# The Effect of the SSI Student Earned Income Exclusion on Education and Labor Supply

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#### Abstract

Youth with disabilities face financial constraints to attaining post-secondary education and encounter strong labor market disincentives when considering employment opportunities. Encouraging human capital development through employment and education could help young Supplemental Security Income (SSI) recipients transition off SSI reliance and improve their long-run economic self-sufficiency. I study the effect of the Student Earned Income Exclusion (SEIE), an education- and work-incentive for youth with disabilities receiving SSI benefits. The SEIE enables SSI recipients under age 22 to exempt \$1,930 of their monthly earnings from the SSI benefits determination if they are enrolled in school. Using the Survey of Income and Program Participation (SIPP) and a regression discontinuity design, I compare changes in SSI recipients' education and labor decisions in the months surrounding the strict age-22 SEIE eligibility cutoff. I find the SEIE causes SSI recipients to increase school enrollment by 8.6 percentage points and increase employment by 8.4 percentage points. The findings suggest that the SEIE helps relax binding financial constraints for SSI recipients to attend college while revealing a substantial preference for employment among these recipients.

**Keywords:** SSI; Education; Labor Supply; Social Safety Net **JEL Classification:** I38, I30, J14

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## 1 Introduction

Youth with disabilities ages 19–22 receiving Supplemental Security Income (SSI) benefits are more than 50% less likely than other young adults from low-income households to enroll in post-secondary education and work (ACS 2019). This lower educational attainment and labor force participation for SSI recipients is cause for concern, because it may contribute to many recipients continuing to receive SSI disability benefits into adulthood and remain trapped in poverty. Encouraging human capital development through employment and education could help young SSI recipients transition off SSI reliance and improve their long-run economic self-sufficiency.

The Student Earned Income Exclusion (SEIE) is the only education- and work-oriented incentive for youths with disabilities receiving SSI benefits. In the absence of SEIE, SSI beneficiaries receive a maximum of \$794 per month, and this amount decreases by 50 cents for each dollar of earned income. The SEIE greatly reduces the SSI work disincentives for SSI recipients below age 22 if they enroll in school. The SEIE enables SSI students under age 22 to exempt \$1,930 of their monthly earnings from the SSI benefits determination. This paper provides the first estimates of the effect of SEIE on SSI recipients' educational and labor market choices.

Post-secondary education is a risky investment because of the high upfront opportunity and financial costs, while its long-run labor market returns are highly variable. While education pays off and yields a substantial economic return for most, this investment is especially risky and less beneficial for SSI recipients for three reasons. First, improvements in labor market returns among lower-paying jobs are of marginal value to SSI recipients. For instance, an hourly wage improvement from \$15 to \$20 may not benefit SSI recipients because they retain the option value of continually receiving the \$794 monthly SSI benefit. They may rationally choose to remain out of the labor market until a sufficiently high wage is reached to offset the risk of giving up SSI benefits. Second, financing college costs or consumption through student loans or other debt has an increased risk for SSI recipients. SSI recipients taking on student debt and subsequently not entering the labor market would have to repay the loan using their modest monthly SSI benefits, intended to provide only a consumption floor. Lastly, SSI recipients may find it more challenging to finance their education. While grants and financial aid can help with the tuition fees, SSI benefits are likely insufficient to cover the increased costs from college through room and board, transportation, books, and supplies. Many lower-income students finance these indirect education costs through employment. However, this option is of limited benefit for SSI beneficiaries not eligible for the SEIE because of the 50 percent benefit reduction rate and minimal income eligibility thresholds within the SSI program.<sup>1</sup>

The SEIE builds on the premise that education integrated with work can help young SSI beneficiaries gain skills needed to increase their future labor market returns, secure economic self-sufficiency, and transition off welfare programs as adults (Benz et al., 1998; Blackorby and Wagner, 1996; Hoffman et al., 2018). Past research documents the positive association between education and labor market outcomes for individuals with disabilities. Young adults with disabilities are more likely to be employed and earn higher income and less likely to rely on SSI benefits if they obtain a post-secondary degree and have work experience before or during college (Berry and Caplan, 2010; Hoffman et al., 2018; Qian et al., 2018; Sannicandro et al., 2018; Grigal et al., 2019).

The SEIE relieves the liquidity constraints during post-secondary school by removing the work disincentive and encouraging school attendance. First, the SEIE provides SSI students below the age of 22 the option of the labor market: the option of being able to enter or leave the labor market after learning more about their abilities and preferences for work. If the risk and cost of entering the labor force are relatively low, more SSI recipients may experiment with entering the labor force. SSI recipients who might have otherwise not entered the labor market may realize substantial gains by building work experience. Second, the SEIE acts as a school subsidy. The increase in young SSI recipients' total income, contingent on school enrollment, is expected to help them cover their education costs, raise their living standards, and make it easier for them to attend school. The SEIE is a policy designed to address the barriers young SSI recipients face as they transition into adulthood, yet its effects are still not examined. This paper is the first to study whether loss of SEIE eligibility at age 22 affects SSI recipients' educational and labor market choices.<sup>2</sup>

I use data from the Survey of Income and Program Participation (SIPP) to study the effects of the SEIE. This nationally representative survey provides comprehensive information on the dynamics of income and participation in government assistance programs, including SSI. The SIPP includes individual-level information on SSI benefit receipt, education, and labor market outcomes. The SIPP collects the respondent's birth month, which provides age precision in relation to the SEIE eligibility cutoff at age 22. My primary analysis sample consists of all individuals receiving SSI benefits within 12 months of their twenty-second

<sup>&</sup>lt;sup>1</sup>The share of SSI post-secondary students between the ages of 19 and 21 who are employed is only 24% relative to 52% of non-SSI students from low-income households (ACS 2019).

<sup>&</sup>lt;sup>2</sup>Losing SEIE eligibility means that young SSI recipients will incur a 50 percent reduction in SSI benefits from their earnings.

birthday. I examine whether loss of SEIE eligibility affects education and labor supply by comparing changes in the decisions of SSI recipients around the SEIE eligibility cutoff at age 22. I find that the SEIE increases school enrollment by 8.6 percentage points and increases employment by 8.4 percentage points. These results indicate that many SSI recipients may attend school or test the labor market but are dissuaded from doing so by either financial constraints or work disincentives in the absence of the SEIE.

Though prior work has studied how educational incentives affect the educational outcomes of low-income individuals, my study is the first to estimate the causal impacts of educational incentives on higher education enrollment of young SSI recipients.<sup>3</sup> Deming and Dynarski (2010) review the research on the causal relationship between college costs and educational attainment, with a focus on low-income populations. They find that for each \$1,000 decrease in college costs, college enrollment increases by approximately 3–5 percentage points. The review article concludes that simple programs that link financial incentives to educational incentives are most effective. The SEIE fulfills both criteria. First, the SEIE is simple: Unlike other financial aid programs, it does not impose any administrative or paperwork requirements. When SSI recipients meet the age and student status criteria, the Social Security Administration automatically applies their SEIE. Second, the SEIE allows SSI recipients below age 22 to keep the maximum level of their SSI benefits and supplement them with additional earned income if they enroll in school. Moreover, the SEIE not only increases the total income of working SSI recipients but also eliminates the fear of losing its related benefits that are indispensable for education: Medicaid health insurance and Supplemental Nutrition Assistance Program (SNAP) food vouchers. Finally, credit constraints are another reason for the SEIE substantially impacting school enrollment, because traditional educational incentives go to considerably richer households than SEIE (Dynarski, 2004; Dynarski and Scott-Clayton, 2006).

The employment response to the SEIE helps inform the long-standing literature examining the effect of means-tested benefits on labor supply. Generally speaking, means-tested programs provide a basic consumption level to individuals facing major economic hardship, such as disability or unemployment. However, by linking eligibility and benefits to income, these programs often create large labor supply disincentives. A large body of work examines the labor market impacts of the Earned Income Tax Credit (EITC). Past work on EITC concludes that increases in EITC benefits boost labor force participation and have no ef-

<sup>&</sup>lt;sup>3</sup>Past work has found correlational evidence of a link between SSI benefits and educational outcomes: SSI beneficiaries ages 19 to 23 are nearly four times more likely to be enrolled in school than their counterparts who had formerly received SSI (Loprest and Wittenburg, 2007).

fect on the intensive margin of hours, particularly among single mothers (Hotz et al., 2003; Eissa and Hoynes, 2006; Meyer, 2010; Nichols et al., 2016).<sup>4</sup> However, this EITC literature focuses almost exclusively on adults with children. Few studies examine the effect of the loss of work incentives or the impacts on young childless adults. The most relevant study on the labor supply response of young childless adults in the SSI program settings comes from Deshpande (2016), which uses the loss of the SSI when child SSI beneficiaries turn 18 as a source of exogenous variation.<sup>5</sup> However, I focus on young SSI adults around age 22, an older age margin, where research is sparse. Additionally, I look at the loss of work incentives while keeping SSI benefits rather than the complete disqualification from the SSI program at age 18 recover only one-third of their lost SSI cash income in earnings. However, she does not look at their educational responses. The low education levels of removed SSI youth at age 18 might explain their low lifetime earnings. The human capital investment of young adult SSI recipients as they transition into adulthood remains a potential area for study.

Overall, the policy implication of this study is that relaxing financial constraints for young SSI recipients increases their investment in human capital and labor skills.

## 2 Policy Background

#### 2.1 Supplemental Security Income (SSI)

The SSI program provides monthly cash benefits to low-income children and non-elderly adults with disabilities, and low-income adults aged 65 and older (regardless of disability status). SSI is the US's largest means-tested cash transfer program, paying about \$55 billion to 8.5 million Americans (Social Security Administration, 2021). The maximum federal SSI benefit amount for an eligible individual – the Federal Benefit Rate (FBR) – is \$794 per month and is adjusted each year for inflation. Some states supplement the FBR with small additional payments. In addition to the monthly cash benefits, SSI provides categorical SNAP eligibility in all states and Medicaid eligibility in most states.

SSI payments provide an income floor to low-income non-elderly adults with disabilities

 $<sup>^{4}</sup>$ Kleven (2019) argues that this literature overstates the EITC effects at the extensive margin of labor supply.

<sup>&</sup>lt;sup>5</sup>Loss of SSI benefits implies removal of the 50 percent benefit reduction rate on earnings.

who are unable to engage in the labor market.<sup>6</sup> If the SSI recipient has income other than SSI benefits, then depending on its type and amount, SSI payments will lower the FBR. The monthly SSI benefit amount  $(SSIBen_{it})$  is calculated as the difference between the FBR and the SSI recipient's "countable income." Countable income consists of the sum of the recipient's unearned income  $(UnEarn_{it})$  and half of earned income  $(Earn_{it})$  after excluding \$20 of general income and \$65 of earned income (Equation 1):<sup>7</sup>

$$SSIBen_{it} = FBR_t - max(UnEarn_{it} - 0.5max(Earn_{it} - 65, 0) - 20, 0)$$
(1)

If an SSI recipient's countable income exceeds the FBR, they do not receive any SSI benefits for that month, and their SSI eligibility, along with SNAP and Medicaid, may be terminated if their countable income continues to remain high. The black line in Figure 1 shows that SSI beneficiaries receive a maximum of \$794 per month, and this amount decreases by 50 cents for each dollar of earned income. In addition, earnings reduce SNAP benefits. Combined with SNAP benefits, the effective tax rate for low-income SSI beneficiaries is even higher than 50 percent.

SSI has been an increasing component of America's social safety net. SSI caseloads of children under age 18 and young adults ages 18–21 have surged since the early 1990s, as shown in Figure 2. Additionally, the SSI enrollment of recipients between 22 and 29 has been increasing since the early 2000s. It remains an open question whether this growth will trickle down to older age groups in the future. Without effective targeting, many SSI recipients will continue receiving SSI disability benefits into adulthood and remain in poverty.<sup>8</sup> The growth in their caseloads will result in substantial federal public assistance spending.

Early adulthood is a critical stage of human capital formation in the life cycle. Young adults learn to conduct independent living and prepare for self-sufficiency: They live separately from their parents, continue their education while working, consider career options, and develop skills in making financial and other decisions with less support. Linking SSI benefits to earned income makes transitioning to adulthood challenging for young SSI recipients. The 50 percent benefit reduction rate discourages work among young adult SSI recipients. It also distorts their decisions in human capital investment – especially since it is challenging to supplement their education costs with additional earnings.

<sup>&</sup>lt;sup>6</sup>The monthly substantial gainful activity amount for non-blind individuals for 2021 is \$1,310.

<sup>&</sup>lt;sup>7</sup>Unearned income consists of unemployment benefits, social security, disability benefits, or family transfers.

 $<sup>^{8}</sup>$  The maximum annual SSI benefit is \$9,528. It is lower than the federal poverty line for a single-person household (\$12,880).

Encouraging human capital development through employment and education could facilitate the transition of young SSI recipients to long-run economic self-sufficiency and yield substantial savings to the federal government. The SEIE is the only education- and workoriented incentive for young adult SSI recipients.

#### 2.2 Student Earned Income Exclusion (SEIE)

The SEIE allows students who are SSI recipients under age 22 to exempt \$1,930 of their monthly earnings from the SSI benefits determination (blue line in Figure 1). Consider an SSI recipient who is a full-time minimum-wage worker. They would earn \$870 per month.<sup>9</sup> If they are not eligible for the SEIE, this person would receive \$274 as SSI benefits. Conversely, with the SEIE, this person would receive the maximum monthly federal SSI benefit amount of \$794, a difference of \$520 per month. Thus, the SEIE allows eligible SSI students to exclude earned income and retain all or some of their SSI benefits.<sup>10</sup>

The Social Security Administration considers an SSI recipient to be in regular school attendance if they take one or more courses of study and attend classes in (1) a college or university for at least eight hours per week; (2) a school (grades seven through 12, including homeschool) for at least 12 hours per week; or (3) another training course designed to prepare the individual for a paying job for at least 12 hours a week, for example, vocational or technical training and government anti-poverty programs (for example, Job Corps). SSI recipients below age 22 must report changes in their student status along with changes in their income.

The SEIE applies each month automatically when an SSI recipient meets the age, student status, and earnings criteria as long as the SEIE annual maximum of \$7,700 has not been reached. From SSI's inception in 1975 to 2000, the SEIE maximum monthly exclusion amount remained fixed at \$400 and the maximum annual exclusion amount was fixed at \$1,620. In 2001, they increased to \$1,290 and \$5,200 respectively, and since then, they have been adjusted annually based on the cost-of-living index (Figure 3).<sup>11</sup>

First, I study the effect of SEIE eligibility (extensive policy margin) in the post-expansion

<sup>&</sup>lt;sup>9</sup>Monthly earnings calculations: 7.25 per hour, 30 hours per week, 4 weeks per month = 870; SSI benefits calculations: 794 - 20 - 65 - 0.5 \* 870 = 274

<sup>&</sup>lt;sup>10</sup>Earned income consists mostly of gross wages but also net earnings from self-employment, sheltered workshop earnings, royalties, and honoraria.

<sup>&</sup>lt;sup>11</sup>Starting in 2005, the SEIE also applies to earnings deemed from an ineligible spouse or parent. Because this policy change can alter young SSI beneficiaries' incentives and decisions, I limit my analysis until 2004.

period from 2001 to 2004. Second, I explore the intensive policy margin of changing the SEIE amounts by comparing the effect of SEIE on the educational and labor market choices of SSI recipients pre- and post-2001.

## 3 Data

To examine the effect of SEIE eligibility on SSI recipients' educational and labor market choices, I use the SIPP. The SIPP is the principal source of individual-level data on the dynamics of income and participation in government assistance programs, including SSI. The SIPP is administered in panels. For each panel, the SIPP interviews a large nationally representative sample of US households and individuals every four months – called "waves" – over three to four years.<sup>12</sup> Respondents within each panel are randomly divided into four subsamples of approximately equal size, and each subsample is referred to as a "rotation group." Each rotation group is interviewed in a separate calendar month about the previous four months. Over four months, all rotation groups are interviewed, providing data for one wave.

Examining whether loss of SEIE eligibility affects education and labor supply requires individual-level information on SSI benefit receipt, education, and employment, in addition to year and month of birth. I use the SIPP for four reasons. First, the SIPP is a rich dataset with monthly observations. Second, it distinguishes which household member receives SSI benefits. Individual-level SSI recipiency is crucial to study the effect of the SEIE because there might be SSI recipients in a household who are not relevant to my analysis, for example, SSI kids, SSI seniors, or SSI adults not around age 22. Third, the SIPP collects the respondent's birth month, providing age precision in relation to the SEIE eligibility cutoff at age 22. Fourth, the SIPP provides detailed information on income sources and amounts, school enrollment, labor force participation, and demographic characteristics.

I use the 2001 and 2004 SIPP panels to explain the SEIE effect on education and labor. The primary analysis sample is all SSI recipients within 12 months of their twenty-second birthday between 2001 and 2004. An SSI recipient in a given month is defined as an individual receiving SSI benefits in this age range and time frame. I identify 181 unique individuals in

<sup>&</sup>lt;sup>12</sup>This increases the accuracy of the data as respondents need only to recall their participation in government assistance programs during the preceding four months (Ham and Shore-Sheppard, 2005); however, underreporting is still a potential limitation of the SIPP measuring of SSI enrollment (Huynh et al., 2002; Ireys et al., 2004).

my primary analysis sample, and my sample consists of 1,468 individual-month observations. The SIPP data is treated as a repeated cross section to maximize the number of observations.

Table 1 displays descriptive statistics for the primary analysis sample and their counterparts not receiving any SSI income and earning less than \$3,000 per month. The SSI sample has lower school enrollment and employment rates. The gap between the share of SSI recipients working while attending school relative to their counterparts is large, 4.5 percent versus 20.7 percent. As the table shows, SSI income is a vital economic resource for the beneficiaries as their average earned income is \$204 per month – substantially lower than other young adults' at \$1,208.

Figure 4 displays school enrollment rates in the 24 months prior to and following the twenty-second birthday for SSI recipients versus non-SSI adults in the post-2001 period. The school enrollment of both groups decreases as they get older. I observe a large decrease in school enrollment among SSI recipients following the discontinuity of SEIE eligibility. This sharp decrease is not observed among non-SSI adults after they turn 22. Figures 5 and 6 show that SSI recipients' employment and working-while-attending-school rates are much lower than their counterparts. Unlike non-SSI adults, the share of SSI beneficiaries working and working while attending school decreases when they are no longer eligible for the SEIE right after they cross the age-22 threshold. Appendix Figures A1 to A3 show both groups' education and labor outcome rates in the pre-2001 period, where the exclusion amounts are small. SSI recipients decrease their employment rates when they age out of SEIE eligibility. I do not observe any changes in either group's other outcomes.

## 4 Methodology

SSI recipients qualify for the SEIE if they are younger than 22 and attend school. Before 2001, the SEIE allowed SSI students under age 22 to exempt only \$400 of their monthly earnings from the SSI benefits determination. In 2001, the maximum monthly exclusion amount increased vastly to \$1,290, and since then, it has been adjusted annually based on the cost-of-living index. First, I study the extensive margin of the SEIE: How does aging out of SEIE eligibility at age 22 affect young SSI recipients' decisions to enroll in school and supply labor in the post-2001 period? Second, I examine the intensive margin of the policy: Do the education and labor market choices of SSI beneficiaries change with respect to the changes in the SEIE amount?

#### 4.1 Extensive Margin of SEIE

The SEIE allows SSI students under age 22 to exempt their monthly earnings from the SSI benefits determination. Before their twenty-second birthday, SSI students can earn up to \$1,930 per month without reducing their SSI benefits. As young SSI recipients age out of SEIE, each dollar of earned income reduces their SSI benefits by 50 cents, creating discontinuing jumps in SSI benefits around age 22. This institutional setup plausibly alters SSI recipients' human capital investment and employment decisions around age 22. I employ a regression discontinuity design to examine the effect of losing eligibility for SEIE on SSI beneficiaries' educational and labor market choices in the post-2001 period (between 2001) and 2004) (Lee and Lemieux, 2010). Lee and Lemieux (2010) refer to these designs as "discontinuities in age with inevitable treatment," where the treatment is initiated when individuals reach a certain age. They classify these cases separately from typical regression discontinuity designs because assignment to treatment is unavoidable, given that all SSI adults will eventually turn 22 years old and become ineligible for SEIE. Lee and Lemieux (2010) explain that the analysis of age discontinuities presents two main issues. First, it is not possible to estimate long-term effects, and short-term effects must be immediate for the treatment to truly impact the outcome. Since my paper focuses solely on shortterm outcomes, the regression discontinuity graphs demonstrate that the effects of aging out of SEIE are indeed immediate. Second, the effects in such settings may be amplified or dampened due to the anticipated nature of the treatment. Lee and Lemieux (2010) do not provide specific guidelines to address this issue as it heavily depends on the context. In the SEIE setting, if the discontinuities in outcomes around the age 22 cutoff are intensified, it would indicate the necessity of additional financial resources for SSI recipients to pursue education and participate in the labor market.<sup>13</sup>

Formally, I estimate the following regression equation:

$$Y_{imt} = \beta_0 + \beta_1 Above22_{imt} + \beta_2 Age_{imt} + \beta_3 Age_{imt} * Above22_{imt} + (\theta X_i + \gamma_s + \delta_{mt}) + \epsilon_{imt}$$
(2)

where  $Y_{imt}$  denotes outcomes for SSI beneficiary *i* in month *m* and year *t* and  $Age_{imt}$  is the running variable normalized so that the month individual *i* turns 22 is 0. The indicator  $Above22_{imt}$  is equal to 1 if an SSI recipient is 22 years old or older. I apply a linear regression, fitting a linear function in  $Age_{imt}$  and allow the slope to differ on either side of the age-22 cutoff. The state and calendar month-by-year fixed effects ( $\gamma_s$ ,  $\delta_{mt}$ ) allow taking

<sup>&</sup>lt;sup>13</sup>Examples of age discontinuities in the litearture are: Ahammer et al. (2022); Card et al. (2008, 2009); Carpenter and Dobkin (2009); Edmonds et al. (2005); Hofmarcher (2021).

the non-SEIE related across-state differences and time trends in educational and labor supply outcomes into account. The baseline covariates  $X_i$  are a gender dummy and two race dummies: White and Black. The inclusion of covariates and state and time fixed effects in Equation 2 improves precision. All regressions weight observations by the inverse sampling probabilities.

I look at three main outcomes: the likelihood of enrolling in school, the probability of working, and the chance of working while attending school. The coefficient of interest is  $\beta_1$ , which reveals the causal effect of aging out of SEIE eligibility when SSI recipients turn 22 relative to SSI beneficiaries who are a few months shy of 22, in the post-2001 period.

One might be worried that finding an effect of losing the SEIE eligibility on education and labor supply reflects a change in sample size or sample composition. If there were significant differences in SSI recipients' predetermined characteristics across age 22, then there may be a selection issue: SSI beneficiaries with specific characteristics might be able to qualify for the SEIE to avoid the 50 percent benefit reduction rate of earned income, which could be driving any differences in outcomes across age 22. First, I formally test for a discontinuity in the density of observations around the age-22 cutoff. If SSI beneficiaries perfectly manipulated their age, then there would be bunching below where the running variable is zero to be eligible for the SEIE and receive larger SSI benefits when working. Appendix Figure A4 shows no evidence of a difference in the density of observations around age 22. Second, Appendix Table A1 shows SSI beneficiaries close to age 22 are relatively similar in predetermined characteristics: gender and race. More importantly, If young adults can perfectly manipulate their SSI status around the SEIE eligibility threshold, then the identifying assumption of the regression discontinuity design that individuals on either side of the cutoff are similar is no longer valid and causal inference cannot be made. To provide evidence that the placement of young adults above or below the cutoff is as good as randomly assigned around the cutoff, Figure 7 plots the mean SSI enrollment rate for each age group and shows that young adults are not manipulating their SSI status below age 22 to become eligible for the SEIE. If anything, there is an increasing trend in SSI status over age, and the share of young adults receiving SSI benefits right above age 22 is slightly higher — yet statistically not significant — relative to the share just below age  $22.^{14}$  It would be difficult for an individual to manipulate their SSI status around age 22 perfectly. In the SSI institutional setting, it is nearly impossible for SSI applicants to time their applications to receive an award in a specific month because of the considerable variation in SSI determination processing and waiting

<sup>&</sup>lt;sup>14</sup>The result is consistent when considering the share of individuals who have ever received SSI benefits in the preceding six-month period (Appendix Figure A5).

times (Maestas et al., 2015). Transitioning on and off SSI is not easily realized. The SSI award rate is low at 30.8 percent for working-age applicants (Social Security Administration, 2021). The rate of successful appeal or reapplication for SSI payments decreases further for youth with a work history (Hemmeter and Gilby, 2009). This institutional setup supports the empirical conclusion that there is no change in sample composition or sorting across the age-22 SEIE eligibility cutoff.

#### 4.2 Intensive Margin of SEIE

The nominal value of the maximum monthly SEIE amount was fixed at \$400 between 1996 and 2000. In 2001, it increased to \$1,290; since then, it has been adjusted annually based on the cost-of-living index. To determine whether young SSI recipients respond to the SEIE amount, I take the difference between the pre- and post-2001 discontinuity estimates at the age-22 cutoff. Formally, I implement the difference-in-regression discontinuities (DiRD) approach (Grembi et al., 2016) on a sample of SSI beneficiaries within 12 months of turning 22 before and after the expansion of SEIE amounts in 2001, between 1996 and 2004:

$$Y_{imt} = \beta_0 + \beta_1 Post2001_t + \beta_2 Above22_{imt} + \beta_3 Age_{imt} + \beta_4 Post2001_t * Above22_{imt} + \beta_5 Age_{imt} * Above22_{imt} + \beta_6 Post2001_t * Age_{imt}$$
(3)  
+  $\beta_7 Post2001_t * Above22_{imt} * Age_{imt} + (\theta X_i + \gamma_s + \delta_t) + \epsilon_{imt}$ 

 $Post2001_t$  is an indicator for the post-2001 period. The interaction of  $Post2001_t$  and  $Above22_{imt}$  yields the coefficient of interest,  $\beta_4$ , which captures how much SSI recipients above 22 years of age change their education and labor market decisions in the expansion period relative to pre-2001.

### 5 Results

In this section, I discuss the findings from the analyses described in the methodology section to examine SSI beneficiaries' education and employment decisions around age 22. I find the SEIE causes SSI recipients to increase school enrollment, employment, and work while attending school. The effects on school enrollment and work while attending school increase with the exclusion amounts. The findings indicate that many SSI recipients would attend school or test the labor market but are dissuaded from doing so by either financial constraints or work disincentives.

#### 5.1 Extensive Margin of SEIE

To study the extensive margin of the SEIE in the post-2001 period, I estimate regression discontinuity models. The results of the SSI recipients' educational and labor market choices are shown in Figures 8 to 10 and corresponding Tables 2 to 6. Findings are robust to different tests.

#### 5.1.1 Educational Outcomes

Figure 8 displays an apparent decrease in the likelihood of enrolling in school by 8.4 percentage points when SSI recipients reach their twenty-second birthday and lose their SEIE eligibility. This is a 32 percent decrease relative to the baseline mean because only about 26.2 percent of SSI beneficiaries below age 22 are enrolled in school in any given month.<sup>15</sup> Table 2 shows the analogous average static estimates from Equation 2. The estimate is robust to including time and state fixed effects and other predetermined characteristics of SSI recipients as shown in Columns 2–4 of Table 2. I explore heterogeneity in the educational choices of SSI recipients by type of school enrollment in Table 3. The effect on part-time school enrollment is larger and statistically significant relative to the effect on full-time school enrollment.

#### 5.1.2 Labor Market Outcomes

Since the SEIE lets SSI beneficiaries below age 22 have earned income without reducing their SSI benefits, I examine whether they alter their labor market choices in response to their eligibility for SEIE. Table 4 displays the regression discontinuity estimates on the likelihood of employment from Equation 2. Losing SEIE eligibility decreases the probability of employment by 8.4 percentage points or by 46.4 percent relative to those just below the age of 22. When time and state fixed effects and other controls are included in the model, the estimate is larger in magnitude and statistically significant at the 95 percent confidence

<sup>&</sup>lt;sup>15</sup>This estimate is within the range of college enrollment elasticity reported in the literature. Deming and Dynarski (2010) find that for each \$1,000 decrease in college costs, college enrollment increases by approximately 3–5 percentage points. I calculate that the SEIE increases the total income of working SSI recipients under age 22 by \$2,724 per year.

interval, shown in Column 2. Columns 3 to 6 of Table 4 split the employment outcome by part-time and full-time employment. The decrease in the employment rate after age 22 is mainly driven by SSI recipients above age 22 decreasing their part-time employment as opposed to their full-time employment. Figure 9 reinforces the results showing a clear discontinuity in the probability of part-time employment surrounding the strict age-22 SEIE eligibility cutoff.

Next, I investigate whether the SEIE has an effect on the intensive margin of labor supply: the number of hours worked per week and monthly earnings. Appendix Figures A6 and A7 and the regression discontinuity estimates in Table 5 show that the SEIE eligibility does not affect the intensive margin of labor supply.

Taken together, young adult SSI beneficiaries respond to their eligibility for SEIE only on the extensive margin of labor supply, which is consistent with the literature on the labor supply effects of EITC. The consensus of EITC studies is that the labor supply response to EITC benefits for single mothers is substantial on the extensive margin and negligible on the intensive margin (Hotz et al., 2003; Eissa and Hoynes, 2006; Meyer, 2010; Nichols et al., 2016).

#### 5.1.3 Working while Attending in School

The SEIE is relevant when SSI recipients under age 22 meet two conditions: they simultaneously attend school regularly and earn income. Therefore, I estimate the effect of SEIE availability on the likelihood of working while attending school around age 22. Figure 10 shows a strong visual jump at the cutoff. SSI beneficiaries are 6.3 percentage points more likely to work while attending school just before their twenty-second birthday and losing their SEIE eligibility. Columns 3 to 6 of Table 6 show that the decrease in the likelihood of working and enrolling in school post-age 22 is not driven by SSI recipients who realize only one of the two outcomes: working or enrolling in school. This finding confirms that SSI beneficiaries are indeed altering their education and labor market choices because of SEIE eligibility, which is satisfied only when they both enroll in school and earn income.

#### 5.1.4 Robustness Checks for the Extensive Margin of SEIE

I test the robustness of the extensive margin of the SEIE in three ways. First, I repeat the analysis across a variety of bandwidths. Table 7 shows the education and labor market out-

comes using bandwidths of 6, 12, 18, and 24 months. The regression discontinuity estimates are robust as they are mostly consistent with the choice of my preferred bandwidth, 12.

Second, I conduct a placebo test where I look at changes in the education and labor market outcomes of SSI beneficiaries around age 21. Columns 1 and 2 of Table 8 show the estimates in the post-2001 period using Equation 2 and age 21 as the cutoff value. I do not observe any changes in school enrollment and employment outcomes after SSI beneficiaries reach their twenty-first birthday. All the estimates are indistinguishable from zero. The nonexistence of effects validates that the findings along the extensive margin of the SEIE are exclusive to SSI recipients losing their SEIE eligibility.

Third, I present the results using Equation 2 for young adults not receiving any SSI benefits around age 22 in Figure 11 and Columns 3 and 4 of Table 8. If there are any statistically significant changes in the education and labor market choices of these young adults, then the main results of the SSI sample cannot be attributed to the eligibility for SEIE. There are no visual discontinuities at the age-22 cutoff, and the estimates are close to zero and statistically not significant. These results imply that some factor unique to SSI recipients at age 22 caused them to leave school and the labor market; losing their eligibility for SEIE provides a plausible explanation for this factor.

I repeat this falsification test using a DiRD methodology:

$$Y_{imt} = \beta_0 + \beta_1 SSI_{imt} + \beta_2 Above22_{imt} + \beta_3 Age_{imt} + \beta_4 SSI_{imt} * Above22_{imt} + \beta_5 Age_{imt} * Above22_{imt} + \beta_6 SSI_{imt} * Age_{imt} + \beta_7 SSI_{imt} * Above22_{imt} * Age_{imt} + (\theta X_i + \gamma_s + \delta_{mt}) + \epsilon_{imt}$$

$$(4)$$

The indicator  $SSI_{imt}$  is equal to 1 if individual *i* receives SSI benefits in month *m*, year *t*. The interaction of  $SSI_{imt}$  and  $Above22_{imt}$  yields the coefficient of interest,  $\beta_4$ , which reveals how much education and labor market outcomes change among young adult SSI recipients following their twenty-second birthday relative to their non-SSI counterparts. Columns 5 and 6 of Table 8 and the corresponding Appendix Figure A8 reveal that SSI beneficiaries decrease their part-time school enrollment and employment while attending school relative to non-SSI adults when they age out of SEIE eligibility.

#### 5.2 Intensive Margin of SEIE

To examine whether young SSI recipients respond to the SEIE amount, I estimate Equation 3, report the findings in Table 9, and run robustness checks in Table 10 and Appendix Table A2.

#### 5.2.1 Main Outcomes on the Intensive Margin of SEIE

I investigate the effect of the SEIE amount on SSI beneficiaries' likelihood of enrolling in school, working, and working while attending school within 12 months of age 22 between 1996 and 2004. Recall that before 2001 the monthly exclusion amount was held constant at \$400, and its real value decreased over time. In 2001, the SEIE amount increased largely to \$1,290; since then, it has been adjusted annually based on the cost-of-living index.<sup>16</sup>

Table 9 shows the extent to which SSI recipients react to losing SEIE eligibility around age 22 in the expansion period relative to pre-2001. Figure 12 shows the analogous DiRD estimates graphically. SSI beneficiaries' school enrollment decreases by 11 percentage points with respect to the pre-expansion period after reaching their twenty-second birthday and losing SEIE eligibility. This effect is driven mainly by part-time school enrollment as opposed to full-time. Nevertheless, the increase in the exclusion amount does not induce changes in labor supply neither on the extensive nor on the intensive margin. The estimates on the labor market choices are statistically not distinguishable from zero. Lastly, SSI recipients above age 22 reduce their likelihood of working while attending school by 7.8 percentage points in post-2001 relative to the pre-expansion period.

#### 5.2.2 Robustness Checks for the Intensive Margin of SEIE

Akin to the robustness checks for the extensive margin of the SEIE, I conduct robustness tests for the intensive margin of the SEIE in three ways. First, Appendix Table A2 shows the DiRD estimates are robust across bandwidths of 6, 12, 18, and 24 months. Second, I repeat the placebo test, where I look at whether SSI recipients around age 21 alter their decisions using Equation 3. Column 2 of Table 10 provides evidence that there are no statistically significant changes in the school enrollment and employment decisions of SSI beneficiaries

 $<sup>^{16}{\</sup>rm The}$  maximum amount of the income exclusion applicable to an SSI student below age 22 is \$1,930 in 2021.

at age 21 in the expansion period with respect to pre-2001. Third, I perform a falsification exercise by examining DiRD results for young adults not receiving any SSI benefits around age 22. Reassuringly, Column 4 of Table 10 and Appendix Figure A9 show that the effects are insignificant for this sample.

## 6 Conclusion

Youth with disabilities receiving SSI benefits have significantly higher unemployment rates compared to other young adults from low-income households (ACS 2019). However, half of those SSI beneficiaries have a desire and capacity to engage in employment (Livermore et al., 2020). SSI recipients younger than age 30 are more than twice as likely to seek employment and much more likely to have previous work history relative to older SSI recipients (Social Security Administration, 2018). Young SSI recipients encounter challenges when trying to enter the labor market. First, they have low education levels. Second, the SSI program embeds substantial work disincentives: SSI benefits decrease by 50 cents for every dollar of earned income. Without effective targeting, SSI recipients will continue receiving SSI disability benefits into adulthood and remain in poverty. The increase in their caseloads will result in substantial federal public assistance spending.

Encouraging human capital development through employment and education could help young SSI recipients transition off SSI reliance and improve their long-run economic selfsufficiency. One such policy is the SEIE, which targets young SSI recipients under age 22. The SEIE is designed to encourage work and help defray education costs. The SEIE allows SSI students under age 22 to exempt \$1,930 of their monthly earnings from the SSI benefits determination. Young SSI recipients eligible for the SEIE can supplement their SSI benefits with earnings and boost their total income above the federal poverty level.

I study the effect of SEIE on SSI recipients' educational and labor market choices around the strict age-22 SEIE eligibility cutoff. I find the SEIE causes SSI recipients to increase school enrollment by 8.6 percentage points and increase employment by 8.4 percentage points. The findings suggest that the SEIE helps relax binding financial constraints for SSI recipients to attend college while revealing a substantial preference for employment among these recipients.

Overall, this study adds to empirical support for the SEIE as a critical evidence-based policy for promoting better school enrollment and employment outcomes among young SSI recipients. The results suggest that some aspects of the SSI program could be updated to better support beneficiaries. First, increasing the earned income disregard of \$65 to an inflation-indexed level would help SSI recipients fully benefit from their additional work effort and raise their total income by enabling them to keep more of their SSI benefit. Second, additional income would encourage SSI recipients to invest in their human capital by defraying education costs. Education and employment can secure financial independence and improve SSI recipients' well-being and quality of life.

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## 7 Figures



Figure 1: SSI Benefits as a Function of Earned Income

Notes: The horizontal axis indicates an SSI recipient's monthly earned income. The vertical axis indicates monthly SSI benefits. The black line shows that monthly SSI benefits, in the absence of the SEIE, decrease by 50 cents for each dollar of earned income. The blue line shows that the SEIE exempts up to \$1,930 of the monthly earnings of SSI students under age 22 from their SSI benefits determination.





Notes: This figure displays the growth rate of SSI caseloads by age groups between 1992 and 2020. The base year is 2022.

#### Figure 3: SEIE Maximum Amounts



Notes: Panel (A) and Panel (B) show the SEIE maximum monthly and annual exclusion amount over time respectively. They remained fixed from 1975 to 2000 and increased substantially in 2001. Since then, they have been adjusted annually based on the cost-of-living index.



Figure 4: School Enrollment of SSI Recipients versus Non-SSI Adults around Age 22 Post-2001

Notes: This figure displays the average school enrollment rate of SSI recipients versus non-SSI adults relative to age 22 in the post-2001 period.



Figure 5: Employment of SSI Recipients versus Non-SSI Adults around Age 22 Post-2001

Notes: This figure displays the average employment rate of SSI recipients versus non-SSI adults relative to age 22 in the post-2001 period.





Notes: This figure displays the average working-while-attending-school rate of SSI recipients versus non-SSI adults relative to age 22 in the post-2001 period.



Figure 7: Mean SSI Enrollment around Age 22

Notes: The horizontal axis indicates an individual's age in months relative to their twenty-second birthday. The vertical axis indicates the fraction of individuals on SSI. Each point is the mean of the probability of being on SSI within non-overlapping one-month bins.



Figure 8: Effect of SEIE Eligibility on SSI Recipients' School Enrollment around Age 22 Post-2001

Notes: The horizontal axis indicates an SSI recipient's age in months relative to their twenty-second birthday, when the SEIE is eliminated. The vertical axis indicates the fraction of SSI recipients that are enrolled in school. Each point is the mean of the probability of enrolling in school within non-overlapping one-month bins. The solid lines are fitted values of regressions of the probability of enrolling in school on a linear trend in age in months, estimated separately on each side of the cutoff (Equation 2).



Figure 9: Effect of SEIE Eligibility on SSI Recipients' Part-time Employment around Age $22 \ {\rm Post-}2001$ 

Notes: The horizontal axis indicates an SSI recipient's age in months relative to their twenty-second birthday, when the SEIE is eliminated. The vertical axis indicates the fraction of SSI recipients that are employed part-time. Each point is the mean of the probability of enrolling in school within non-overlapping one-month bins. The solid lines are fitted values of regressions of the probability of part-time employment on a linear trend in age in months, estimated separately on each side of the cutoff (Equation 2).



Figure 10: Effect of SEIE Eligibility on SSI Recipients' Rate of Working while Attending School around Age 22 Post-2001

Notes: The horizontal axis indicates an SSI recipient's age in months relative to their twenty-second birthday, when the SEIE is eliminated. The vertical axis indicates the fraction of SSI recipients that work while attending school. Each point is the mean of the probability of working while attending school within non-overlapping one-month bins. The solid lines are fitted values of regressions of the probability of working while attending school on a linear trend in age in months, estimated separately on each side of the cutoff (Equation 2).



Figure 11: Falsification Test for Non-SSI Adults Post-2001

Notes: The horizontal axis indicates the age in months relative to a non-SSI adult's twenty-second birthday. The vertical axis represents the fraction of non-SSI adults who (a) are enrolled in school, (b) work, and (c) work while attending school. Each point on the graph represents the average probability of each outcome within non-overlapping one-month intervals. The solid lines depict fitted values of regressions for the probability of each outcome, estimated separately on each side of the cutoff (Equation 2).



Notes: The horizontal axis indicates the age in months relative to an SSI recipient's twenty-second birthday, when the SEIE is eliminated. Each point on the graphs represents the difference in mean outcomes of SSI recipients by month of birth between the post-2001 and pre-2001 periods. The solid lines depict fitted values of regressions for the probability of each outcome, estimated separately on each side of the cutoff (Equation 3).

Figure 12: DiRD Figures for SSI Recipients Post- versus Pre-2001

## 8 Tables

	(1)	(2)
	SSI	Non-SSI
School Enrollment (%)	19.683	35.895
	(39.774)	(47.969)
Employment $(\%)$	18.056	65.680
	(38.478)	(47.478)
Employed & In School (%)	4.470	20.659
	(20.672)	(40.486)
Monthly Earnings	203.609	1,208.410
	(678.835)	(1, 186.548)
Weekly Hours	4.074	21.961
	(10.475)	(18.240)
SSI Benefits	737.966	.000
	(443.039)	(.000)
Male $(\%)$	51.566	48.226
	(49.993)	(49.969)
White (%)	64.509	78.886
	(47.865)	(40.812)
Black $(\%)$	29.838	14.774
	(45.770)	(35.485)
Obs	1,468	92,342

Table 1: Summary Statistics by SSI Status

Notes: Descriptive statistics for young adults within 12 months of their twenty-second birthday by SSI status. Column 1 shows the SSI recipients, while Column 2 shows their counterparts who do not receive SSI benefits and earn less than \$3,000/month. Standard deviations are shown in parentheses.

	(1)	(2)	(3)	(4)
Above22	$-8.412^{*}$	$-9.474^{*}$	-8.774*	-8.643*
	(5.008)	(4.867)	(4.558)	(4.508)
Time FE		Х	Х	Х
State FE			Х	Х
Controls				Х
Mean	26.159	26.159	26.159	26.159
Obs	1,468	$1,\!468$	$1,\!468$	1,468

Table 2: Effect of SEIE Eligibility on School Enrollment Post-2001

Notes: Regression estimates of Equation 2 using school enrollment as the dependent variable. The sample is SSI recipients within 12 months of age 22 between 2001 and 2004. Above22 is an indicator for 22 years old or older. \* p < .10, \*\* p < .05, \*\*\* p < .01

	(1)	(2)	(3)	(4)
	Part-time School Enrollment (%)	Part-time School Enrollment (%)	Full-time School Enrollment (%)	Full-time School Enrollment (%)
Above22	$-7.103^{***}$	$-5.153^{**}$	-1.309	-3.490
	(2.619)	(2.128)	(4.593)	(4.185)
Time FE		Х		Х
State FE		Х		Х
Controls		Х		Х
Mean	5.510	5.510	20.649	20.649
Obs	1,468	1,468	1,468	1,468

Table 3: Effect of SEIE Eligibility on Part-time and Full-time School Enrollment Post-2001

Notes: Regression estimates of Equation 2 using part-time and full-time school enrollment as the dependent variables. The sample is SSI recipients within 12 months of age 22 between 2001 and 2004. Above22 is an indicator for 22 years old or older. \* p < .10, \*\* p < .05, \*\*\* p < .01

Table 4: Effect of SEIE Eligibility on the Extensive Margin of Labor Supply Post-2001

	(1)	(2)	(3)	(4)	(5)	(6)
	Employment $(\%)$	Employment $(\%)$	Part-time $(\%)$	Part-time $(\%)$	Full-time $(\%)$	Full-time $(\%)$
Above22	-5.864	$-8.408^{**}$	-5.639	$-9.089^{**}$	225	.682
	(4.524)	(3.983)	(4.047)	(3.533)	(2.411)	(2.370)
Time FE		Х		Х		Х
State FE		Х		Х		Х
Controls		Х		Х		Х
Mean	18.106	18.106	15.459	15.459	2.647	2.647
Obs	1,468	1,468	1,468	1,468	1,468	1,468

Notes: Regression estimates of Equation 2 using employment outcomes as the dependent variables. The sample is SSI recipients within 12 months of age 22 between 2001 and 2004. Above 22 is an indicator for 22 years old or older. \* p < .10, \*\* p < .05, \*\*\* p < .01

Table 5: Effect of SEIE Eligibility on the Intensive Margin of Labor Supply Post-2001

	(1)	(2)	(3)	(4)
	Weekly Hours	Weekly Hours	Monthly Earnings	Monthly Earnings
Above22	-1.042	-1.073	82.871	68.694
	(1.156)	(1.077)	(79.516)	(81.417)
Time FE		Х		Х
State FE		Х		Х
Controls		Х		Х
Mean	3.445	3.445	162.895	162.895
Obs	1,468	1,468	1,468	1,468

Notes: Regression estimates of Equation 2 using employment outcomes as the dependent variables. The sample is SSI recipients within 12 months of age 22 between 2001 and 2004. Above 22 is an indicator for 22 years old or older. \* p < .10, \*\* p < .05, \*\*\* p < .01

	(1)	(2)	(3)	(4)	(5)	(6)
	Employed & In School (%)	Employed & In School (%)	Only Employed (%)	Only Employed (%)	Only in School (%)	Only in School (%)
Above22	$-5.806^{**}$	$-6.267^{**}$	058	-2.140	-2.606	-2.376
	(2.652)	(2.600)	(3.911)	(3.556)	(4.580)	(4.146)
Time FE		Х		Х		Х
State FE		Х		Х		Х
Controls		Х		Х		Х
Mean	5.350	5.350	12.757	12.757	20.809	20.809
Obs	1,468	1,468	1,468	1,468	1,468	1,468

Table 6: Effect of SEIE Eligibility on Rate of Working while Attending School Post-2001

Notes: Regression estimates of Equation 2 using working while attending school outcomes as the dependent variables. The sample is SSI recipients within 12 months of age 22 between 2001 and 2004. Above22 is an indicator for 22 years old or older. \* p < .05, \*\*\* p < .01

	(1)	(2)	(3)	(4)
	BW=6	BW=12	BW=18	BW=24
School Enrollment (%)	-6.555	-8.643*	-9.245**	$-6.077^{*}$
	(6.098)	(4.508)	(3.716)	(3.232)
Part-time School Enrollment (%)	-5.076*	$-5.153^{**}$	$-3.705^{**}$	$-2.829^{*}$
	(2.743)	(2.128)	(1.837)	(1.608)
Full-time School Enrollment (%)	-1.479	-3.490	-5.540	-3.248
	(5.686)	(4.185)	(3.428)	(3.016)
Employment $(\%)$	-4.496	$-8.408^{**}$	-3.902	-2.266
	(5.202)	(3.983)	(3.295)	(2.902)
Part-time Employment $(\%)$	-5.131	$-9.089^{**}$	$-7.176^{**}$	$-6.418^{***}$
	(4.609)	(3.533)	(2.851)	(2.482)
Full-time Employment $(\%)$	.635	.682	$3.274^{*}$	4.152**
	(2.969)	(2.370)	(1.875)	(1.700)
Weekly Hours	615	-1.073	.863	$1.526^{*}$
	(1.304)	(1.077)	(.943)	(.839)
Monthly Earnings	74.273	68.694	$133.946^{**}$	$255.070^{***}$
	(107.802)	(81.417)	(61.480)	(82.896)
Employed & In School (%)	-4.168	$-6.267^{**}$	-3.462*	-3.231*
	(3.400)	(2.600)	(2.035)	(1.755)
Time FE	Х	Х	Х	Х
State FE	Х	Х	Х	Х
Controls	Х	Х	Х	Х
Obs	784	1,468	2,160	2,819

Table 7: Post-2001 Regression Discontinuity Estimates Across Bandwidths

Notes: Post-2001 regression discontinuity estimates of Equation 2 for all outcomes across bandwidths. Each column shows a different bandwidth of age in months. The sample is SSI recipients in the post-2001 period. \* p < .10, \*\* p < .05, \*\*\* p < .01

	(1)	(2)	(3)	(4)	(5)	(6)
	Above21	Above21	Non-SSI	Non-SSI	DiRD with Non-SSI	DiRD with Non-SSI
School Enrollment (%)	3.681	5.818	507	565	-7.905	-7.663
	(5.583)	(5.376)	(.703)	(.685)	(5.050)	(5.031)
Part-time School Enrollment (%)	274	072	.105	.039	$-7.208^{***}$	$-7.117^{***}$
	(1.942)	(2.044)	(.363)	(.360)	(2.640)	(2.607)
Full-time School Enrollment (%)	3.955	5.890	612	604	697	546
	(5.445)	(5.275)	(.670)	(.653)	(4.636)	(4.698)
Employment $(\%)$	1.114	-2.923	394	435	-5.470	-5.635
	(4.426)	(3.473)	(.689)	(.676)	(4.570)	(4.649)
Part-time Employment $(\%)$	1.361	-1.857	159	126	-5.479	-5.264
	(4.041)	(3.217)	(.637)	(.630)	(4.092)	(4.021)
Full-time Employment $(\%)$	247	-1.067	234	309	.009	371
	(2.107)	(2.158)	(.713)	(.696)	(2.511)	(2.774)
Weekly Hours	396	-1.240	068	093	974	-1.087
	(1.185)	(1.063)	(.262)	(.256)	(1.184)	(1.269)
Monthly Earnings	177.292	115.951	-17.419	-19.272	100.290	88.921
	(132.668)	(113.985)	(17.140)	(16.700)	(81.240)	(85.675)
Employed & In School (%)	1.094	568	508	598	$-5.297^{*}$	-4.981*
	(1.959)	(2.146)	(.599)	(.589)	(2.715)	(2.681)
Time FE		Х		Х		Х
State FE		Х		Х		Х
Controls		Х		Х		Х
Obs	1,328	1,328	$92,\!342$	$92,\!342$	93,810	$93,\!810$

Table 8: Robustness Checks for the Extensive Margin of the SEIE Post-2001

Notes: Columns 1 and 2 show the estimate of  $\beta_2$  from Equation 2 for SSI recipients within 12 months of their twenty-first birthday. Columns 3 and 4 show the estimate of *Above*22 from Equation 2 for non-SSI adults within 12 months of their twenty-second birthday. Columns 5 and 6 show the DiRD estimate of  $\beta_4$  from Equation 4. \* p < .10, \*\* p < .05, \*\*\* p < .01

	(1)	(2)
	DiRD	DiRD
School Enrollment (%)	$-10.882^{*}$	-10.976*
	(6.346)	(5.834)
Part-time School Enrollment (%)	-9.622***	$-7.922^{***}$
	(2.832)	(2.654)
Full-time School Enrollment (%)	-1.259	-3.054
	(5.959)	(5.459)
Employment $(\%)$	5.745	.491
	(5.899)	(5.709)
Part-time Employment $(\%)$	1.736	-2.085
	(5.087)	(4.880)
Full-time Employment $(\%)$	4.009	2.575
	(3.467)	(3.391)
Weekly Hours	$2.956^{*}$	1.476
	(1.646)	(1.602)
Monthly Earnings	$220.159^{**}$	151.482
	(109.899)	(107.595)
Employed & In School (%)	$-7.188^{**}$	$-7.769^{**}$
	(3.135)	(3.132)
Time FE		Х
State FE		Х
Controls		Х
Obs	$3,\!134$	$3,\!134$

Table 9: Effects for the Intensive Margin of the SEIE

Notes: Columns 1 and 2 show the DiRD estimates of Equation 3, using a sample of SSI recipients within 12 months of reaching the age of 22 between 1996 and 2004. \* p < .10, \*\* p < .05, \*\*\* p < .01

	(1)	(2)	(3)	(4)
	Above21	Above21	Non-SSI	Non-SSI
School Enrollment (%)	520	3.791	-1.167	619
	(7.095)	(6.647)	(.981)	(.956)
Part-time School Enrollment (%)	-1.299	-1.674	009	.009
	(2.550)	(2.527)	(.486)	(.482)
Full-time School Enrollment (%)	.779	5.464	-1.158	628
	(6.881)	(6.433)	(.941)	(.917)
Employment $(\%)$	.087	290	290	430
	(5.884)	(5.191)	(.956)	(.940)
Part-time Employment (%)	388	-1.255	.773	.856
	(5.219)	(4.605)	(.886)	(.878)
Full-time Employment $(\%)$	.475	.965	-1.063	-1.286
	(3.163)	(2.998)	(.993)	(.972)
Weekly Hours	-1.243	-1.112	305	391
	(1.590)	(1.470)	(.368)	(.359)
Monthly Earnings	134.925	138.224	-14.531	-18.452
	(144.241)	(132.803)	(23.898)	(23.354)
Employed & In School (%)	-1.145	830	470	237
	(2.383)	(2.401)	(.834)	(.823)
Time FE		Х		Х
State FE		Х		Х
Controls		Х		Х
Obs	3,034	3,034	187,503	187,503

Table 10: Robustness Checks for the Intensive Margin of the SEIE

Notes: Columns 1 and 2 show the estimate of  $\beta_4$  from Equation 3 for SSI recipients within 12 months of their twenty-first birthday. Columns 3 and 4 show the estimate of  $\beta_4$  from Equation 3 for non-SSI adults within 12 months of their twenty-second birthday. \* p < .10, \*\* p < .05, \*\*\* p < .01

## 9 Appendix





Notes: This figure displays the average school enrollment rate of SSI recipients versus non-SSI adults relative to age 22 in the pre-2001 period.



Figure A2: Employment of SSI Recipients versus Non-SSI Adults around Age 22 Pre-2001

Notes: This figure displays the average employment rate of SSI recipients versus non-SSI adults relative to age 22 in the pre-2001 period.





Notes: This figure displays the average working-while-attending-school rate of SSI recipients versus non-SSI adults relative to age 22 in the pre-2001 period.



Figure A4: Histogram of Age in Months

Notes: The horizontal axis indicates the normalized age in months with respect to being 22 years old. The figure plots the distribution of the number of SSI recipients by density in each month bin.



Figure A5: Mean Lag SSI Enrollment around Age 22

Notes: The horizontal axis indicates an individual's age in months relative to their twenty-second birthday. The vertical axis indicates the fraction of individuals who ever received SSI benefits in the previous 6 months. Each point is the mean of the probability of being on lag SSI within non-overlapping one-month bins.





Estimate: -1.042 (1.156)

Notes: The horizontal axis indicates an SSI recipient's age in months relative to their twenty-second birthday, when the SEIE is eliminated. The vertical axis indicates the weekly hours worked of SSI recipients. Each point is the mean of weekly hours worked within non-overlapping one-month bins. The solid lines are fitted values of regressions of weekly hours worked on a linear trend in age in months, estimated separately on each side of the cutoff (Equation 2).



Figure A7: Effect of SEIE Eligibility on SSI Recipients' Monthly Earnings around Age 22 Post-2001

Estimate: 82.871 (79.516)

Notes: The horizontal axis indicates an SSI recipient's age in months relative to their twenty-second birthday, when the SEIE is eliminated. The vertical axis indicates the monthly earnings of SSI recipients. Each point is the mean of monthly earnings within non-overlapping one-month bins. The solid lines are fitted values of regressions of monthly earnings on a linear trend in age in months, estimated separately on each side of the cutoff (Equation 2).





Notes: The horizontal axis indicates the age in months relative to an individual's twenty-second birthday. Each point on the graphs represents the difference in mean outcomes by month of birth between SSI recipients and non-SSI adults around the age 22 cutoff. The solid lines depict fitted values of regressions for the probability of each outcome, estimated separately on each side of the cutoff (Equation 4).

Figure A9: Falsification Test for Non-SSI Adults Post- versus Pre-2001



Notes: The horizontal axis indicates the age in months relative to a non-SSI adult's twenty-second birthday. Each point on the graphs represents the difference in mean outcomes of non-SSI adults by month of birth between the post-2001 and pre-2001 periods. The solid lines depict fitted values of regressions for the probability of each outcome, estimated separately on each side of the cutoff (Equation 3).

	(1)	(2)	(3)
	Male $(\%)$	White $(\%)$	Black $(\%)$
Above22	.969	1.514	945
	(5.835)	(5.333)	(5.028)
Mean	51.148	64.507	29.543
Obs	1,468	1,468	1,468

Table A1: Covariate Balance Test of SSI Recipients around Age 22

Notes: Regression estimates of Equation 2 using covariates as the dependent variables. The sample is SSI recipients within 12 months of age 22 between 2001 and 2004. Above22 is an indicator for 22 years old or older. \* p < .05, \*\*\* p < .01

	(1)	(2)	(3)	(4)
	BW=6	BW=12	BW=18	BW=24
School Enrollment (%)	-12.540	$-10.976^{*}$	$-12.987^{***}$	$-12.906^{***}$
	(8.069)	(5.834)	(4.788)	(4.226)
Part-time School Enrollment (%)	$-9.184^{**}$	$-7.922^{***}$	$-5.873^{***}$	$-4.072^{**}$
	(3.833)	(2.654)	(2.140)	(1.862)
Full-time School Enrollment (%)	-3.355	-3.054	-7.113	$-8.834^{**}$
	(7.455)	(5.459)	(4.521)	(4.011)
Employment $(\%)$	6.027	.491	2.740	1.843
	(8.097)	(5.709)	(4.612)	(4.059)
Part-time Employment (%)	5.364	-2.085	-1.227	-1.273
	(6.915)	(4.880)	(3.924)	(3.425)
Full-time Employment $(\%)$	.663	2.575	3.967	3.117
	(4.841)	(3.391)	(2.762)	(2.480)
Weekly Hours	1.108	1.476	$2.836^{**}$	1.897
	(2.258)	(1.602)	(1.320)	(1.184)
Monthly Earnings	101.012	151.482	251.327***	$268.936^{***}$
	(159.812)	(107.595)	(83.450)	(93.850)
Employed & In School (%)	-7.633	$-7.769^{**}$	-4.865*	$-5.436^{**}$
	(4.653)	(3.132)	(2.493)	(2.151)
Time FE	Х	Х	Х	Х
State FE	Х	Х	Х	Х
Controls	Х	Х	Х	Х
Obs	$1,\!668$	$3,\!134$	4,651	6,090

Table A2: DiRD Estimates for the Intensive Margin of the SEIE Across Bandwidths

Notes: DiRD estimates of Equation 3 for all outcomes across bandwidths. Each column shows a different bandwidth of age in months. The sample is SSI recipients between 1996 and 2001. \* p <.10, \*\* p <.05, \*\*\* p <.01