The Role of Postsecondary Education in Welfare Recipients' Paths to Self-Sufficiency

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Abstract

Today's welfare system does not encourage postsecondary education, focusing instead on services aimed at immediate employment. The loss of postsecondary education as a route out of poverty for welfare recipients may be detrimental to some women. College graduation is associated with lower rates of return to aid and post-welfare poverty than attendance without graduation or no attendance. However, graduation rates for welfare recipients are well below national graduation rates.

Keywords: welfare, postsecondary education, poverty, recidivism

Introduction

The landmark 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) greatly reformed the provision of cash assistance to poor families nationwide. In contrast to the former Aid to Families with Dependent Children (AFDC) program, Temporary Assistance for Needy Families (TANF), implemented as part of PRWORA, is aimed at moving recipients off welfare and into the labor force. In focusing on labor market participation, TANF has become a program that, for the most part, does not encourage postsecondary education. Although some states and localities have implemented programs aimed at helping recipients attend college, federal TANF provisions do not encourage college attendance, and are likely to act as disincentives to recipients desiring to attend college. In particular, working toward a two-year or four-year degree is not one of the 12 work activities designated by PRWORA.[1] States that allow this activity risk not meeting the federal work participation rate set out in the legislation.

Despite these federal guidelines, states have taken advantage of the flexibility in PRWORA to allow opportunities for postsecondary education in varying degrees. For instance, 38 states allow postsecondary education to meet the state work requirement (Greenberg, Strawn, and Plimpton 2000). Of these, 22 states allow postsecondary education for more than 12 months. Two states, Maine and Wyoming, allow use of mandatory state TANF contributions to support postsecondary education for aid recipients, so that they are not counted as recipients of federal monies. However, even in the states that allow postsecondary education, case managers may not necessarily promote it. For instance, Maine's Parents as Scholars Program—one of the more highly visible programs nationally—has been underenrolled since its inception (Butlerand Deprez 2002). A recent report on postsecondary education among Michigan welfare recipients

indicates that case managers may actively discourage college attendance (Coalition for Independence through Education 2002).

Although postsecondary education is not a key feature of the current federal welfare program, previous programs have focused more specifically on human capital acquisition as a means to self-sufficiency. The Job Opportunities and Basic Skills (JOBS) program, initiated as part of the Family Support Act of 1988, allowed and encouraged welfare recipients to attend college while on aid. Through JOBS, all but three states had provisions in place for welfare recipients to attend college while they received cash assistance. In 1992, for instance, 15 percent of JOBS participants attended a college program (U.S. House of Representatives 1994).

The switch from human capital focused to "work first" approaches to welfare reform in the mid-1990s set off debates among policymakers, researchers, and practitioners about the best ways to assist welfare recipients in moving toward self-sufficiency. Two primary approaches were examined: basic skills and job training, a longer-term approach, or job search assistance with the goal of immediate employment. There is strong evidence that the human capital approach, and specifically enrollment in postsecondary education, leads to improved outcomes for welfare recipients and others (for example, Kane and Rouse 1995; Gittell, Gross, and Holdaway 1993; Thompson 1993). There is also evidence that work first approaches lead to increased employment and shorter time on aid (Friedlander and Burtless 1995). However, the positive impacts associated with work first programs tend to decline over the long term, while the impacts associated with a more human capital approach tend to improve. (Riccio, Friedlander, and Freedman 1994). Opponents of allowing postsecondary education to welfare recipients do not necessarily dispute the benefits of human capital approaches. Rather, they argue that allowing welfare recipients to attend college while on aid undermines the short-term

focus of the TANF program (Friedman 2001), and unfairly allows some low-income students to subsidize their college education with funds from cash assistance.

Although research is suggestive of improved outcomes associated with attending college while on aid, few studies have addressed this issue specifically. Among those that have, none has used longitudinal data to examine the extent to which simultaneous postsecondary education enrollment and welfare receipt results in improved outcomes over a longer time period. Further, studies have not attempted to control for the inherent bias involved in examining the effects of college attendance. One would expect that women who attend college while on aid possess some unobservable characteristics, such as a high level of motivation, that would lead them to achieve better outcomes than their non-college attending peers even in the absence of postsecondary enrollment. Controlling for this bias is important in quantifying the extent to which college attendance improves the outcomes of welfare recipients.

This paper adds to the literature on the effects of postsecondary education for welfare recipients by using 20 years of panel data from the National Longitudinal Survey of Youth (NLSY). I examine the extent to which both college attendance and college graduation are associated with improved outcomes—measured by employment, poverty, and welfare recidivism—in one-year and five-year follow-up periods. To address the bias issue raised previously, I employ an instrumental variables approach, discussed fully in the theory section.

In short, findings indicate that college graduation, rather than attendance, is the key to success for two of the three outcome measures I examine. In particular, welfare recipients who graduate from college have lower rates of return to aid and lower rates of post-welfare poverty than those who do not attend college and those who attend but do not graduate from college. However, graduating from college is not the norm among students who are on aid; graduation

rates for welfare recipients in the NLSY are well below national graduation rates for both two-year and four-year colleges.

Background Literature

In most states, even those that allow postsecondary education, TANF is essentially a work first program, aiming to move recipients into the workforce as quickly as is appropriate. The philosophy behind this approach is at odds with the long-standing human capital literature, which indicates that there are tremendous returns to schooling particularly at the postsecondary level. For instance, Kane and Rouse (1995) show that having an Associates Degree leads to a 30 percent increase in annual earnings for women. The returns are even greater for a four-year degree, leading to a 51 percent increase in earnings for women. For welfare recipients in particular, having a higher level of education is associated with shorter welfare spells (Barrett 2002; Blank 1989), increased post-program employment and earnings (Michalopoulos and Schwartz 2000), and better educational outcomes for children (Magnuson and McGroder 2002). Although these studies point to returns to education for welfare recipients, none specifically examines the effects of simultaneous welfare receipt and college enrollment. Rather, analyses of returns to education for welfare recipients generally rely on education levels measured at the start of a welfare spell.

Much the literature on the effectiveness of welfare programs relies on random assignment evaluations of various approaches to welfare reform. However, to date there has been just one random assignment evaluation studying the impact of postsecondary education for welfare recipients. At this time, it is too early to assess results from the New Visions Project, a

collaborative between the county social services agency and the local community college in Riverside County, CA (Fein, Beecroft, Long, and Robertson 2003).

Other evaluations of welfare recipients' experiences in college are more descriptive, non-experimental in nature, and rely mostly upon survey or administrative data collected on program participants to illustrate the effects of college attendance on a variety of outcomes. For instance, studies of welfare recipients who attend college find that wages for graduates are generally higher than for non-graduates, and that graduating from college is associated with higher rates of exit from welfare (Gittell et al. 1993; Thompson 1993; Karier 1998; Karier 2000). These studies do not control for the inherent selection bias associated with entry to college among some welfare recipients.

Studies have reported psychosocial benefits from college attendance as well. For example, Butler and Deprez (2002) find that student TANF recipients in Maine report different types of positive outcomes stemming from their college attendance, including increased feelings of self-concept and independence, better job opportunities, and an increased ability to meet goals and set new ones. Being enrolled in a college-based targeted support program for welfare recipients may increase students' chances of graduation (Gittell et. al 1993). These programs generally provide remedial assistance, counseling or case management, and camaraderie. Enrollment in a supportive program may also improve post-program outcomes, including earnings (Hollenbeck and Kimmel 2002). Notably, welfare recipients who graduate from college cite financial aid as the primary form of assistance necessary to graduate (Gittell et. al 1993 and Thompson 1993).

Although findings from these studies provide suggestive evidence that attending college leads to improved outcomes for welfare recipients, they are descriptive in nature and causal

conclusions cannot be drawn from them. None has explicitly controlled for the inherent biases in the selection process for who attends and graduates from college, and most do not control for other intervening factors. Careful attention to modeling and estimation is necessary in order to more precisely estimate the effects of college attendance and graduation on welfare recipients' outcomes.

Data

Data for this study come from the special geocode version of the National Longitudinal Survey of Youth (NLSY). The NLSY is a longitudinal data set that follows a nationally representative sample of nearly 13,000 young men and women from 1979 to 1998. The NLSY includes detailed information on welfare receipt, educational enrollment and attainment, job training, and labor force behavior. Welfare and college spells are tabulated using monthly records of AFDC income receipt and college attendance. Spells refer to continuous periods of time in which an NLSY respondent is receiving cash assistance or enrolled in college. Only college attendance toward an individual's first advanced degree is considered in this paper. I limit my sample to women because they are the primary recipients of welfare assistance.

College enrollment is defined on a monthly basis using questions that ask about each respondent's enrollment in "regular school." Respondents are coded as being enrolled in college if they report being enrolled in regular school in a particular month over the previous year and: (1) indicate that they are enrolled in college at the time of the interview, or (2) if they are not enrolled at the time of the interview, indicate that they completed a high school diploma or GED prior to the month in question. College spells are smoothed for up to four-month gaps in enrollment to account for institutional lapses that occur over the summer and between semesters

or quarters. The NLSY questions that allow me to determine monthly enrollment do not allow me to differentiate between enrollment in two-year or four-year colleges. Only at graduation are respondents asked the type of degree pursued. I therefore combine two-year and four-year college enrollment throughout the paper and do not attempt to conduct separate analyses. Even if information about two- and four-year college attendance were available, it is likely that sample size limitations would prevent separate analyses. In total, 312 female welfare recipients in the NLSY attend college while on aid.

Welfare spells are also identified on a monthly basis using variables that identify AFDC income received each month of the previous year. To be counted, the respondent herself must be the recipient of the welfare payment. As is standard in the literature, welfare spells are smoothed for one-month gaps to account for bureaucratic lapses (e.g., due to misfiling of paperwork) or errors in reporting. Characteristics of the welfare spell are assigned using data from the first year of the spell.

After 1994, the NLSY moved to a biannual survey, skipping interview years 1995 and 1997. Questions asked in 1996 and 1998 allow me to reconstruct monthly college enrollment and welfare histories during that period. In cases where a welfare spell begins during 1995 or 1997, spell characteristics are assigned from 1994 or 1996, respectively.

The NLSY geocode version includes state and county of residence for all respondents each year, as well as other county-level information. To these data, I append state-level maximum AFDC benefit levels for a family of three, the number of postsecondary institutions in each county, and the number of enrollments associated with postsecondary institutions in each county. The postsecondary education information comes from the 1982-1983, 1989-1990, and 1996-1997 Integrated Postsecondary Education Data System (IPEDS), collected by the National

Center for Educational Statistics. Data from the 1982-1983 survey are appended to college spells beginning between 1979 and 1985, 1989-1990 survey data are appended to college spells beginning between 1986 and 1993, and the 1996-1997 data are appended to college spells that begin between 1994 and 1998. It is unlikely that the number of schools is related linearly to the enrollment outcome (i.e., increasing from 0 or 1 schools in a county is probably not the same as increasing from 100 to 101 schools). Number of schools is therefore coded using 10 dummy variables denoting a specific range of number of schools.[2]

Descriptive Findings

What Are the Educational Outcomes of Welfare Recipients Who Attend College?

Data from the NLSY indicate that 13.8 percent of women's welfare spells have overlapping college enrollment (Table 1). When restricted to women who have completed high school or a GED, NLSY data show that 17.0 percent of welfare spells are associated with college enrollment.

Because the unit of analysis examined is the welfare spell, there is the possibility that women may have more than one welfare spell and more than one welfare/college spell during the NLSY panel. As has been documented previously in the literature, many welfare recipients cycle in and out of welfare receipt, resulting in multiple spells over time (Bane and Ellwood 1983, Ellwood 1986). As is shown in Table 2, more than half (56.9 percent) the welfare recipients in the NLSY have more than one welfare spell during the time period examined. These same women, when the attend college, also tend to do so in spells. A majority (53.9 percent) of those who attend college also experience more than one college spell during the period. However, in looking at overlapping college and welfare spells, multiple spells is less

common. The majority of women who go to college while on aid do so only once (68.3 percent). From Table 2, it is also clear that welfare recipients who attend college do so both while they are on aid and also while they are not. Only slightly more than half of college spells for this population overlap with periods of welfare receipt.

Enrolling in college is one indicator of potential future success, but graduation may be an even better predictor. In 1990, midway through the NLSY panel, the U.S. college graduation rate was 48 percent, indicating that just under half of all entering first year college students graduated within a year of their target graduation date (ACT 2000). Graduation rates for welfare recipients, using a more generous definition, are substantially below this level. As is shown in Table 3, just 36 percent of welfare recipients who attend college graduate at any time during the 20-year panel of the NLSY. In comparison, the NLSY sample shows that 55 percent of women who attend college and do not receive welfare graduate during the 20 years of the NLSY panel. One argument used by opponents of allowing college education among welfare recipients is that it will artificially lengthen welfare spells as women remain on aid merely to complete their degrees. The data show, however, that the majority of welfare recipients do not use their time on welfare to graduate. Only 16 percent of student welfare recipients graduate from college while they are still receiving aid or in the two months following exit. Twenty percent graduate during a period when they are not receiving AFDC.[3]

Of those who graduate, welfare recipients are far more likely to obtain an Associates Degree (as compared to Bachelors or higher degrees) than their non-welfare counterparts. Fifty-nine percent of college/welfare students who graduate complete an Associates Degree, compared to 20 percent of non-welfare graduating college students in the NLSY.

What Are the Economic Outcomes Welfare Recipients Who Attend and Graduate From College?

Policymakers are most concerned with assisting welfare recipients to become self-sufficient. In this study, I examine three measures of self-sufficiency to study post-welfare outcomes: welfare recidivism, post-welfare employment, and post-welfare poverty. All measures are examined one year and five years following the end of a welfare spell.

Tabulations indicate substantial returns to college attendance for welfare recipients. For all measures examined in Table 4, welfare recipients who attend college while on aid had superior outcomes to their counterparts who did not attend college. Results are strongest for the recidivism measure, in both the one-year and five-year time frames. Among those who did not attend college while on aid, 22.9 percent came back on the rolls within a year of exit. In comparison, just 14.4 percent of those who attended college returned to aid. Those with high school diplomas who did not attend college returned to aid at a rate of 21.8 percent. Nationally, data indicate that recidivism rates range from 17 percent to 28 percent within one year of exit (Acs and Loprest 2001). The five-year time horizon shows similar results scaled for a longer period—non-college attendees have a 53.2 percent recidivism rate within five years of welfare exit and 40.0 percent of college attendees returned to aid.

The results for those who graduate from college are even more striking. Among welfare recipients who graduate from college during or just after a welfare spell, the rate of return to aid is just 9 percent within one year and 20 percent within five years. Both these recidivism rates are well below those seen for college attendees who do not graduate and those who did not attend college.

The story for post-welfare employment rates is a bit different than for recidivism. Although nearly half of former welfare recipients were employed in the year after their welfare exit, the differences in employment rates post-welfare are not tremendous for the groups. Indeed, women with high school diplomas who do not attend college were slightly more likely to be employed one year after welfare exit than those who attended college. This is not surprising. Nearly 30 percent of college/welfare spells end with the former recipient continuing in college. One would expect one-year follow-up employment rates to be somewhat lower for this group.

Although employment is an important measure, family well-being is better captured by looking at family poverty levels post-welfare. The last two rows of Table 4 show that welfare recipients who attend college have lower poverty levels than their non-attending counterparts in both the one-year and five-year follow-up periods. As with return to aid, graduating from college is the key to reduced poverty. In the five-year follow-up, just 42.5 percent of graduating recipients experienced a year of poverty, compared to 73.7 percent of non-attending recipients and 67.8 percent of non-attending high school graduates.

These tabulations provide an indication of the importance of college attendance and graduation on post-program outcomes. However, they are potentially misleading because college students are likely to differ from non-college students on a number of unobservable characteristics. It is possible that these recipients would have done better than their counterparts even without going to college. The next sections discuss this issue in more detail and offer estimates that control for this omitted variable bias.

Theory

There are a number of reasons to expect that welfare recipients who attend college while on aid would have better outcomes than their counterparts who do not. In particular, higher levels of education have been linked to improved labor market and related outcomes among the population at large (Card 2000; Kane and Rouse 1995). Merely increasing their education level would lead to expected gains in employment and income for welfare recipients, which would in turn lead to reduced return to aid and poverty rates.

To study the effects of college attendance and graduation on various outcomes, one would estimate the following equation:

(1) $\text{Prob}(Y_{ist}^{n+p}=1) = F(X_{is}, C_{is}, G_{is}, \varepsilon_{is})$,

where Y is one of three outcome measures (return to aid, employment, and poverty status) at one of two time periods (p), t^{n+1} or t^{n+5}, where t^n is the spell exit year; X is a set of characteristics for person i at the start of spell s; C is a measure of whether person i in spell s attended college regardless of whether they graduated; G is a measure of whether person i in spell s graduated from college during or just after that spell; and ε_{is} is an error term.

Based on the literature discussed previously, one would expect C and G to have positive effects on post-welfare employment and negative effects on post-welfare return to aid and poverty because higher levels of education have been shown to improve labor market outcomes. Given the descriptive findings discussed previously, one might also expect graduating from college (G) would have a greater effect than merely attending college (C).

An important consideration is that welfare recipients who pursue advanced degrees may have certain characteristics, such as a high level of motivation or a strong desire to pursue more education. This is a classic problem in the returns to education literature (Card 2000). In the

absence of schooling while on aid, it is possible, perhaps even likely, that these recipients would have stronger outcomes than their counterparts.

This is an omitted variable bias problem in which it is likely that there are characteristics that set apart the group that attends college from the group that does not. The measures that might influence this decision are unobservable in the data available. More specifically, it is likely that C is correlated with ε, which may contain unobserved factors associated with Y, such as increased motivation or desire for schooling. In the same way, graduating from college may be correlated with unobservable factors.

To account for this omitted variable bias, I use an instrumental variables model, instrumenting separately for C and G. In both stages, the IV model is a linear probability model. There are two first stage regressions:

(2) Prob $(C_{is}=1) = \alpha_0 + \alpha_1 X_{is} + \alpha_2 J_{is} + \varepsilon_1$

(3) Prob $(G_{is}=1) = \beta_0 + \beta_1 X_{is} + \beta_2 J_{is} + \beta_3 K_{is} + \varepsilon_2$,

where J is a set of instruments used to predict both college attendance and college graduation and K is an instrument used to predict college graduation only.

The NLSY provides a number of excellent measures of capacity and taste for education. Included in J are the respondent's mother's highest grade attended, the respondent's 1980 AFQT percentile rank, and measures of the number of postsecondary institutions in the respondent's county of residence at the start of the spell. Mother's highest grade attended can be thought of as a measure of taste for education and the AFQT percentile ranking is an aptitude measure, differentiating capacity for advanced education. Both these factors would likely play a role in college attendance and graduation while on welfare, but would have a less direct influence on post-program outcomes among welfare recipients. One might also argue that mother's highest

grade is an indicator of the availability of family support. Respondents whose mothers are more highly educated may have more family resources upon which to rely and therefore have different outcomes regardless of schooling. To account for this, in the second stage equation I include measures of parental occupation when the respondent was age 14.[4] These variables should control for the presence of greater availability of parental support.

The third instrument, number of postsecondary institutions in the county, is a measure of the supply of postsecondary education options. Recipients living in counties with more schools are likely to perceive greater educational possibilities and have more opportunities to attend (and also graduate from) school. Because the relationship is unlikely to be linear (i.e., adding one school to a county with zero schools would have a different effect than for a county with 100 schools), I include a set of 10 dummy variables that correspond to various numbers of schools ranging from 0 to 419.

Included in K is an instrument for college graduation only, whether the recipient received student loans while attending school as a welfare recipient. Research has indicated that access to financial aid provides necessary support to welfare recipients and is a key factor assisting them to complete their degrees (Gittell et. al 1993; Thompson 1993).

Using these instruments, I estimate the probability of various outcomes as follows:

(4) Prob $(Y_{ist}^{n+p}=1) = \delta_0 + \delta_1 X_{is} + \delta_2 \hat{C}_{is} + \delta_3 \hat{G}_{is} + \varepsilon_3$.

The estimated coefficients δ_2 and δ_3 will allow me to gauge the effects of college attendance and graduation on post-program outcomes.

Findings from Instrumental Variables Models

Results from the model described in the previous section can be found in Tables 5, 6 and 7. Looking first at recidivism, Table 5 presents the results of the instrumental variables model for both the one-year and five-year follow-up periods. Although not shown in the table, using instrumental variables compared to OLS does not change the direction of the results, but does change the magnitude and significance of the coefficients for college attendance and graduation.[5] The IV estimates indicate that college attendance is not associated with return to aid within one year of college/welfare exit, but college graduation above and beyond attendance is associated with a statistically significant 41 percentage point decline in return to aid. Results are even stronger in the five-year period. Five years after exit, those who graduate from college (beyond mere attendance) during or just after a welfare spell are substantially less likely to return to aid than welfare recipients who did not attend college. Note, in both these models merely attending college without graduation is not associated with different rates of return to aid.

Other variables have the expected results, and do not vary terribly across the two models. For instance, being younger and African-American or Latina increases the probability of return to aid, particularly within five years. Living in counties with higher unemployment rates also increases the probability of return to aid, both in the one-year and five-year periods.

Table 6 presents comparable findings for models that examine employment one year and five years after spell completion. In contrast to the bivariate results shown in Table 4, the IV model indicates a significant return to college attendance in both time frames, but no significant return to college graduation. In comparison to those who did not attend college, attending college is associated with a 55 percentage point increase in employment one year after the welfare spell ends and a 49 percentage point increase within five years. In contrast, graduating

from college has no significant effect on employment in the one-year and five-year follow-up periods, although the coefficient is positive for both specifications.

A potential explanation for the larger effect of attendance than graduation is that many welfare recipients and former welfare recipients are employed both during and after their time on aid. Cycling between employment and welfare receipt is a common pattern among this group. Hence, there is not as much variation in employment among the attending and graduating groups as is present for the other outcome measures examined.

Coefficients for other control variables have the expected signs. For instance, being older, non-African-American, non-Latina, and having fewer young children all lead to increases in post-welfare employment one year after exit. Living in a county with higher unemployment also decreases the probability of employment. In the five-year model, being divorced or separated is also associated with increased employment after welfare exit.

Finally, Table 7 presents results from the IV model that uses post-welfare family poverty as a measure of well-being. Family poverty measures both the effects of employment (through earnings) and changes in family structure or other family membes' incomes. The findings indicate that those who attend college are 56 percentage points less likely to have family income below the poverty line one year after exit and 37 percentage points less likely within five years, compared to those who do not attend college. In the longer time frame, graduating from college is associated with a 146 percentage point decline in the probability of poverty. However, graduating from college is not associated with changes in the probability of poverty in one year. As with the previous models, other coefficient estimates are in the expected directions.

Discussion

The findings presented in this paper indicate that there may be tremendous returns to allowing welfare recipients attend college while receiving aid. Data from 20 years of the NLSY indicate that attending and graduating from college are associated with improved employment, poverty, and recidivism outcomes, particularly in the five-year follow-up. Those who graduate from college while on aid have substantially improved outcomes over both those who attend without graduating, and those who do not attend, when looking at return to aid and family poverty levels within five years. However, graduation from college among this group is not the norm. Of those who attend college while on aid, just 16 percent graduate while still on aid, and another 20 percent graduate sometime after leaving welfare. These graduation rates are substantially lower than those seen among all college attendees.

Because graduation appears to be the key factor in substantially improving the lives of welfare recipients who attend school, states that allow for postsecondary education in their TANF programs should emphasize graduation as a goal. For many recipients, reaching this goal will require a number of supports in place. The literature has identified the most important of such supports as follows:[6] child care, both during courses and for other activities such as job interviews, during nontraditional hours and on campus if possible; other supportive services, such as transportation, crisis intervention, ongoing case management, and career counselors; remediation for students who need to improve basic skills; financial aid counseling and assistance; supplies, such as books and notebooks; and incentives for attending school and graduating. Studies have also suggested that partnerships between welfare agencies and colleges (typically community colleges) should be forged to create joint incentives to see these programs succeed.

A number of models for this type of collaboration have appeared over the past several years and research has indicated that merging funds and co-locating services can be a tremendous asset to programs (Golonka and Matus-Grossman 2001). Beyond this collaboration, it may be necessary to tailor college programs to welfare recipients to allow them to complete their courses while still meeting their TANF requirements and family obligations and to focus their education concretely in areas where there are labor market needs.

This study suggests that if implemented so as to promote graduation, programs that emphasize college education for welfare recipients can be enormously successful in removing them from the welfare rolls and helping them improve their family incomes.

References

Acs, Gregory and Pamela Loprest. (2001). *Final synthesis report of findings from ASPE "Leavers" Grants.* Washington, DC: The Urban Institute.

ACT (2000). *College dropout rate improves, but graduation rate falls.* News Release, February 16, 2000.

Bane, Mary Jo and David Ellwood (1983). *The dynamics of dependence: The routes to self-sufficiency.* Cambridge, MA: Urban Systems Research and Engineering, Inc.

Barrett, Garry F. (2000). The effect of educational attainment on welfare dependence: Evidence from Canada. *Journal of Public Economics, 77*, 209-232.

Blank, Rebecca M. (1989). Analyzing the length of welfare spells. *Journal of Public Economics, 39*, 245-273.

Butler, Sandra S. and Luisa Deprez. (2002). Something worth fighting for: Higher education for women on welfare. *Affilia, 17,* 30-54.

Card, David. (2000). *Estimating the return to schooling: Progress on some persistent econometric problems*, Working paper 7769. Cambridge, MA: National Bureau of Economic Research.

Carnevale, Anthony and Kathleen Reich. (2000). *A piece of the puzzle: How states can use education to make work pay for welfare recipients*. Princeton, NJ: Educational Testing Service.

Coalition for Independence through Education. (2002). *Access and barriers to post-secondary education under Michigan's welfare to work policies: Policy background and recipients' experience.* Retrieved 11/20/2002 from http://www.umich.edu/~cew/CFITErep/CFITErpt.pdf.

Ellwood, David. (1986). *Targeting 'would be' long-term recipients of AFDC*. Princton, NJ: Mathematica Policy Research.

Fein, David, Eric Beecroft, David A. Long, and Anne Robertson. (2003). *College as job advancement strategy: an interim report on the New Visions Self-Sufficiency and Lifelong Learning Project*. Bethesda, MD: Abt Associates.

Friedlander, Daniel and Gary Burtless. (1995). *Five years after: The long-term effects of welfare-to-work programs*. New York, NY: Russell Sage Foundation.

Friedman, Pamela. 2001. "TANF Reauthorization and Postsecondary Education Options for Welfare Recipients." *TANF Reauthorization Resource, Reauthorization Notes 1(3).*

Retrieved 9/9/2003 from http://www.welfareinfo.org/tanfreauth-postsecedureauthorization.htm.

Gittell, Marilyn, Jill Gross, and Jennifer Holdaway. (1993). *Building human capital: the impact of post-secondary education on AFDC recipients in five states*. The Graduate School and University Center, City University of New York.

Golonka, Susan and Lisa Matus-Grossman. (2001). *Opening doors: expanding educational opportunities for low-income workers*. New York, NY: Manpower Demonstration Research Corporation.

Greenberg, Mark, Julie Strawn, and Lisa Plimpton. (2000). *State opportunities to provide access to postsecondary education under TANF*. Washington, DC: Center for Law and Social Policy.

Greenberg, Mark and Steve Savner. (1996). *A detailed summary of key provisions of the Temporary Assistance for Needy Families Block Grant of H.R. 3734*. Washington, DC: Center for Law and Social Policy.

Hollenbeck, Kevin and Jean Kimmel. (2002). The role of postsecondary education in welfare reform: Ohio's JOBS Student Retention Program. *Evaluation Review, 26,* 618-644.

Kane, Thomas and Cecilia Rouse. (1995). Labor-market returns to two-and four-year college. *American Economic Review, 85*, 600-614.

Karier, Thomas. (2000). *Welfare college students: Measuring the impact of welfare reform.* Policy Note 2000/3. Annandale-on-Hudson, New York: The Levy Economics Institute.

_____. (1998). Welfare Graduates: *College and financial independence.* Policy Note 1998/1. Annandale-on-Hudson, New York: The Levy Economics Institute.

London, Rebecca A. (2003). Welfare recipients' college enrollment, graduation, and time on aid. Paper presented at the 2003 Annual meeting of the Association for Public Policy and Management, Washington, DC.

Magnuson, Katherine A. and Sharon M. McGroder. (2002). *The effect of increasing welfare mothers' education on their young children's academic problems and school readiness*, Working Paper 2002-280. Chicago, IL: Joint Center for Poverty Research.

Michalopoulos, Charles and Christine Schwartz. (2000). *National evaluation of welfare-to-work strategies what works best for whom: impacts of 20 welfare-to-work programs by subgroup*. New York, NY: Manpower Demonstration Research Corporation.

Thompson, Joanne J. (1993). Women, welfare, and college: the impact of higher education on economic well-being. *Affilia, 8*, 425-441.

U.S. House of Representatives (1994). *Green Book: background material and data on programs within the jurisdiction of the Committee on Ways and Means.* Washington, DC: U.S. Government Printing Office.

Table 1: College Enrollment Among Female Welfare Recipients

	College Enrollment During the Welfare Spell	
	Percent	N
Recipients with a High School Diploma or GED	17.0	2,509
All Recipients	13.8	3,317

Notes:
(1) Welfare spells are smoothed for one-month gaps.
(2) Tabulations are weighted using the 1979 person weights provided by the NLSY.

Table 2: Distribution of College Spells for Welfare Recipients

Number of Spells per Respondent	Welfare Spells	College Spells Total	Overlappying College/Welfare Spells
1	665	276	213
2	412	168	71
3	244	78	18
4	131	40	8
5	54	18	1
6	18	6	1
7	14	5	
8	3	2	
9			
10			
11			
12	1		
Total Number Respondents	1,542	593	312

Notes:
(1) Welfare spells are smoothed for one-month gaps.
(2) College and college/welfare spells include spells for a respondent's first degree only.

Table 3: College Graduation Among Female College/Welfare and College Only Students

	College/Welfare Students (N=312)	**College Only Students** (N=2,549)
Graduate Ever During NLSY Panel	36.2	55.0
Graduate with Associate's Degree	59.1	19.7
Graduate with Bachelor's Degree or Higher	40.9	80.3
Graduate At End of College or College/Welfare Spell	16.2	55.0
Graduate After Leaving Welfare	20.0	N/A
Never Graduate During NLSY Panel	63.8	45.0

Note: Tabulations are weighted using the 1979 person weights provided by the NLSY.

Table 4: Post-Welfare Outcomes for Female Recipients, by College Attendance, College Graduation, and Education Level

	Attended College While on Welfare		**Did Not Attend College While on Welfare**			
	All Enrollees (N=452)	**Graduated After Welfare Spell** (N=42)	**All Non-Attenders (N=2,753)**	**Graduated High School** (N=1,472)	**Completed GED** (N=603)	**No HS Diploma or GED** (N=678)
Returned to Welfare Within One Year	14.4	8.5	22.9	21.8	21.5	26.2
Returned to Welfare Within Five Years	40.0	19.6	53.2	49.7	56.4	57.6
Employed One Year After Welfare Exit	46.4	57.5	43.5	49.9	34.0	36.0
Employed Within Five Years of Welfare Exit	81.3	86.4	76.0	80.6	69.9	70.4
Family Poverty One Year After Welfare Exit	35.0	21.5	43.4	39.3	44.4	50.6
Family Poverty Within Five Years of Welfare Exit	67.3	42.5	73.7	67.8	79.8	82.0

Notes:
(1) Sample sizes reported represent the total pool from which follow-up data is drawn. Actual sample sizes vary for one-year and five-year follow-up.
(2) Observations are spells of welfare receipt and college/welfare receipt. Once an individual graduates from college after a college/Welfare spell, she is dropped from the sample even if she returns to aid.
(3) Tabulations are weighted using the weights provided by the NLSY.

Table 5: Effects of College Attendance on Post-Welfare Recidivism

	Return Within One Year	Return Within Five Years
Attend College (instrumented)	-0.0002 (0.112)	0.012 (0.149)
Graduate College (instrumented)	-0.410* (0.316)	-1.236** (0.461)
Age	-0.009** (0.002)	-0.010** (0.004)
African-American	-0.027 (0.023)	0.092** (0.032)
Latina	-0.029 (0.024)	0.092** (0.032)
Number Children	0.009 (0.009)	0.016 (0.013)
Youngest Child Under 6	-0.021 (0.025)	0.038 (0.036)
Married	0.027 (0.024)	-0.016 (0.031)
Divorced/Separated	0.008 (0.021)	-0.034 (0.029)
County Unemployment Rate	0.006* (0.003)	0.005* (0.003)
Maximum AFDC Benefit*100	0.0001 (0.003)	0.008* (0.004)
N	2,778	2,343

Notes:
(1) Also included in models are dummy variables for parent's occupation when respondent was age 14, including one dummy variable for missing occupation for both parents.
(2) Regressions are unweighted.
(3) *Significant at the 10% level. ** Significant at the 1% level.

Table 6: Effects of College Attendance on Post-Welfare Employment

	Employed Within One Year	Employed Within Five Years
Attend College (instrumented)	0.554** (0.138)	0.485** (0.130)
Graduate College (instrumented)	0.368 (0.406)	0.502 (0.422)
Age	0.007** (0.003)	-0.001 (0.003)
African-American	-0.073** (0.028)	-0.031 (0.028)
Latina	-0.070* (0.031)	0.010 (0.029)
Number Children	-0.020* (0.012)	-0.028** (0.012)
Youngest Child Under 6	-0.041* (0.032)	0.010 (0.033)
Married	-0.021 (0.030)	0.024 (0.029)
Divorced/Separated	0.002 (0.027)	0.066** (0.027)
County Unemployment Rate	-0.012** (0.003)	-0.001 (0.003)
N	2,778	2,343

Notes:
(1) Also included in models are dummy variables for parent's occupation when respondent was age 14, including one dummy variable for missing occupation for both parents.
(2) Regressions are unweighted.
(3) *Significant at the 10% level. ** Significant at the 1% level.

Table 7: Effects of College Attendance on Post-Welfare Poverty Level

	Poor Within One Year	Poor Within Five Years
Attend College (Instrumented)	-0.555** (0.134)	-0.368** (0.136)
Graduate College (instrumented)	0.092 (0.394)	-1.459** (0.486)
Age	-0.008** (0.003)	-0.011** (0.004)
African-American	0.140** (0.028)	0.202** (0.030)
Latina	0.010 (0.031)	0.103** (0.032)
Number Children	0.032** (0.012)	0.045** (0.013)
Youngest Child Under 6	0.032 (0.031)	-0.013 (0.037)
Married	-0.046* (0.030)	-0.041* (0.030)
Divorced/Separated	0.060* (0.027)	0.037 (0.029)
County Unemployment Rate	0.012** (0.003)	0.010** (0.003)
N	2,741	2,222

Notes:
(1) Also included in models are dummy variables for parent's occupation when respondent was age 14, including one dummy variable for missing occupation for both parents.
(2) Regressions are unweighted.
(3) *Significant at the 10% level. ** Significant at the 1% level.

Notes

[1] See Greenberg and Savner (1996) for a summary of TANF provisions.
[2] Dummy variables for number of schools in the county are grouped as follows: 0, 1-3, 4-9, 10-14, 15-19, 20-49, 50-99, 100-199, 200-299, and 300 or more. Other groupings were tested in the analyses with very similar results.
[3] Attending college while on aid is associated with longer time on aid, however. See London (2003) for a discussion of the determinants of enrollment and graduation and the effects of these on total time on welfare.
[4] Dummy variables are coded for each of the 12 major occupational code groupings. Where mother's occupation was available, I used it. If mother's occupation was missing, I used father's occupation. In 26 percent of observations, both mother's and father's occupation were missing. These were, for the most part, instances where the parent in the home did not work. Missing occupational status is coded as a separate dummy variable.
[5] Consistent with much of the literature on returns to education, using supply-side factors (e.g., school availability) as an instrument for demand for schooling results in OLS estimates that are smaller in magnitude than IV estimates. This is the case for each of the models estimated in Tables 3, 4, and 5. See Card (2000) for a discussion of the potential reasons for this.
[6] See Butler and Deprez (2002), Golonka and Matus-Grossman (2001), Carnevale and Reich (2000), Fein et al. (2003), and Thompson (1993) for more detailed discussions of services that can and should be offered to welfare recipients who attend college.