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The returns to higher education for marginal students: Evidence from Colorado Welfare recipients[☆]

Lesley J. Turner[*]

University of Maryland, College Park Department of Economics and NBER, 3114 Tydings Hall, College Park, MD 20742, United States

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ABSTRACT

I estimate the impact of community college credits and credentials on the labor market outcomes of several cohorts of current and former welfare recipients. Using an individual fixed effects approach, I find that women who attend college after entering welfare experience large and significant earnings gains. These returns are driven by credential receipt and when subassociate' s degree credentials are unobservable, positive earnings gains will be inappropriately attributed to college attendance alone.

1. Introduction

Public two-year colleges serve an increasingly important role in meeting the growing demand for an educated workforce in the United States. Students induced to enroll in college by changes in the costs or returns to higher education are more likely to attend a two-year institution and these schools have absorbed much of the growth in college attendance over the past several decades (Bound, Lovenheim, & Turner, 2010). In January 2015, President Obama released a proposal to further expand access to community college programs by making the first two years of enrollment free for all students.[1] Although numerous studies provide evidence of substantial labor market returns to community college credits and credentials (Belfield & Bailey, 2011), it is unclear whether individuals at different parts of the skill distribution would experience equally large returns from attending a two-year institution.[2]

In this paper, I focus on a group of students who are particularly constrained in their ability to finance college attendance – mothers who are current and former welfare recipients. Mothers at risk for welfare receipt are an especially relevant group given their generally low levels of income,

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* Tel.: +1 3014053512.
E-mail address: turner@econ.umd.edu

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[1] See https://www.whitehouse.gov/the-press-office/2015/01/09/fact-sheet-white-house-unveils-america-s-college-promise-proposal-tuitio for additional details.

[2] Several studies find evidence that academically marginal students benefit from admission to a four-year institution (e.g., Zimmerman, 2014; Goodman, Hurwitz, & Smith, 2015) and Backes, Holzer, and Velez (2015) show that community college attendance increases earnings among disadvantaged youth, but there is little evidence of whether marginal nontraditional students benefit from attending a two-year institution.

education, and the time limits on welfare eligibility.[3] Furthermore, over the past two decades, federal policy has placed increasing restrictions on welfare recipients' ability to attend college while receiving cash assistance, with corresponding decreases in postsecondary enrollment (Dave, Corman, & Reichman, 2012; Dave, Reichman, Corman, & Das, 2011).

I estimate the impact of community college attendance, credits, and credential receipt on the labor market outcomes of several cohorts of Colorado welfare entrants. My preferred specification controls for an extensive set of time-varying observable characteristics (e.g., number and age of children, vehicle ownership), as well as unobservable individual-specific characteristics that are time-invariant or vary linearly over time. Women who enroll in college following welfare entry experience large and significant earnings gains. These gains are entirely driven by credential receipt. All career-oriented community college credentials – from short-term certificates that require as few as 15 credits to associate degrees – lead to significant earnings gains. Conversely, associate of arts and general studies degrees, while potentially facilitating transfer to a four-year degree program, leads to only small and largely insignificant changes in earnings.[4]

My identification strategy closely follows that of Jacobson, LaLonde, and Sullivan (2005). I take advantage of the fact that my data contains information on individuals' labor market outcomes before and following community college attendance. Under the identifying assumption that, conditional on time-varying observable characteristics, trends in an individual's pre-college labor market outcomes represent a valid counterfactual for the evolution of their earnings and employment in the absence of college attendance, my estimates will represent the causal impact of community college credits and credentials. Consistent with prior findings (e.g., Jepsen, Troske, & Coomes, 2014; Backes et al., 2015; Bahr, Dynarski, Jacob, Kreisman, Sosa, & Wiederspan, 2015; Liu, Belfield, , & Trimble, 2015; Stevens, Kurlaender, & Grosz, 2015; Dadgar & Trimble, forthcoming), women who earn credentials in health, science, or technical fields experience the largest labor market benefits. However, in contrast with studies that find little to no average impact of short-term credentials on the average community college student's earnings (e.g., Jepsen et al., 2014; Bahr et al., 2015; Liu et al., 2015; Dadgar & Trimble, forthcoming), I estimate that even women who earn short-term certificates in non-technical fields experience statistically significant earnings gains.

Furthermore, I document that failure to account for sub-associate credentials results in falsely attributing positive earnings gains to college attendance in the absence of credential receipt in my setting. Measures of educational attainment in most major surveys, such as the Decennial Census, Current Population Survey, and American Community Survey, do not include certificate receipt, suggesting the large category generally classified as "some college" includes a heterogeneous group of individuals.[5] Given the low completion rates of community college students, it is especially important to distinguish between earnings gains due to credit completion and those driven by credential receipt.

Finally, I use information on post-college earnings trajectories, direct and indirect costs associated with college attendance, and public assistance receipt to approximate short- and medium-run private returns to college attendance. When foregone earnings and direct postsecondary costs are taken into consideration, short-run private rates of return to certificates and most degrees are negative, providing a rationale as to why so few women complete credentials, even in light of the large impacts on post-college earnings.

My findings speak to the question of whether state and federal welfare policy should support formal human capital development and suggest that supports for credential completion are just as, if not more, important than funding targeted towards increasing college attendance. Furthermore, my results have implications beyond welfare policy given the increases in community college enrollment that would occur without tuition. If students induced to enroll in community college due to these efforts are more disadvantaged than the average community college student, my results can also inform future policies targeting such groups.

The remainder of this chapter proceeds as follows: in Section 2, I discuss the evolution of federal welfare policy towards human capital development as well as research findings on the returns to the two-year sector of higher education. Section 3 discusses my data and presents descriptive results, while Section 4 describes my empirical approach. In Section 5, I present estimates of the impact of community college credits and credentials on labor market outcomes. Section 6 discusses my estimates of the private returns to community college over the short- and medium-run and 7 concludes.

2. Welfare policy and human capital development

Over the past two decades, federal welfare policy has become increasingly less supportive of concurrent college enrollment and cash assistance receipt. Welfare recipients are eligible for Pell and federal loan aid and under the pre-1996 Aid to Families with Dependent Children (AFDC) program, recipients' ability to attend college while receiving welfare was relatively unconstrained.[6] Attending a post-secondary institution while on welfare was not uncommon – one study estimates that 14% of all recipients attended college while receiving AFDC benefits (London, 2006).

The 1996 Personal Responsibility and Work Reconciliation Act (PRWORA) made it more difficult to receive welfare while attending college. The legislation imposed work requirements and time limits on welfare recipients, increasing the costs associated with postsecondary education by requiring part-time employment or exit from welfare for those wishing to attend college full-time. Although states had the

[3] Federal law limits recipients to 60 lifetime months of cash assistance receipt, while many states have shorter time limits (Ziliak, forthcoming).

[4] Using data on transfer students from a single state, Crosta and Kopko (2014) find among students with at least 50 community college credits, those who earn associate of arts degrees are more likely to transfer to a four-year institution and subsequently receive a bachelor's degree than students who did not earn a degree or applied science degree recipients.

[5] For instance, the 2009 American Community Survey places 21% of adults in this category (Snyder & Siebens, 2012).

[6] Single parents who received public assistance in the prior year automatically qualify for an "automatic zero expected family contribution" and the maximum Pell Grant.