

# Does Welfare Prevent Crime?

## The Criminal Justice Outcomes of Youth Removed from SSI\*

Manasi Deshpande

Michael Mueller-Smith

October 29, 2021

DRAFT - COMMENTS WELCOME

### Abstract

We estimate the effect of losing Supplemental Security Income (SSI) benefits at age 18 on criminal justice outcomes over the next two decades. To estimate this effect, we use the regression discontinuity design from Deshpande (2016) in the likelihood of being reviewed for SSI eligibility at age 18 created by the 1996 welfare reform law. We evaluate this natural experiment with Social Security Administration data linked to records from the Criminal Justice Administrative Records System. We find that SSI removal increases the number of criminal charges by a statistically significant 20% over the next two decades. The increase in charges is concentrated in offenses for which income generation is a primary motivation (60% increase), especially theft, burglary, fraud/forgery, and prostitution. In response to SSI removal, youth are twice as likely to be charged with an illicit income-generating offense than they are to maintain steady employment at \$15,000/year in the labor market. As a result of these charges, the annual likelihood of incarceration increases by a statistically significant 60% in the two decades following SSI removal. Additional government costs of enforcement and incarceration eliminate the cost savings from reduced SSI benefits.

---

\*Deshpande: University of Chicago, NBER, and SSA, mdeshpande@uchicago.edu; Mueller-Smith: University of Michigan, mgms@umich.edu. Deshpande conducted this research as a Visiting Economist at the Social Security Administration. We thank the Social Security Administration for providing data for this project. We thank David Autor, Janet Currie, Ben Danforth, Eric French, Peter Ganong, Michael Greenstone, Sara Heller, Jeffrey Hemmeter, Paul Kelly, Douglas Miller, Magne Mogstad, Samuel Norris, Adam Sacarny, Mark Sarney, Jeffrey Smith, Alexander Strand, Alessandra Voeva, Melanie Wasserman, Robert Weathers, and seminar participants at the Cowles Foundation, Institute for Research on Poverty, Bocconi CEPR Workshop, George Washington University, Case Western University, Pontificia Universidad Católica de Chile, Transatlantic Workshop on the Economics of Crime, Chicago Booth Applied Micro, and Chicago Economics Applications for helpful comments. We thank Benjamin Pyle, Mary Quiroga, Marcia Ruiz Pulgar, Michael Ryter, and Jiada Ye for excellent research assistance. Deshpande thanks the Ronzetti Initiative for the Study of Labor Markets at the Becker-Friedman Institute for financial support. Mueller-Smith thanks Arnold Ventures and the Michigan Institute for Teaching and Research in Economics for financial support. The findings and conclusions expressed are solely those of the author(s) and do not represent the views of SSA, any agency of the Federal Government, or the NBER.

# 1 Introduction

What are the effects of providing welfare benefits to disadvantaged youth? On the one hand, welfare benefits could provide a basic level of income and well-being to youth who face barriers to employment. On the other hand, encouraging work among disadvantaged youth is a commonly stated policy goal. Welfare benefits could discourage work at a formative time and thereby discourage the development of skills, good habits, or attachment to the labor force.

In the United States, this question is particularly relevant to the Supplemental Security Income program, which provides cash assistance to the families of 1.2 million low-income children with disabilities and to 5.2 million low-income adults with disabilities.<sup>1</sup> When children who receive SSI turn 18, they are reevaluated to determine whether their medical condition meets the eligibility criteria for adult SSI. About 40% of children who receive SSI just before age 18 are removed from SSI as a result of this reevaluation. Relative to those who stay on SSI in adulthood, these children lose nearly \$10,000 annually in SSI benefits in adulthood. Deshpande (2016) finds that, consistent with the theory of income effects, youth who are removed from SSI at 18 have higher earnings in adulthood.<sup>2</sup> Average annual earnings increase from \$4,200 to \$5,000, and the likelihood of earning above \$15,000 per year—approximately full-time, full-year minimum-wage levels—increases from 10 percent to 14 percent.

Until now, earnings has been the sole measure by which this policy reform has been evaluated. The earnings results in Deshpande (2016) might be interpreted as a positive, if modest, advancement toward the goal of encouraging work and self-sufficiency among disadvantaged and disabled youth. Yet the earnings results may not paint the full picture of what happens to youth who are removed from SSI at age 18—in particular, the 86 percent of youth who earn at less than minimum-wage levels. What do their lives look like after being removed from SSI?<sup>3</sup>

In this paper, we begin to fill in that picture by studying two decades of criminal justice outcomes of youth who are removed from SSI at age 18 relative to those who are not. We use the same regression discontinuity design from Deshpande (2016) in which children who had

---

<sup>1</sup>SSI Annual Statistical Report, 2019.

<sup>2</sup>Higher earnings are also consistent with an incentive effect, since the SSA reduces adult SSI benefits by 50 cents for every \$1 in earnings, after a small earnings disregard.

<sup>3</sup>We observe on earnings, not wages or hours, so references to minimum-wage levels are intended in an annualized sense. Previous papers provide descriptive statistics of outcomes other than earnings for individuals who received SSI as children. Hemmeter et al. (2009) use the National Survey of SSI Children and Families (NSCF) linked to SSA administrative data to measure health care needs, education and employment status, and criminal justice involvement before and after the age 18 redetermination. Hemmeter (2011) uses the NSCF to compare health care access for individuals who stay on SSI versus leave SSI after age 18.

an 18th birthday after the date of welfare reform enactment—August 22, 1996—had their eligibility for the adult SSI program reviewed, while nearly all of those with an 18th birthday before that date were allowed onto the adult program without review. We merge Social Security Administration SSI records to records from the Criminal Justice Administrative Records System (CJARS), created by Finlay and Mueller-Smith (2021), to estimate the effect of this policy reform on criminal justice outcomes. Descriptive statistics from this linkage indicate that nearly 40% of recent SSI cohorts are involved in the criminal justice system in adulthood, making criminal justice involvement a high-powered outcome for individuals who received SSI benefits as children.

We find that SSI removal at age 18 in 1996 increases the number of criminal charges by a statistically significant 20% (2.04 to 2.50 charges) over the following two decades. The increase in criminal charges is concentrated in activities for which income generation is a primary motivation. The number of “income-generating” charges (which we define as burglary, theft, fraud/forgery, robbery, drug distribution, and prostitution) increases by 60%, compared to just 10% for charges not associated with income generation. As a result of these charges, the annual likelihood of incarceration increases from 4.7 to 7.6 percentage points, a statistically significant 60%, in the two decades following SSI removal.

We study the effects of SSI removal on criminal justice involvement separately for men and women. For men, the largest and most precise increase is for theft charges. We also estimate less precise increases in burglary and drug distribution charges for men. Some non-income-generating charges also increase for men, but these charges are mostly related to income-generating activities—e.g., criminal trespass (related to burglary) and resisting arrest or other obstruction (mechanically related to another charge). The likelihood of incarceration for men increases from 7.2 to 10.8 percentage points (50%).

The effect of SSI removal on criminal charges is even larger for women than for men, and for women is concentrated almost exclusively in activities associated with income generation. As for men, the largest increase for women is in theft charges. There are also large and precise increases in fraud/forgery charges and prostitution charges for women. The estimate for fraud and forgery charges—most commonly bad checks, retail fraud, and identity theft—is close to zero in the full sample but large and precise for women. The likelihood of incarceration for women increases from 0.7 to 2.4 percentage points (220%). All of these estimates are statistically different from zero.

The effect of SSI removal at age 18 on criminal charges and incarceration persists over the two decades following removal in 1996, even as the effect of SSI removal at age 18 on actual SSI receipt declines. The effect of SSI removal on the likelihood of a criminal charge associated with income generation increases from 3.6 percentage points in 1997–2001

to 5.7 percentage points during the Great Recession in 2007–2012. Similarly, the effect on the annual likelihood of incarceration remains around 3 percentage points over this time period. Yet the effect of SSI removal at age 18 on the likelihood of receiving SSI *decreases* from 45 percentage points in 1997–2001 to just 14 percentage points in 2007–12.<sup>4</sup> These estimates suggest that contemporaneous SSI income during adulthood is not the primary driver of criminal justice involvement. Instead, it is more likely the loss of SSI income in early adulthood that permanently increases the propensity to commit crimes throughout adulthood. This persistence could be due to the development of human capital in criminal activity or to long-term labor market scarring resulting from criminal records.

We investigate heterogeneity in the effects by family structure, family income, gender, race, and type of disability. We see large responses across all subgroups in the likelihood of being charged with an income-generating crime. However, the incarceration effects of SSI removal are disproportionately higher for the most disadvantaged groups, especially Black youth and youth with low parent earnings. SSI removal thus exacerbates existing inequality in incarceration rates.

How do our estimates on criminal justice involvement square with the finding from Deshpande (2016) that SSI removal increases work activity? We first replicate the earnings and employment results from Deshpande (2016) and then investigate the relationship between legal employment and illicit income generation. We find that youth who are removed from SSI at age 18 are twice as likely to be charged with an illicit activity associated with income generation (9.3pp) than they are to maintain steady employment at or above minimum-wage levels (4.4pp). Over time, youth appear to specialize in either legal employment or criminal activity to generate income: although some youth who work in steady formal employment have one criminal charge over the next two decades, almost none of the steadily employed youth have multiple criminal charges. This bimodal response is starker for women and for youth with low parent earnings.

We compare the cost savings from terminating SSI benefits to the administrative costs in the criminal justice system from higher criminal activity and incarceration rates. Each individual removed from SSI in 1996 saves the government \$37,700 in SSI costs and \$8,400 in Medicaid costs over the next two decades, plus an additional \$3,000 in tax revenue from higher earnings. Each removal creates \$10,800 in police and court costs and another \$30,200 in incarceration costs, meaning that the administrative costs of crime alone almost eliminate the cost savings from removing these young adults from SSI. Including victim costs of \$85,600 per removal brings the cost-to-benefit ratio to 2.6.

---

<sup>4</sup>This decline occurs mostly because individuals in the control group, who did not receive a medical review at age 18, are removed from SSI in adulthood for medical and non-medical reasons.

Taken together, these results indicate that the income effect from losing SSI eligibility in young adulthood in 1996 is not solely—or even mostly—limited to an increase in formal employment. While some youth who are removed from SSI at age 18 respond by working at minimum-wage levels, a much larger fraction respond by engaging in illicit activities to replace the lost SSI income, behavior that generates potentially wide-reaching negative externalities on society at large. These effects on illegal activities are not limited to the years immediately following removal in 1996 but instead persist over the next two decades, perhaps because the youth who start engaging in illicit activity to generate income end up specializing in that activity. These effects on illicit income-generating activities substantially increase the likelihood of incarceration, including and especially for women.

To what extent do these effects from SSI removal in 1996 speak to the effects of removing youth from SSI today? Certain policy changes since 1996 may have changed the crime response to SSI removal since that time. For example, the Workforce Innovation and Opportunity Act (WIOA) of 2014 required state vocational rehabilitation agencies to spend at least 15% of their federal funding on pre-employment transition services for youth with disabilities.<sup>5</sup> Beyond SSI, state Medicaid expansions under the Affordable Care Act mean that young adults in most states qualify for Medicaid without SSI. Still, youth who are removed from SSI today are highly disadvantaged and lose nearly \$10,000 annually in cash assistance as a result of removal. We leave it to future work to determine whether increased supports and services have changed the effect of SSI removal at age 18 on criminal justice outcomes in adulthood.<sup>6</sup>

Our paper makes several contributions to the literature. First, we provide the first evidence in the US on the effect of cash assistance on criminal justice involvement using large-scale administrative data and quasi-experimental variation. We build on previous work that studies the effect of in-kind programs on criminal justice involvement.<sup>7</sup> We also build on evidence of the effect of cash on criminal activity from the developing world (Blattman et al., 2017; Khanna et al., 2021) and in historical contexts (Melander and Miotto, 2021). Yang (2017) studies the effect of cash and non-cash public assistance on recidivism for individuals who have already offended.

---

<sup>5</sup>In addition, in 2015 the Social Security Administration began sending families of adolescents receiving SSI annual information about the age 18 redetermination and resources available to help with the transition. See <https://www.ssa.gov/pubs/EN-05-11005.pdf>.

<sup>6</sup>The Youth Transition Demonstration, conducted from 2006–12, found that employment experiences and other supports reduced criminal justice involvement in two out of six participating sites and increased involvement at one site (Fraker et al., 2014).

<sup>7</sup>The crime impacts of a number of other public programs have been evaluated, including: housing interventions (Kling et al., 2005), food stamps (Tuttle, 2019), summer jobs (Heller, 2014), Medicaid (He and Barkowski, 2020; Arenberg et al., 2020), and educational interventions (Garces et al., 2002; Deming, 2009). In addition, a separate literature has examined how the timing of benefit receipt influences patterns of criminal activity (see Dobkin and Puller, 2007; Foley, 2011; Carr and Packham, 2019; Belfield et al., 2006).

In addition, we provide evidence on the mechanisms through which cash welfare affects criminal justice involvement—in particular, we show that the increases in criminal charges are concentrated almost exclusively in income-generating activity. Here we build on work that distinguishes between financially motivated crime and crime that is motivated by other factors (Tuttle, 2019; Khanna et al., 2021; Corman et al., 2014).

Finally, we conduct the first linkage between SSI and crime records, providing one of the first non-earnings-based measure of well-being for this population. Together, these steps allow us to fill in the picture from Deshpande (2016) and provide a more accurate and complete understanding of how SSI removal affects the lives of youth with disabilities and social welfare more generally.

The rest of the paper proceeds as follows. Section 2 discusses the various channels through which losing SSI benefits could affect criminal activity in adulthood. Section 3 describes the data and presents statistics on the adult of criminal justice involvement of children who receive SSI benefits. Section 4 presents the empirical strategy and results on the effect of SSI removal on criminal activity. Section 5 discusses the results and Section 6 concludes.

## 2 Conceptual Framework

There are several potential ways through which removing a young adult from SSI could affect criminal justice outcomes later in life. We discuss the expected direction and magnitude of each channel, and suggest empirical tests to distinguish among them.

As background, we first discuss institutional details of the SSI program that are relevant to these channels. Children qualify for SSI based on their own disability and their parents' low income and assets. SSI benefits for children under 18 are paid to parents or legal guardians. The monthly maximum SSI benefit (\$794 in 2021) is reduced as parent income increases. In December 2019, the latest month for which data are available, approximately 60% of SSI child recipients received the maximum monthly benefit.<sup>8</sup> In most states, SSI recipients also receive automatic or near-automatic Medicaid enrollment. Regarding medical eligibility, child eligibility criteria are based on age-appropriate activity. Most of the growth in the SSI children's program in recent decades has come from mental and behavioral conditions such as ADHD, autism, and speech delay (U.S. Government Accountability Office, 2011).

When children receiving SSI reach 18 years of age, they must be reevaluated for SSI based on the adult criteria. Unlike the child criteria, adult SSI criteria are based on an inability to

---

<sup>8</sup>SSI Annual Statistical Report, 2019.

work. The age 18 redetermination process disproportionately removes children with mental and behavioral conditions such as ADHD (see Appendix Figure B2). For those who are found eligible for the adult program, SSI benefits are paid directly to the young adult. The maximum monthly benefit (\$794 in 2021) is reduced based on the adult's own income (as well as in-kind support from family). The adult's benefits can be terminated if their earnings are too high ("substantial gainful activity," \$1,310 per month for non-blind recipients in 2021) or if they are incarcerated for more than 12 months.<sup>9</sup>

**Income effect: indirect (↓) and direct (↑).** Perhaps the most obvious channel through which SSI removal at age 18 could affect criminal justice involvement is the loss of SSI income in adulthood. Annual SSI benefits are nearly \$10,000 for adults with no earnings. We distinguish between an "indirect" income effect that operates through increased employment, and a "direct" income effect that operates through the income loss itself. Regarding the indirect income effect, Deshpande (2016) finds that SSI removal at 18 increases the likelihood of earning at full-time, full-year minimum wage levels (\$15,000/year) from 10 percent to 14 percent, and increases average annual earnings from \$4,200 to \$5,000. Higher employment and earnings levels could reduce criminal justice involvement either mechanically—i.e., by occupying the time of youth who would otherwise offend (Jacob and Lefgren, 2003)—or by building good habits that reduce the likelihood of offending (Heller, 2014). Randomized studies of ex-offenders from the 1970s find that welfare benefits increase recidivism, likely because they discourage work (Rossi et al., 2013). Of course, 86 percent of youth removed from SSI at age 18 still do not earn at self-sufficiency levels, so any indirect effects of employment are unlikely to apply to them. To test for an indirect income effect, we estimate the effects of SSI removal on the joint outcomes of employment and crime. If reductions in crime are observed and concentrated among those who work in response to SSI removal, this would provide evidence in support of the indirect income effect.

Regarding the direct income effect, Deshpande (2016) also finds that SSI removal at 18 does not increase earnings enough on average to replace the lost SSI income. Therefore most youth who are removed from SSI likely experience a net income loss. SSI removal could increase illegal activities that generate income, such as theft, drug distribution, or prostitution. In his book *Evicted: Poverty and Profit in the American City*, Matthew Desmond follows the story of a young woman who loses SSI benefits: "'SSI always come,' she said. Until one day it didn't. She had been approved for SSI as a minor, but her adult reevaluation found her ineligible. Now Crystal's only source of income came from food stamps. Because she didn't know what else to do, Crystal went 'on the stroll' and began selling sex" (Desmond, 2016, p. 268). Conversely, it is possible that SSI removal reduces illegal activities that require

---

<sup>9</sup>See <https://www.ssa.gov/pubs/EN-05-10133.pdf> for more details.

income, such as alcohol-related traffic offenses and disorderly conduct. To test for a direct income effect, we define a category of “income-generating” criminal charges that comprises burglary, theft, fraud/forgery, robbery, drug distribution, and prostitution. We categorize all other charges as “non-income-generating,” including non-robbery violent charges, disorderly conduct/obstruction/resisting arrest, criminal trespass, drug possession, and driving under the influence.<sup>10</sup>

**Incentive effect ( $\uparrow$ ).** Adult SSI benefits are temporarily suspended when a recipient is incarcerated and can be reinstated when the recipient provides documentation of their release from jail or prison. However, if a recipient is incarcerated for more than 12 months, SSI benefits are permanently terminated and the individual must re-apply after leaving jail or prison in order to receive benefits again.<sup>11</sup> SSI removal could therefore increase criminal justice involvement by reducing the cost of incarceration—an incentive effect. Although incarceration itself is likely a deterrent to criminal activity (Lee and McCrary, 2017), SSI recipients might face extra pressure from family members who rely on their SSI income to avoid imprisonment. Losing SSI benefits at age 18 could potentially alleviate this pressure and encourage criminal activity as a result. To test for an incentive effect, we separately estimate effects on charges that are more or less likely to lead to incarceration.

**Medicaid effect ( $\uparrow$ ).** In most states, SSI provides automatic or near-automatic Medicaid eligibility for adults. The 18-year-olds who are removed from SSI in this quasi-experiment could lose Medicaid eligibility, especially since the 1996 reform precedes state Medicaid expansions to low-income adults under the Affordable Care Act. The loss of Medicaid could potentially have two effects. One is an income effect, similar to the income effect from losing SSI cash benefits, if Medicaid would have paid for treatments that the individual must now pay for out-of-pocket. The second is the effect of foregoing medical care in the absence of health insurance coverage. Jácome (2020) finds that losing access to Medicaid increases the likelihood of incarceration for low-income men, especially those with a history of mental health conditions. To test for a possible Medicaid effect in our context, we use estimates from Hemmeter (2011) showing that among young adults who received SSI as children but no longer receive SSI (prior to the Affordable Care Act), the likelihood of having unmet medical needs is higher for those with intellectual (39%) and mental conditions (27%) compared to those with physical conditions (4%). If Medicaid has larger effects for those with higher

---

<sup>10</sup>There could also be effects on non-income-generating charges as a result of income loss. Becker (1968) proposes that the deterrence effects of the criminal justice system are weaker for lower-income individuals with fewer outside opportunities. In practice, we find much smaller effects on non-income-generating charges than on income-generating charges.

<sup>11</sup>See <https://www.ssa.gov/pubs/EN-05-10133.pdf> for more details.

versus lower unmet medical needs without SSI, then we can test for a Medicaid effect by testing whether the effects of SSI removal are larger for youth with intellectual and mental conditions versus physical conditions.

**Long-term and spillover effects ( $\uparrow\downarrow$ , depending on other effects).** The effects on criminal activity that operate through the income effect (indirect or direct), the incentive effect, or the Medicaid effect could have long-term effects or spillovers to other types of crime. The immediate effects of SSI removal on criminal activity could persist through path dependence if individuals develop human capital in criminal activity or build social networks that encourage criminal activity. Mueller-Smith and Schnepel (2021) show that felony convictions amplify future criminal activity. Increases in income-generating criminal activity could spill over to violent crime, either through collateral effects (e.g., a robbery attempt that escalates into homicide) or deeper involvement in crime.

### 3 Data and Descriptive Statistics

We merge Social Security Administration data linked with records compiled by the Criminal Justice Administrative Records System (CJARS). Since these measures are unconditional on SSI status, they allow us to estimate the effect of SSI removal on criminal justice involvement in adulthood.

**SSA data.** The Supplemental Security Record (SSR) includes benefit history and demographic information for all SSI recipients. For each month from 1974 to the present, the SSR records whether an individual is currently eligible for SSI and the amounts of the federal and state SSI payments for that month. The SSR also includes information on whether the individual's benefits were terminated as a result of a medical review, including the age 18 medical review. We link the SSR to the CDR Waterfall File, which provides the dates and outcomes of the age 18 medical review and other medical reviews. We also link the SSR to the Master Earnings File, which provides annual earnings from W-2 and Schedule SE records for all individuals in the sample. Since the SSR includes information on the parents of children receiving SSI benefits, we also construct variables for family structure and parental earnings for all children in the sample. About 10% of children receiving SSI do not have a parent on their record, usually because they live with someone other than their parent or legal guardian or because they are wards of the state.

**CJARS data.** The Criminal Justice Administrative Records System compiles criminal justice records from many jurisdictions and agencies. In this paper, we use two primary types of records: criminal court charges, which are classified by type (e.g., property, drug, violent, parole violations) and gravity (e.g., misdemeanor, felony); and correctional data, including incarceration, probation, and parole. These state and local government records go back to the 1980s or earlier (Finlay and Mueller-Smith, 2021). CJARS uses a probabilistic matching algorithm (see Mueller-Smith and Gross, 2021) to track individual involvement in the justice system over time and across jurisdictions. The map in Appendix Figure B1 shows the coverage of CJARS records: a geographically diverse set of states and localities that cover about 50% of the U.S. population. CJARS does not include records from the juvenile justice system. Given high rates of criminal justice involvement in this population, it is likely that many of the youth in the sample have criminal charges prior to their 18th birthday that we do not observe.<sup>12</sup>

**Linkage between SSA and CJARS data.** We link records from CJARS to SSA administrative data based on an exact match of full name (first, last, and middle), date of birth, and state. For the state of Virginia, where year of birth is not available on criminal records, we use day and month of birth. We define our crime measures to be non-missing only for the youth located in counties with longitudinal CJARS coverage, which can differ for the criminal court records versus the correctional records. In addition, since our main measures are defined over the 1997–2017 period, our outcomes are non-missing only for individuals in counties with CJARS records in at least 80% of these years. About 40% of the SSI child population born between 1976 and 1998, and about one-third of the original Deshpande (2016) sample, resides in a county with CJARS coverage of at least one outcome. Appendix Table B1 shows that the CJARS-covered and non-CJARS-covered samples are similar on characteristics in the SSA data.

**Summary statistics for children receiving SSI.** Figure 1 presents rates of criminal justice involvement for children born between 1976 and 1998, inclusive, who ever receive SSI benefits as children and who reside in a county with CJARS coverage. Overall, 29% of these children have some contact with the criminal justice system by 2019. Rates of criminal justice involvement are higher for more disadvantaged groups, including youth with a single parent or no parent (32%) compared to youth with two parents (20%), youth with lower parental earnings (34%) relative to those with higher parental earnings (23%), and Black youth (41%) relative to white youth (26%). About 35% of male children who receive SSI

---

<sup>12</sup>The age of majority varies by state and over time. Often, youth who do not meet the age of majority definition are still prosecuted through the adult criminal justice system when they engage in serious criminal activity and will appear in CJARS as a result.

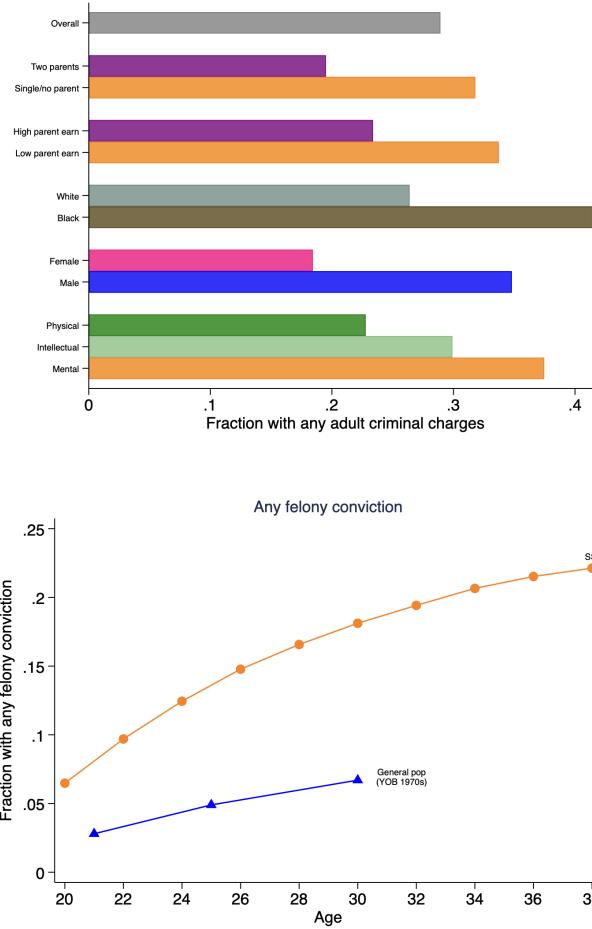
go on to be involved in the criminal justice system, nearly double the rate for female SSI children (18%), although even the rate for women is much higher than for women in the general population (Finlay and Mueller-Smith, 2021).

Most of the growth in SSI—and concomitantly, most of the controversy about who should receive benefits—has come from children with mental conditions other than intellectual disability, such as ADHD, autism spectrum disorder, and speech delay (U.S. Government Accountability Office, 2011). Figure 1 shows that rates of criminal justice involvement are higher for children with mental conditions (37%) than they are for child SSI recipients with physical conditions (23%) or intellectual disability (30%).

The bottom graph of Figure 1 shows the crime-age profile for individuals who received SSI benefits as children. Here we use the likelihood of a felony conviction since this outcome is also available for the general population. Rates of felony conviction among individuals who received SSI benefits as children increase from 6.5% at age 20, to 18% at age 30, to 22% at age 38. Using Finlay and Mueller-Smith (2021), we compare this crime-age profile to that of 1970s birth cohorts overall. Rates among former SSI youth are about double those of the general population in the early 20s and nearly triple by age 30.

These descriptive statistics have several implications for our causal analysis. First, the heterogeneity in baseline levels by diagnosis, sex, and family structure within the SSI child population highlights the importance of studying outcomes by subgroup. Still, rates of criminal justice involvement are high for all groups relative to the general population, including groups like women and youth from two-parent families that are often ignored in criminal justice analysis. Therefore it is still meaningful to study effects for these subgroups. Second, the crime-age profile suggests the importance of studying both the extensive (any involvement) and intensive (number of encounters or charges) margins of criminal justice involvement. Because we observe the children in the age 18 regression discontinuity design until age 41, it is possible that SSI removal affects offending behavior among those would have offended by this age anyway, in addition to affecting first-time offending behavior.

Figure 1: Criminal justice involvement of SSI children (YOB 1976–98) in adulthood



Notes: Graphs plot the fraction of individuals who received SSI as children who are involved in the adult criminal justice system. Sample is individuals who received SSI as children with years of birth between 1976 and 1998, inclusive, who reside in a county with CJARS coverage. The top graph plots the fraction in each group with any adult criminal charge up to the last date in the data. Demographic characteristics are measured at the last time that the child appears in SSI records. “High/low parent earn” indicates parental earnings above/below the sample median (\$12,500 annually) when the child was between ages 12 and 17. “Physical” indicates a physical disability, “Intellectual” indicates an intellectual disability, and “Mental” indicates mental disability other than intellectual. The bottom graph plots the fraction in the sample with a felony conviction at each age from 20 years to 38 years. The “1970s birth cohort” series uses Finlay and Mueller-Smith (2021) to plot the fraction of individuals born in the 1970s with a felony conviction at ages 21, 25, and 30.

## 4 Empirical Strategy and Results

### 4.1 Empirical strategy: Discontinuity in age 18 medical reviews

We estimate the effect of removal from SSI at age 18 on criminal justice involvement in adulthood using a regression discontinuity design originally documented and used by Deshpande (2016). The variation is based on a policy change in the 1996 welfare reform law. The Supreme Court ruling in the 1990 case *Sullivan v. Zebley* effectively required the Social Security Administration to allow children with mental and behavioral conditions of a certain severity to qualify for SSI. After a rapid increase in SSI child enrollment following that decision, Congress took measures in the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 to stem the tide of SSI child enrollment and to remove children that it believed had been improperly allowed onto SSI.

PRWORA included two provisions regarding medical reviews for children receiving SSI who had attained 18 years of age. First, PRWORA required the SSA to redetermine the eligibility of all children receiving SSI when they turned 18, whereas previously SSA had conducted age 18 medical reviews for a very small fraction of children. Second, PRWORA required the SSA to use adult medical criteria to determine eligibility at age 18, whereas previously age 18 reviews only required that children not demonstrate improvement in their medical condition in order to pass the review. The definition of disability is different for adults and children: for children, disability is defined in terms of age-appropriate activity, while for adults disability is defined as an inability to work. Conditions like ADHD may qualify a child for SSI but are less likely to qualify an adult unless it is judged to be severe enough to preclude work. Thus the new PRWORA requirement effectively made the age 18 review criteria more stringent.

Deshpande (2016) documents that the PRWORA rules were applied to children with an 18th birthday after August 22, 1996, the date of enactment. Figure 2 replicates, for the CJARS-coverage sample used in this paper, the first stage result from Deshpande (2016) showing that almost no children with an 18th birthday before PRWORA enactment received an age 18 medical review, while nearly 90% of children with an 18th birthday after PRWORA enactment received a review. (There is a decline in review rates one year later after another policy change, but review rates remain high relative to the pre-PRWORA period.) This cutoff rule allows us to estimate equations of the form:

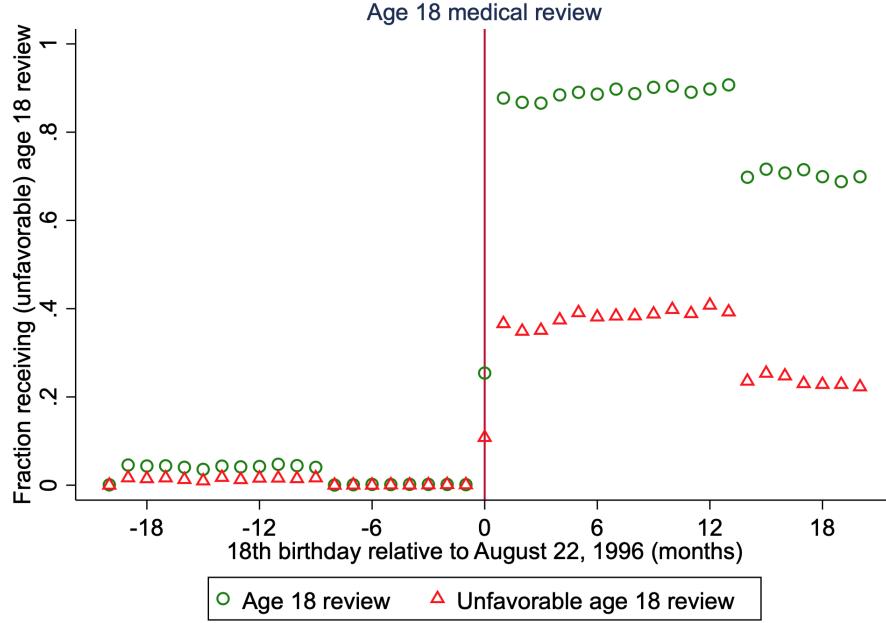
$$Y_i = \alpha + \beta \text{AfterPRWORA}_i + \gamma \text{DOB}_i + \delta (\text{AfterPRWORA}_i \times \text{DOB}_i) + X_i + \varepsilon \quad (1)$$

where  $Y_i$  is a child outcome,  $\text{AfterPRWORA}_i$  is an indicator for having a date of birth after the date of PRWORA enactment (August 22, 1996), and  $\text{DOB}_i$  is the date of birth running variable. The  $X_i$  include medical diary (a measure of severity), since the RD assignment rule is conditional on medical diary. We include additional covariates to improve precision, including sex, age at first SSI receipt, type of disability, family structure, parental earnings, and state. We residualize outcomes using these covariates in the RD scatter plots presented in the results. The coefficient of interest,  $\beta$ , gives the effect on outcomes of having an 18th birthday after the cutoff. We use a 10-month bandwidth in our main estimates. As robustness checks, we also present results without covariates (see Appendix Table B9), using a nonparametric analysis (see Appendix Table B10), and using a wide range of bandwidths (see Appendix Figure B4). Our results are robust to these alternative specifications.

Since many children who receive a medical review are found eligible for the adult program, the discontinuity in the likelihood of receiving an unfavorable age 18 review falls to 36 percentage points. Children who receive an unfavorable age 18 medical review lose eligibility for SSI in adulthood, though they can reapply for SSI as adults. As shown in Appendix Figure B2, young adults who are removed from SSI as a result of the age 18 medical review are disproportionately male and Black and have mental conditions other than intellectual disability. Medical conditions that are over-represented in the “complier” population relative to the full sample include (starting with the most over-represented): ADHD, asthma, personality disorder, anxiety disorder, cancer, bipolar/affective disorder, neurocognitive disorder, musculoskeletal conditions, and autism. Medical conditions that are under-represented include (starting with the most under-represented): borderline IQ, cerebral palsy, blindness or deafness, nervous system conditions, injuries, schizophrenia, blood disorders, congenital disorders, and intellectual disability.

The identifying assumption of this RD design is that criminal justice outcomes would have evolved smoothly across the cutoff in the absence of the 1996 welfare reform law increasing the number and stringency of age 18 medical reviews. Deshpande (2016) presents tests of validity for the full sample of children around the August 22, 1996, birthdate cutoff. We conduct similar tests for the sample of children in CJARS-covered states. Manipulation of the birthdate running variable seems unlikely in this context because birthdate was determined decades before the 1996 welfare reform law was passed. Even in the mid-1990s, there was uncertainty about whether or exactly when such a law would pass and how it would be enforced. Appendix Table B2 presents covariate balance tests for the CJARS-coverage sample used in this paper. A joint F-test fails to reject the null hypothesis of no discontinuities in covariates across the cutoff, and the discontinuities are small as a percentage of the mean values of the covariates. We also test for discontinuities in the density of SSI child birthdates across the cutoff and do not detect any breaks (see Appendix Figure B3).

Figure 2: First stage: Likelihood of age 18 medical review across cutoff



Notes: Figure plots the likelihood of receiving an age 18 medical review and the likelihood of receiving unfavorable age 18 review (i.e., removed from SSI at age 18). Sample is SSI children with an 18th birthday within 18 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

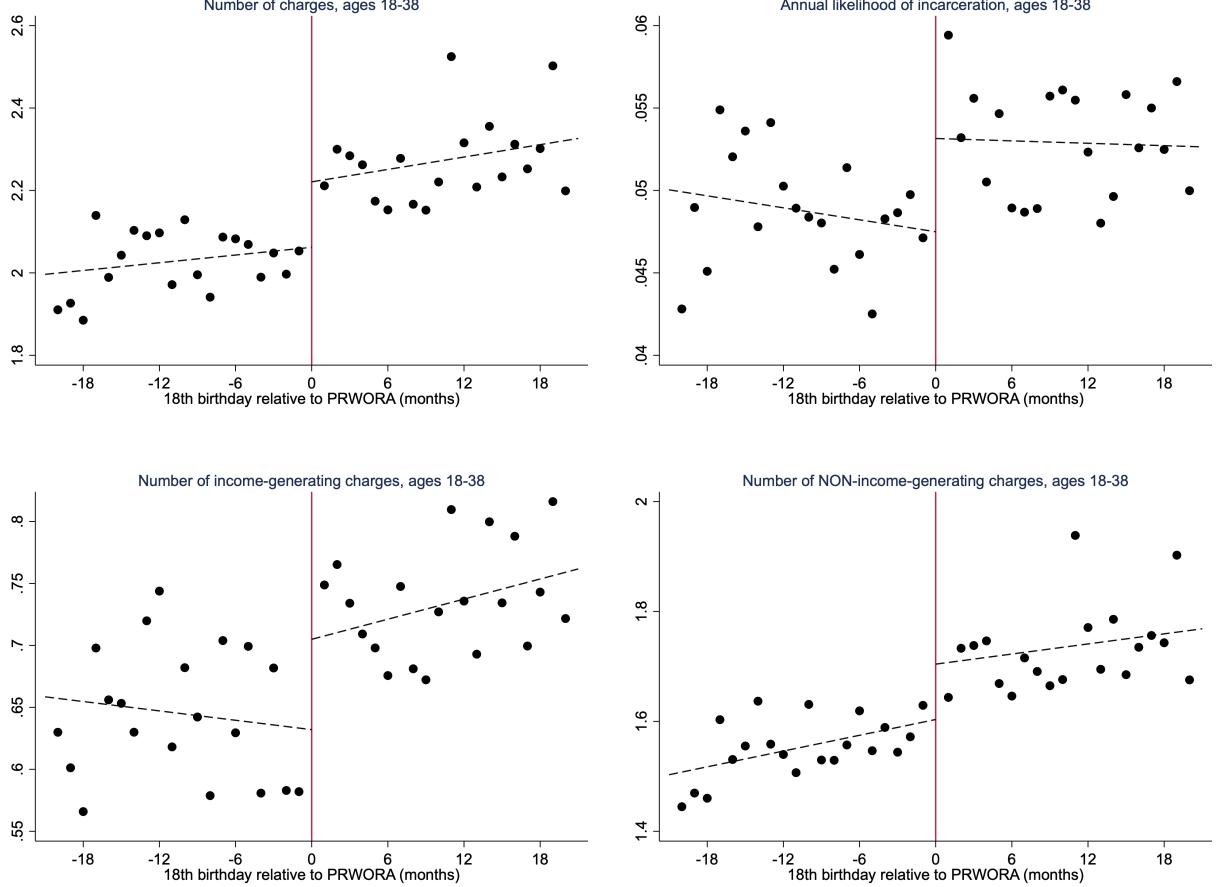
## 4.2 Effects of SSI Removal on Criminal Justice Outcomes

Figure 3 shows results for our main outcomes in the top two graphs: the total number of criminal charges between ages 18 and 38 (top left) and the average annual likelihood of incarceration over the same period (top right). These graphs show a large and clear jump in charges and incarceration to the right of the cutoff, where the SSI removal rate is higher. From Table 1, the number of charges increases by a statistically significant 8% (from 2.04 to 2.21 charges) across the cutoff and the annual likelihood of incarceration increases by a statistically significant 23% (from 4.7 to 5.8 percentage points). Scaling up the reduced form estimates by the first stage effect on the likelihood of an unfavorable age 18 review (36 percentage points), SSI removal at age 18 increases the number of charges by 20% and the annual likelihood of incarceration by 60%. Importantly, these results mean that the two main CJARS data sources—court charges and corrections—individually show a large and precise increase in criminal justice involvement across the cutoff.<sup>13</sup>

Recall from the conceptual framework that if the effect of SSI removal on criminal justice outcomes operates primarily through an income effect, then removal could have larger ef-

<sup>13</sup>What explains the upward trend in number of charges by birthdate? The answer appears to be a secular increase in criminal charges for younger birth cohorts. Appendix Figure B5 shows an upward trend in criminal charges and incarceration for the general population with the same birthdate range.

Figure 3: Reduced form: Criminal justice outcomes across cutoff



Notes: Figure plots total number of charges between ages 18–38 years (top left) and the average annual likelihood of incarceration from ages 18–38 years (top right), total number of income-generating charges (bottom left), and total number of non-income-generating charges (bottom right). Outcomes are residualized (and then control mean added back) using the same covariates used in the main specification: medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. Sample is SSI children with an 18th birthday within 18 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

fects on charges for which the primary motivation is income generation. We classify charges as either “income-generating” (burglary, theft, fraud/forgery, robbery, drug distribution, and prostitution) or “non-income-generating” (all others, including assault, weapons possession, sex crimes, drug possession, and disorderly conduct). From the bottom two graphs of Figure 3, the effect of the age 18 birthdate discontinuity is larger and more precise for income-generating charges (bottom left) than for non-income-generating charges (bottom right). SSI removal increases income-generating charges overall by a statistically significant 60% (0.63 to 1.0 charges), compared to just 10% (1.6 to 1.7, not statistically significant) for non-income-generating charges (see Table 1). The effects on income-generating charges operate both on the extensive margin (i.e., any charge) and the intensive margin (i.e., number of charges). In other words, SSI removal leads to more first-time offending and to more

offending among youth who would have been involved in the criminal justice system even if they had retained their SSI benefits.

Consistent with Deshpande (2016), we find that SSI removal also increases formal employment in our CJARS-covered analysis sample: the likelihood of earning more than \$15,000 annually increases by 4.4 percentage points, from 11% to 16% (see Table 1).<sup>14</sup> However, the increase in the likelihood of having an income-generating criminal charge is nearly double at 9.3 percentage points (24% to 33%).

Which specific income-generating crimes drive this increase? From Figure 4, by far the largest and most precise increase is for theft charges (0.24 increase, or 90%). The increase in theft charges is large and precise for both men and women. For other types of charges, however, there is substantial heterogeneity by sex. For men, we estimate increases in burglary charges (0.10 increase, or 50%) and drug distribution charges (0.07 increase, or 40%), though these estimates are not statistically significant. There is also a small but precise increase in prostitution charges for men (0.02 increase, or 340% given the near-zero baseline). For women, SSI removal leads to a huge increase in the number of income-generating charges—nearly triple. In addition to theft, we estimate large and precise increases for women in fraud/forgery charges (0.19 increase, or 150%) and prostitution charges (0.08 increase, or 460%) as a result of SSI removal. Note that the estimate for fraud and forgery charges—most commonly bad checks, retail fraud, and identity theft—is close to zero in the full sample but large and precise for women. Appendix Tables B3 and B4 present RD and IV estimates for men and women separately.

To be sure, we observe increases in some non-income-generating charges as a result of SSI removal, again with differences by men and women. Even these non-income-generating charges, however, may be linked to income-generating offenses. For men, we estimate large and precise increases in criminal trespass charges (0.11, or 130%). This effect could be related to the effect on burglary charges, since burglary is really a combination of offenses: criminal trespass plus the attempt to commit another offense, or criminal trespass plus a completed offense (Anderson, 2011; Mitchell, 2001). Men also see a large and precise increase in charges for disorderly conduct/obstruction/resisting arrest (0.18 increase, or 50%), the latter two of which are mechanically related to other charges. Non-robbery violent charges for men also increase (0.15 increase, or 30%), but this estimate is not statistically significant and is driven by men who also have income-generating charges. This could mean that the violent charge occurs in the process of committing income-generating crimes (e.g., assault occurs during burglary), or simply that the same men who do more illicit income-generating activity also commit more violent offenses.

---

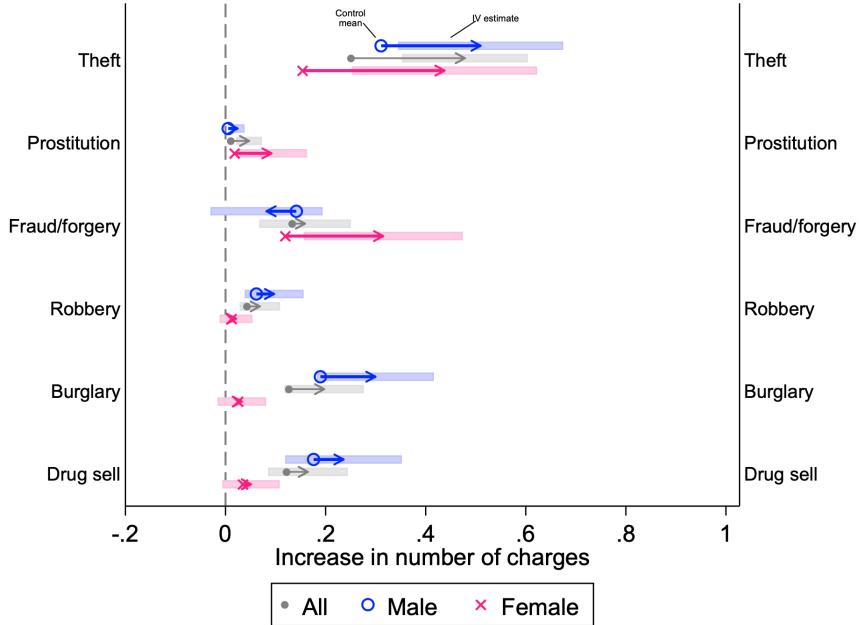
<sup>14</sup>Average annual earnings increase by \$1,421, from \$4,676 to \$6,097 (30%).

Table 1: RD and IV estimates of criminal justice outcomes

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
<b>First stage (N = 28,843)</b>						
Age 18 medical review	0.853*** (0.005)		0.002			
Unfavorable review	0.36*** (0.007)		0.0004			
On SSI from ages 19-22	-0.152*** (0.007)		0.822			
All crime						
Any charge (N = 21,768)	0.023** (0.012)	0.062** (0.032)	0.387	0.171* (0.092)	0.464* (0.249)	2.041
Incarcerated (annual likelihood/days) (N = 26,991)	0.011*** (0.004)	0.029*** (0.010)	0.047	3.222*** (1.133)	8.791*** (3.092)	13.39
Incarceration/parole/probation (likelihood/days) (N = 22,705)	0.011 (0.010)	0.029 (0.027)	0.229	4.671** (2.328)	12.72** (6.331)	36.03
Charges related to income-generating activity (N = 21,768)						
Total	0.034*** (0.011)	0.093*** (0.03)	0.240	0.140*** (0.039)	0.380*** (0.105)	0.625
Burglary	0.005 (0.007)	0.014 (0.018)	0.068	0.023 (0.015)	0.063 (0.041)	0.129
Theft	0.029*** (0.009)	0.080*** (0.023)	0.121	0.088*** (0.024)	0.240*** (0.064)	0.258
Fraud/forgery	0.007 (0.007)	0.018 (0.020)	0.076	0.006 (0.016)	0.016 (0.044)	0.135
Robbery	0.008* (0.005)	0.021* (0.012)	0.030	0.006 (0.008)	0.017 (0.021)	0.046
Drug distribution	0.005 (0.007)	0.013 (0.019)	0.071	0.019 (0.015)	0.050 (0.041)	0.125
Prostitution	0.005*** (0.002)	0.012*** (0.005)	0.004	0.014*** (0.005)	0.039*** (0.014)	0.010
Charges unrelated to income-generating activity (N = 21,768)						
Total	0.005 (0.012)	0.014 (0.031)	0.357	0.036 (0.076)	0.098 (0.205)	1.585
Non-robbery violent	0.013 (0.010)	0.036 (0.027)	0.182	0.031 (0.026)	0.083 (0.072)	0.377
Disorderly conduct/obstruction/resisting arrest	0.016* (0.009)	0.043* (0.024)	0.128	0.049** (0.023)	0.132** (0.063)	0.260
Criminal trespass	0.004 (0.005)	0.010 (0.015)	0.045	0.027** (0.012)	0.073** (0.033)	0.062
Drug possession or paraphernalia	0.014 (0.009)	0.039 (0.024)	0.136	0.034 (0.028)	0.092 (0.076)	0.303
Driving under the influence	0.001 (0.006)	0.004 (0.015)	0.046	-0.010 (0.010)	-0.027 (0.028)	0.072
Employment (N = 28,843)						
Annual employment (earnings > \$ 5K/yr)	0.028*** (0.007)	0.077*** (0.018)	0.216			
Annual employment (earnings > \$ 15K/yr)	0.016*** (0.005)	0.044*** (0.014)	0.113			
Annual earnings				511.8*** (192)	1,421*** (528.6)	\$4,676

Notes: Table presents parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured between ages 18–38 years ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. The sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage. “Extensive” indicates the likelihood of any charge (or, alternatively, incarceration spell or ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of incarceration spells or number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Figure 4: Income-generating illicit activities for men and women



Notes: Figure plots change in number of charges from 1997–2017 for each crime resulting from SSI removal at age 18, by sex. Each arrow starts at the control mean for that subgroup and ends at the control mean plus IV estimate of the effect of receiving an unfavorable age 18 medical review. Shaded bars represent confidence intervals. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

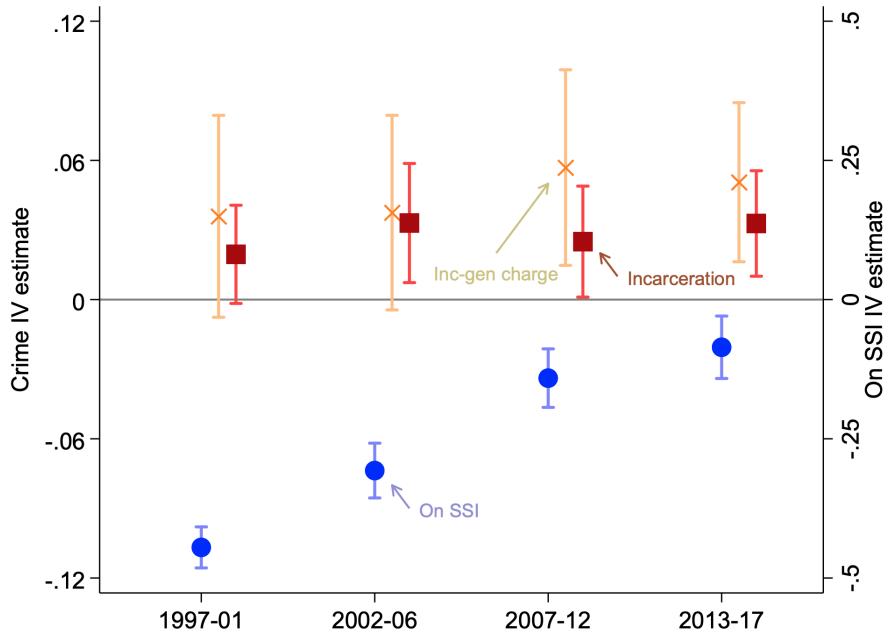
For women, we estimate a large and precise increase in drug possession charges (0.18 increase, or 170%). The reason for this increase is not obvious. It probably does not reflect drug distribution activity given that we do not find an increase in drug distribution charges for women. It could potentially reflect an attempt to self-medicate after the loss of SSI and Medicaid benefits, but we cannot test this hypothesis. As expected, we see no increase in violent charges for women.

As a result of the increase in criminal charges, the likelihood of incarceration increases from 4.7 to 7.6 percentage points (60%) in the full sample in the two decades following SSI removal. The likelihood of incarceration for men increases from 7.2 to 10.8 percentage points (50%). The likelihood of incarceration for women increases from 0.7 to 2.3 percentage points (220%). All of these estimates are statistically different from zero.

Does SSI removal lead to temporary increases in criminal activity among youth until they find more legal means of recovering the lost SSI income? Or does SSI removal permanently increase the propensity to offend throughout adulthood? Figure 5 presents the IV estimates of the effect of receiving an unfavorable age 18 medical review on SSI receipt, income-generating criminal charges, and incarceration over time. The figure, which plots period-by-period (not cumulative) estimates, shows that the effects of SSI removal on criminal activity are highly

persistent over the following two decades. The effect of SSI removal on the likelihood of a criminal charge associated with income generation increases from 3.6 percentage points in 1997–2001, the period immediately after removal, to 5.7 percentage points during the Great Recession in 2007–12. The effect on the likelihood of incarceration also remains steady at around 3 percentage points over this time. This persistence in criminal charges and incarceration is made more remarkable by the fact that the effect of age 18 removal on the likelihood of receiving SSI benefits *declines* over the same time period. The effect of SSI removal on the likelihood of receiving SSI decreases from 45 percentage points in 1997–2001 to just 14 percentage points in 2007–12, mostly because individuals in the control group leave SSI in adulthood for various reasons. This pattern suggests that contemporaneous SSI income during adulthood is not the primary driver of criminal justice involvement. Instead, the loss of SSI income in early adulthood permanently increases the propensity to commit crimes throughout adulthood. Appendix Figure B6 shows the time path for specific charges.

Figure 5: Timing of effects of SSI removal on criminal justice outcomes



Notes: Figure plots IV estimates of the effect of receiving an unfavorable age 18 medical review on the likelihood of receiving SSI benefits in each period (right axis), the likelihood of having a criminal charge for an income-generating crime in each period (left axis), and the likelihood of being incarcerated in each period (left axis). The estimates are within each period, not cumulative. The IV estimates for crime and incarceration are measured on the left axis, and the IV estimate for receiving SSI benefits is measured on the right axis. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

We study heterogeneity in the effects of SSI removal by family structure, parent income, race, gender, and type of disability. Figure 6 shows that SSI removal increases the likelihood of an income-generating criminal charge substantially among all observable subgroups within

the SSI population (see Appendix Table B5 and Table B6 for estimates). These differences across subgroups are not statistically significant. However, the incarceration effects are disproportionately large for groups that already have high incarceration rates, including Black youth and youth with a single or no parent or low parent earnings. The differences in incarceration effects by parental earnings, race, and gender are statistically significant. These results suggest that SSI removal exacerbates existing inequality in incarceration.<sup>15</sup>

In addition to estimating effects by observable subgroup, we also estimate effects by predicted removal probability. Figure 6 shows that on both the employment and crime margins, treatment effects are larger for youth with below-median removal probabilities than above-median. This counterintuitive result could be explained by selection into the complier population identifying each effect, or could simply reflect that our prediction-of-removal regression has limited explanatory power.<sup>16</sup>

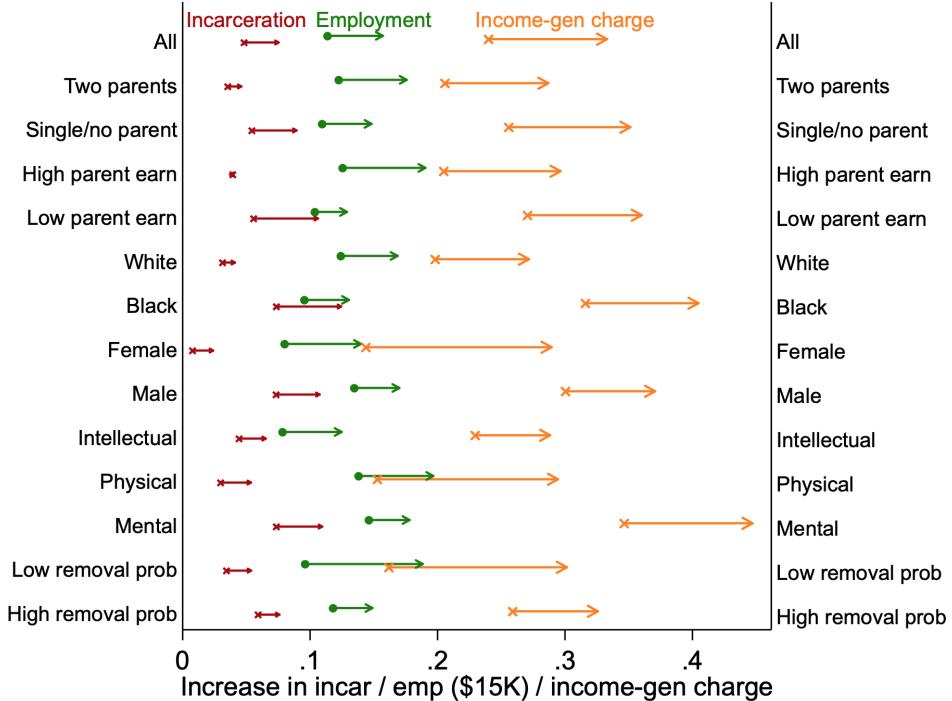
Figure 6 also shows, consistent with Deshpande (2016), that SSI removal modestly increases the likelihood of steady employment (annual earnings above \$15,000) for most subgroups. Do the same youth respond on both the employment and crime margins, or do some youth pursue legal earning opportunities while others engage in illicit income-generating activity? Figure 7 suggests the latter explanation. The figure plots IV estimates of the effect of an unfavorable age 18 review on joint employment and offending outcomes. Employment is defined as earning at least \$15,000 annually in at least one-half of the years from 1997 and 2017, and crime is defined as having at least one (or more than one, for the intensive-margin measure) criminal charge associated with illicit income-generating activity during that time. The largest increase is for the arguably worst outcome—responding on the crime margin but not on the employment margin. Among those who respond on the employment margin, about one-half have at least one criminal charge associated with income generation and the other half do not. When we produce the same estimates using more than one criminal charge (instead of any criminal charge), we find that the distribution of outcomes becomes even more bimodal: youth either respond with steady employment, or, more commonly, with multiple criminal charges. This bimodal distribution of outcomes is especially stark for women (see Appendix Figure B8, which shows the breakdown in Figure 7 by subgroup).

---

<sup>15</sup>The differences across groups in how charge effects translate into incarceration effects could reflect either that these groups engage in different types of criminal activity or that the criminal justice system treats the groups differently conditional on criminal activity. Although we cannot distinguish definitively between these channels, we can look at types of charges by group. We estimate larger and more precise effects on burglary, non-robbery violent, and weapons charges for Black youth compared to white youth. We estimate larger effects on theft, burglary, drug distribution, prostitution, and weapons charges for youth with low parent earnings compared to youth with higher parent earnings. See Appendix Figure B7 for these comparisons.

<sup>16</sup>We regress an indicator for receiving an unfavorable age 18 review on observable characteristics for children with an 18th birthday after the PRWORA cutoff and then predict the likelihood of receiving an unfavorable age 18 review for the entire sample. The R-squared of the prediction regression is 0.16, indicating that we as researchers observe only a limited number of factors that enter the disability examiner's decision.

Figure 6: Heterogeneity in effects of SSI removal by subgroup



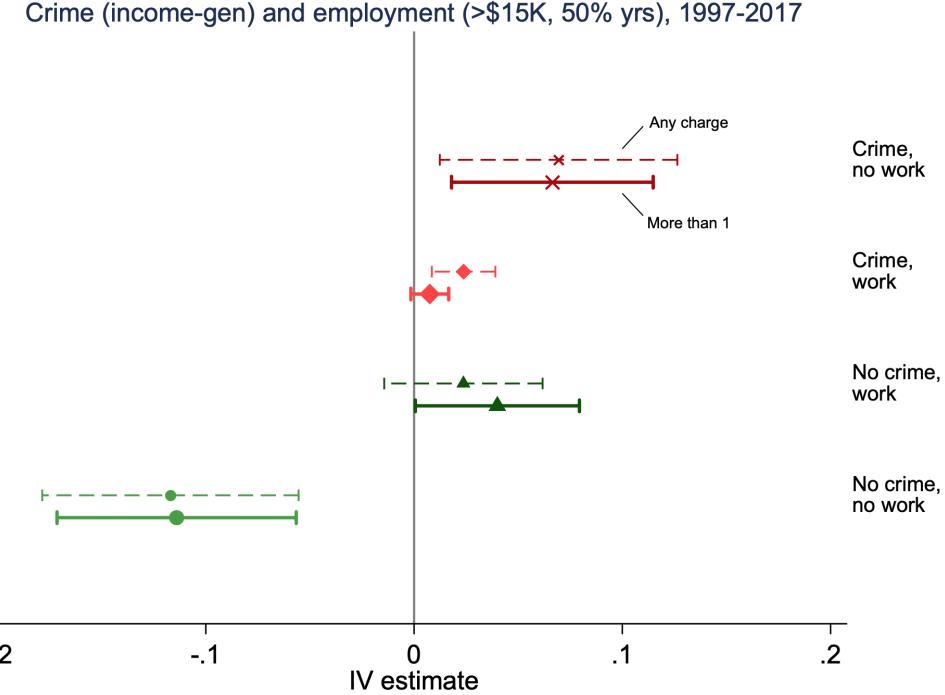
Notes: Figure plots change in outcome variable (annual incarceration rate, likelihood of income-generating charge, or likelihood of earning more than \$15,000 annually from 1997–2017) resulting from SSI removal at age 18, by subgroup. Each arrow starts at the control mean for that subgroup and ends at the control mean plus IV estimate of the effect of receiving an unfavorable age 18 medical review. “High/low parent earn” indicates children with parental earnings above/below the sample median (\$5,500 annually) when the child was between 12 and 17 years of age. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

Youth with physical disabilities respond almost exclusively with crime, while youth with mental conditions are one of the few groups with an employment response that is larger than the crime response. Youth in high crime areas have a much larger crime response than employment response, while the opposite is true for low-crime areas, suggesting that the available opportunities for legal or illegal income generation matter for the response to SSI removal.<sup>17</sup>

The results suggest that over time youth specialize in either legal work or criminal activity to generate income. To be sure, we cannot directly measure the true increase in criminal activity or compare total illegally-generated income to the legal earnings that we observe in SSA data. But if anything, our estimate of the effect on criminal charges vastly underestimates the true effect on criminal activity, since the vast majority of offenses go unreported to law

<sup>17</sup>We also study how the effect of SSI removal on criminal charges varies with the local unemployment rate, minimum wage, and cost of living. In general, we estimate effects in the expected direction (larger effects for higher unemployment rates, lower minimum wages, and lower cost of living), but the estimates are small and imprecise (see Appendix Table B11).

Figure 7: Effect of SSI removal on joint crime and employment outcomes



Notes: Figure plots IV estimates of the effect of receiving an unfavorable age 18 medical review on the joint likelihood of having at least one (or more than one, for the intensive-margin measure) criminal charge for an income-generating crime from 1997–2017 and having annual earnings of at least \$15,000 (in 2012 dollars) in at least half of the years from 1997–2017. “Crime, no work” indicates the outcome of having at least one (or more than one) criminal charge but not earning at least \$15,000 in at least one-half of years. “Crime, work” indicates the outcome of having at least one (or more than one) criminal charge and earning at least \$15,000 in at least one-half of years. “No crime, work” indicates having no criminal charge (or one or fewer) and earning at least \$15,000 in at least one-half of years. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

enforcement or uncharged by prosecutors. Using estimates from other sources on reporting rates and charging rates (see Appendix Table B14 for details), we do a back-of-the-envelope calculation of the number of crimes created by each SSI removal. Scaling up the IV estimates yields an increase of 4.9 thefts, 1.2 burglaries (and 1.3 criminal trespass offenses), 0.64 fraud/forgery offenses, and 0.21 robberies for each SSI removal. Since “victimless” crimes like drug dealing, drug possession, and prostitution are rarely reported, the scaled-up IV estimates for these offenses (per SSI removal) are in the hundreds.

We also estimate effects on criminal justice outcomes for siblings and parents of the 18-year-old sample, presented in Appendix Table B7. As in Deshpande (2016), we can only observe siblings who themselves receive SSI benefits at some point in their life. We estimate effects for these siblings in the same direction as the effects for the 18-year-olds, with statistically significant increases in criminal charges and incarceration rates. This crime response is consistent with the finding in Deshpande (2016) that younger siblings of 18-year-

olds who are removed have lower earnings in adulthood. Unlike the 18-year-olds themselves, however, younger siblings respond to the 18-year-old’s removal with both income-generating and non-income-generating crime in adulthood (though these estimates individually are not statistically significant). This pattern suggests that younger sibling criminal justice involvement may not be driven by income-generation motives (as appears to be the case for the 18-year-old) but by other channels—for example, it could be that the 18-year-old’s removal reduces the resources available to younger siblings, which adversely affects their human capital development and leads to a higher propensity to commit crime in adulthood. Regarding parents, we find that parent criminal justice involvement, though high at baseline, does not respond to the 18-year-old’s removal. This lack of response is also consistent with the negligible parent earnings response in Deshpande (2016).

## 5 Discussion

Our results indicate that youth are more likely to respond to the SSI loss by generating income through illicit activity than through legal employment, and that this illicit activity increases their likelihood of going to prison. Since SSI is a means-tested program, children who receive SSI are doubly disadvantaged: they have a disability and live near or below the poverty line. When they lose SSI benefits, they may not have the skills to succeed in formal employment and might face discrimination (with respect to disability, race, or class) or other barriers in the labor market.

Appendix Figure B9 compares our estimates to other estimates of the effects of transfers on criminal charges, specifically for housing transfers (from Kling et al., 2005) and Head Start (from Garcés et al., 2002; Deming, 2009). We scale all effect sizes so as to measure effect size per \$1,000 transfer. Conditional on transfer size, our estimates are substantially larger than the housing and Head Start estimates. This is mostly attributable to the persistence of effects shown in Figure 5. Even as the differential in the transfer amount declines, the effect on criminal charges increases. These comparisons suggest that SSI benefits in young adulthood lead to larger and more persistent reductions in crime than do other types of transfers.

### 5.1 Evidence on mechanisms

In Section 2, we proposed various channels through which SSI removal at age 18 could affect criminal justice involvement in adulthood. Overall, we interpret our results as pointing

primarily to a direct income effect—many youth who lose SSI income respond by engaging in illegal activities to generate income. Here we discuss the evidence for each of the alternative channels:

*Indirect income effect through employment.* If there is an indirect income effect that reduces crime through higher employment, it is small relative to the direct income effect working in the other direction. Figure 7 suggests that youth who do respond by working more in the formal sector are unlikely to engage in criminal activity in the long run. This could mean that the indirect income effect applies to the small minority of youth who respond with formal employment. However, the large increase in criminal charges means that the indirect income effect is dominated by a much larger direct income effect.

*Incentive effect.* We also consider an incentive effect in which removed youth may be less likely to avoid crimes that could land them in prison since they no longer face the threat of losing SSI benefits if incarcerated. We estimate a large increase in the likelihood of incarceration, but it is not obvious whether this effect operates through the incentive effect or through the direct income effect via income-generating criminal activity. To distinguish the incentive effect from the direct income effect, we can look at effects on charges that are likely to lead to incarceration but are not income-generating, such as non-robbery violent crime. We estimate an imprecise 20% increase in non-robbery violent crime. Moreover, we find that this increase is driven by men who also respond on income-generating charges, suggesting that they could be collateral damage from income-generating crimes. Although we cannot rule out the incentive effect entirely, the evidence suggests that the incentive effect is second-order relative to the direct income effect.

*Medicaid effect.* Youth who were removed from SSI in 1996 mostly lost eligibility for Medicaid unless they lived in one of the few states that provided Medicaid to low-income adults.<sup>18</sup> The Medicaid loss could affect crime through either an income effect or an effect of foregone medical care. To test for a Medicaid effect, we compare the crime response for youth with intellectual and mental conditions relative to those with physical conditions, since Hemmeter (2011) finds higher rates of unmet medical needs when off SSI for the former. We find similar effects across disability types, which is contrary to what we would expect if the Medicaid effect were strong. If anything, we see larger responses for youth with physical conditions than for those with mental or intellectual disabilities. These results suggest that the Medicaid effect is small relative to the direct income effect.

*Long-term and spillover effects.* We find suggestive evidence for long-term and spillover

---

<sup>18</sup>Among states in our sample, states that provided Medicaid to low-income adults in 1997 include Oregon and Maryland. Arizona expanded Medicaid access to adults in 2001. Michigan, Indiana, and Wisconsin expanded access between 2001 and 2010 (Rudowitz et al., 2013).

effects. Figure 5 shows the persistence of effects on income-generating charges and incarceration. Some of this persistence could be explained by a direct income effect, especially since income-generating crimes spike during the Great Recession when employment opportunities may be more limited. However, Figure 5 also shows that the effect on SSI income attenuates over the two decades after removal, suggesting that the contemporaneous loss of SSI income alone is unlikely to explain the persistence of crime effects. It could be that removed SSI youth with limited skills turn to illegal activity immediately after removal, and this initial experience with crime leads to more criminal behavior later in adulthood, either through the development of criminal capital or social networks or the effects of criminal records and incarceration. The small increase in violent crimes among men may also reflect spillovers from illegal income-generating activity, especially since the increase is concentrated among men who also respond with income-generating charges.

*Alternative explanations.* We estimate large effects of SSI removal on criminal charges and incarceration, which we interpret throughout the paper as demonstrating a large effect of SSI removal on criminal activity. However, we consider the possibility that SSI removal affects the likelihood that a prosecutor charges someone with a crime conditional on underlying criminal activity, either because the prosecutor treats SSI recipients more leniently or because the SSI income helps recipients pay for legal representation. We think this is unlikely to be a primary explanation for the increase in criminal charges for two reasons. First, the number of criminal charges for the control group is high: an average of 2.04 criminal charges over the 21 years after removal. Individuals receiving SSI are clearly not exempt from criminal charges. Second, if the effect of SSI removal were operating primarily through the likelihood of charging, we would expect the effect to show up in a broad set of charges. Instead, we see effects almost exclusively in activities aimed at generating income, even though the control mean for non-income-generating charges is high.

## 5.2 Cost-benefit analysis of SSI removal

Part of the motivation for removing youth from SSI at age 18—both when the 1996 welfare reform law was passed and today—is to avoid spending taxpayer money on individuals who are deemed capable of working in adulthood. In Table 2, we calculate the savings to the government from removing youth from SSI relative to government expenditures from increased crime and incarceration. We use our estimates of the effect of SSI removal on criminal justice involvement for both the 18-year-olds and their siblings (see Appendix Table B8). Here we summarize our cost-benefit calculations, with more details in Appendix Section A. From our IV estimates, each SSI removal saves about \$37,700 in federal SSI benefits. Combining our IV estimates with other estimates, we calculate additional savings of \$8,400 in Medicaid costs

from 1997–2013 (prior to Medicaid expansions under the Affordable Care Act in 2014). The federal government also benefits from higher tax revenue from those youth who work more in response to removal, on the order of \$3,000 per removal over the next 21 years. On the cost side, we calculate the enforcement and court cost per removal from police investigations and prosecutions, amounting to \$10,800 per removal over those 21 years. These costs are largely borne by state and local governments rather than the federal government. Over the 1997–2017 time period, each SSI removal increases prison time by 227 days, jail time by 70 days, probation time by 349 days, and parole time by 73 days. Together these correctional costs amount to \$30,200 per removal, also mostly paid by state and local governments.<sup>19</sup> Incorporating the state and local government costs from increased criminal activity nearly eliminates the cost savings to the federal government.

We can also calculate an estimate of victim costs from the increase in crime. Using conservative assumptions and estimates detailed in Appendix Section A, we estimate victim costs at \$85,600 per removal. Victim costs dwarf both the government savings from SSI and the government costs from charging and incarcerating offenders. Even without victim costs, however, the government only receives a small return on the investment of removing young people from SSI.<sup>20</sup>

## 6 Conclusion

In labor economics, the “income effect” associated with welfare programs traditionally refers to changes in employment and earnings induced by welfare benefits. Consistent with this traditional theory of income effects, Deshpande (2016) shows that removing young adults from SSI, the largest cash welfare program in the United States, in 1996 increases employment and earnings modestly in adulthood. In this paper, we use a novel linkage between SSI records and crime records to document an alternative income effect: criminal activity. We show that even as some young people respond to the SSI loss by working more in formal employment, a larger fraction respond by engaging in illicit income-generating activity, including theft, burglary, fraud/forgery, and prostitution. As they progress through adulthood, youth who have been removed from SSI appear to specialize in either illegal activity or formal employment

---

<sup>19</sup>It is possible that SSI removals also lead to increases in federal crimes like interstate drug trafficking, resulting in enforcement, prosecution, and correctional costs incurred by the federal government, but these are outside the scope of CJARS and consequently unaccounted for in this exercise.

<sup>20</sup>Calculating the marginal value of public funds as proposed by Hendren and Sprung-Keyser (2020), we estimate an MVPF of SSI removal at age 18 of 1.43 considering only SSI and Medicaid savings and the tax revenue from earnings, 0.56 additionally considering the administrative and correctional costs to the government of higher crime, and 0.25 additionally incorporating victim costs (and assuming that victims have the same social welfare weight as taxpayers).

Table 2: Cost-benefit analysis

	Amount	Notes
<b>Savings per removal</b>		
SSI benefit savings	\$37,737	Authors' IV estimate (1997–2017)
Medicaid savings	\$8,400	Savings from 1997–2013
Likelihood of being off SSI	0.24	Authors' IV estimate
Likelihood of losing Medicaid	0.71	Hemmeter (2011) estimate
Annual net cost of Medicaid	\$2,900	Finkelstein et al. (2019) estimate, doubled
Tax revenue from earnings	\$2,984	21-year period, assume 10% tax rate
Annual earnings increase	\$1,421	Authors' IV estimate
Total savings to government	\$49,121	
<b>Costs per removal</b>		
Enforcement costs	\$10,028	See Appendix Table B12 for details
Court costs	\$746	See Appendix Table B12 for details
Corrections costs	\$30,160	See Appendix Table B13 for details
Total costs to government	\$40,934	
Victim cost	\$85,628	See Appendix Table B14 for details
Total costs to society	\$126,562	

Notes: Table presents estimates of savings and costs resulting from each SSI removal. “SSI benefit savings” indicates cost savings to the government from spending less on SSI from 1997–2017. “Medicaid savings” indicates cost savings to the government from spending less on Medicaid from 1997–2013 (since state Medicaid expansions under the Affordable Care Act began in 2014). “Tax Revenue” indicates the increase in tax revenue from higher earnings assuming a 10% average tax rate. “Enforcement costs” indicate the cost of more police investigations, and “court costs” indicate the cost of more prosecutions. “Corrections costs” indicate costs to the government from increased time spent in prison, jail, probation, and parole. “Victim cost” indicates the increased number of offenses times estimates of victim costs for each offense type. See Appendix Section A for details.

in order to recover the SSI income that they have lost. Illegal income-generating activity leads to higher rates of incarceration, especially for groups with a high baseline incarceration rate, including Black youth and youth from the most disadvantaged families.

To what extent do our results on welfare payments to low-income youth with disabilities speak to the effects of welfare payments more broadly—for example, the recently expanded Child Tax Credit or a universal basic income? At least two factors are relevant to this

assessment. The first is the extent to which the population of children receiving SSI benefits reflects the low-income child population more generally. We find that the SSI loss increases criminal justice involvement for youth with a wide range of disabilities, rather than being concentrated among youth with particular types of mental or intellectual disabilities. In fact, the largest effects are for youth with physical conditions—often conditions like asthma or cancer that may improve in adulthood—which suggests that our results may apply more broadly to low-income children. Moreover, the age 18 removal instrument estimates a local average treatment effect for youth with the least severe medical conditions who are deemed to have substantial capacity to work. This group is more similar to the general population than the average youth receiving SSI. A second issue is the extent to which the effects of losing SSI benefits after having received them as a child are symmetric to the effects of gaining cash benefits. Generalizing from our setting requires ruling out an endowment effect from receiving SSI benefits in childhood—e.g., that receiving SSI somehow discouraged achievement and primed children for criminal behavior in adulthood. Further research in this area will be important to determining whether new or expanded general welfare programs would decrease crime by the same magnitude.

## References

- Anderson, Helen A.**, “From the thief in the night to the guest who stayed too long: The evolution of burglary in the shadow of the common law,” *Ind. L. Rev.*, 2011, 45.
- Angrist, J. D. and J. S. Pischke**, *Mostly harmless econometrics*, Princeton university press, 2008.
- Arenberg, Sam, Sam Stripling, and Seth Neller**, “The Impact of Youth Medicaid Eligibility on Adult Incarceration,” *Working Paper*, 2020.
- Becker, Gary**, “Crime and Punishment: An Economic Approach,” *Journal of Political Economy*, 1968, 76 (2), 169–217.
- Belfield, Clive R, Milagros Nores, Steve Barnett, and Lawrence Schweinhart**, “The high/scope perry preschool program cost–benefit analysis using data from the age-40 followup,” *Journal of Human resources*, 2006, 41 (1), 162–190.
- BJS**, “Criminal Victimization, 2019,” *Working Paper*, 2020.
- , “Financial Fraud in the United States, 2017,” *Working Paper*, 2021.
- Blattman, Christopher, Julian C. Jamison, and Margaret Sheridan**, “Reducing crime and violence: Experimental evidence from cognitive behavioral therapy in Liberia,” *American Economic Review*, 2017, 107 (4), 1165–1206.
- Calonico, Sebastian, Matias D. Cattaneo, Max H. Farrell, and Rocio Titiunik**, “RDROBUST: Stata module to provide robust data-driven inference in the regression-discontinuity design,” *Statistical Software Components S458483*, 2018.
- Carr, Jillian B and Analisa Packham**, “SNAP benefits and crime: Evidence from changing disbursement schedules,” *Review of Economics and Statistics*, 2019, 101 (2), 310–325.
- Caulkins, J. P.**, “Cost of marijuana prohibition on the California criminal justice system,” *RAND Drug Policy Research Center Working Paper WR-763-RC*, 2010.
- CJISD**, “Percent of Offenses Cleared by Arrest or Exceptional Means by Population Group, 2019,” *Working Paper*, 2019.
- Corman, H., D. M. Dave, and N. E. Reichman**, “Effects of welfare reform on women’s crime,” *International Review of Law and Economics*, 2014, 40, 1–14.
- Deming, David**, “Early childhood intervention and life-cycle skill development: Evidence from Head Start,” *American Economic Journal: Applied Economics*, 2009, 1 (3), 111–34.
- Deshpande, Manasi**, “Does welfare inhibit success? The long-term effects of removing low-income youth from the disability rolls,” *American Economic Review*, 2016, 106 (11), 3300–3330.
- Desmond, Matthew**, *Evicted: Poverty and profit in the American city*, Crown, 2016.
- Dobkin, Carlos and Steven L Puller**, “The effects of government transfers on monthly cycles in drug abuse, hospitalization and mortality,” *Journal of Public Economics*, 2007, 91 (11-12), 2137–2157.
- Finkelstein, Amy, Nathaniel Hendren, and Erzo FP Luttmer**, “The value of medicaid: Interpreting results from the oregon health insurance experiment,” *Journal of Political Economy*, 2019, 127 (6), 2836–2874.
- Finlay, Keith and Michael Mueller-Smith**, “Inequalities in U.S. Criminal Justice and Economic Outcomes,” *Working Paper*, 2021.
- Foley, C Fritz**, “Welfare payments and crime,” *The review of Economics and Statistics*, 2011, 93 (1), 97–112.

- Fraker, Thomas, Arif Mamun, Todd Honeycutt, Allison Thompkins, and Erin Jacobs Valentin**, “Final report on the Youth Transition Demonstration evaluation,” 2014. Washington, DC: Mathematica Policy Research.
- Garces, Eliana, Duncan Thomas, and Janet Currie**, “Longer-term effects of Head Start,” *American economic review*, 2002, 92 (4), 999–1012.
- He, Qiwei and Scott Barkowski**, “The effect of health insurance on crime: Evidence from the Affordable Care Act Medicaid expansion,” *Health economics*, 2020, 29 (3), 261–277.
- Heller, Sara B**, “Summer jobs reduce violence among disadvantaged youth,” *Science*, 2014, 346 (6214), 1219–1223.
- Hemmeter, Jeffrey**, “Health-Related Unmet Needs of Supplemental Security Income Youth After the Age-18 Redetermination,” *Health Services Research*, 2011, 46 (4), 1224–1242.
- , **Jacqueline Kauff, and David Wittenburg**, “Changing circumstances: Experiences of child SSI recipients before and after their age-18 redetermination for adult benefits,” *Journal of Vocational Rehabilitation*, 2009, 30 (3), 201–221.
- Hendren, N. and B. Sprung-Keyser**, “A unified welfare analysis of government policies,” *The Quarterly Journal of Economics*, 2020, 135 (3), 1209–1318.
- Henrichson, Christian**, “The price of jails: Measuring the taxpayer cost of local incarceration,” New York: Vera Institute of Justice, 2015.
- and **Sarah Galgano**, “A guide to calculating justice-system marginal cost,” New York: Vera Institute of Justice, 2013.
- Hunt, Priscillia, James Anderson, and Jessica Saunders**, “The price of justice: New national and state-level estimates of the judicial and legal costs of crime to taxpayers,” *American journal of criminal justice*, 2016, 42 (2), 231–254.
- , **Jessica Saunders, and Beau Kilmer**, “Estimates of law enforcement costs by crime type for benefit-cost analyses,” *Journal of benefit-cost analysis*, 2018, 10 (1), 95–123.
- Jacob, Brian A and Lars Lefgren**, “Are idle hands the devil’s workshop? Incapacitation, concentration, and juvenile crime,” *American economic review*, 2003, 93 (5), 1560–1577.
- Jácome, Elisa**, “Mental Health and Criminal Involvement: Evidence from Losing Medicaid Eligibility,” *Working Paper*, 2020.
- Khanna, G., C. Medina, A. Nyshadham, and J. A. Tamayo**, “Formal employment and organized crime: Regression discontinuity evidence from Colombia,” *Working Paper*, 2021.
- Kling, Jeffrey R, Jens Ludwig, and Lawrence F Katz**, “Neighborhood effects on crime for female and male youth: Evidence from a randomized housing voucher experiment,” *The Quarterly Journal of Economics*, 2005, 120 (1), 87–130.
- Lee, David S and Justin McCrary**, *The deterrence effect of prison: Dynamic theory and evidence*, Emerald Publishing Limited, 2017.
- McCollister, Kathryn E., Michael T. French, and Hai Fang**, “The cost of crime to society: New crime-specific estimates for policy and program evaluation,” *Drug and alcohol dependence*, 2010, 108 (1–2), 98–109.
- Melander, E. and M. Miotto**, “Welfare cuts and crime: Evidence from the New Poor Law,” *University of Warwick, Centre for Competitive Advantage in the Global Economy, Department of Economics*, 2021.
- Miller, T. R.**, *Victim costs and consequences: A new look*, US Department of Justice, Office of Justice Programs, National Institute of Justice, 1996.

- Mitchell, Barry**, “Multiple wrongdoing and offence structure: a plea for consistency and fair labelling,” *The Modern Law Review*, 2001, 64 (3), 393–412.
- Mueller-Smith, Michael and Kevin Schnepel**, “Diversion in the Criminal Justice System,” *Review of Economic Studies*, 2021.
- and **Matthew Gross**, “Modernizing Person-Level Entity Resolution with Biometrically Linked Records,” *Working Paper*, 2021.
- Prisons Bureau**, “Annual Determination of Average Cost of Incarceration Fee (COIF),” *Review of Economic Studies*, 2019.
- Rossi, P. H., R. A. Berk, and K. J. Lenihan**, *Money, work, and crime: experimental evidence*, Elsevier, 2013.
- Rudowitz, R., S. Artiga, and R. Arguello**, “A look at Section 1115 Medicaid demonstration waivers under the ACA: A focus on childless adults,” *Kaiser Family Foundation*, 2013.
- The Vermont Center for Justice Research**, “Criminal Justice Consensus Cost-Benefit Working Group,” *Working Paper*, 2014.
- Tuttle, Cody**, “Snapping back: Food stamp bans and criminal recidivism,” *American Economic Journal: Economic Policy*, 2019, 11 (2), 301–27.
- U.S. Bureau of Economic Analysis**, “Regional Price Parities by State and Metro Area,” *BEA Data*, 2021.
- U.S. Bureau of Labor Statistics**, “Local Area Unemployment Statistics,” *LAU Databases*, 2021.
- U.S. Government Accountability Office**, “Supplemental Security Income. Preliminary Observations on Children with Mental Impairments,” *Highlights of GAO-12-196TT, testimony before the Subcommittee on Human Resources, Committee on Ways and Means, House of Representatives*, 2011.
- Vaghul, K. and B. Zipperer**, “Historical state and sub-state minimum wage data,” *Washington Center for Equitable Growth*, 2016.
- Yang, Crystal S**, “Does public assistance reduce recidivism?,” *American Economic Review*, 2017, 107 (5), 551–55.

# Appendix (for online publication)

## A Cost-Benefit Analysis

We use our estimates of the effect of SSI removal at age 18 on criminal charges and incarceration to estimate the costs and benefits to the government of removing young adults from SSI at age 18. We consider three types of cost savings: savings from reduced SSI payments, savings from reduced Medicaid costs, and tax revenues from higher earned income among those who are removed. The estimate for SSI payments comes directly from our IV estimates: each removal reduces SSI payments by \$37,700 over the next 21 years (no discounting applied). To estimate cost savings to Medicaid, we use our estimate of the effect of SSI removal on the likelihood of receiving SSI over the next 21 years, combined with estimates of the likelihood of losing Medicaid after leaving SSI (prior to the ACA Medicaid expansions) and estimates of the net cost of Medicaid to the government. We estimate that SSI removal decreases the annual likelihood of receiving SSI by 24 percentage points over the next 21 years. Hemmeter (2011) estimates that 96% of youth who remain on SSI after age 18 retain Medicaid access, compared to just 25% of those who leave SSI. Finkelstein et al. (2019) estimate that the net cost to the government of Medicaid is \$1,450 per recipient for the general low-income adult population; they argue that the net cost of Medicaid is much lower than the gross cost because the government still subsidizes health care for nominally uninsured individuals through charity care. To be conservative, we double this amount (\$2,900 per recipient per year) to account for the possibility that Medicaid might pay more on net for adults with disabilities than for the general adult population. Multiplying these three figures, we calculate that each SSI removal results in average annual Medicaid savings of \$494, which amounts to \$8,400 from 1997–2013 (since state Medicaid expansions began in 2014). The estimate for tax revenue (\$3,000) comes from multiplying our IV estimate of the effect of removal on earnings (\$1,420 annually over 21 years) by an assumed 10% tax rate. Note that for many young adults removed from SSI, the EITC and other progressive taxation might make their average tax rate zero or negative. Therefore a 10% tax rate is likely a conservative assumption.

We consider two types of costs to the government: enforcement and court costs and correctional costs (including prison, jail, parole, and probation). We additionally consider victim costs, which are not a direct cost to the government but costs to society more generally. For all costs, we start with the IV estimates of the effect of SSI removal on specific types of crime by the 18-year-old as well as any siblings we observe, from Appendix Table B8. We use the following procedures to estimate each type of cost.

**Enforcement and court costs.** Appendix Table B12 details the calculation of enforcement and court costs. For each charge type, we start with our IV estimate of the effect of SSI removal on the number of charges for the 18-year-old and any observed siblings, from Appendix Table B8. Since enforcement costs begin at the time an offense is reported, we use estimates from a number of sources of the fraction of reported offenses that lead to a court charge, given in the second column (CJISD, 2019). The fraction ranges from 14% for burglary to 52% for assault. We scale up the original IV estimates to get these “corrected” IV estimates of the effect of SSI removal on reported offenses. For most charges, the price of investigation is around \$1,000–\$2,000, but costs are lower for drug possession (\$420) and much higher for violent crimes (e.g., \$10,700 for assault) (Caulkins, 2010; Hunt, Saunders and Kilmer, 2018). Multiplying the corrected IV estimates by the price of investigation gives total enforcement costs.

To calculate court costs, we use our original IV estimates of the effect of SSI removal on number charges and multiply by the price per prosecution for that charge type (The Vermont Center for Justice Research, 2014; Hunt, Anderson and Saunders, 2016). The price per prosecution is less variable than the price of investigation: the price for most charges is within a few hundred dollars of \$1,000, reflecting the modest amount of time spent per case in the U.S. justice system. The product is total court costs.

**Correctional costs.** Appendix Table B13 details the calculation of correctional costs. We use our estimates of the effect of SSI removal on the total number of days spent in prison, jail, probation, and parole by the 18-year-old and any observed siblings, over the 21 years following SSI removal, from Appendix Table B8. Prison time increases by 227 days, jail time by 70 days, probation by 349 days, and parole by 73 days. We multiply each of these types of corrections by their daily marginal cost from various sources: The cost is high for prison (\$94) and jail (\$104) and much lower for probation (\$3) and parole (\$7) (Henrichson and Galgano, 2013; Henrichson, 2015; Prisons Bureau, 2019). Multiplying the IV estimates by the price per day yields the total correctional costs. By far the largest cost is from prison time, since the IV estimate for prison days is large and the cost of prison is high.

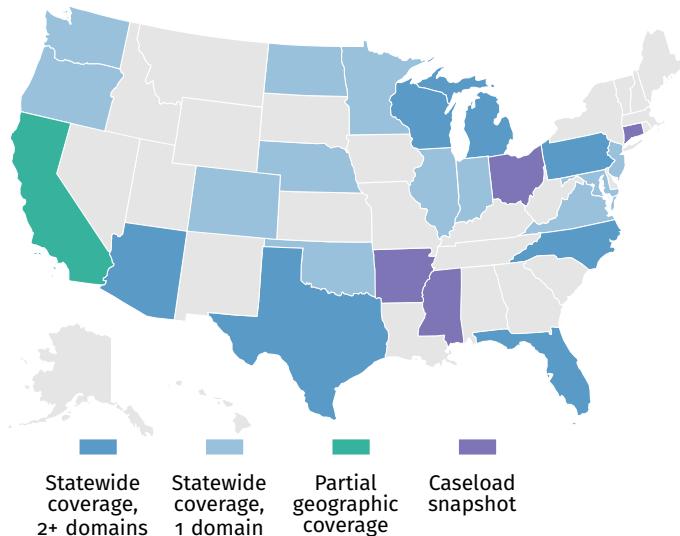
**Victim costs.** Appendix Table B14 details the calculation of victim costs. To get the total number of offenses (rather than just reported offenses), we scale up our IV estimates by estimates from other sources of the fraction of illicit acts that result in a charge (BJS, 2020, 2021). This fraction is smallest for charges that do not have a direct victim, such as drug crimes and prostitution, and largest for robbery (17%) and assault (22%). We scale up the original IV estimates to get “corrected” IV estimates that reflect the true number of offenses committed against victims. Finally, we multiply by victim cost per offense. We

take a conservative approach by 1) assuming that prostitution and drug crimes have no victim costs and 2) using lower bound estimates of the victim cost from Miller (1996) and McCollister et al. (2010) for the other offense types.

# Appendix Figures and Tables (for online publication)

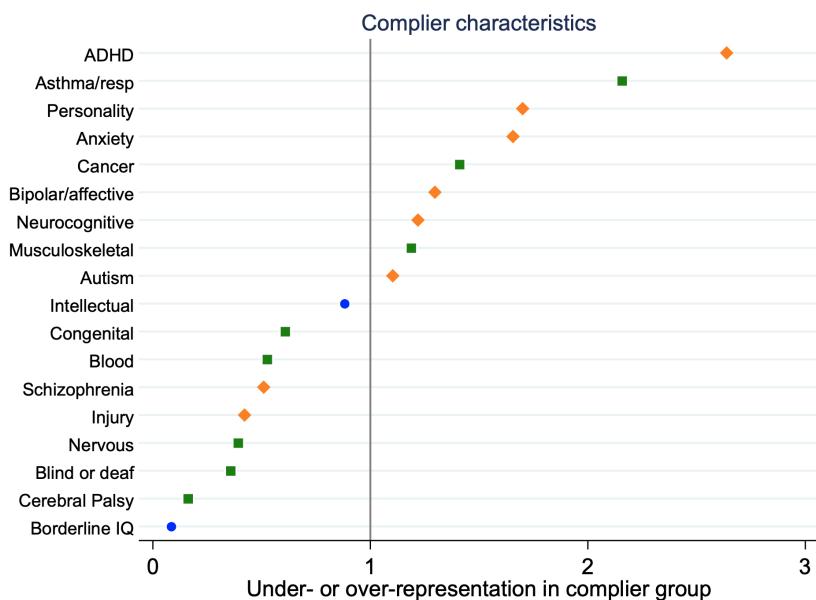
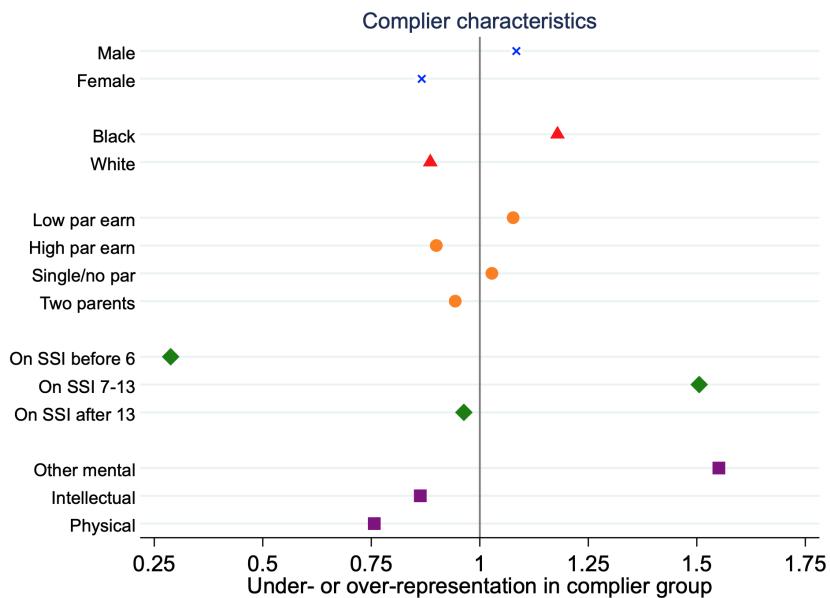
## B Appendix Figures and Tables

Figure B1: CJARS data coverage



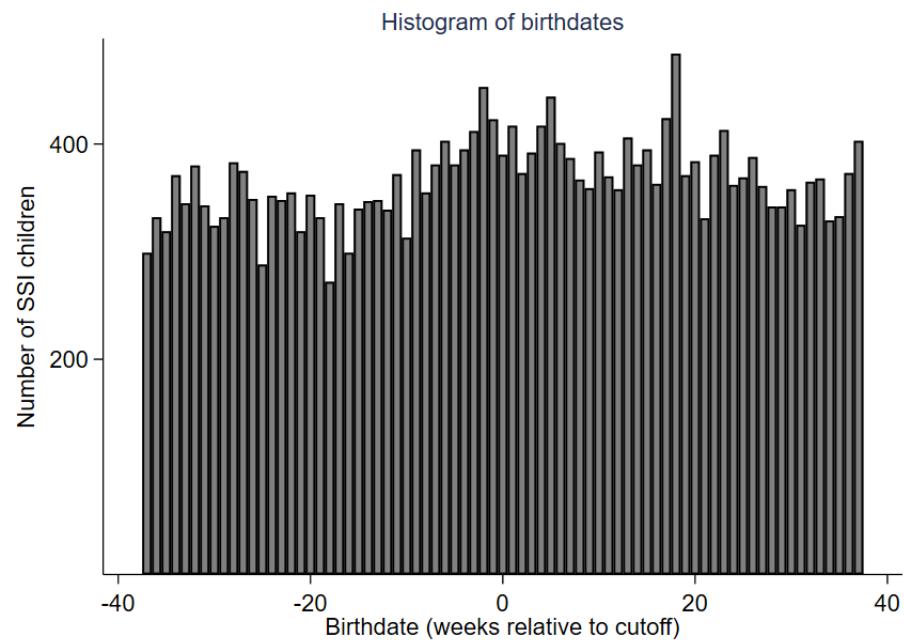
Notes: Map indicates states and localities included in the Criminal Justice Records System. “Statewide coverage” means having state criminal records over multiple years, the number of “domains” indicates court records or correctional records or both. “Partial geographic coverage” means having records from some local jurisdictions in the state over multiple years. “Caseload snapshot” means having point-in-time records from the state.

Figure B2: Characteristics of LATE “complier” population



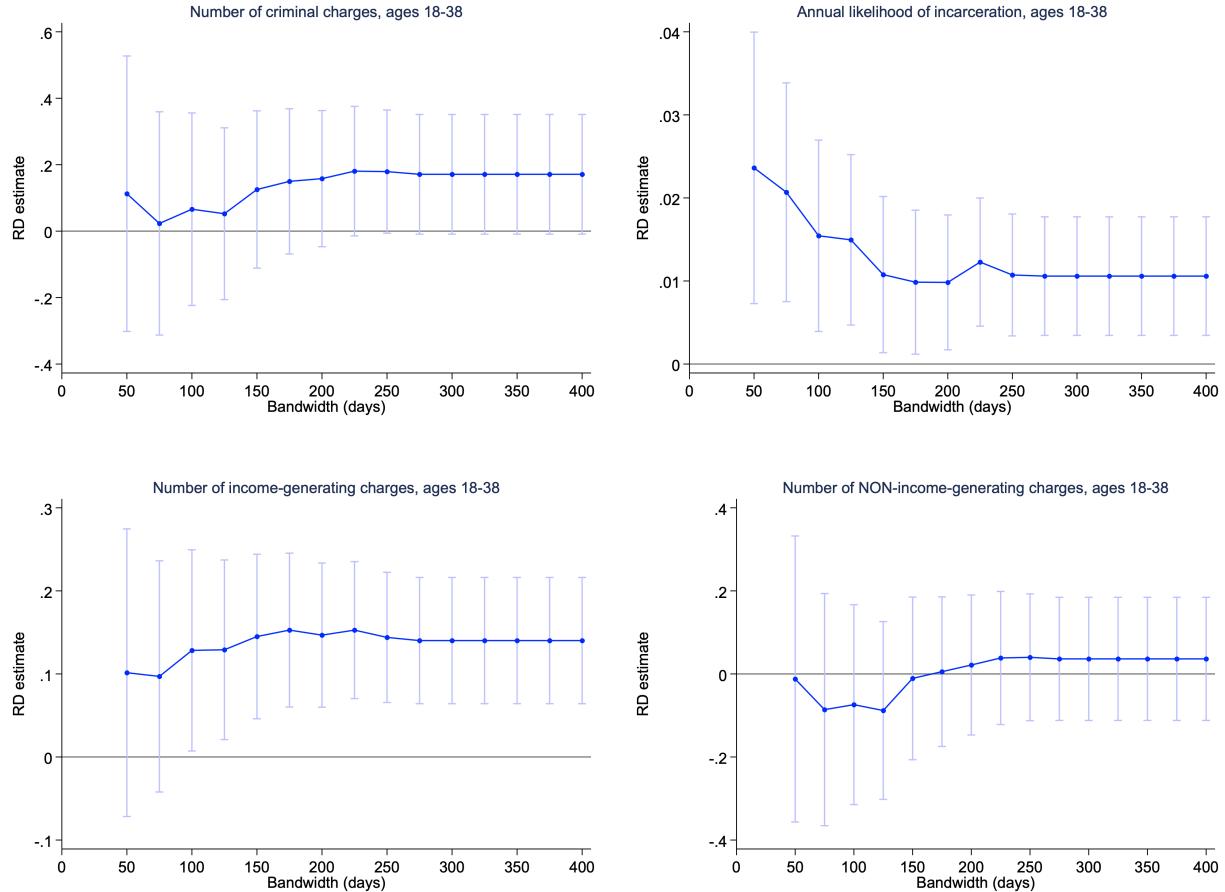
Notes: Figure plots complier ratios (for the instrument of having an 18th birthday after the August 22, 1996, cutoff, and the endogenous variable of receiving an unfavorable age 18 medical review) using the methodology from Angrist and Pischke (2008). The top graph shows under- and over-representation of demographic characteristics. “High/low parent earn” indicates children with parental earnings above/below the sample median (\$5,500 annually) when the child was between 12 and 17 years of age. The second graph shows under- and over-representation of diagnosis or body system code. Orange diamonds represent mental conditions, green squares represent physical conditions, and blue circles represent intellectual disabilities.

Figure B3: Test of validity: histogram of birthdate



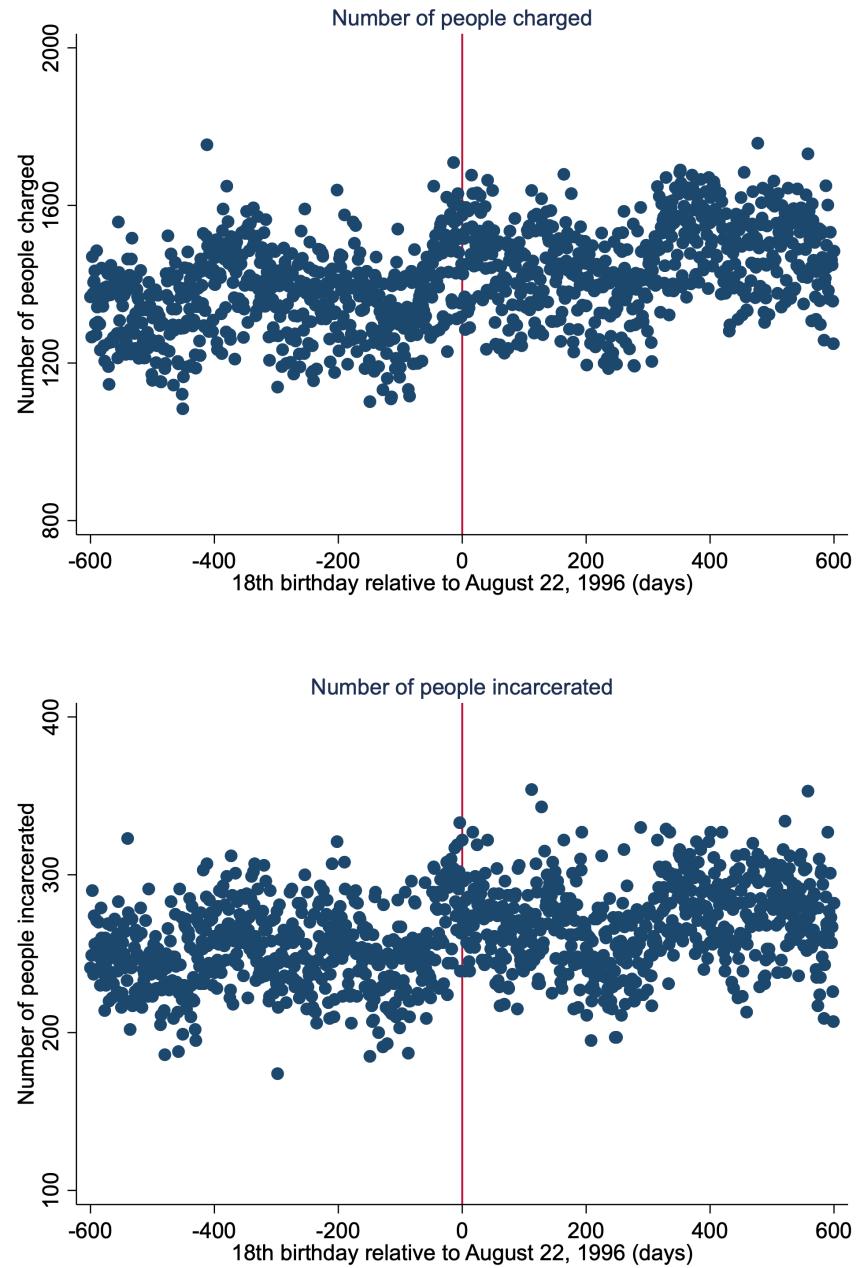
Notes: Histogram plots the frequency of 18th birthday relative to August 22, 1996. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

Figure B4: Robustness to alternative bandwidths



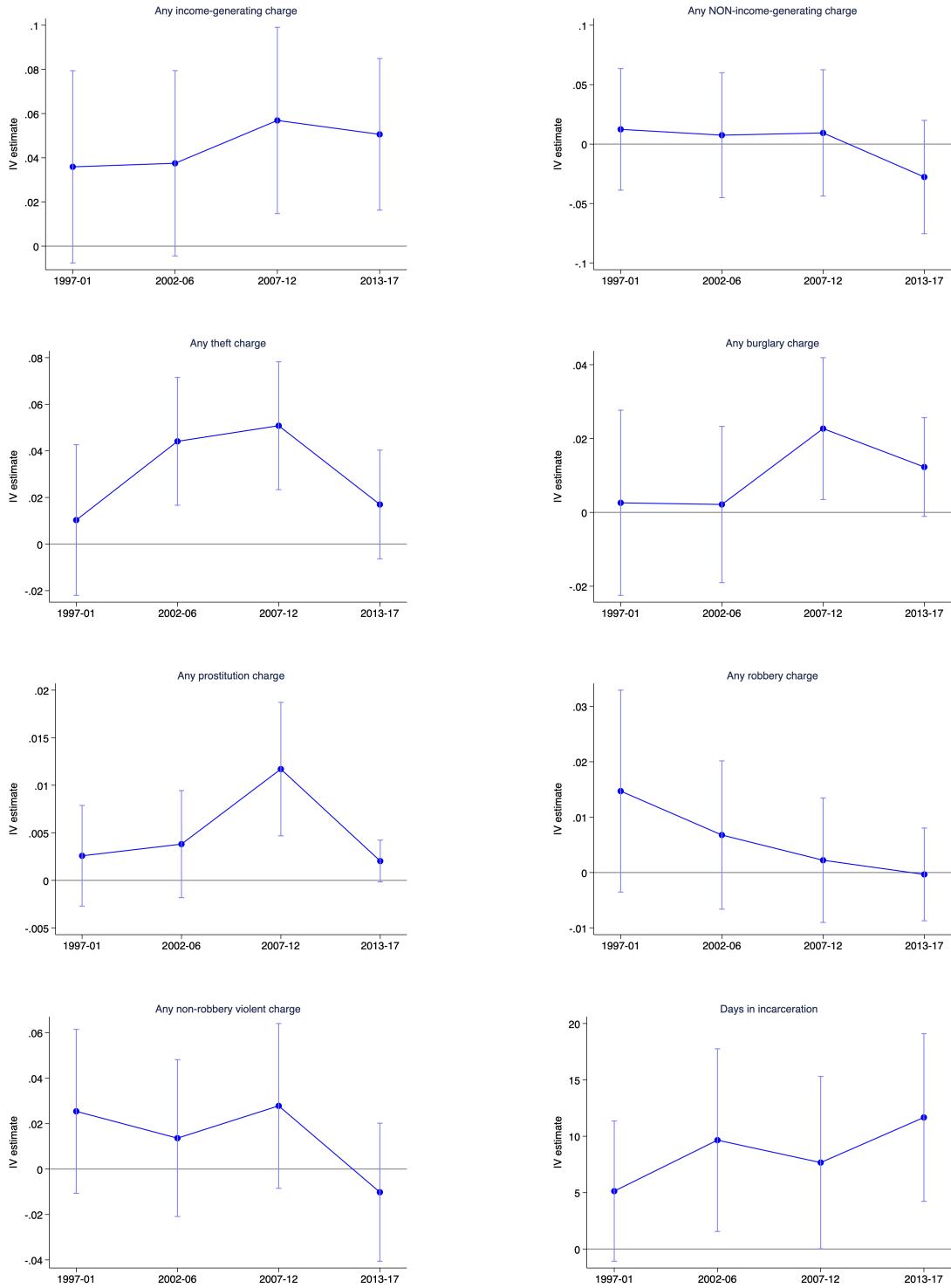
Notes: Figure plots parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured from ages 18–38 years ( $\beta$  from equation (1)), using different bandwidths. The outcomes are total number of charges from ages 18–38 years (top left) and the average annual likelihood of incarceration from ages 18–38 years (top right), total number of income-generating charges (bottom left), and total number of non-income-generating charges (bottom right). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. The sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage.

Figure B5: Trends in criminal charges and incarceration in general population



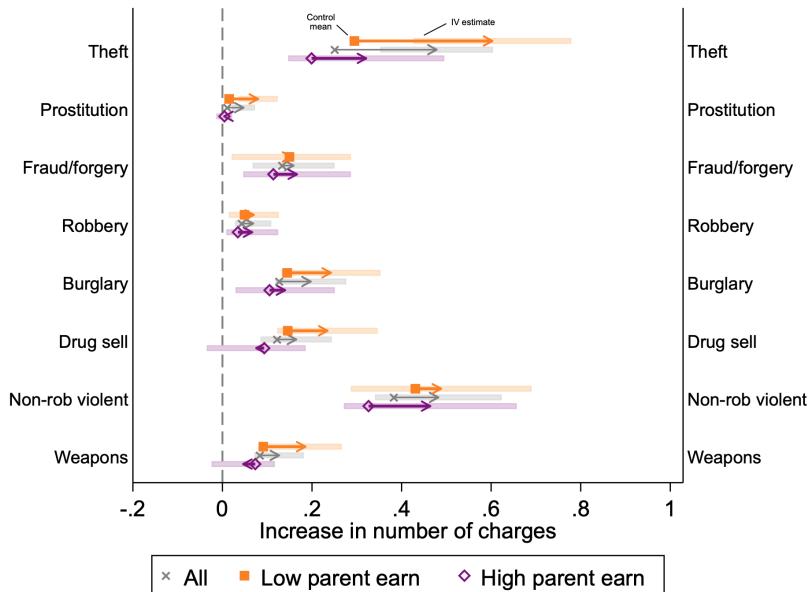
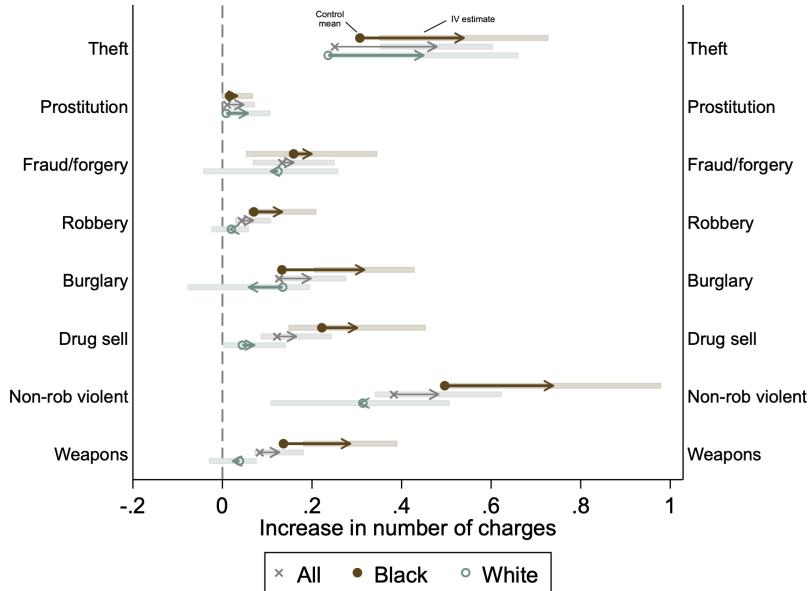
Notes: Top (bottom) graph plots the number of people charged (incarcerated) in the general population in states in our main sample, for individuals with an 18th birthday within 600 days of the August 22, 1996, cutoff. Data come from the Criminal Justice Administrative Records System (CJARS).

Figure B6: Effect of SSI removal on criminal outcomes by time period



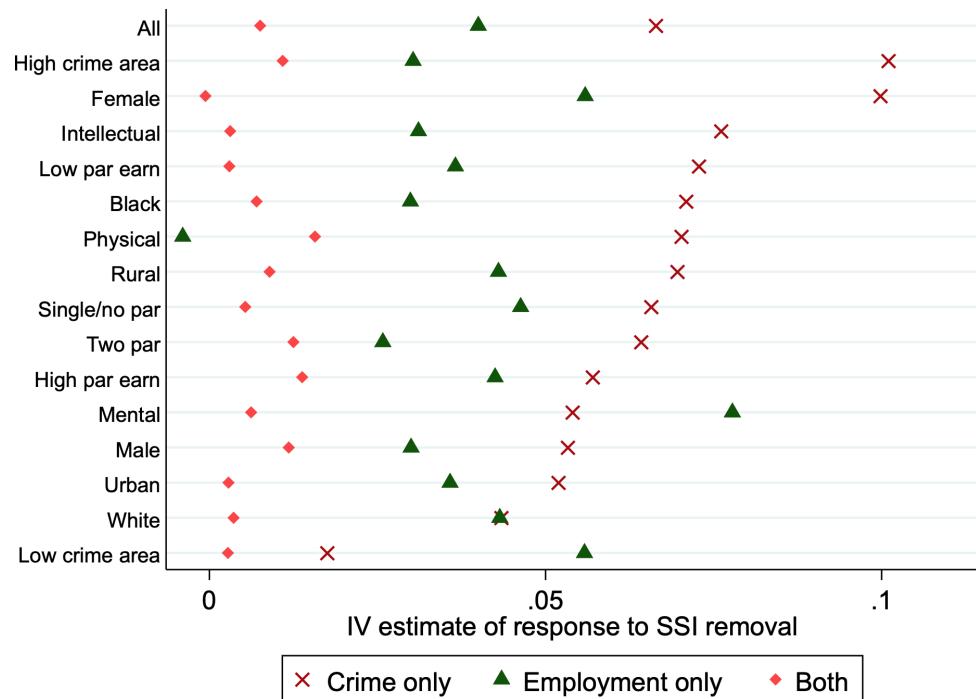
Notes: Figure plots IV estimates of the effect of receiving an unfavorable age 18 medical review on the outcome indicated across time periods. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

Figure B7: Heterogeneity in effects by subgroup



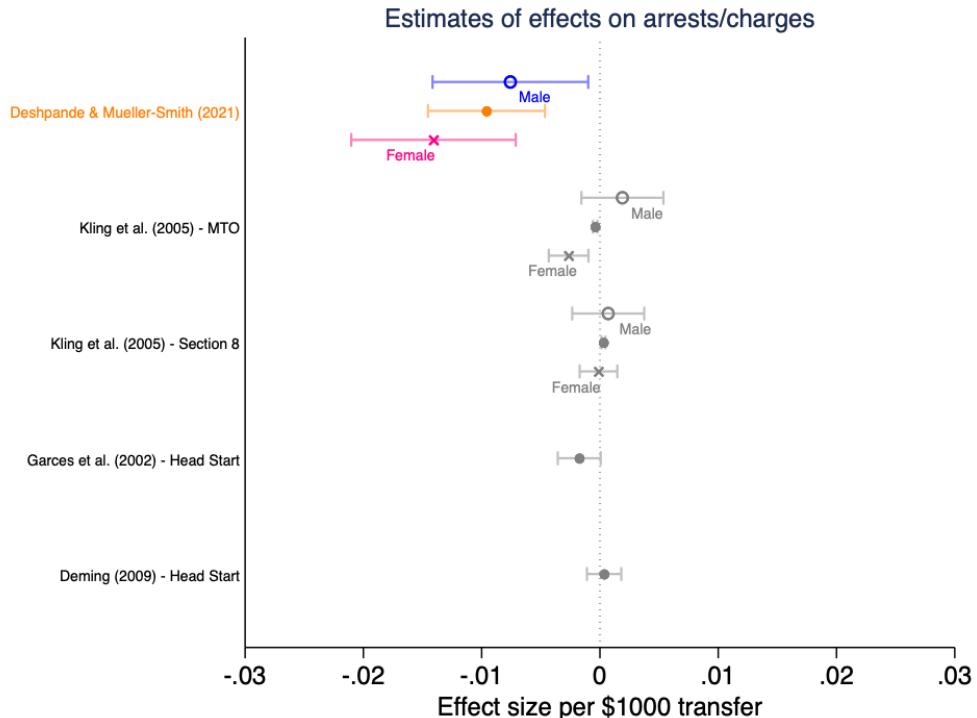
Notes: Figure plots change in number of charges from 1997–2017 for each crime resulting from SSI removal at age 18, by Black youth versus white youth (top graph) and by parent earnings (bottom graph). Each arrow starts at the control mean for that subgroup and ends at the control mean plus IV estimate of the effect of receiving an unfavorable age 18 medical review. Shaded bars represent confidence intervals. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

Figure B8: Effect of SSI removal on joint crime and employment outcomes by subgroup



Notes: Figure plots IV estimates by subgroup of the effect of receiving an unfavorable age 18 medical review on the joint likelihood of having a criminal charge for an income-generating crime from 1997–2017 and having annual earnings of at least \$15,000 (in 2012 dollars) in at least half of the years from 1997–2017. “Crime-only” indicates the outcome of having a criminal charge but not earning at least \$15,000 in at least one-half of years. “Employment-only” indicates not having a criminal charge and earning at least \$15,000 in at least one-half of years. “Both” indicates having a criminal charge and earning at least \$15,000 in at least one-half of years. “High/low parent earn” indicates children with parental earnings above/below the sample median (\$5,500 annually) when the child was between 12 and 17 years of age. Sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff who reside in a county with CJARS coverage.

Figure B9: Comparison of estimates to literature



Notes: Figure plots estimates of the annual effect size per \$1,000 transfer across papers. Our estimate of the effect of SSI removal, indicated as “Deshpande and Mueller-Smith 2021,” is the annualized version of the IV estimate of the effect of SSI removal on the number of criminal charges from Table 1 (and Appendix Tables B3 and B4). Estimates for Moving to Opportunity and Section 8 housing voucher come from Kling et al. (2005); the outcome is number of arrests (not charges) from a combination of administrative and survey data. Estimates for Head Start come from Garces et al. (2002) and Deming (2009). The outcome in Garces et al. (2002) is the self-reported likelihood of being booked or charged with a crime. The outcome in Deming (2009) is a composite measure of self-reported contact with the criminal justice system.

Table B1: Comparison table

	CJARS sample	Non-CJARS sample	t-test (p-value)
<b>Diagnosis</b>			
Infectious	0.039	0.037	0.2360
Endocrine	0.033	0.038	0.0002
Blood	0.010	0.010	0.5074
Mental	0.727	0.738	0.0004
Nervous	0.058	0.052	0.0001
Sensory	0.037	0.034	0.0267
Respiratory	0.010	0.011	0.0158
Musculoskeletal	0.013	0.012	0.7174
Congenital	0.012	0.011	0.1253
Missing	0.023	0.021	0.2331
Single mother	0.51	0.51	0.0569
No parent	0.16	0.15	0.0000
Age at SSI entry	11.29	11.47	0.0000
Ann. parent earnings, 1990-1995	\$13,522	\$12,262	0.0000
<b>N</b>	<b>28,843</b>	<b>53,122</b>	

Notes: Table presents summary statistics from the Supplemental Security Record (and Master Earnings File) for the Deshpande (2016) Age 18 sample, split by CJARS coverage status. “CJARS sample” indicates that the child lives in a county covered by the CJARS data, while “Non-CJARS sample” indicates that child does not live in a county covered by the CJARS data. The third column gives the p-value on the t-test of the difference in means between the samples.

Table B2: Covariate balance test

	Pt. Est.	Control mean	% diff
Demographic characteristics			
Male	0.015 (0.011)	0.62	2.44%
Age at entry	-0.025 (0.097)	11.6	-0.22%
Single parent	-0.001 (0.012)	0.50	-0.21%
No parent	0.003 (0.008)	0.17	1.87%
Diagnosis			
Mental	-0.0105 (0.01)	0.72	-1.47%
Nervous	0.006 (0.005)	0.06	10.86%
Sensory	0.003 (0.004)	0.03	8.51%
Infectious	-0.003 (0.004)	0.05	-6.35%
Endocrine	0.004 (0.004)	0.03	11.94%
Congenital	-0.003 (0.003)	0.01	-21.24%
Musculoskeletal	0.002 (0.003)	0.01	15.72%
Respiratory	0.001 (0.002)	0.01	12.33%
Blood	0.00083 (0.002)	0.0091	9.11%
Neoplasm	0.004 (0.002)	0.01	36.72%
Missing	-0.003* (0.002)	0.03	-10.69%
HH earnings (1990-95)	-803.5** (458.4)	\$12,022	-6.68%
N	28,843		
<i>p</i> -value on joint <i>F</i> -test		0.2833	

Notes: Table shows the estimate of  $\beta$  from equation (1) when the covariate indicated is put on the left-hand-side of the specification (and no additional covariates other than medical diary on the right-hand-side). The p-value is that from the joint F test of the null hypothesis that the covariate discontinuities are statistically different from zero.

Table B3: RD and IV estimates of criminal justice outcomes (men)

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
<b>First stage (N = 17,979)</b>						
Age 18 medical review	0.833*** (0.007)		0.002			
Unfavorable review	0.377*** (0.009)		0.001			
On SSI from ages 19-22	-0.153*** (0.009)		0.784			
<b>All crime</b>						
Any charge (N = 13,566)	0.029* (0.015)	0.076* (0.04)	0.467	0.175 (0.131)	0.453 (0.338)	2.681
Incarcerated (annual likelihood/days) (N = 16,839)	0.014** (0.006)	0.036** (0.015)	0.072	4.32** (1.741)	11.27** (4.541)	20.51
Incarceration/parole/probation (likelihood/days) (N = 14,113)	0.014 (0.014)	0.036 (0.036)	0.302	5.326 (3.43)	13.73 (8.830)	50.96
<b>Charges related to income-generating activity (N = 13,566)</b>						
Total	0.029* (0.015)	0.075* (0.039)	0.300	0.115** (0.054)	0.299** (0.139)	0.799
Burglary	0.008 (0.010)	0.022 (0.026)	0.099	0.038 (0.024)	0.099 (0.061)	0.193
Theft	0.031*** (0.012)	0.079*** (0.031)	0.147	0.078** (0.032)	0.203** (0.084)	0.320
Fraud/forgery	-0.006 (0.009)	-0.015 (0.024)	0.083	-0.028 (0.020)	-0.072 (0.052)	0.140
Robbery	0.011 (0.007)	0.029 (0.018)	0.044	0.009 (0.012)	0.023 (0.031)	0.068
Drug distribution	0.007 (0.010)	0.018 (0.027)	0.100	0.026 (0.023)	0.068 (0.060)	0.180
Prostitution	0.004** (0.002)	0.010** (0.004)	0.002	0.007*** (0.003)	0.018*** (0.007)	0.005
<b>Charges unrelated to income-generating activity (N = 13,566)</b>						
Total	0.011 (0.015)	0.028 (0.040)	0.441	0.063 (0.109)	0.163 (0.283)	2.116
Non-robbery violent	0.021 (0.014)	0.055 (0.036)	0.238	0.056 (0.039)	0.146 (0.101)	0.518
Disorderly conduct/obstruction/resisting arrest	0.022* (0.012)	0.057* (0.032)	0.163	0.069** (0.034)	0.180** (0.087)	0.338
Criminal trespass	0.004 (0.008)	0.009 (0.020)	0.059	0.041** (0.018)	0.106** (0.048)	0.082
Drug possession or paraphernalia	0.014 (0.013)	0.037 (0.034)	0.188	0.019 (0.041)	0.049 (0.107)	0.426
Driving under the influence	0.001 (0.008)	0.002 (0.021)	0.062	-0.019 (0.015)	-0.050 (0.039)	0.099
<b>Employment (N = 17,979)</b>						
Annual employment (earnings > \$5K/yr)	0.025*** (0.009)	0.067*** (0.023)	0.241			
Annual employment (earnings > \$15K/yr)	0.013* (0.007)	0.036* (0.018)	0.134			
Annual earnings				381.4 (266.6)	1011 (702)	\$5,442

Notes: Table presents, for men, parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured between ages 18–38 years ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. The sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage. “Extensive” indicates the likelihood of any charge (or, alternatively, incarceration spell or ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of incarceration spells or number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B4: RD and IV estimates of criminal justice outcomes (women)

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
<b>First stage (N = 10,864)</b>						
Age 18 medical review	0.887*** (0.008)		0.001			
Unfavorable review	0.332*** (0.012)		0.000			
On SSI from ages 19-22	-0.150*** (0.010)		0.882			
<b>All crime</b>						
Any charge (N = 8,202)	0.014 (0.018)	0.040 (0.053)	0.260	0.184* (0.108)	0.541* (0.316)	1.017
Incarcerated (annual likelihood/days) (N = 10,152)	0.006** (0.002)	0.016** (0.007)	0.007	1.659** (0.684)	4.904** (2.023)	1.913
Incarceration/parole/probation (likelihood/days) (N = 8,592)	0.009 (0.013)	0.026 (0.039)	0.113	4.037* (2.200)	12.08* (6.558)	12.21
<b>Charges related to income-generating activity (N = 8,202)</b>						
Total	0.046*** (0.015)	0.134*** (0.045)	0.145	0.188*** (0.051)	0.551*** (0.150)	0.346
Burglary	0.002 (0.006)	0.005 (0.016)	0.018	0.002 (0.009)	0.006 (0.025)	0.027
Theft	0.027** (0.012)	0.080** (0.035)	0.08	0.105*** (0.033)	0.308*** (0.097)	0.158
Fraud/forgery	0.028** (0.012)	0.083** (0.034)	0.064	0.064** (0.028)	0.188** (0.081)	0.128
Robbery	0.002 (0.004)	0.007 (0.011)	0.008	0.003 (0.006)	0.008 (0.017)	0.012
Drug distribution	0.002 (0.007)	0.007 (0.020)	0.025	0.006 (0.010)	0.018 (0.030)	0.036
Prostitution	0.006* (0.004)	0.018* (0.011)	0.006	0.028** (0.013)	0.082** (0.038)	0.018
<b>Charges unrelated to income-generating activity (N = 8,202)</b>						
Total	-0.003 (0.017)	-0.010 (0.050)	0.223	0.005 (0.083)	0.015 (0.241)	0.735
Non-robbery violent	0.001 (0.012)	0.002 (0.035)	0.092	-0.011 (0.025)	-0.033 (0.073)	0.151
Disorderly conduct/obstruction/resisting arrest	0.005 (0.011)	0.016 (0.032)	0.072	0.010 (0.026)	0.029 (0.077)	0.135
Criminal trespass	0.004 (0.006)	0.012 (0.018)	0.022	0.004 (0.010)	0.011 (0.029)	0.031
Drug possession or paraphernalia	0.016* (0.010)	0.048* (0.029)	0.054	0.062** (0.029)	0.183** (0.086)	0.107
Driving under the influence	0.002 (0.006)	0.005 (0.019)	0.02	0.004 (0.010)	0.013 (0.031)	0.028
<b>Employment (N = 10,864)</b>						
Annual employment (earnings > \$5K/yr)	0.033*** (0.010)	0.098*** (0.030)	0.177			
Annual employment (earnings > \$15K/yr)	0.020*** (0.007)	0.060*** (0.021)	0.080			
Annual earnings				721.7*** (252.3)	2175*** (748)	\$3,452

Notes: Table presents, for women, parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured between ages 18–38 years ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. The sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage. “Extensive” indicates the likelihood of any charge (or, alternatively, incarceration spell or ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of incarceration spells or number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B5: RD and IV estimates of criminal justice outcomes (by family background)

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
<b>Two parents (N = 7,121)</b>						
Any charge	0.035*	0.100*	0.330	0.223	0.645	1.663
	(0.020)	(0.058)		(0.143)	(0.411)	
Income-generating charge	0.029	0.085	0.202	0.113*	0.327*	0.526
	(0.018)	(0.052)		(0.060)	(0.174)	
Incarcerated (annual likelihood/days) (N = 9,021)	0.004	0.013	0.034	1.180	3.418	9.810
	(0.005)	(0.015)		(1.543)	(4.457)	
Annual employment (earnings > \$15K/yr) (N = 9,564)	0.018*	0.054**	0.122			
	(0.009)	(0.027)				
<b>Single/no parent (N = 14,647)</b>						
Any charge	0.016	0.042	0.414	0.136	0.359	2.216
	(0.015)	(0.038)		(0.117)	(0.310)	
Income-generating charge	0.036***	0.094***	0.258	0.149***	0.396***	0.671
	(0.014)	(0.036)		(0.050)	(0.131)	
Incarcerated (annual likelihood/days) (N = 17,970)	0.014***	0.037***	0.053	4.284***	11.40***	15.09
	(0.005)	(0.013)		(1.516)	(4.034)	
Annual employment (earnings > \$15K/yr) (N = 19,279)	0.014**	0.039**	0.109			
	(0.006)	(0.016)				
<b>High parent earn (N = 10,349)</b>						
Any charge	0.029*	0.085*	0.334	0.150	0.442	1.689
	(0.017)	(0.049)		(0.121)	(0.354)	
Income-generating charge	0.032**	0.094**	0.202	0.105**	0.310**	0.500
	(0.015)	(0.044)		(0.049)	(0.142)	
Incarcerated (annual likelihood/days) (N = 12,587)	-0.0002	-0.001	0.038	0.130	0.382	10.93
	(0.005)	(0.014)		(1.423)	(4.186)	
Annual employment (earnings > \$15K/yr) (N = 13,132)	0.022***	0.065***	0.125			
	(0.008)	(0.024)				
<b>Low parent earn (N = 11,535)</b>						
Any charge	0.016	0.041	0.434	0.181	0.460	2.348
	(0.017)	(0.042)		(0.136)	(0.344)	
Income-generating charge	0.035**	0.089**	0.274	0.170***	0.432***	0.734
	(0.016)	(0.040)		(0.059)	(0.150)	
Incarcerated (annual likelihood/days) (N = 14,505)	0.020***	0.052***	0.054	6.030***	15.49***	15.48
	(0.005)	(0.014)		(1.708)	(4.402)	
Annual employment (earnings > \$15K/yr) (N = 15,711)	0.010	0.026	0.104			
	(0.007)	(0.017)				

Notes: Table presents, by family background, parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured between ages 18–38 years ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. “Extensive” indicates the likelihood of any charge (or, alternatively, ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B6: RD and IV estimates of criminal justice outcomes (by race and diagnosis)

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
<b>White (N = 9,117)</b>						
Any charge	0.039** (0.018)	0.116** (0.053)	0.325	0.122 (0.129)	0.360 (0.378)	1.598
Income-generating charge	0.031* (0.016)	0.091* (0.047)	0.196	0.111** (0.056)	0.327** (0.165)	0.511
Incarcerated (annual likelihood/days) (N = 12,330)	0.004 (0.004)	0.011 (0.011)	0.031	1.355 (1.212)	3.946 (3.522)	8.710
Annual employment (earnings > \$15K/yr) (N = 12,835)	0.015* (0.008)	0.045* (0.023)	0.124			
<b>Black (N = 8,744)</b>						
Any charge	0.003 (0.019)	0.006 (0.046)	0.487	0.242 (0.159)	0.606 (0.397)	2.751
Income-generating charge	0.031* (0.018)	0.077* (0.046)	0.319	0.161** (0.067)	0.404** (0.167)	0.832
Incarcerated (annual likelihood/days) (N = 9,869)	0.021*** (0.007)	0.053*** (0.018)	0.072	6.172*** (2.287)	15.39*** (5.706)	20.60
Annual employment (earnings > \$15K/yr) (N = 10,529)	0.014* (0.008)	0.035* (0.019)	0.095			
<b>Intellectual (N = 10,174)</b>						
Any charge	0.014 (0.017)	0.044 (0.053)	0.369	0.202 (0.127)	0.630 (0.395)	1.857
Income-generating charge	0.020 (0.016)	0.063 (0.049)	0.227	0.094* (0.053)	0.294* (0.165)	0.584
Incarcerated (annual likelihood/days) (N = 12,578)	0.007 (0.005)	0.022 (0.016)	0.043	1.984 (1.525)	6.424 (4.931)	12.28
Annual employment (earnings > \$15K/yr) (N = 13,379)	0.014** (0.006)	0.047** (0.021)	0.078			
<b>Physical (N = 5,847)</b>						
Any charge	0.044** (0.021)	0.137** (0.066)	0.268	0.261* (0.142)	0.805* (0.437)	1.273
Income-generating charge	0.045** (0.019)	0.138** (0.057)	0.159	0.199*** (0.063)	0.616*** (0.196)	0.392
Incarcerated (annual likelihood/days) (N = 7,270)	0.008 (0.006)	0.024 (0.017)	0.029	1.895 (1.782)	5.666 (5.318)	8.408
Annual employment (earnings > \$15K/yr) (N = 7,885)	0.019* (0.011)	0.059* (0.033)	0.138			
<b>Mental (N = 5,747)</b>						
Any charge	0.018 (0.024)	0.037 (0.048)	0.540	0.039 (0.217)	0.079 (0.435)	3.125
Income-generating charge	0.049** (0.024)	0.099** (0.049)	0.346	0.155* (0.092)	0.314* (0.185)	0.929
Incarcerated (annual likelihood/days) (N = 7,143)	0.019** (0.009)	0.039** (0.017)	0.072	6.629** (2.765)	13.26** (5.539)	20.28
Annual employment (earnings > \$15K/yr) (N = 7,579)	0.016 (0.011)	0.032 (0.022)	0.146			

Notes: Table presents, by race and diagnosis, parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured between ages 18–38 years ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. “Extensive” indicates the likelihood of any charge (or, alternatively, ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B7: RD and IV estimates of criminal justice outcomes (siblings, 18-year-old plus siblings, parents)

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
<b>Sibling sample (N = 8,514)</b>						
Any charge	0.015 (0.020)	0.037 (0.049)	0.429	0.272* (0.164)	0.659* (0.397)	2.386
Income-generating charge	0.020 (0.018)	0.048 (0.044)	0.268	0.104 (0.068)	0.252 (0.164)	0.728
Non-income-generating charge	0.017 (0.020)	0.042 (0.048)	0.396	0.200 (0.136)	0.484 (0.329)	1.855
Incarcerated (annual likelihood/days) (N = 10,650)	0.013** (0.005)	0.031** (0.014)	0.045	3.487** (1.646)	8.704** (4.110)	12.60
<b>18-year-old and sibling sample (N = 22,078)</b>						
Any charge	0.019 (0.012)	0.051 (0.032)	0.457	0.276** (0.136)	0.748** (0.367)	3.069
Income-generating charge	0.030*** (0.011)	0.082*** (0.031)	0.299	0.179*** (0.052)	0.486*** (0.141)	0.901
Non-income-generating charge	0.007 (0.012)	0.019 (0.032)	0.426	0.116 (0.112)	0.314 (0.302)	2.420
Incarcerated (annual likelihood/days) (N = 27,268)	0.011*** (0.004)	0.029*** (0.011)	0.064	3.965*** (1.408)	10.80*** (3.839)	19.54
<b>Parent sample (N = 28,980)</b>						
Any charge	-0.005 (0.008)	-0.013 (0.022)	0.140	-0.022 (0.029)	-0.061 (0.081)	0.374
Income-generating charge	-0.003 (0.005)	-0.010 (0.015)	0.062	0.006 (0.013)	0.018 (0.035)	0.107
Non-income-generating charge	-0.006 (0.007)	-0.016 (0.020)	0.118	-0.031 (0.024)	-0.086 (0.066)	0.288
Incarcerated (annual likelihood/days) (N = 36,097)	0.001 (0.001)	0.002 (0.003)	0.004	0.210 (0.338)	0.591 (0.948)	1.184

Notes: Table presents, for various family members, parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). The “Sibling” sample is siblings (who themselves receive SSI) of SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage. The “18-year-old and sibling” sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage, plus their siblings who themselves receive SSI. The “Parent” sample is parents of SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage. “Extensive” indicates the likelihood of any charge (or ever incarcerated). “Intensive” indicates the number of charges (or number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B8: RD and IV estimates of criminal justice outcomes (18-year-old plus siblings)

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
All crime						
Any charge (N = 22,078)	0.019 (0.012)	0.051 (0.032)	0.457	0.276** (0.136)	0.748** (0.367)	3.069
Incarcerated (annual likelihood/days) (N = 27,268)	0.011*** (0.004)	0.029*** (0.011)	0.064	3.965*** (1.408)	10.8*** (3.839)	19.54
Incarceration/parole/probation (likelihood/days) (N = 22,705)	0.015 (0.011)	0.041 (0.029)	0.282	7.082** (3.093)	19.28** (8.415)	51.84
Charges related to income-generating activity (N = 22,078)						
Total (income generating)	0.03*** (0.011)	0.082*** (0.031)	0.300	0.179*** (0.052)	0.486*** (0.141)	0.901
Burglary	0.012 (0.007)	0.032 (0.02)	0.091	0.031* (0.019)	0.084* (0.051)	0.177
Theft	0.021** (0.009)	0.058** (0.025)	0.152	0.092*** (0.030)	0.249*** (0.081)	0.340
Fraud/forgery	0.004 (0.008)	0.011 (0.021)	0.101	0.011 (0.020)	0.029 (0.055)	0.192
Robbery	0.014** (0.005)	0.037** (0.015)	0.041	0.013 (0.010)	0.035 (0.026)	0.068
Drug distribution	0.008 (0.008)	0.023 (0.021)	0.099	0.029 (0.020)	0.078 (0.055)	0.191
Prostitution	0.003 (0.002)	0.008 (0.006)	0.005	0.008 (0.006)	0.022 (0.017)	0.011
Charges unrelated to income-generating activity (N = 22,078)						
Total (non-income generating)	0.007 (0.012)	0.019 (0.032)	0.426	0.116 (0.112)	0.314 (0.302)	2.420
Non-robbery violent	0.013 (0.011)	0.034 (0.028)	0.229			
Criminal trespass	0.004 (0.006)	0.010 (0.017)	0.059	0.037*** (0.014)	0.101*** (0.037)	0.081
Drug possession or paraphernalia	0.009 (0.010)	0.024 (0.026)	0.184	0.048 (0.035)	0.130 (0.096)	0.455
Driving under the influence	0.0001 (0.006)	0.0001 (0.017)	0.059	-0.0113 (0.012)	-0.0307 (0.033)	0.102

Notes: Table presents, for 18-year-old plus siblings, parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured over 1997–2017 ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. The sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage, plus their siblings who themselves receive SSI. “Extensive” indicates the likelihood of any charge (or, alternatively, incarceration spell or ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of incarceration spells or number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B9: RD and IV estimates of criminal justice outcomes (no covariates)

	Extensive			Intensive		
	RD Pt Est (SE)	IV Pt Est (SE)	Mean	RD Pt Est (SE)	IV Pt Est (SE)	Mean
<b>First stage (N = 27,220)</b>						
Age 18 medical review	0.854*** (0.005)		0.002			
Unfavorable review	0.362*** (0.007)		0.0004			
On SSI from ages 19-22	-0.154*** (0.007)		0.822			
<b>All crime</b>						
Any charge (N = 21,768)	0.023* (0.013)	0.063* (0.034)	0.387	0.162* (0.098)	0.437* (0.265)	2.041
Incarcerated (annual likelihood/days) (N = 26,991)	0.011*** (0.004)	0.029*** (0.010)	0.047	3.214*** (1.165)	8.722*** (3.164)	13.39
Incarceration/parole/probation (likelihood/days) (N = 22,705)	0.013 (0.011)	0.036 (0.029)	0.229	5.700** (2.513)	15.39** (6.778)	36.03
<b>Charges related to income-generating activity (N = 21,768)</b>						
Total	0.035*** (0.011)	0.095*** (0.031)	0.240	0.144*** (0.040)	0.388*** (0.107)	0.625
Burglary	0.006 (0.007)	0.016 (0.018)	0.068	0.025 (0.015)	0.067 (0.041)	0.129
Theft	0.030*** (0.009)	0.081*** (0.024)	0.121	0.091*** (0.024)	0.247*** (0.065)	0.258
Fraud/forgery	0.007 (0.007)	0.018 (0.020)	0.076	0.005 (0.017)	0.015 (0.045)	0.135
Robbery	0.008* (0.005)	0.022* (0.013)	0.030	0.007 (0.008)	0.019 (0.021)	0.046
Drug distribution	0.006 (0.007)	0.016 (0.019)	0.071	0.021 (0.015)	0.056 (0.042)	0.125
Prostitution	0.004*** (0.002)	0.012*** (0.005)	0.004	0.014*** (0.005)	0.037*** (0.014)	0.010
<b>Charges unrelated to income-generating activity (N = 21,768)</b>						
Total	0.005 (0.012)	0.014 (0.034)	0.357	0.025 (0.082)	0.068 (0.220)	1.585
Non-robbery violent	0.013 (0.010)	0.034 (0.028)	0.182	0.027 (0.027)	0.073 (0.074)	0.377
Disorderly conduct/obstruction/resisting arrest	0.015 (0.009)	0.040* (0.024)	0.128	0.046* (0.024)	0.125* (0.065)	0.260
Criminal trespass	0.004 (0.006)	0.010 (0.015)	0.045	0.027** (0.012)	0.072** (0.033)	0.062
Drug possession or paraphernalia	0.014 (0.009)	0.038 (0.025)	0.136	0.033 (0.029)	0.089 (0.078)	0.303
Driving under the influence	0.001 (0.006)	0.002 (0.015)	0.046	-0.011 (0.010)	-0.029 (0.028)	0.072
<b>Employment (N = 28,843)</b>						
Annual employment (earnings > \$ 5K/yr)	0.030*** (0.007)	0.084*** (0.019)	0.216			
Annual employment (earnings > \$ 15K/yr)	0.018*** (0.005)	0.049*** (0.014)	0.113			
Annual earnings				583.5*** (196)	1613*** (537)	\$4,676

Notes: Table presents parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured between ages 18–38 years ( $\beta$  from equation (1)). It also presents IV estimates of the effect of receiving an unfavorable age 18 medical review ( $\beta$  from equation (1) scaled up by the likelihood of an unfavorable medical review). No covariates are included in the specification other than medical diary (severity). The sample is SSI children with an 18th birthday within 10 months of the August 22, 1996, cutoff, located in counties with CJARS coverage. “Extensive” indicates the likelihood of any charge (or, alternatively, incarceration spell or ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of incarceration spells or number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B10: Non-parametric RD estimates of criminal justice outcomes (all, men, women)

	Extensive		Intensive	
	RD Pt Est (SE)	Mean	RD Pt Est (SE)	Mean
<b>All (N = 86,387)</b>				
Any charge	0.022 (0.016)	0.387	0.185 (0.123)	2.041
Income-generating charge	0.031** (0.014)	0.240	0.158*** (0.048)	0.625
Non-income-generating charge	0.003 (0.016)	0.357	0.049 (0.102)	1.585
Incarcerated (annual likelihood/days) (N = 106,471)	0.011** (0.005)	0.047	3.348** (1.389)	13.39
Annual employment (earnings > \$15K/yr) (N = 113,885)	0.015** (0.007)	0.113		
<b>Men (N = 53,906)</b>				
Any charge	0.041** (0.020)	0.467	0.175 (0.175)	2.681
Income-generating charge	0.026 (0.018)	0.300	0.103* (0.061)	0.799
Non-income-generating charge	0.015 (0.020)	0.441	0.077 (0.148)	2.116
Incarcerated (annual likelihood/days) (N = 66,465)	0.016** (0.007)	0.072	4.325** (2.117)	20.51
Annual employment (earnings > \$15K/yr) (N = 71,001)	0.014* (0.008)	0.134		
<b>Women (N = 32,481)</b>				
Any charge	0.008 (0.024)	0.260	0.199 (0.131)	1.017
Income-generating charge	0.048** (0.019)	0.145	0.203*** (0.061)	0.346
Non-income-generating charge	-0.008 (0.022)	0.223	-0.0003 (0.099)	0.735
Incarcerated (annual likelihood/days) (N = 40,006)	0.006** (0.003)	0.007	1.826** (0.754)	1.913
Annual employment (earnings > \$15K/yr) (N = 42,884)	0.011 (0.010)	0.080		

Notes: Table presents, for all, men and women, non-parametric RD estimates of the effect of having an 18th birthday just after the August 22, 1996, cutoff on outcomes measured between ages 18–38 years using the Stata program “rdrobust” (Calonico et al., 2018). Covariates include medical diary (severity), sex, first age of SSI receipt, body system code, family structure, parent earnings, and state. The sample is SSI children located in counties with CJARS coverage with an 18th birthday within the number of days that “rdrobust” selects. “Extensive” indicates the likelihood of any charge (or, alternatively, incarceration spell or ever incarcerated). “Intensive” indicates the number of charges (or, alternatively, number of incarceration spells or number of days incarcerated). “Mean” indicates the average outcome for individuals with an 18th birthday within 6 months to the left of the August 22, 1996, cutoff.

Table B11: Variation in effect of SSI removal on charges by geographic factors

Dependent variable: number of criminal charges in 2007–12 (Great Recession)								
	Baseline specification		By local unemployment rate		By local minimum wage		By local cost of living	
Post x Rate			-0.000208 (0.00437)	0.000185 (0.00435)	-0.00250 (0.0208)	-0.00345 (0.0208)	-0.0000261 (0.00103)	-0.0000616 (0.00102)
Post	0.0683*** (0.0175)	0.0666*** (0.0175)	0.0702* (0.0410)	0.0651 (0.0408)	0.0874 (0.161)	0.0930 (0.161)	0.0713 (0.104)	0.0731 (0.104)
Rate			-0.00158 (0.00306)	-0.0000907 (0.00366)	-0.0357** (0.0147)	0.0560** (0.0232)	-0.00290*** (0.000747)	-0.00240** (0.00117)
DOB	-0.000194** (0.0000804)	-0.000196** (0.0000808)	-0.000195** (0.0000803)	-0.000196** (0.0000808)	-0.000193** (0.0000804)	-0.000196** (0.0000808)	-0.000192** (0.0000854)	-0.000197** (0.0000851)
Post x DOB	0.000051 (0.000118)	0.0000529 (0.000118)	0.0000516 (0.000118)	0.0000529 (0.000118)	0.00005210 (0.000118)	0.000053 (0.000118)	0.0000399 (0.000126)	0.0000456 (0.000126)
Demographics	X	X	X	X	X	X	X	X
Age at entry FEs	X	X	X	X	X	X	X	X
Body system FEs	X	X	X	X	X	X	X	X
Severity FEs	X	X	X	X	X	X	X	X
State FEs		X		X		X		X
N	22,078	22,078	22,078	22,078	22,078	22,078	18,826	18,826

Notes: Table presents the estimates of how the RD effect varies by local unemployment rate, local minimum wage, and cost of living. In all specifications, the dependent variable is the number of criminal charges during the Great Recession period (2007–12). The first two columns (“Baseline specification”) present estimates from the standard RD specification, where “Post” is an indicator for having an 18th birthday after the August 22, 1997, cutoff. The next two columns (“By local unemployment rate”) interact “Post” with local area unemployment rate from 2007–12 (from U.S. Bureau of Labor Statistics (2021)). The next two columns (“By local minimum wage”) interact “Post” with local minimum wage in 2007–12 (from Vaghul and Zipperer (2016)). The final two columns (“By local cost of living”) interact “Post” with cost of living in 2008 (regional price parities from U.S. Bureau of Economic Analysis (2021)). Covariates include demographic characteristics (sex, family structure, and parent earnings), age at entry, body system code, and severity. State fixed effects are excluded from the first specification in each set of columns and included in the second specification.

Table B12: Cost-benefit analysis: enforcement and court cost of crime

	Enforcement cost					Court cost			Total
	Original IV estimate: Δ charges	% of reported offenses cleared by arrest	Corrected IV estimate: Δ reported offenses	Price per investigation	Total Enforcement Costs	IV estimate: Δ charges	Price per prosecution	Total Court Costs	
Burglary	0.08	14%	0.60	\$1,550	\$928	0.08	\$404	\$34	\$962
Theft	0.25	19%	1.35	\$1,332	\$1,802	0.25	\$492	\$122	\$1,924
Robbery	0.03	31%	0.11	\$2,895	\$328	0.03	\$936	\$32	\$360
Fraud/forgery	0.03	32%	0.09	\$1,354	\$120	0.03	\$456	\$13	\$133
Prostitution	0.02	n/a	0.02	\$1,354	\$30	0.02	\$456	\$10	\$40
Drug Dealing	0.08	n/a	0.08	\$786	\$61	0.08	\$1,064	\$83	\$144
Drug Possession	0.09	n/a	0.09	\$424	\$36	0.09	\$1,064	\$91	\$127
Sexual Assault	0.05	33%	0.14	\$25,230	\$3,589	0.05	\$3,311	\$155	\$3,744
Assault	0.114	52%	0.22	\$10,729	\$2,339	0.114	\$1,438	\$164	\$2,503
Trespass	0.101	17%	0.59	\$1,354	\$795	0.101	\$404	\$41	\$836
Total					\$10,028			\$746	\$10,774

Notes: Table presents enforcement and court cost of crime resulting from each SSI removal. For enforcement cost, it presents the original IV estimates of the change in the number of charges for different types of offenses for both the 18-year-old and observable siblings from Appendix Table B8. The original IV estimates are scaled by the fraction of reported offenses that lead to a charge, from CJISD (2019), to obtain the “corrected” IV estimates of the change in the number of reported offenses. Corrected IV estimates are multiplied by investigation costs adjusted to 2012 prices to obtain total enforcement costs. Burglary, theft, robbery, fraud/forgery, prostitution, sexual assault, assault and trespass investigation costs come from Hunt et al. (2018), and drug dealing and drug possession investigation costs come from Caulkins (2010). For court cost, the table presents the IV estimates of change in number of charges for different types of offenses. IV estimates are multiplied by prosecution costs adjusted to 2012 prices to obtain total court costs. Burglary, theft, robbery, fraud/forgery, prostitution, sexual assault, assault and trespass prosecution costs come from Hunt et al. (2016), and drug dealing and drug possession prosecution costs come from The Vermont Center for Justice Research (2014).

Table B13: Cost-benefit analysis: corrections cost of crime

	IV estimate: Δ days	Price per day	Total correctional costs
Total days in prison	227	\$94	\$21,280
Total days in jail	70.4	\$104	\$7,361
Total days on probation	349	\$3	\$1,033
Total days on parole	73	\$7	\$486
Total			\$30,160

Notes: Table presents prison cost of crime resulting from each SSI removal. It presents IV estimates of change in number of days in prison/jail or on probation/parole for both the 18-year-old and observable siblings from Appendix Table B8. IV estimates are multiplied by cost per day incarcerated adjusted to 2012 prices to obtain total correctional costs. Prison costs of crime come from Prisons Bureau (2019), jail costs of crime come from Henrichson (2015), and probation and parole costs of crime come from Henrichson and Galgano (2013).

Table B14: Cost-benefit analysis: victim cost of crime

	Original IV estimate: $\Delta$ charges	% of illicit acts $\rightarrow$ charges	Corrected IV estimate: $\Delta$ illicit acts	Price per offense	Total victim costs
Burglary	0.08	7%	1.21	\$2,225	\$2,694
Theft	0.25	5%	4.89	\$588	\$2,873
Robbery	0.03	17%	0.21	\$12,716	\$2,642
Fraud/forgery	0.03	5%	0.64	\$0	\$0
Prostitution	0.02	0.03%	70.06	\$0	\$0
Drug Dealing	0.08	0.02%	464.8	\$0	\$0
Drug Possession	0.09	0.02%	511.3	\$0	\$0
Sexual Assault	0.05	10%	0.48	\$138,287	\$66,909
Assault	0.11	23%	0.51	\$14,941	\$7,574
Trespass	0.10	8%	1.32	\$2,225	\$2,936
Total					\$85,628

Notes: Table presents victim cost of crime resulting from each SSI removal. It presents the original IV estimates of the change in the number of charges for different types of offenses for both the 18-year-old and observable siblings from Appendix Table B8. The original IV estimates are scaled by the fraction of total offenses reported to law enforcement (BJS, 2020, 2021) and the fraction of reported offenses resulting in arrest (CJISD, 2019) to obtain the “corrected” IV estimates of change in number of illicit acts. Corrected IV estimates are multiplied by victim cost per crime type adjusted to 2012 prices to obtain total victim costs. Victim costs of crime for all types of offenses in the table come from Miller (1996).