242
Edlow-Edmid	.062	−.255	−.107	−.319	.036	−.289	−.082	−.265
Edlow-Edhigh	.001	−.486	−.227	−.439	−.036	−.494	−.225	−.436
Germany (GSOEP)								
Employment-population ratio								
Edlow	.024	.043	.328	.593	−.374	−.655	.233	.559
Edmid	−.096	−.145	.466	.702	−.313	−.548	.356	.854
Edhigh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Edlow-Edmid	.120	.188	−.138	−.109	−.061	−.107	−.123	−.295
Full-time employment-population ratio								
Edlow	−.074	−.173	.409	.958	−.514	−1.233	.259	.621
Edmid	−.099	−.237	.612	1.468	−.558	−1.338	.318	.763
Edhigh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Edlow-Edmid	.025	.064	−.203	−.510	.044	.106	−.059	−.141

Note: n.a. = cell size equal to 10 or fewer observations. "Mean" refers to the mean outcome for the relevant education group.

are eligible for benefits. By and large, this group is limited to unmarried women with children, although in a very small number of cases, married couples with children can also qualify. Moreover, among this group of single mothers, the less educated are far more likely to qualify for welfare benefits and to find welfare an attractive option. These considerations suggest several possible comparisons that can yield evidence on the importance of welfare.

First, among unmarried women, one can compare the employment rates of those with and without children. In the United States, the former can conceivably qualify for welfare benefits, while the latter cannot. Further, employment differences between these two groups can be contrasted for the less educated and those with middle or high educational levels, since less educated, single mothers are the most likely welfare recipients. And both these comparisons can be contrasted for Germany and the United States, since only the U.S. welfare system has strong work disincentives built in. Second, among women with children, one can compare the employment rates of married and unmarried women. In Germany, neither group has an AFDC-like program available, while in the United States, again, single mothers can qualify. In either comparison, if less educated, single mothers in the United States stand out with especially low relative employment levels, then this would provide some evidence that welfare may have a role to play in explaining the lower employment rates of at least some American women.

The levels of the relevant variables are shown in table 3.14. We focus on table 3.15, which provides the type of comparisons discussed above. We focus on the employment-population ratio rather than work hours, since AFDC taxed away virtually all earnings except for a small exemption (Ehrenberg and Smith 1997). First, looking at unmarried American women, we see that for each educational group, those with children are less likely to be employed than those without children. Further, the largest differences either in absolute value or (especially) relative to the mean of the educational group are for less educated American women. This is the case in both 1984 and 1991. In contrast, in Germany among less educated unmarried women in 1984, those with children actually are more likely to be employed than those without children, while the reverse is true among those with middle levels of education. In 1991, mothers are less likely to work among both less and middle educated women in Germany, but relative to the mean, the contrasts between the Edlow and the Edmid groups are bigger in the United States than in Germany. This comparison between the German and the U.S. experience implies that welfare may play a role in lowering American women's employment. This does not mean, however, that welfare necessarily explains a substantial portion of the U.S.-German difference. We attempt to shed light on the potential size of the effects of welfare below.

Second, among those with children, the unmarried in the United States are as likely or more likely than married women to be employed. Although it is the case that as education rises, unmarried women's relative employment levels compared to those who are married also rise, we find a similar result for Germany (when data are available). Thus this contrast between educational groups is not strong evidence of a welfare effect. Finally, we note that among less educated women with children, the unmarried are much more likely to work than married women (by 23.3 to 32.8 percentage points) in Germany, while in the United States the married are about as likely to work as the unmarried. However, the German employment advantage for unmarried women with children is even larger among the middle-education group, so this comparison again does not provide evidence of a welfare effect.

While tables 3.13, 3.14, and 3.15 provide some suggestive (although mixed) evidence that the U.S. welfare system plays a role in explaining U.S.-German differences in labor market attachment among the less educated, how large an effect can it have? This issue is addressed in table 3.16, which examines the impact of family structure. It shows what the employment and full-time employment rates among less educated young American women would be if they had the same population shares for marital-status–presence-of-children groups as German women (i.e., married with children, married without children, unmarried with children, and unmarried without children). The table shows that the U.S.-German difference in labor market attachment would be almost as large in each year under this simulation as it actually is. Specifically, 81 to 86 percent of the German advantage in employment rates would remain. (Similar results are obtained for full-time employment.) Thus family structure is

Table 3.16	Actual and Hypothetical Employment Rates for Women Aged 18–29 with Low Educational Levels			
	Employment		Full-Time Employment	
Year	Actual	German Shares	Actual	German Shares
1984				
Germany	.553	.553	.427	.427
United States	.353	.382	.210	.231
U.S.-German difference	.200	.171	.217	.196
1991				
Germany	.563	.563	.417	.417
United States	.375	.411	.232	.257
U.S.-German difference	.188	.152	.185	.160

Note: Employs German shares for marital-status–presence-of-children groups.

not an important factor in producing the German employment advantage, at least not in an accounting sense. Thus, even if the welfare system were responsible for the entire U.S.-German difference in family structure, its effects would be small.

The results in table 3.16 imply that the source of the U.S.-German differences is located within marital-status-children groups. This could still mean that welfare is important, but not necessarily. As may be seen in table 3.14, where data are available, German employment rates are higher than American rates even among two groups not eligible for welfare, married and unmarried women without children, and in 1984, this was also the case for married women with children. If we restrict the U.S.-German comparison entirely to the three groups who are largely not eligible for U.S. welfare (i.e., married women with and without children and unmarried women without children) and use the German shares for these groups (to focus on the within-group differences in employment rates), the average employment rate for Germany was .522 in 1984; in the United States, this simulated rate was only .375. Thus, for welfare-ineligible groups, using a fixed-weight average for both countries, Germans were 14.7 percentage points more likely to be employed than Americans in 1984. This difference is almost as large as the 17.1 percentage point gap in the family-composition-corrected employment rates for the entire population of young women with low educational levels shown in table 3.16. This means that in 1984 the bulk of the employment rate gap between the United States and Germany for less educated young women occurred within groups who were not eligible for AFDC in the United States. While unfortunately the data do not permit a similar computation for 1991, the results for 1984 strongly suggest that welfare is not an important cause of the German women's greater attachment to the labor market.

3.5.3 Parental Leave

While low real wage offers, less access to public employment, and, to a considerably lesser extent, welfare may all potentially reduce young, less educated American women's labor market attachment relative to German women's, a countervailing factor is Germany's maternity and parental leave policies. Throughout our period of observation (1984–91) Germany has had more generous maternity leave policies than is the case in the United States. Moreover, in 1986 additional parental leave was mandated in Germany, reaching 18 months by 1990, and provisions were adopted to require paid parental leave for those working under 19 hours per week. As a test of the effect of this law, we compare the impact of children on young married mothers' labor market attachment in the United States and Germany for 1984 (before the new law) and 1991.

The results of this comparison are shown in table 3.17, which contrasts

Table 3.17   **Employment by Family Composition and Education for Women Aged 18–29: Differences**

Country	Married: With Children vs. Without Children			
	1984		1991	
	Absolute Difference	Divided by Mean	Absolute Difference	Divided by Mean
United States (CPS)				
Employment-population ratio				
Edlow	−.152	−.431	−.133	−.355
Edmid	−.283	−.417	−.264	−.367
Edhigh	−.256	−.295	−.253	−.285
Full-time employment-population ratio				
Edlow	−.150	−.714	−.113	−.487
Edmid	−.316	−.669	−.314	−.604
Edhigh	−.299	−.425	−.332	−.446
Germany (GSOEP)				
Employment-population ratio				
Edlow	−.536	−.969	n.a.	n.a.
Edmid	−.539	−.812	−.642	−.873
Edhigh	−.571	−.730	−.727	−.864
Full-time employment-population ratio				
Edlow	−.614	−1.438	n.a.	n.a.
Edmid	−.700	−1.217	−.758	−1.283
Edhigh	−.683	−1.105	−.721	−.954

Note: n.a. = cell size equal to 10 or fewer observations.

employment and full-time employment by educational group for young married women with and without children. In all cases, married women with children have lower employment rates than married women without children. Further, for each year and educational group, this difference is considerably larger for Germany than for the United States, particularly for full-time employment. This pattern holds for both absolute differences and for differences relative to the mean for the relevant educational group.

The larger difference in employment rates between married women with children and those without children for Germany than for the United States likely reflects a variety of factors in addition to Germany's more generous maternity and parental leave policies, including cultural differences between the two countries, the need to supply lunches at home for schoolchildren in Germany, and the legality of employment discrimination against pregnant women. However, the parental leave system became steadily more generous between 1984 and 1991, whereas the need to provide lunches for schoolchildren and the legal situation of pregnant women did not change. We do not know what happened to attitudes toward moth-

ers working; however, since female participation rates in general increased over this period, it is unlikely that these became *less* favorable. Thus, if the effect of children became more negative between 1984 and 1991, an adverse effect of the policy changes on German women's employment will be suggested.

The results in table 3.17 indicate that the "effect" of children (i.e., the difference in employment rates between mothers and nonmothers) tended to rise for Germany, although this pattern is most consistent for employment rather than for full-time employment. In contrast these effects stayed the same or declined slightly in the United States.[30] These results are largely confirmed in appendix table 3A.6, which uses the probit analyses of tables 3A.1 and 3A.2 to examine partial derivatives and semielasticities of employment and full-time employment with respect to marriage and children. Moreover, in these analyses, which control for other factors (i.e., age, age squared, marital status, Edlow, Edmid, and race for the United States), the rise in the absolute value of the effect of children (both the derivative and the semielasticity) in Germany is larger for full-time employment than for overall employment. The larger impact on full-time work in Germany may well be due to the 19-hour provision enacted into the 1986 law, which strongly discourages full-time work. The results in tables 3.17 and 3A.6 thus provide some evidence in support of an impact of the German parental leave law.

These findings serve to highlight the strength of the factors raising the employment rates of young, less educated German women relative to similar women in the United States. Their higher wages and greater access to government employment were strong enough to outweigh the more generous German policies for maternity and parental leave, which our results suggest did negatively affect German women's employment behavior in the 1980s, as well as other factors including the possibility of legal discrimination against pregnant women and the lack of school lunch programs in Germany.

3.6 Conclusions

This paper has examined gender differences in labor market outcomes for hard-to-employ youths in the United States and West Germany during the 1984–91 period. We find that young, less educated American men and especially women are far less likely to be employed than their German counterparts. Moreover, less educated young women and men in the United States have lower earnings relative to more highly educated youths

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30. The declining relative effect of children on women's labor force participation in the United States has been noted in other studies (see, e.g., Leibowitz and Klerman 1995).

in their own country and also fare much worse than less educated German youths in absolute terms, correcting for purchasing power. At the same time, for those in the highest educational group, Americans outearned Germans by considerable margins.

The evidence that young, less educated women in the United States are more weakly attached to the labor market than those in Germany is especially surprising in light of Germany's lower labor force participation rates for other groups of women and its considerably more generous family and maternity leave policies. We present evidence suggesting that all else equal these policies do negatively affect the labor force attachment of German women, particularly their full-time employment rates. While welfare may play a role, our findings suggest that it accounts for very little of the U.S.-German difference in employment rates. Employment rates of less educated women are also substantially lower in the United States than in Germany for categories of women who would not be eligible for welfare—in particular, for married and unmarried women without children. And most of the difference in labor market attachment between less educated young German and American women is accounted for by groups who are not eligible for welfare in the United States. This suggests that poor labor market opportunities are more important than our welfare system in explaining young American women's lower labor force attachment.

The relatively high employment rates of less educated German youths combined with their relatively high wages, raise the question of how they are successfully absorbed into the labor market. One possibility is that less educated German youths are more productive than their American counterparts. We lack the data to examine this issue directly; however, other evidence suggests that less educated German youths may well have higher skills (Nickell and Bell 1996) and thus that productivity differences could play a role in explaining this pattern. However, given the considerable evidence discussed above that institutions affect wage inequality, we believe that productivity differences are unlikely to account fully for the extremely large differences that we have documented between Germany and the United States in the wages and employment of hard-to-employ youths.

An alternative explanation that we were able to explore is that the public sector in Germany in effect functions as an employer of last resort, absorbing some otherwise unemployable low-skilled youths. Consistent with this idea, we find that while government employment is selective of the highly educated in both the United States and Germany, low education has a much larger negative effect on government employment of young workers in the United States. Moreover, among German males, the effect of low education on government employment is more negative for older than for younger workers, supporting the idea that public employment in Germany is particularly an outlet for younger, less skilled workers. This

makes sense in that they are more likely to be minimum wage constrained. While this pattern did not hold consistently among women, it may well be that older, less educated German women are also minimum wage constrained. A simple accounting suggests that the effects of the public sector on youth employment in Germany could be large indeed. Public sector jobs may well allow the German labor market to absorb the additional workers attracted by high wages for the low skilled, relative to the U.S. labor market. This does not require that Germany explicitly pursue a policy of utilizing the government as employer of last resort. The large size of the government sector in Germany combined with the composition of employment in government jobs could well have this effect even in the absence of a conscious policy.

Appendix

Table 3A.1   Probit Results for the Determinants of Employment and Full-Time Employment, Ages 18–29

| | Germany | | | | United States | | | |
| | Men | | Women | | Men | | Women | |
Explanatory Variables	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
A. Employment 1984								
White					.428	.037	.331	.033
Age	−.577	.397	.318	.275	.107	.065	.080	.055
Agesq	.012	.008	−.005	.006	−.002	.001	−.001	.001
Mar	.489	.189	−.647	.131	.550	.036	−.354	.026
Childyes	−.236	.150	−1.049	.118	−.163	.031	−.680	.025
Edlow	−.443	.262	−.321	.189	−.925	.055	−1.192	.048
Edmid	.126	.220	−.100	.166	−.381	.050	−.461	.041
Constant	7.692	4.736	−2.955	3.292	−.455	.766	.052	.656
N	622		716		13,421		14,441	
Log likelihood	−210.947		−371.638		−5,480.21		−8,013.24	
B. Full-time employment 1984								
White					.397	.035	.180	.033
Age	.277	.325	.485	.276	.424	.058	.528	.055
Agesq	−.005	.007	−.010	.006	−.007	.001	−.010	.001
Mar	.434	.157	−.744	.125	.483	.029	−.197	.024
Childyes	−.256	.129	−1.215	.115	−.124	.027	−.679	.024
Edlow	.006	.227	−.122	.185	−.476	.044	−.881	.044

Edmid	.334	.177	.195	.158	−.173	.038	−.302	.035
Constant	−3.455	3.888	−4.857	3.292	−5.623	.687	−6.439	.657
N	622		716		13,421		14,441	
Log likelihood	−309.091		−363.485		−7,671.28		−8,735.83	
C. Employment 1991								
White					.359	.041	.270	.034
Age	−.048	.067	.604	.429	.139	.072	.087	.062
Agesq	.001	.001	−.011	.009	−.002	.002	−.001	.001
Mar	.038	.027	−.675	.169	.432	.041	−.214	.028
Childyes	−.022	.027	−1.732	.166	−.046	.036	−.662	.028
Edlow	−.074	.035	−.327	.275	−1.055	.063	−1.235	.051
Edmid	−.038	.028	.042	.236	−.498	.058	−.421	.044
Constant	1.485	.820	−5.936	5.238	−.717	.857	.018	.741
N	473		554		10,926		11,924	
Log likelihood	−		−201.802		−4,376.31		−7,430.67	
D. Full-time employment 1991								
White					.302	.039	.120	.034
Age	−.213	.472	.182	.435	.530	.066	.656	.061
Agesq	.007	.010	−.004	.009	−.009	.001	−.012	.001
Mar	.043	.213	−.723	.158	.543	.036	−.090	.027
Childyes	.117	.203	−1.955	.154	−.082	.033	−.650	.027
Edlow	−.127	.264	−.556	.262	−.653	.051	−.928	.046
Edmid	−.060	.224	−.135	.209	−.210	.044	−.278	.037
Constant	1.942	5.673	−.328	5.304	−6.709	.786	−7.940	.737
N	473		554		10,926		11,924	
Log likelihood	−187.373		−195.551		−5,702.66		−8,264.56	

Note: S.E. = asymptotic standard error. The employment regression for German men in 1991 is OLS, due to convergence problems.

Table 3A.2   Probit Results for the Determinants of Employment and Full-Time Employment, Ages 25–36

Explanatory Variables	Germany				United States			
	Men		Women		Men		Women	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
A. Employment 1984								
White					.355	.039	.028	.031
Age	.456	.425	.121	.276	−.107	.083	−.020	.061
Agesq	−.007	.007	−.002	.005	.002	.001	.001	.001
Mar	.601	.197	−.364	.125	.546	.040	−.275	.026
Childyes	−.285	.196	−1.303	.131	−.037	.040	−.704	.028
Edlow	−.725	.242	−.320	.154	−1.111	.049	−.974	.037
Edmid	−.053	.187	.077	.131	−.543	.042	−.324	.029
Constant	−5.897	6.431	−.775	4.190	2.646	1.246	1.460	.921
N	820		898		15,343		16,400	
Log likelihood	−169,496		−512.271		−4,823.43		−9,526.76	
B. Full-time employment 1984								
White					.358	.035	−.137	.030
Age	.181	.320	−.030	.300	.073	.070	.061	.059
Agesq	−.003	.005	−.00005	.005	−.001	.001	−.001	.001
Mar	.406	.145	−.569	.119	.476	.033	−.322	.024
Childyes	−.225	.142	−1.484	.119	−.010	.033	−.781	.025
Edlow	−.233	.184	−.136	.171	−.804	.040	−.819	.037
Edmid	.455	.121	.154	.137	−.357	.031	−.276	.026
Constant	−2.003	4.885	1.839	4.543	.738	3.167	.033	.895
N	820		898		15,343		16,400	
Log likelihood	−349.708		−399.363		−7,069.55		−10,073.8	

C. Employment 1991

	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
White					.280	.039	.147	.031
Age	.719	.499	.224	.301	−.062	.082	−.180	.065
Agesq	−.012	.008	−.003	.005	.001	.001	.003	.001
Mar	.393	.248	−.434	.138	.459	.038	−.099	.026
Childyes	−.071	.255	−1.497	.142	.029	.039	−.640	.028
Edlow	−.516	.276	.183	.169	−1.082	.049	−1.035	.038
Edmid	−.079	.218	.285	.134	−.531	.043	−.303	.030
Constant	−9.176	7.537	−2.451	4.547	2.287	1.245	3.765	.992
N	696		789		14,472		15,796	
Log likelihood	−108.36		−410.331		−4,919.14		−8,720.72	

D. Full-time employment 1991

	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
White					.280	.036	.006	.030
Age	.466	.399	−.125	.341	.023	.075	−.077	.062
Agesq	−.007	.007	.002	.006	−.0004	.001	.001	.001
Mar	.076	.186	−.587	.135	.509	.035	−.192	.024
Childyes	.043	.193	−2.066	.133	.062	.035	−.707	.025
Edlow	−.346	.223	−.098	.197	−.924	.043	−.888	.037
Edmid	.020	.161	.109	.147	−.376	.035	−.248	.026
Constant	−5.897	6.041	2.776	5.159	.459	1.128	2.033	.939
N	696		789		1,472		15,796	
Log likelihood	−191.227		−296.014		−6,116.72		−9,824.16	

Note: S.E. = asymptotic standard error.

Table 3A.3   **Partial Derivatives and Semielasticities of Employment Probabilities with Respect to Education**

| | Partial Derivative | | | | Semielasticity | | | |
| | 1984 | | 1991 | | 1984 | | 1991 | |
Country	Edlow	Edmid	Edlow	Edmid	Edlow	Edmid	Edlow	Edmid
				A. Ages 18–29				
Germany								
Men	−.087	.025	−.074	−.038	.099	.028	.078	.040
	(.051)	(.043)	(.035)	(.028)	(.058)	(.049)	(.037)	(.030)
Women	−.118	−.037	−.110	.014	−.179	−.056	−.153	.020
	(.069)	(.061)	(.093)	(.079)	(.105)	(.092)	(.129)	(.110)
United States								
Men	−.231	−.095	−.256	−.121	−.277	−.114	−.304	−.144
	(.014)	(.012)	(.015)	(.014)	(.017)	(.014)	(.018)	(.017)
Women	−.443	−.171	−.439	−.150	−.686	−.265	−.641	−.219
	(.018)	(.015)	(.018)	(.016)	(.028)	(.023)	(.026)	(.023)
U.S.-Germany difference								
Men	−.144	−.120	−.182	−.083	−.376	−.142	−.382	−.184
	(.053)	(.045)	(.038)	(.031)	(.060)	(.051)	(.041)	(.034)
Women	−.325	−.134	−.329	−.164	−.507	−.209	−.488	−.239
	(.071)	(.063)	(.095)	(.081)	(.109)	(.095)	(.132)	(.112)

				B. Ages 25–36				
Germany								
Men	−.086	−.006	−.042	−.006	−.092	−.007	−.043	−.007
	(.029)	(.022)	(.022)	(.018)	(.031)	(.024)	(.023)	(.018)
Women	−.126	.030	.068	.106	−.221	.053	.105	.163
	(.061)	(.052)	(.063)	(.050)	(.107)	(.091)	(.097)	(.077)
United States								
Men	−.212	−.103	−.215	−.106	−.239	−.116	−.244	−.120
	(.009)	(.008)	(.010)	(.009)	(.010)	(.009)	(.011)	(.010)
Women	−.361	−.120	−.360	−.106	−.556	−.185	−.515	−.152
	(.014)	(.011)	(.013)	(.010)	(.022)	(.017)	(.019)	(.014)
U.S.-Germany difference								
Men	−.126	−.097	−.173	−.100	−.147	−.109	−.201	−.113
	(.030)	(.023)	(.024)	(.020)	(.032)	(.026)	(.026)	(.021)
Women	−.235	−.150	−.428	−.212	−.335	−.238	−.620	−.315
	(.063)	(.053)	(.064)	(.051)	(.109)	(.092)	(.098)	(.078)

Note: Based on coefficients from tables 3A.1 and 3A.2. Derivatives are evaluated at the sample mean of the dependent variable. The semielasticity is defined as the derivative divided by the sample mean. Other explanatory variables include age, age squared, marital status (Mar), presence of children (Childyes), and for the United States a race dummy (White). Numbers in parentheses are asymptotic standard errors.

Table 3A.4   **Average School Attendance, Educational Attainment, Employment, and Log Wages for Immigrants in Germany Aged 18–29**

| | 1984 | | 1991 | |
Sample	Men	Women	Men	Women
A. All immigrants				
In school	.275	.144	.286	.257
German technical or high school degrees	.041	.039	.066	.085
German postsecondary degrees	.300	.209	.347	.232
Vocational/university degrees outside				
Germany	.137	.094	.063	.037
N (including the nonemployed)	437	436	378	354
B. Individuals not in school				
German technical or high school degrees	.025	.027	.048	.038
German postsecondary degrees	.325	.204	.407	.289
Vocational/university degrees outside				
Germany	.167	.105	.081	.049
Employed	.823	.456	.889	.487
Full-time employed	.779	.373	.863	.384
Log hours-corrected earnings among				
employed	6.889	6.617	6.991	6.731
N (including the nonemployed)	317	373	270	263
C. Individuals not in school and without				
German technical, high school, or				
postsecondary degrees				
Vocational/university degrees outside				
Germany	.222	.119	.132	.072
Employed	.830	.400	.848	.376
Full-time employed	.778	.314	.835	.276
Log hours-corrected earnings among				
employed	6.882	6.607	6.952	6.770
N (including the nonemployed)	213	293	158	181
D. Individuals not in school, without				
German technical, high school, or				
postsecondary degrees, and without				
vocational/university degrees outside				
Germany				
Employed	.824	.403	.854	.381
Full-time employed	.782	.318	.839	.280
Log hours-corrected earnings among				
employed	6.879	6.602	6.934	6.770
N (including the nonemployed)	165	258	137	168

Note: Native earnings equations were used to simulate hours-corrected earnings for immigrants.

Table 3A.5   **Partial Derivatives and Semielasticities of Government Employment Probabilities with Respect to Edlow and Edmid**

Gender		Ages 18–29		Ages 30–65	
		Edlow	Edmid	Edlow	Edmid
A. Derivatives					
Men					
1984	United States	−.095	−.063	−.171	−.108
		(.010)	(.007)	(.008)	(.005)
	Germany	.001	−.008	−.208	−.110
		(.068)	(.048)	(.039)	(.022)
1991	United States	−.176	−.043	−.181	−.079
		(.015)	(.009)	(.008)	(.005)
	Germany	−.025	−.032	−.179	−.070
		(.067)	(.050)	(.052)	(.025)
Women					
1984	United States	−.230	−.130	−.376	−.247
		(.018)	(.009)	(.011)	(.007)
	Germany	−.165	−.172	−.283	−.291
		(.072)	(.053)	(.043)	(.039)
1991	United States	−.200	−.103	−.320	−.198
		(.018)	(.009)	(.011)	(.006)
	Germany	−.009	−.026	−.237	−.241
		(.083)	(.062)	(.047)	(.040)
B. Semielasticities					
Men					
1984	United States	−1.090	−.723	−1.025	−.649
		(.118)	(.078)	(.045)	(.031)
	Germany	.003	−.049	−.766	−.405
		(.409)	(.289)	(.144)	(.079)
1991	United States	−1.631	−.400	−1.130	−.493
		(.137)	(.079)	(.052)	(.030)
	Germany	−.130	−.162	−.675	−.266
		(.340)	(.257)	(.197)	(.093)
Women					
1984	United States	−1.758	−.989	−1.488	−.921
		(.138)	(.067)	(.053)	(.029)
	Germany	−.619	−.644	−1.008	−1.034
		(.268)	(.199)	(.155)	(.138)
1991	United States	−1.753	−.902	−.320	−.198
		(.161)	(.076)	(.011)	(.006)
	Germany	−.032	−.096	−.760	−.773
		(.311)	(.232)	(.151)	(.128)

Note: Based on a probit model controlling for age, age squared, marital status (Mar), presence of children (Childyes), Edlow, Edmid, and for the United States, a race dummy (White), estimated among those with jobs. Derivatives are evaluated at the sample mean of the dependent variable. The semielasticity is defined as the derivative divided by the sample mean. Numbers in parentheses are asymptotic standard errors.

Table 3A.6   Partial Derivatives and Semielasticities of Employment Probabilities with Respect to Marriage and Presence of Children for Women

Age Group	Employment Probability				Full-Time Employment Probability			
	1984		1991		1984		1991	
	Marriage	Presence of Children	Marriage	Presence of Children	Marriage	Presence of Children	Marriage	Presence of Children
A. Derivatives								
Ages 18–29								
Germany	−.237	−.385	−.227	−.583	−.294	−.481	−.282	−.763
	(.048)	(.043)	(.076)	(.056)	(.049)	(.046)	(.062)	(.060)
United States	−.132	−.253	−.076	−.235	−.078	−.269	−.036	−.259
	(.010)	(.009)	(.010)	(.010)	(.010)	(.010)	(.011)	(.011)
Ages 25–36								
Germany	−.143	−.512	−.162	−.558	−.270	−.442	−.279	−.754
	(.049)	(.052)	(.051)	(.053)	(.045)	(.042)	(.061)	(.059)
United States	−.102	−.261	−.034	−.223	−.128	−.311	−.076	−.280
	(.009)	(.010)	(.009)	(.009)	(.010)	(.010)	(.009)	(.010)
B. Semielasticities								
Ages 18–29								
Germany	−.360	−.584	−.316	−.810	−.535	−.874	−.484	−1.309
	(.073)	(.066)	(.111)	(.078)	(.090)	(.083)	(.106)	(.103)
United States	−.204	−.391	−.111	−.343	−.171	−.589	−.071	−.513
	(.015)	(.014)	(.015)	(.015)	(.021)	(.021)	(.021)	(.021)
Ages 25–36								
Germany	−.252	−.902	−.251	−.866	−.812	−1.326	−.701	−1.895
	(.087)	(.091)	(.080)	(.082)	(.136)	(.126)	(.153)	(.149)
United States	−.157	−.402	−.049	−.319	−.265	−.643	−.141	−.518
	(.014)	(.016)	(.012)	(.013)	(.020)	(.021)	(.017)	(.018)

Note: Based on coefficients from tables 3A.1 and 3A.2. Derivatives are evaluated at sample means of the dependent variable. The semielasticity is defined as the derivative divided by the sample mean. Other explanatory variables include age, age squared, Edlow, Edmid, and for the United States a race dummy (White).

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