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ABSTRACT

The Intergenerational Effects of Requiring Unemployment Benefit Recipients to Engage in Non-Search Activities*

We use a quasi-experimental design and national administrative data to analyze the intergenerational effects of introducing non-search activity requirements for unemployment benefit recipients. The Mutual Obligations Initiative (MOI) required people aged 18-34 receiving unemployment benefits to undertake a range of non-search activities (e.g., volunteering, training) in addition to job search. The young adults (aged 23-28) we study were in early adolescence in 1999 when the MOI was introduced. Using a regression discontinuity approach, we find that those young adults whose fathers were subject to the MOI have a lower incidence of unemployment benefit receipt in comparison to those whose fathers were not. More detailed investigation suggests that completion of the mandated activities, role modeling, changes in attitudes, improved health, and greater support and stability are potential channels for this effect.

JEL Classification: J68, J64, J62

Keywords: Mutual Obligations Initiative, active labor market policy, unemployment, intergenerational treatment effects

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1 Introduction

Most OECD countries have a long history of trying to enhance the re-employment prospects of benefit recipients by adopting active labor market policies (Immervoll and Scarpetta, 2012). The receipt of unemployment benefits is often conditional, for example, on undertaking job search activities that have been shown to be effective in reducing benefit duration and/or raising the probability of finding new employment (e.g., Heckman et al., 1999; Card et al., 2010). Alternatively, benefit conditionality may take the form of mandatory participation in certain non-search activities, such as a training course or volunteering activity. Active labor market policies, such as these, aim to improve the economic and social participation of welfare recipients and maintain their skill levels. Recent evaluations of workfare policies generally find that they reduce benefit receipt in the short term (e.g., Richardson, 2002; Breunig et al., 2003; Dahlberg et al., 2009; Markussen and Røed, 2016; Bastiaans et al., 2019);[1] however, the impacts of these policies over the longer term are not well understood.

Importantly, we lack evidence on the consequences of active labor market policies for the children of benefit recipients. This is unfortunate since the social and economic returns to these activation policies will be partly shaped by any intergenerational spillovers in program impacts. For example, if benefit conditionality encourages parents to exit benefits and take up employment sooner, children's outcomes may be affected through the role models they see or changes in the time and financial investments made in them (Doepke and Zilibotti, 2017; Cobb-Clark et al., 2019). Understanding the intergenerational impact of active labor market programs is also critical in light of growing socioeconomic inequality worldwide (Keely, 2015). Rising inequality reduces social and economic mobility, making it harder for children to overcome the circumstances of their birth. We need to know whether policies targeting parents' benefit receipt are an effective tool for improving the outcomes of disadvantaged children.

We make an important contribution by using high-frequency, national administrative data and a quasi-experimental design to evaluate the intergenerational impact of an Australian activation policy on the unemployment experiences of young adults (aged 23–28) whose fathers were subject to the reform while youths were in early adolescence more than a decade earlier. Specifically, the 1999 Mutual Obligations Initiative (MOI) tightened eligibility for unemploy-

[1] An exception is Borland and Tseng (2011) who find that activation requirements come at a cost of less job search, leading to longer benefit durations.

ment benefits by expanding the work test for young (aged 18–34) long-term recipients to include non-search activities, such as training, volunteering, or part-time employment (Richardson, 2002); older (aged 35+) benefit recipients were exempted, allowing for a regression discontinuity design. We find that the MOI reduced the duration of fathers' unemployment benefits and—up to 14 years later—their young-adult children are also less likely to receive unemployment benefits. The per-person reduction in youths' unemployment benefit receipt (almost $800) is similar in absolute terms to the reduction in benefits among their fathers ($1,100) and is larger in relative terms.

We can rule out the possibility that the reductions in fathers' and young people's unemployment benefits result from substitution between welfare programs or that fathers' benefit reduction is accompanied by increased benefit receipt by mothers. At the same time, we find no evidence for fathers' reduced unemployment duration directly driving their children's reduction in benefits. Instead, our results point to the importance of exposure to the mandated engagement activities; effects are largest for those young-adult children of long-term unemployed fathers who were more likely to complete the activities. We also find evidence that fathers may serve as role models; effects are larger for children growing up in families in which fathers are more likely to be present. Additionally, effects are larger for sons than for daughters which is consistent with gender-specific role modeling as a channel through which boys are more influenced by their father's experiences than are girls.

Ancillary analyses of survey data for a subset of these young people suggest that the reduction in their benefit receipt may be linked to improved health, less support for generous unemployment benefits, stronger beliefs that having an education is important for getting ahead in life, greater parental financial support, and reduced instability in schooling or housing while growing up. Taken together, these findings add a novel and important dimension to impact evaluations of labor market reforms by demonstrating that activation measures can have long-lasting effects—even on future generations—which raises the social and economic returns from these policies.

Despite the conceptual importance of intergenerational effects for optimal policy design, the corresponding evidence base remains surprisingly underdeveloped. A recent article by Hoynes and Schanzenbach (2018) reviews the literature on the impact of access to social safety net

programs and concludes that there has been an overall positive effect of such policies on a wide range of child outcomes, including infant health, academic performance, and college attendance. This evidence suggests that recent budget cuts in social safety net programs may have lasting adverse effects on children in disadvantaged families. At the same time, an emerging literature on the intergenerational consequences of benefit dependency has produced quite consistent evidence that an increase in benefit generosity—which results in an increase in parental benefit receipt—leads to worse child outcomes, while a reduction in benefit generosity has the opposite effect (Dahl et al., 2014; Hartley et al., 2017; Dahl and Gielen, 2020; De Haan and Schreiner, 2018).

Our research makes several key contributions. First, we evaluate a nation-wide policy reform that generated exogenous variation in the degree of conditionality of parents' unemployment benefits using high-quality fortnightly administrative data over two decades. As such, our study is the first to provide evidence on the long-term, intergenerational impact of activation measures. Second, in contrast to the large literature on the link between in-utero or early-childhood experiences and child outcomes (e.g., Almond et al., 2018), our study investigates the consequences of a change in parental circumstances that occurs during adolescence. There is no a-priori reason to believe that early childhood events would affect later life outcomes in a similar fashion to events that occur during later childhood, especially since adolescence is known as an important stage of physical and psychological development (Steinberg, 2014). Chetty et al. (2016), for example, find that the Moving to Opportunity experiment that offered disadvantaged families support in moving to low-poverty neighborhoods had opposite effects on long-term outcomes for adolescents over age 13 compared to younger children. Third, we shed light on the channels underpinning intergenerational disadvantage by investigating whether requiring unemployed parents to engage in non-search activities is a policy lever for improving the labor market outcomes of the next generation. Taken together, our results demonstrate the relevance of parent-child interactions in intergenerational welfare receipt and highlight the need to consider the intergenerational consequences of labor market policies. Finally, we make an important contribution by focusing on the role of fathers in their children's development—"a topic that has generally been neglected in the literature" (Almond et al., 2018, p. 1439).

2 Institutional Background and Policy Change

In Australia, unemployment benefits are funded from general tax revenue rather than through direct employer-employee contributions as is the case in countries such as Canada and the United States. Unemployment benefits form a key component of the overall social safety net which provides targeted benefits to a broad cross-section of the population across the lifecycle (see Whiteford, 2010). Australia's proportion of gross domestic product spent on public social spending cash transfers is less than the OECD average (OECD, 2019); nearly 80 percent of public social cash spending occurs through income and asset-tested benefits—a share that is nearly three times that in the United States and the United Kingdom (OECD, 2014).

This institutional context is particularly appealing for studying the questions at hand for two reasons. First, eligibility for unemployment benefits is not contingent on past work experience. Exits from unemployment benefits are thus more likely to reflect re-employment rather than the exhaustion of benefit eligibility, making it easier to interpret our results. Second, unemployment benefits are administered as part of the overall social safety net by a single agency, allowing us to observe them in conjunction with all other welfare payments paid to the same individuals.

The principle of mutual (or reciprocal) obligations emerged in the 1990s as part of a broader process of Australian welfare reform. Activity tests had always been a feature of the unemployment benefit system; however, with the adoption of the mutual obligations principle, the activity test was gradually widened beyond the traditional job search requirement to also require recipients to engage in non-search activities. "Just as it is an ongoing responsibility of government to support those in genuine need, so also it is the case that—to the extent that it is within their capacity to do so—those in receipt of such assistance should give something back to society in return, and in the process improve their own prospects for self-reliance." (Prime Minister John Howard, 1999).

Formally embedding this principle in law, the Mutual Obligations Initiative (MOI) took effect on July 1, 1998. Young job seekers (aged 18–24) in receipt of unemployment benefits for at least six months were for the first time required to participate in an approved training or volunteering activity in addition to looking for work (Richardson, 2002). One year later, the Australian Government further strengthened its commitment to mutual obligations as a guiding principle in the provision of welfare support. Specifically, the MOI was extended in

July 1999 to: (i) also apply to job seekers between the ages of 25–34 on unemployment benefits for 12 months or more; (ii) increase the hours requirement for volunteering or paid part-time work; and (iii) double the number of Work for the Dole places available (Raper, 2000).[2]

In the intervening years, the MOI has been progressively applied to older job seekers as well as to those receiving other forms of welfare support.[3] Job seekers' mutual obligation requirements can be met through a wide range of activities including training, part-time study, work experience, volunteering, and career counselling. Penalties—primarily reductions and/or suspensions of benefits—apply for noncompliance.[4] Our analysis exploits the age-discontinuity generated by the 1999 expansion in the scope and coverage of the MOI to identify the causal effect of the stricter work test requirements on fathers' and their young-adult children's unemployment benefit receipt.

Previous researchers have demonstrated that the introduction of various mutual obligation requirements impacted job seekers' transitions out of unemployment—though not always in the ways anticipated by policy makers. Borland and Tseng (2011), for example, conclude that participation in the 1997 Work for the Dole scheme (a precursor to the MOI) was associated with a large and statistically significant reduction—rather than increase—in the chances of exiting unemployment benefits. They hypothesize that this adverse outcome was the result of a lock-in effect due to the time required to complete specific Work for the Dole activities. There is evidence that the MOI was effective in increasing unemployment exits for both younger (aged 18–24) and older (aged 46–49) job seekers; however, much of this occurred through a threat effect rather than participation in mutual obligation activities themselves (Richardson, 2002; Lim, 2008). These findings are consistent with international evidence that suggests that much of the reduction in benefit duration in response to mandatory reemployment services in the United States operates through early exits from benefits rather than the program itself (Black et al., 2003). Finally, although mutual obligations were meant to be compulsory for certain job seekers, in practice take-up rates were well below 100 percent (Richardson, 2002; Lim, 2008).

[2]Work for the Dole places job seekers in work-like activities, usually at not-for-profit organizations or government agencies, where they can gain skills and work experience as well as give back to the community.

[3]Specifically, the MOI was extended in 2002 to apply to all long-term job seekers under the age of 50.

[4]Details of the emergence of the mutual obligations principle and its adoption in Australian social policy are provided in Saunders et al. (2000), Richardson (2002), and Borland (2014). Current mutual obligation requirements can be found on the website for the Department of Human Services (www.humanservices.gov.au).

3 Data

3.1 Transgenerational Data Set

While the responsibility for the development of Australian social policy is shared across several policy-focused departments (e.g., health, education, employment, social services, etc.), the responsibility for administering the nation's social security system lies with a single department—the Department of Human Services—through its agency known as Centrelink. As a consequence, Australian social security (Centrelink) records provide high-frequency payment information for the universe of Australians receiving any social security benefit from the government.

We rely on the 2014 version of the Transgenerational Data Set (TDS2-E) constructed by the Department of Social Services (DSS).[5] The TDS2-E was constructed by using Centrelink records to identify all young people born between October 1987 and March 1988 who ever had contact with the social security system between 1993 (age 5–6) and 2013 (age 25–26). Young people are in the administrative data if they receive benefits themselves. Most, however, are in the data because a family member (usually a parent) received at least one Centrelink payment between 1993 and 2005 (i.e., before the young person turned 18) that depended in part on his or her relationship to the focal youth. Australian social security benefits are nearly universal for families with young children. Therefore, comparing our administrative data to census data suggests that over 98 percent of young people born between October 1987 and March 1988 are captured in the TDS2-E data (Breunig et al., 2009). The TDS2-E also includes data for some of the youths' siblings.

We then link the welfare receipt of these young people in their early twenties to that of the families in which they grew up. Biological relationships are not observed in the Centrelink data; however, we do know the person who had the primary caring responsibility for the youth at every point in time up until the youth turned 18 years old. This allows us to identify the people who had the longest duration of primary care and are most likely to be biological parents.[6]

[5]Multiple versions of the Transgenerational Data Set have been constructed over the years. The initial Transgenerational Data Set was constructed in the 1990s and was the basis for the early work of DSS staff on intergenerational disadvantage (McCoull and Pech, 2000; Pech and McCoull, 2000). In the early 2000s, a second version of the data (TDS2) was created and matched to survey data as part of the Youth in Focus (YIF) project which ended in 2008 (Breunig et al., 2009). In 2014, the TDS2 data were extended (referred to as TDS2-E) to include updated administrative records for the period 2008–2013, which is the version we use. The data window closes on January 2, 2014 so, for simplicity, we refer to the data window as all years up to and including 2013.

[6]This strategy has been used in previous research. Selecting the person who had the longest duration of primary care, and in cases of ties, targeting mothers using an algorithm based on gender and age, successfully identifies mothers (biological parents) in 96.5 (98.6) percent of cases (Breunig et al., 2009).

In total, the TDS2-E data includes 126 million fortnightly Centrelink payments between 1996 and 2013. Of these, 29 percent are means-tested welfare payments, with the remaining 71 percent being other types of transfer payments that need not be income- or asset-tested.[7]

3.2 Sample and Key Variables

In our sample we include all young people born between 1985 and 1990 who are between ages 23 and 28 at the end of our observation window in 2013.[8] This approach effectively extends our data around the focal youths to also capture their slightly younger or older siblings, while still ensuring a relatively homogeneous sample. We then match every youth to their primary male carer ("fathers") by selecting the male among the two primary carers with the longest duration of care for the youth. We focus our primary analysis on fathers because they are more likely to receive unemployment benefits. Mothers usually qualify for more generous benefits, based on their caring responsibilities, while children and adolescents are present in the household.[9] Nonetheless, we match young people to their primary female carer ("mothers") to account for mothers' information in our analyses. We conduct ancillary analyses of mothers' benefit receipt in order to assess the extent of benefit substitution between parents (see Section 6.2).

We focus our analysis on paternal unemployment during youths' entire adolescence (i.e., between the youth's 12^{th} and 18^{th} birthday). The presence of siblings in our data implies that we observe some fathers multiple times; therefore, we cluster standard errors at the father-level in all analyses. The MOI was neither targeted at, nor effective in, reducing the flow of people onto unemployment benefits (the extensive margin), but it did effectively reduce the duration of benefit receipt (the intensive margin; see Richardson, 2002; Lim, 2008). Consequently, we condition our sample on fathers who receive unemployment benefits at some stage during their child's adolescence. This approach allows us to focus purely on the intensive margin of unemployment by analyzing the MOI's effect on fathers' overall benefit duration and total benefit receipt. Specifically, we construct four measures of fathers' duration on unemployment benefits, capturing (i) the total number of weeks on unemployment benefits (regardless of the

[7]For example, some payments, such as the Child Care Benefit, have no income test at all and others, such as the Family Tax Benefit, are denied only to families in the top quintile of the income distribution. Similar benefits in the United States are provided to families through the tax system in the form of standard deductions for dependent children and child care rebates.

[8]We exclude young people who died before the end of our observation window, which constitute less than 1 percent of our final data set. There is no selective mortality either for youths or for fathers due to the reform.

[9]In June 1999, 47 percent of male income support recipients received unemployment payments compared to only 17 percent of all female income support recipients (Department of Family and Community Services, 2001).

number of spells), and indicators for whether the total time exceeds (ii) three months, (iii) six months, and (iv) 12 months.[10] We construct a measure of total benefit receipt by calculating the total dollars of unemployment benefits fathers receive during their child's adolescence, measured in 2013 constant AUD ($). We provide definitions for all variables in Appendix Tables A.1 and A.2, and summary statistics for our unemployment outcomes in Appendix Table A.3. Fathers in our sample spend on average 81 weeks of their child's adolescence receiving unemployment benefits: 77 percent of them exceed a total of three months, 65 percent exceed a total of six months, and 48 percent exceed a total of 12 months. On average, their benefits amount to $18,792 over the six-year period.

Young people in our sample become fully eligible for unemployment benefits at the age of 21.[11] For this reason, we focus on unemployment benefit receipt from age 21 onwards constructing (i) an indicator for whether young adults receive unemployment benefits at some point; (ii) the total number of weeks on unemployment benefits (regardless of the number of spells); and (iii) the total dollars received, again measured in 2013 constant AUD ($). Although we focus on a homogeneous five-year birth cohort of youths, we also control for year of birth (of the youth) fixed effects to account for time-varying macroeconomic conditions and the fact that youths' age differences result in disparities in the opportunity to accumulate unemployment experience. Therefore, in addition to an aggregate measure of benefit receipt at any age, we truncate every youth's experience at each age from 23 to 26 and present these statistics separately.[12] Depending on their age, approximately 19 to 29 percent of young people receive unemployment benefits in early adulthood (see Appendix Table A.3). Young people are unemployed for 19 weeks on average receiving a total of $5,204 in benefits. We illustrate our data construction and the periods over which unemployment benefit outcomes are measured graphically in Appendix Figure A.1.

Our final sample consists of 48,897 unique youth-father pairs (from 30,086 unique fathers). We provide an overview of key demographic variables in Appendix Table A.4. Eleven percent of our youth-father pairs include an Indigenous father and fathers were on average 29 years old

[10] In additional analyses, we consider measures based on spells of unemployment benefit receipt.

[11] Between the ages 16 and 20, job seekers are entitled to receive Youth Allowance Jobseeker. Eligibility for Youth Allowance Jobseeker depends in part on their parents' income.

[12] In this approach, we drop every young person who has not yet reached the age of interest by end of 2013. Thus, our sample size decreases the higher the age at which we consider the outcomes. As we observe only a small share of our sample until ages 27 and 28, we do not consider those ages separately from the aggregate measures.

at their child's birth. Mothers were younger, on average, at their child's birth (26 years), but again the proportion of Indigenous mothers makes up 11 percent of our sample. In 68 percent of cases, the youth's parents are still coupled when the MOI was introduced. Most young people have fathers who care for multiple children.[13] Half of the young people in our sample have fathers who received unemployment benefits between 1996 and 1999 prior to the introduction of the MOI, and in 13 percent of cases the father received family income support (i.e., Family Tax Benefits or Family Payment and Family Allowance) prior to the MOI. In contrast, only 4 percent of young people have mothers receiving unemployment benefits before the introduction of the MOI; instead 83 percent have mothers who were receiving family income support. Young people are on average 26 years old at the end of our data window; 49 percent are women and 14 percent are Indigenous.

4 Empirical Strategy

4.1 Regression Discontinuity Design

We use a sharp Regression Discontinuity (RD) Design to identify the MOI's effect on unemployment benefit receipt of both fathers and their young-adult children. Our analysis exploits the age-discontinuity generated by the 1999 expansion in the scope and coverage of the MOI. Men who were unemployed long-term and born on July 1, 1964 or after were required to engage in an approved mutual obligation activity; unemployed men born before July 1, 1964 were not. We use this discontinuity to evaluate the impact of subjecting unemployed fathers to stricter work tests on both their own and their young-adult children's unemployment experiences. It is worth noting two things about the age-discontinuity we exploit. First, fathers could age out of the additional requirements when turning 35 years old. Second, the MOI was extended to all long-term job seekers under the age of 50 only three years later. Both will attenuate estimates based on the 1999 MOI age-discontinuity leading us to expect our results to be conservative lower-bound estimates.

We denote the outcome of interest by $Y_i(1)$ if the father of the youth-father pair i is initially subject to the MOI and by $Y_i(0)$ if he is not. Our running variable is the father's date of birth

[13]The number of children includes all children the father is ever observed to care for, for FTB (Family Tax Benefits) or FPA (Family Payment and Family Allowance) purposes in our data observation window. Thus, these children may have been born either before or after the introduction of the MOI.

(DOB_i), which we normalize to be centered around the cut-off: $X_i = DOB_i - 07/01/1964$. Fathers born on the cut-off date, July 1, 1964, or later are initially subject to the MOI (treatment group) whereas fathers born earlier are not (control group). For fathers of the young people born between October 1987 and March 1988—the majority of our sample—this cut-off corresponds to being 23 years old when the youth was born. To identify the MOI's effect, we wish to estimate $\mathbb{E}[Y_i(1) - Y_i(0)|X_i = 0]$, which we can express as:

$$\tau_{\text{RD}} = \mathbb{E}[Y_i(1) - Y_i(0)|X_i = 0] = \lim_{x \downarrow 0} \mathbb{E}[Y_i|X_i = x] - \lim_{x \uparrow 0} \mathbb{E}[Y_i|X_i = x] \equiv \mu_- - \mu_+. \tag{1}$$

To estimate τ_{RD}, we fit local polynomials to either side of the cut-off using data within a chosen symmetric bandwidth h and with Kernel function $k(\cdot)$. Our preferred specification is a local linear regression (LLR), i.e., a polynomial of order one, with a triangular kernel. Following the notation of Calonico et al. (2014), where $\mu^{(1)}$ denotes the first derivative of μ, we thus estimate:

$$\begin{aligned}
\hat{\tau}_{\text{RD}} =& \hat{\mu}_+(h) - \hat{\mu}_-(h), \text{ where} \\
\left(\hat{\mu}_+(h), \hat{\mu}_+^{(1)}(h)\right)' =& \underset{b_0, b_1 \in \mathbb{R}}{\arg\min} \sum_{i=1}^{n} \mathbf{1}_{(X_i \geq 0)} (Y_i - b_0 - X_i b_1)^2 k\left(\frac{X_i}{h}\right) \\
\left(\hat{\mu}_-(h), \hat{\mu}_-^{(1)}(h)\right)' =& \underset{b_0, b_1 \in \mathbb{R}}{\arg\min} \sum_{i=1}^{n} \mathbf{1}_{(X_i < 0)} (Y_i - b_0 - X_i b_1)^2 k\left(\frac{-X_i}{h}\right).
\end{aligned} \tag{2}$$

To choose the bandwidth, h, we apply the data-driven bandwidth selection proposed by Calonico et al. (2014) that is mean-squared-error (MSE) minimizing for optimal point estimation. In all our results, we report the estimated coefficient $\hat{\tau}_{\text{RD}}$, but rely on robust statistical inference that applies a bias correction and takes into account this correction's contribution to the variability of the bias corrected point estimator. As a result, confidence intervals are not centered around the reported coefficients, $\hat{\tau}_{\text{RD}}$, and the corresponding t-statistics are rescaled (for details, see Calonico et al., 2014; Cattaneo et al., 2019).[14]

To account for age differences in our sample and varying macroeconomic conditions, we control for cohort (birth year) fixed effects for youth in all our estimations. In addition, we consider alternative specifications in Section 5.3 and show that our results are robust to: (i)

[14]For this reason, we provide robust p-values rather than standard errors in all results tables. The bandwidth applied in the bias correction for obtaining these robust p-values is also MSE-minimizing but may differ from the main bandwidth applied in the estimation of the point estimate. We only report the number of observations from the estimation of the point estimate chosen by the main bandwidth. We perform all regression discontinuity estimations using the STATA package `rdrobust` (see Calonico et al., 2017, for details).

the inclusion of a broader set of control variables; (ii) the use of higher polynomial orders; (iii) the choice of the kernel; and (iv) different bandwidth selections.

4.2 Identifying Assumptions

We now discuss the key maintained assumptions that are required for the above empirical strategy to result in estimates that can reasonably be given a causal interpretation. First, it is important that selection into our sample is not itself driven by the MOI. Young people and their fathers are in our database because either young people themselves or one of their siblings were born between October 1987 and March 1988. The selection of this cohort is unrelated to the MOI's timing. Importantly, we only include young people born between 1985 and 1990—more than nine years before the reform—in our sample. We also condition our analysis on fathers who are unemployed at some point during their child's adolescence because the MOI was targeted specifically at the long-term unemployed. We investigate the validity of this sample restriction by using the full set of available youth-father pairs to estimate the effect of the MOI reform on an indicator for whether fathers received any unemployment benefits during their child's adolescence. The coefficient from this estimation is positive (see Table 1), but is economically small (1.7 percentage points) and statistically insignificant.[15] Thus, the MOI had no effect on the probability of fathers experiencing any unemployment during their child's adolescence, supporting our strategy of focusing on unemployed fathers as our sample of interest.

Table 1: Fathers' Unemployment Benefit Receipt During Youths' Adolescence

	Incidence (Dummy) (1)
RD Estimate	0.017
	(0.407)
Obs. Control	39273
Obs. Treatment	16807

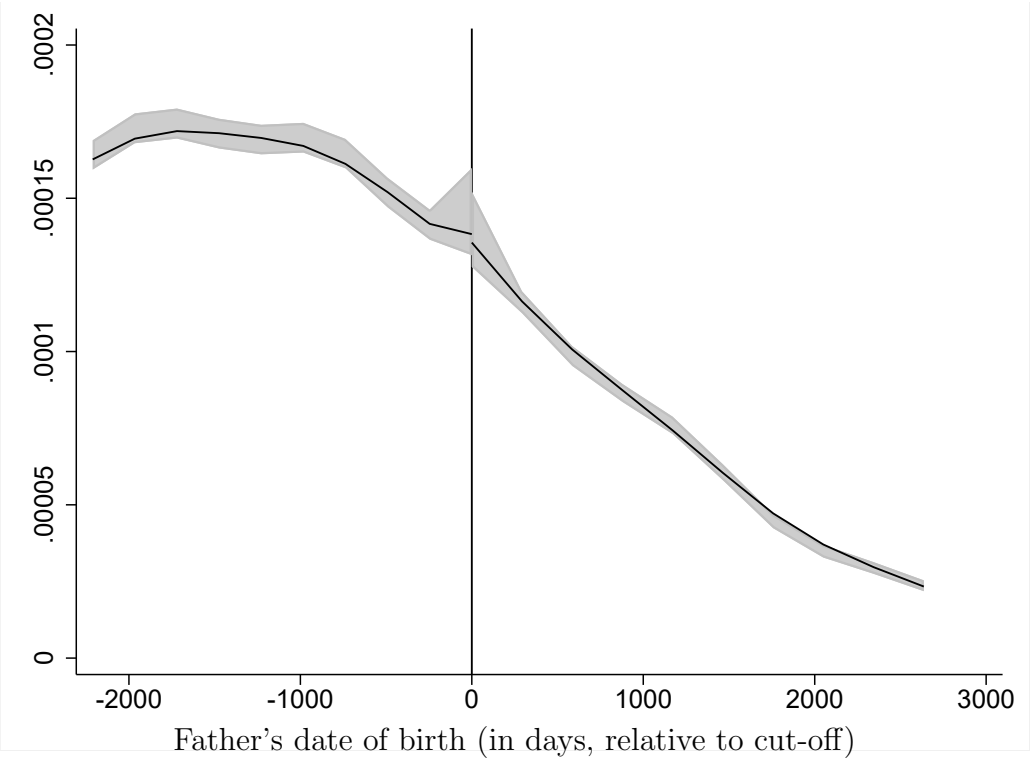
Note: TDS2-E unconditional on fathers' unemployment benefit receipt, local linear regression discontinuity estimation of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-value in parenthesis. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1044 and 1212 days). *p<0.1, **p<0.05, ***p<0.01.

Second, it is crucial that people cannot manipulate their assignment to the treatment or the control group by altering their position with respect to the cut-off. Since our running variable is the date of birth of fathers, assignment is arguably exogenous and outside fathers' control. To

[15] In comparison, the average incidence of unemployment benefit receipt in the full sample is 21 percent.

support this argument and ensure that our sample selection is truly unrelated to fathers' date of birth, we present a density plot of fathers' date of birth centered around the cut-off in Figure 1. The displayed point estimates together with 95 percent confidence intervals suggest there is no discontinuity in the density of observations around the cut-off. We formally confirm this with a local polynomial density estimation that yields a robust p-value of 0.564. Thus, we fail to reject the null hypothesis, which implies that there is no statistical evidence of manipulation at the cut-off.

Figure 1: RD Manipulation Test Using Local Polynomial Density Estimation



Note: TDS2-E Analysis Sample, point estimate with 95% confidence interval. Corresponding RD Manipulation test using local polynomial density estimation of order 2 with triangular kernel based on 5323 effective control and 4634 effective treatment observations yields a robust p-value 0.5637.

Finally, the RD estimation relies on individuals close to the cut-off being otherwise similar across control and treatment groups. Since assignment to either group cannot be manipulated, we have no conceptual reason to expect that control and treated individuals are different around the cut-off birth date. Still, we empirically test whether this assumption is reasonable by estimating the effect of the MOI reform on a wide range of observable characteristics which are largely predetermined. The results reveal that there are no statistically significant discontinuities around the cut-off in the demographic characteristics of fathers (Indigenous status, age at childbirth, marital status, total number of children), mothers (Indigenous status, age

at childbirth), and young people (gender, Indigenous status, age at data end) (see Appendix Table A.4). In two cases, the year and month of birth indicators for the youth are statistically significant at 10 percent (or lower); however, there is no systematic pattern overall and these exceptions are fully expected when testing for a large range of variables at conventional significance levels. Importantly, fathers' and mothers' receipt of both family income support and unemployment benefits prior to the MOI reform is fully balanced at the cut-off between control and treatment groups.

Thus, we are persuaded that our setting and data provide an excellent opportunity for using an RD design to estimate causal effects.

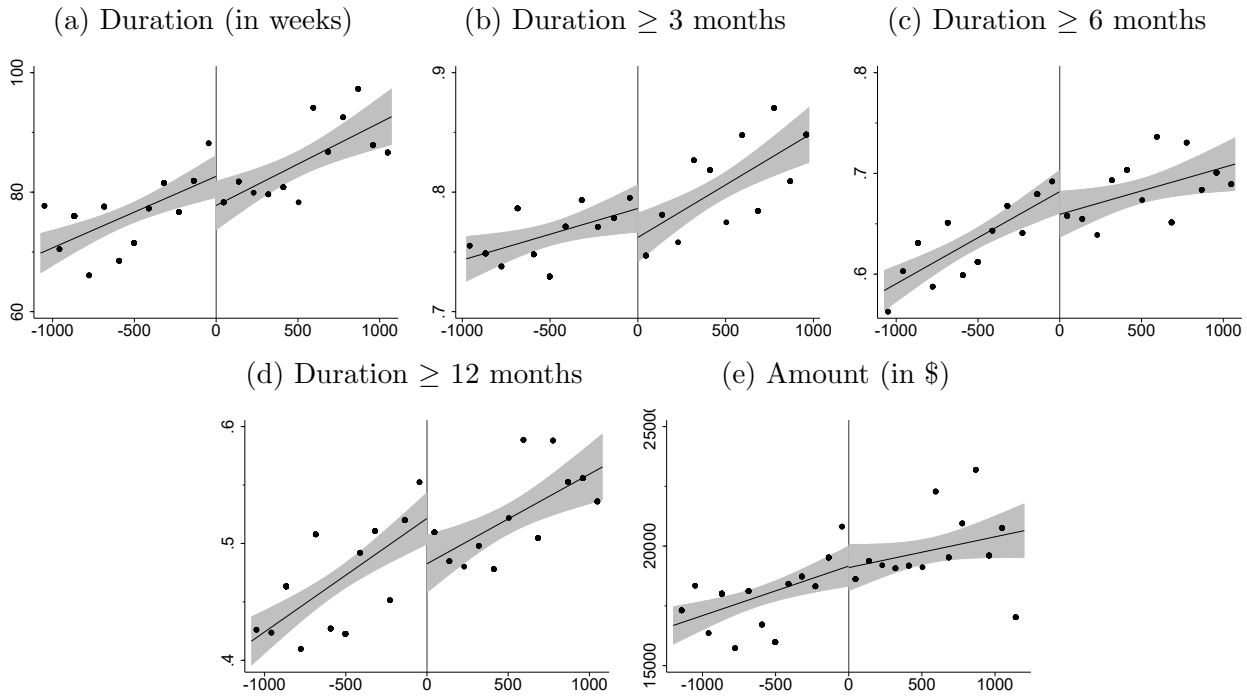
5 Results

5.1 Effect on Fathers

In this section, we consider the effect of the MOI reform on fathers' unemployment benefit receipt. We begin with a graphical depiction of our key outcomes by fathers' date of birth. The relationship between the reform and the intensity of fathers' unemployment benefit receipt during their children's adolescence is shown in Figure 2. The sample is comprised of fathers who received unemployment benefits at some point in that period. The running variable is the father's birth date relative to the cut-off date; all fathers born on or after July 1, 1964 (denoted as relative date of birth = 0 in the figure) were initially subject to the 1999 MOI and would thus be required to engage in an approved mutual obligation activity once they had received benefits for over 12 months. We include a linear trend on either side of the cut-off in each figure and aggregate means into paternal birth date bins at the quarter level.

The duration of unemployment benefit receipt increases with fathers' birth date (see Panel (a)). Younger fathers spend more weeks on unemployment benefits than older fathers during their children's adolescence. This is not surprising given our focus on the fathers of young people born between 1985 and 1990. This implies that fathers to the right of the cut-off (i.e., born after July 1, 1964) were at most 26 years old when their child was born. Due to potential selection into young parenthood as well as the education and career interruption associated with child rearing, we might expect these younger fathers to generally have less education, poorer career prospects and, consequently, a greater dependency on unemployment benefits

Figure 2: Fathers' Unemployment Benefit Receipt During Youths' Adolescence, Linear Fit



Note: TDS2-E Analysis Sample within symmetric MSE-minimizing bandwidths from main RD estimations for each outcome. Linear fit and 95% confidence interval, means at quarterly level.

than fathers who have children later in life. This pattern re-emphasizes the need for the RD design which allows us to account for this age pattern. Importantly, there is a sharp drop in benefit receipt duration to the right of the cut-off, implying that those eventually subject to mutual obligation activities receive unemployment benefits for a shorter period of time.

We illustrate the MOI's effect on indicators of various unemployment durations in Panels (b) to (d). Although we also observe a reduction in the likelihood of fathers born after the cut-off receiving unemployment benefits beyond three and beyond six months, this drop appears statistically significant only for total durations of at least 12 months. Finally, we see little to no effect of the age cut-off on the overall amount of unemployment benefits received (Panel (e)). RD graphs with a quadratic trend show similar patterns and provide even stronger evidence of an age-discontinuity across all unemployment benefit outcomes (see Appendix Figure A.2).

We present the regression results corresponding to Figure 2 in Table 2.[16] On average, the time spent on unemployment benefits is more than seven weeks shorter for those who may become subject to a mutual obligation activity requirement (column 1); this amounts to a 9 percent reduction in the duration of benefit receipt compared to the mean.[17] Moreover, the likelihood of receiving unemployment benefits for at least three months is 3.2 percentage points (4 percent) lower for fathers subject to the MOI (column 2), while the chances of receiving benefits for at least 12 months is 4.3 percentage points (9 percent) lower (column 4). Consistent with these effects on benefit duration, the amount of unemployment benefits received over the six years of children's adolescence is around $1,100 (or 6 percent compared to the mean) lower for fathers affected by the reform, although this effect is not significant at the conventional levels (column 5).

Table 2: Fathers' Unemployment Benefit Receipt During Youths' Adolescence

	Duration				Amount
	in weeks	$\geq$ 3 months	$\geq$ 6 months	$\geq$ 12 months	in $
	(1)	(2)	(3)	(4)	(5)
RD Estimate	-7.348*	-0.032*	-0.028	-0.043*	-1108.185
	(0.077)	(0.078)	(0.155)	(0.054)	(0.219)
Obs. Control	8131	7292	8131	8191	9169
Obs. Treatment	5454	5072	5454	5468	5936

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 978 and 1201 days). *p<0.1, **p<0.05, ***p<0.01.

We plot the distribution of fathers' unemployment benefit duration separately for the control and the treatment group in Appendix Figure A.3. To account for the age trend, we have regressed out fathers' age at the time of the reform.[18] The treatment effect appears to be concentrated among fathers who have relatively short benefit durations; there is no difference in benefit durations in the right-tail of the distributions (i.e., at longer durations). In additional analyses, we investigate whether these reductions are driven by fathers experiencing either

[16]Regression results do not perfectly correspond to the figure, as they weight observations based on their distance to the cut-off (using a triangular kernel) and account for youths' year of birth. Thus, they provide more accurate measures of the discontinuity than the visual jumps that are based on simple unconditional linear fits. Sample sizes used in the estimations differ by outcome as the bandwidth selection is data-driven to be MSE-minimizing in each estimation. Results based on a fixed bandwidth across outcomes remain unaltered (see Appendix Table A.5).

[17]The magnitude of our estimates is similar to effect sizes found in previous studies on similar or related policies (see McVicar, 2014; Fredriksson and Holmlund, 2006, for reviews).

[18]Thus, the plotted measure of duration is the residual of regressing duration on a constant and age in days on July 1, 1999.

(i) fewer or (ii) shorter spells of unemployment benefit receipt (see Appendix Table A.6).[19] Estimates for the total number of spells, their average duration, and the duration of the longest spell are negative but not statistically significant. These findings suggest that the statistically significant reduction in total benefit duration associated with the MOI is not particularly driven by either spell numbers or spell length, but rather, reflects a cumulative effect.

Taken together, we find evidence for a substantial effect of the MOI reform in reducing fathers' dependence on unemployment benefits during their children's adolescence.

5.2 Intergenerational Effects

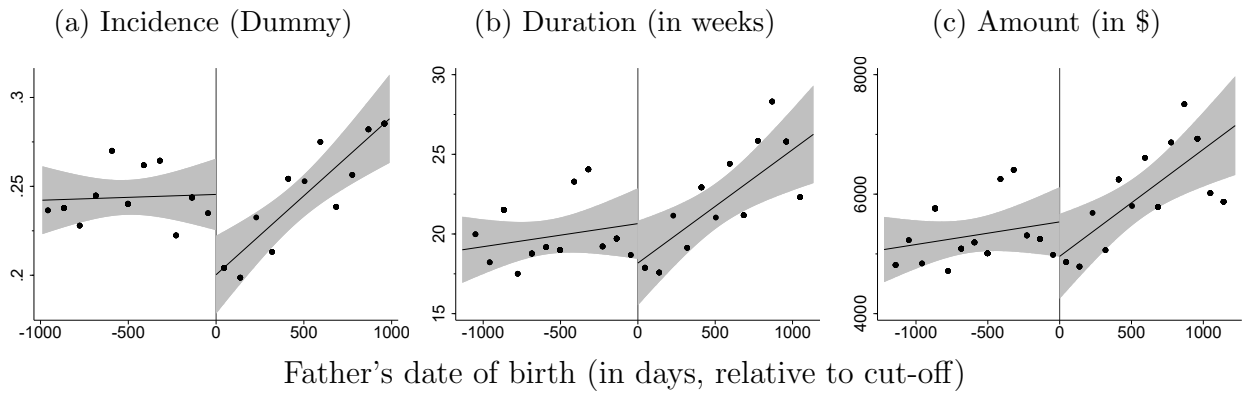
We turn now to investigating whether the MOI had any intergenerational spillover effects on the unemployment experience of adolescents in the household once they are adults themselves. Figure 3 presents RD graphs for: (a) an indicator for receiving unemployment benefits; (b) the number of weeks receiving unemployment benefits; and (c) the amount of unemployment benefits received; each measured up to 14 years after the reform. The x-axes are the same as in Figure 2, with the running variable being the father's birth date relative to the MOI cut-off date in 1964. The y-axes plot youths' unemployment benefit receipt (in early adulthood) rather than that of fathers. We present similar RD graphs with a quadratic trend and RD graphs displaying the effects by youths' age in Appendix Figures A.4, A.5, and A.6.

The results provide strong evidence for the presence of intergenerational spillovers. Young-adult children of fathers subject to the reform are less likely to receive unemployment benefits, they also spend slightly less time on benefits and receive somewhat lower total benefits.

To assess whether the steeper trend to the right of the cut-off is specific to our sample of young-adult children with unemployed fathers, we also plot the same graphs for those young adults whose fathers did not receive unemployment benefits (see Appendix Figure A.7). The pattern in unemployment benefits by fathers' date of birth is similar for both groups of young adults. That is, the steeper trend to the right of the cut-off is also present for young adults whose fathers were not unemployed during their child's adolescence. This suggests that young fatherhood is correlated with lower employment prospects not only for fathers but also for

[19] We define separate unemployment spells whenever there is at least one calendar month without unemployment benefit receipt in between months of receipt. We measure spell duration by the number of consecutive calendar months with unemployment benefit receipt. Overall, 49 percent of our sample are cases in which the father experiences only one unemployment spell; in the remaining cases fathers experience two or more spells over the six-year period.

Figure 3: Youths' Unemployment Benefit Receipt Ever, Linear Fit



Note: TDS2-E Analysis Sample within symmetric MSE-minimizing bandwidths from main RD estimations for each outcome. Linear fit and 95% confidence interval, means at quarterly level.

their young-adult children. Importantly, we observe no statistically significant discontinuities in benefit durations and amounts among the young-adult children of fathers who were not unemployed. If anything, there appears to be a slight increase (not decline) in the incidence of unemployment benefit receipt for this group.

Table 3 confirms the picture that emerges from the RD graphs.[20] Young adults whose fathers would eventually have had to comply with the mutual obligation requirement are 4.5 percentage points less likely to receive unemployment benefits during a period that is up to 14 years after the reform (column 5). This amounts to a reduction of approximately 18 percent relative to the mean. Moreover, the point estimates appear to increase slightly with the age at which the young person's outcome is measured (compare columns 1 to 4), suggesting that the reduction takes place at various ages and thus accumulates over time. Furthermore, young-adult children of treated fathers also experience marginally shorter durations on unemployment benefits (about 16 percent relative to the mean) and receive a somewhat lower amount of benefits (about 15 percent less). However, estimates based only on the sample of young people who ever receive unemployment benefits no longer exhibit these disparities in the total benefit duration and amounts (see Appendix Table A.7). Thus, the reduction in unemployment durations and total unemployment benefits received is entirely driven by the reduced unemployment incidence of young people whose fathers were subject to the MOI.

These are very sizable long-term effects. Relative to the respective means in each generation's unemployment outcomes, the intergenerational effects are even larger than the direct

[20] Again, sample sizes differ between estimations as the bandwidth selection is data-driven. Results are unaltered when using a fixed bandwidth across outcomes and subsamples (see Appendix Table A.5).

Table 3: Youths' Unemployment Benefit Receipt

	By Age 23 (1)	By Age 24 (2)	By Age 25 (3)	By Age 26 (4)	Ever (5)
Incidence (Dummy)					
RD Estimate	-0.036***	-0.041**	-0.058***	-0.053**	-0.045***
	(0.007)	(0.011)	(0.004)	(0.019)	(0.003)
Obs. Control	8786	6884	5586	4435	7396
Obs. Treatment	5759	4607	3725	2722	5123
Duration (in weeks)					
RD Estimate	-1.337*	-2.239*	-3.392*	-3.724	-3.168*
	(0.068)	(0.061)	(0.068)	(0.138)	(0.067)
Obs. Control	9666	8000	6023	4556	8649
Obs. Treatment	6172	5096	3941	2768	5684
Amount (in $)					
RD Estimate	-306.976	-546.218*	-884.503*	-1169.430*	-776.598*
	(0.108)	(0.087)	(0.078)	(0.093)	(0.096)
Obs. Control	10859	8905	6351	4559	9353
Obs. Treatment	6657	5491	4075	2770	6012

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 958 and 1409 days). *p<0.1, **p<0.05, ***p<0.01.

effects on fathers. These findings suggest that economic opportunities for children from disadvantaged families are strongly influenced by policies targeting their parents' benefit receipt. More specifically, activation measures such as those in the MOI can have long-lasting effects, both on current and future generations.

5.3 Sensitivity Analyses

We report a variety of methodological specification checks for our model of young people's incidence of unemployment benefit receipt, our main intergenerational outcome, in Table 4. Parallel results for total benefit duration and amount are provided in Appendix Tables A.9 and A.10.[21] To facilitate comparisons, we report the RD estimates from our main results in the top row of the table.

We present the results of our baseline model which has been extended to include a rich set of demographic control variables in Panel A. Our baseline results for the incidence of unemployment benefit receipt are highly robust to the inclusion of controls; the same is generally true of the results for the duration and amount of benefits received. In Panels B and C, we

[21] A similar set of robustness checks for fathers' unemployment experience is presented in Appendix Table A.8.

Table 4: Sensitivity Analyses Method—Youths' Incidence of Unemployment Benefit Receipt

	Incidence (Dummy)				
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Main Results (for Comparison)					
RD Estimate	-0.036***	-0.041**	-0.058***	-0.053**	-0.045***
Panel A: Controlling for Demographics[a]					
RD Estimate	-0.038***	-0.044***	-0.061***	-0.056**	-0.046***
	(0.004)	(0.007)	(0.002)	(0.011)	(0.003)
Observations	8788; 5709	6934; 4604	5498; 3668	4335; 2662	7181;4980
Panel B: Polynomial Order 2					
RD Estimate	-0.038**	-0.045**	-0.066***	-0.062**	-0.052***
	(0.032)	(0.032)	(0.007)	(0.023)	(0.007)
Observations	12684; 7235	10854; 6177	9399; 5232	6567; 3430	11905; 7013
Panel C: Polynomial Order 3					
RD Estimate	-0.040**	-0.048**	-0.071***	-0.070**	-0.056***
	(0.029)	(0.026)	(0.007)	(0.022)	(0.006)
Observations	21682; 9111	18169; 7673	14426; 6297	9194; 3923	18525; 8555
Panel D: Epanechnikov Kernel					
RD Estimate	-0.038***	-0.043***	-0.059***	-0.052**	-0.046***
	(0.004)	(0.008)	(0.003)	(0.020)	(0.003)
Observations	8937; 5813	6474; 4415	5256; 3544	4293; 2660	7107; 4937
Panel E: Uniform Kernel					
RD Estimate	-0.031**	-0.029**	-0.060***	-0.053**	-0.033**
	(0.013)	(0.031)	(0.001)	(0.017)	(0.013)
Observations	9169; 5936	8489; 5298	5789; 3834	4202; 2636	9296; 5988
Panel F: Asymmetric Bandwidth					
RD Estimate	-0.038***	-0.051***	-0.069***	-0.075***	-0.055***
	(0.002)	(0.001)	(0.000)	(0.000)	(0.000)
Observations	18369; 4756	19616; 3713	16145; 3042	13676; 2157	22277; 4150
Panel G: Fixed Bandwidth at 5 Years					
RD Estimate	-0.027**	-0.030**	-0.042***	-0.039**	-0.033***
	(0.011)	(0.011)	(0.002)	(0.024)	(0.003)
Observations	14396; 7696	12921; 6688	11362; 5706	7790; 3697	14396; 7696
Panel H: Coverage Error Rate Minimizing Inference[b]					
RD Estimate	-0.036	-0.041	-0.058**	-0.053**	-0.045**
	(0.120)	(0.126)	(0.034)	(0.037)	(0.030)
Observations	8786; 5759	6884; 4607	5586; 3725	4435; 2722	7396; 5123

Note: TDS2-E Analysis Sample, regression discontinuity estimations of fathers being subject to the MOI controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment). Unless otherwise specified, local linear estimates with symmetric MSE-minimizing bandwidths and triangular kernel. *p<0.1, **p<0.05, ***p<0.01. [a]Fathers' Indigenous status, family income support and unemployment benefit receipt before July 1, 1999, no. of FTB/FPA cared for children fixed effects, marital status to mother at July 1, 1999; youths' gender, Indigenous status, month of birth fixed effects; mothers' age at childbirth, Indigenous status, family income support and unemployment benefit receipt before July 1, 1999. 813 observations are excluded because of missing information on mothers. [b]Robust p-values obtained through coverage error rate minimizing bandwidth.

allow for a polynomial of order 2 and 3, respectively; both yield results that are fairly similar in magnitude. In addition, our results are robust to using an Epanechnikov Kernel (see Panel D) or a Uniform Kernel (see Panel E). Specifications in Panels F to H illustrate the robustness towards different bandwidth selections. We allow for an asymmetric bandwidth, choosing differential bandwidths that are MSE-minimizing for optimal point-estimation to either side of the cut-off (Panel F) and we hold the bandwidth constant at five years to either side of the cut-off (Panel G). Again, our baseline conclusions remain for these specifications, although the effect sizes are somewhat smaller in Panel G. In Panel H we present baseline coefficients obtained through MSE-minimizing bandwidths optimal for point estimation, but base statistical inference on a bandwidth that is coverage error rate minimizing. Naturally, this approach is more conservative and hence decreases statistical significance; yet, p-values for the incidence of unemployment benefit receipt remain below 0.05 in most specifications.

We consider the robustness of young people's incidence of unemployment benefit receipt to different sample selection criteria in Table 5.[22] First, we re-define the age of adolescence to 12–15, excluding ages 16–17 when youths may be entitled to youth unemployment benefits in their own right. When we focus on the subsample of youth whose fathers ever received unemployment benefits during this shorter window, we find that the effects of the MOI on their young-adult children's incidence of benefit receipt remain consistent with our main findings (see Panel A). The point estimates for the duration and amount of benefits received are also very robust, although the degree of statistical significance drops slightly. Second, to investigate the role of age-specific effects for young people, we condition our estimates on the narrow birth cohort born between October 1987 and March 1988. Effect sizes are generally even larger, but these results lack statistical significance, likely due to a lack of power resulting from a substantial drop in the number of observations (see Panel B). Finally, we exclude father-youth pairs with Indigenous fathers, as they often have access to particularly tailored social assistance. While the effects of the MOI on fathers' unemployment duration are reduced, the intergenerational results remain stable (see Panel C).

[22]Similar sets of robustness checks for fathers' unemployment experiences and the youths' other outcomes are presented in Appendix Tables A.11, A.12, and A.13.

Table 5: Sensitivity Analyses Sample—Youths' Incidence of Unemployment Benefit Receipt

	Incidence (Dummy)				
	By Age 23 (1)	By Age 24 (2)	By Age 25 (3)	By Age 26 (4)	Ever (5)
Main Results (for Comparison)					
RD Estimate	-0.036***	-0.041**	-0.058***	-0.053**	-0.045***
Panel A: Defining Youths' Adolescence as Ages 12–15					
RD Estimate	-0.032**	-0.044**	-0.063***	-0.055**	-0.048***
	(0.023)	(0.011)	(0.003)	(0.021)	(0.004)
Observations	9070; 5777	6385; 4236	4983; 3357	4193; 2548	6741; 4671
Panel B: Subsample of Focal Youths (born between Oct 1987 and Mar 1988)					
RD Estimate	-0.042	-0.044	-0.063**	-0.064	-0.060*
	(0.123)	(0.128)	(0.041)	(0.122)	(0.052)
Observations	3112; 2103	3006; 2039	2787; 1927	1586; 1064	2764; 1911
Panel C: Excluding Indigenous Fathers					
RD Estimate	-0.037**	-0.043**	-0.063***	-0.061**	-0.051***
	(0.017)	(0.021)	(0.006)	(0.015)	(0.004)
Observations	6722; 4289	5701; 3622	4684; 2985	3727; 2169	6013; 3959

Note: TDS2-E Subsamples of Analysis Sample with 42530 (Panel A), 21451 (Panel B), 43746 (Panel C) observations, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment) by symmetric MSE-minimizing bandwidths. *p<0.1, **p<0.05, ***p<0.01.

Overall, our intergenerational effects are robust to various specification checks. This holds in particular for the estimated effect of the MOI on young people's incidence of unemployment benefit receipt.

5.4 Placebo Tests

Finally, we perform a series of additional placebo tests for our baseline outcomes. To do this, we re-estimate our RD model using only fathers who, based on their age, were not subject to the 1999 MOI (i.e., the control group). We define a placebo reform by imposing the same age-discontinuity as in our main analysis, but instead pretend that this placebo reform occurred one year earlier (1998) than the date the actual reform came into effect (1999). Effectively, this test considers the consequences of a placebo age cut-off of July 1, 1963. Fathers born between July 1, 1963 and June 30, 1964 are considered to be "treated"; their unemployment experiences are compared to older fathers born earlier. As the MOI did not in fact include such an age-discontinuity, none of the fathers (and their children) were actually impacted by the MOI. As expected, we find no evidence that this placebo reform had a significant effect on either fathers' or their young-adult children's unemployment benefit receipt (see Appendix Table A.14). Point

estimates are generally small in size and they exhibit no systematic pattern of reduced or increased unemployment benefit receipt in either generation. This provides strong evidence that our results are being driven by the actual MOI reform, and not by other confounding factors that impacted fathers at a similar age cut-off.

A second placebo test is conducted in which we investigate whether the actual MOI reform had any intergenerational spillover effects for young adults whose fathers were never on unemployment benefits during their adolescence.[23] As the MOI was only targeted at the (long-term) unemployed, we expect fathers without any unemployment experience, and their young-adult children, to be largely unaffected by the MOI. Once we restrict the sample this way, we generally find that the MOI did not have a statistically significant effect on young people's receipt of unemployment benefits in their early adulthood (see Appendix Table A.15). The only exception is an increased incidence of receipt by ages 25 and 26. However, these point estimates are in the opposite direction to our baseline results. Moreover, almost all other point estimates are small in magnitude and positive. Taken together, these placebo results provide additional evidence that our main results cannot be explained by other unobserved factors unrelated to the MOI.

6 Potential Mechanisms

6.1 Fathers' Reduction in Unemployment Benefit Duration

Fathers' unemployment experience is known to directly affect the unemployment incidence of their children in adulthood (e.g., Oreopoulos et al., 2008; Grübl et al., 2020). Parental unemployment may increase the probability that children become unemployed through various channels, for example, due to a role model effect, a lack of parental job-search networks, or limited financial resources (Plug et al., 2018; Rege et al., 2011). However, little is known about the extent to which it is parents' unemployment duration as opposed to incidence that produces the intergenerational transmission of joblessness. Our empirical strategy allows us to shed light on this issue. By conditioning on fathers who experience some unemployment during their children's adolescence, we effectively hold constant the extensive unemployment margin,

[23] Adolescents are eligible for some benefits in their own right at ages 16–17. Therefore, for this analysis, adolescence is restricted to ages 12–15. This avoids potential behavioral responses in shifting benefits within families after the youth's 16th birthday allowing for a true placebo test.

allowing us to isolate the effect of the intensive unemployment margin (i.e., the duration of unemployment and total benefit receipt).

To investigate whether the intergenerational effects operate through the reduced intensity of fathers' unemployment benefit receipt, we re-estimate the effect of the MOI on young adults' benefit receipt controlling for a vector of measures that capture the intensity of their father's unemployment experience (i.e., total duration, indicators for long-term unemployment, and total dollar amount; see Table 6). We find that the estimated coefficients are very similar in magnitude to our main results, suggesting that a reduction in the intensity of fathers' unemployment benefit receipt is not driving the intergenerational unemployment effects that we observe. There appear to be other mechanisms at work (several of which we explore below) that do not necessarily operate through the intensity of fathers' unemployment experiences. This would also help explain why the effects of the MOI are larger in relative terms for young people than they are for fathers themselves.

Table 6: Youths' Unemployment Benefit Receipt Controlling for Fathers' Intensity Measures

	Incidence (Dummy)				
	By Age 23 (1)	By Age 24 (2)	By Age 25 (3)	By Age 26 (4)	Ever (5)
Main Results (for Comparison)					
RD Estimate	-0.036***	-0.041**	-0.058***	-0.053**	-0.045***
Controlling for Fathers' Intensity Measures					
RD Estimate	-0.034**	-0.039**	-0.056***	-0.050**	-0.044***
	(0.011)	(0.014)	(0.005)	(0.027)	(0.004)
Obs. Control	9343	7215	5731	4635	7810
Obs. Treatment	6011	4750	3805	2800	5316

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects and, in second panel only, for fathers' duration (in weeks) and amount (in AUD) receiving unemployment benefits as well as indicators for total duration of receipt $\geq$ 3 months, $\geq$ 6 months, and $\geq$ 12 months during the youths' adolescence. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 984 and 1221 days). *p<0.1, **p<0.05, ***p<0.01.

6.2 Benefit Substitution

A decline in unemployment benefit receipt as eligibility rules are tightened may not necessarily mean that people (and their families) are no longer welfare-reliant. Instead, a reduction in unemployment benefit receipt may indicate that either (i) people have transitioned from

one welfare benefit (unemployment benefits) to another (e.g., parenting benefits) or (ii) intra-household substitution in benefit claims is occurring.

We first investigate whether reductions in unemployment benefit receipt among both fathers and their young-adult children are the result of a shift towards other types of welfare benefits. Specifically, we re-estimate our model using an overall indicator for whether fathers or youths receive any other (i.e., non unemployment-related) welfare benefits related to their disability, caring obligations (i.e., carer payments), or parenting responsibilities (i.e., payments to partnered- or single-headed low-income families).[24] Our results indicate that there are no significant effects of the MOI on the probability of receiving any of these other benefits (see Table 7). Moreover, the estimated effect sizes are small, ranging from 0.2 to 1.1 percentage points, implying that any effect is economically small. These results are also robust to estimating the model for young people separately by gender and payment type (see Appendix Table A.16). We can thus rule out the possibility that either fathers or their young-adult children responded to the MOI by substituting other types of welfare benefits for unemployment benefits.

Table 7: Fathers' and Youths' Other Welfare Receipt

Incidence of Receiving Any Other Welfare (Dummy)						
	Fathers	Youths				
	During Youths' Adolescence (1)	By Age 23 (2)	By Age 24 (3)	By Age 25 (4)	By Age 26 (5)	Ever (6)
RD Estimate	0.005	0.011	0.007	0.008	0.002	0.008
	(0.968)	(0.328)	(0.622)	(0.660)	(0.887)	(0.586)
Obs. Control	10833	12449	11523	9722	4595	13642
Obs. Treatment	6646	7183	6335	5327	2785	7495

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1133 and 1642 days). Other welfare encompasses Disability Support Pension, Carer Payment, Parenting Payment Partnered, and Parenting Payment Single. *p<0.1, **p<0.05, ***p<0.01.

Alternatively, fathers' reduction in unemployment benefit receipt in response to stricter work tests may also be the result of an intra-household substitution of benefits towards claims made by their partners. In Table 8, we therefore investigate whether, in response to the father being subjected to the MOI, youths' mothers are more likely to receive either unemployment benefits

[24]For fathers, we consider any other welfare payments received during the youths' adolescence; for youths we consider any other welfare payments received since entering legal adulthood at age 18.

(columns 1 to 3) or any other welfare benefits (columns 4 to 6). In both cases, we find that there is no significant increase in the incidence of mothers' benefit receipt during young people's adolescence. Nor are there any statistically significant changes in mothers' benefit intensity as reflected in benefit duration or total dollars received over the six-year period.[25] Thus, fathers' reduction in unemployment benefit receipt is not offset by an increase in mothers' welfare receipt.

Table 8: Mothers' Welfare Receipt During Youths' Adolescence

	Unemployment Benefits			Any Other Welfare		
	Incidence (Dummy) (1)	Duration (in weeks) (2)	Amount (in $) (3)	Incidence (Dummy) (4)	Duration (in weeks) (5)	Amount (in $) (6)
RD Estimate	-0.005	0.461	308.743	0.003	2.593	888.495
	(0.540)	(0.958)	(0.649)	(0.995)	(0.880)	(0.816)
Obs. Control	12465	11873	14912	12034	11911	11958
Obs. Treatment	7161	6995	7784	7048	7010	7028

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1540 and 1903 days). Other welfare encompasses Disability Support Pension, Carer Payment, Parenting Payment Partnered, and Parenting Payment Single. *p<0.1, **p<0.05, ***p<0.01.

Overall, we find no evidence that the 1999 MOI reform which impacted unemployed fathers, shifted either their own welfare receipt or that of their young-adult children from unemployment to other welfare benefits. Nor did it lead mothers to take up more welfare benefits. Thus, the reduction in unemployment benefit receipt associated with the MOI likely led to a reduction in overall welfare dependency.

6.3 Mutual Obligation Activities

Undertaking a mutual obligation activity was only required of job seekers who had been receiving unemployment benefits for at least one year. Thus, a large share of the unemployed fathers in our sample likely never had to participate in any of these activities. Much of the MOI's effect in increasing unemployment exits appears to have operated through a threat effect rather than actual participation in mutual obligation activities themselves (Richardson, 2002; Lim, 2008). For this reason, we explore whether the intergenerational spillover effects we observe differ by fathers' unemployment benefit duration. Specifically, we distinguish between young

[25] These findings are robust to estimating mothers' welfare receipt separately by payment type (see Appendix Table A.17).

people whose father's longest spell during their adolescence was shorter than 12 months (57 percent of our sample) and those whose father's longest spell lasted 12 months or more. This distinction does not perfectly correspond to whether fathers actually participated in mutual obligation activities or not (which we do not observe).[26] Still, it provides a useful proxy for whether or not affected fathers undertook the prescribed mutual obligation activities.

Panel A of Table 9 shows the estimated effects of the MOI on young people's probability of receiving unemployment benefits if their father's longest unemployment spell was shorter than 12 months. The MOI reduced the probability of receiving unemployment benefits by specific ages—as well as ever, within our observation window—by between 1.9 and 4.2 percentage points. These effect sizes are slightly smaller than our main intergenerational results and are also generally less statistically significant. Yet, the negative sign persists and the reduction in ever receiving unemployment benefits remains statistically significant.

Panel B shows the results for young people whose fathers were on unemployment benefits for at least 12 consecutive months during their adolescence, and hence were subject to participation in mutual obligation activities. Effect sizes are substantially larger for this group,

Table 9: Youths' Unemployment Benefit Receipt by Fathers' Longest Unemployment Benefit Spell Duration

	Incidence (Dummy)				
	By Age 23 (1)	By Age 24 (2)	By Age 25 (3)	By Age 26 (4)	Ever (5)
Panel A: Father's Longest Spell < 12 months					
RD Estimate	-0.019	-0.024	-0.042*	-0.037	-0.034*
	(0.201)	(0.184)	(0.081)	(0.166)	(0.053)
Obs. Control	4946	4118	3255	2236	4785
Obs. Treatment	3075	2605	2096	1368	3020
Panel B: Father's Longest Spell ≥ 12 months					
RD Estimate	-0.056***	-0.058**	-0.069**	-0.080**	-0.058**
	(0.007)	(0.022)	(0.017)	(0.014)	(0.016)
Obs. Control	4734	3759	3158	2566	4086
Obs. Treatment	3131	2521	2069	1522	2857

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 959 and 1520 days). *p<0.1, **p<0.05, ***p<0.01.

[26] There are three reasons to expect a discrepancy: (i) left-censoring leading to an underestimate of the spell's total length, as fathers may already have been on unemployment benefits before their child turned 12 years old; (ii) length measured in calendar months may slightly overstate actual length if benefits are not received during the entire calendar month; and (iii) there may be non-compliance with completing the required activities.

with statistically significant reductions in the probability of unemployment receipt among the youths of 5.6 to 8.0 percentage points. This positive relationship between the likelihood of fathers participating in mutual obligation activities and the estimated impact of the MOI on young people indicates that fathers' actual exposure to mutual obligation activities may play a key role in the transmission of improved labor market prospects to the next generation.

6.4 Role Modeling

Another potential channel linking the tightening of fathers' unemployment benefit eligibility to the labor market outcomes of their young-adult children is through the father serving as a role model. Children learn from observing their fathers' experiences and choose their own behavior accordingly by, for example, following the career paths and entering the same occupations as their parents. Not surprisingly, there is extensive evidence that socioeconomic status is transmitted across generations in part through occupational status (d'Addio, 2007). At the same time, children who observe their fathers struggling with unemployment and new, more onerous eligibility requirements for accessing benefits may pursue different career paths as a result. To learn whether the effects of the MOI operate through a role model channel, we conduct two analyses.

Table 10: Youths' Unemployment Benefit Receipt by Fathers' Marital Status

	Incidence (Dummy)				
	By Age 23 (1)	By Age 24 (2)	By Age 25 (3)	By Age 26 (4)	Ever (5)
Panel A: Father Partnered to Mother on July 1, 1999					
RD Estimate	-0.046***	-0.055***	-0.079***	-0.073**	-0.063***
	(0.008)	(0.008)	(0.002)	(0.012)	(0.002)
Obs. Control	5087	4147	3430	2556	4086
Obs. Treatment	3115	2578	2126	1527	2701
Panel B: Father not Partnered to Mother on July 1, 1999					
RD Estimate	-0.021	-0.022	-0.025	-0.025	-0.020
	(0.332)	(0.389)	(0.411)	(0.570)	(0.394)
Obs. Control	4184	3591	2822	2119	3991
Obs. Treatment	3028	2553	2027	1379	2928

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 847 and 1576 days). *p<0.1, **p<0.05, ***p<0.01.

First, we split our sample based on the parents' marital status at the introduction of the MOI as a proxy for the father's presence in young people's lives (see Table 10). We present estimates for young people whose parents were either married or in a de-facto relationship (68 percent of our sample) in Panel A,[27] while we show estimates for young people whose parents were not together in a committed relationship in Panel B. The results reveal that effects are concentrated among those youths of partnered parents, who more likely grew up with their father present in the household.

Second, we estimate the MOI's effect separately by youths' gender. Cultural norms and gender-specific stereotypes imply that daughters' labor market outcomes are often less closely tied to those of their fathers than are sons'. Chadwick and Solon (2002), for example, were among the first to demonstrate that, in the United States, intergenerational income elasticities are generally lower for daughters, implying that they are less tied to their parents' income position than are sons. Moreover, the intergenerational occupational mobility of daughters and sons with respect to their fathers' occupations also differs and is changing over time (see Rosenfeld, 1978; Schwenkenberg, 2014). We demonstrate that the reduction in unemployment benefit receipt is predominantly found among men; for them the decrease in the incidence of benefit

Table 11: Youths' Unemployment Benefit Receipt by Youths' Gender

	Incidence (Dummy)				
	By Age 23 (1)	By Age 24 (2)	By Age 25 (3)	By Age 26 (4)	Ever (5)
Panel A: Male					
RD Estimate	-0.044**	-0.064***	-0.090***	-0.064**	-0.062***
	(0.027)	(0.009)	(0.002)	(0.042)	(0.005)
Obs. Control	3952	3354	2901	2498	3792
Obs. Treatment	2684	2239	1888	1456	2592
Panel B: Female					
RD Estimate	-0.027	-0.017	-0.020	-0.031	-0.025
	(0.129)	(0.448)	(0.412)	(0.277)	(0.176)
Obs. Control	5874	5856	4452	2570	5940
Obs. Treatment	3456	3158	2533	1515	3472

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 932 and 1732 days). *p<0.1, **p<0.05, ***p<0.01.

[27]The vast majority of these parents (84 percent) were married, while only 16 percent were in de-facto relationships.

receipt is large, irrespective of age, and statistically significant (see Table 11). In contrast, for women, the estimated effect of the MOI is smaller in magnitude and not statistically significant at conventional levels. The direction of the effects for women, however, coincides with those for men. Overall, our results are consistent with gender-specific role modeling in which the fathers' exposure to the MOI has a stronger influence on their sons than their daughters.

6.5 Ancillary Analyses: Health, Control Perceptions, Work-Welfare Attitudes, Employment, Family Support, Risky Behavior, and Education

We turn now to consider a range of further potential mechanisms underpinning the reduction in unemployment benefit receipt among young people whose fathers were subject to the 1999 MOI. Specifically, we take advantage of data from the Youth in Focus (YIF) Project which was designed to study the intergenerational transmission of socioeconomic disadvantage. In 2006, the YIF Project surveyed a stratified random sample of the focal youth captured in the Transgenerational Data Set. More than 4,000 respondents, then aged 18, were interviewed about their family relationships, school experiences, mental and physical health, and risk-taking behavior (see Breunig et al., 2007, 2009). We can match a small number (878) of these YIF respondents to our final analysis sample. Of these, 127 of them had fathers born after July 1, 1964 who, given their age, would have been subject to the 1999 MOI if they had become unemployed for more than 12 months; the other 751 of them had fathers born before the cut-off and who were not subject to the reform.

We use this small sample to estimate the effect of the MOI on measures of young people's health outcomes, locus of control, work-welfare attitudes, family background, risky behavior, educational attainment, and employment. Each of these outcomes (measured at age 18) reflects a potential pathway through which the MOI may have reduced young people's subsequent need for unemployment benefits from age 21 onwards; see Appendix Table A.2 for variable definitions. Table 12 presents descriptive statistics for these variables (columns 1 to 3), next to the estimated effect of the MOI on them (columns 4 to 8). Again, we estimate this effect using the sharp RD design to account for the adverse circumstances of the treatment group being born to younger parents and present it together with the associated p-value (columns 4 and 5).[28] To rule mechanisms into the possibility set and others out, we conduct a series of one-

[28]Since the survey data was only collected for focal youths born within one half-year cohort, fathers' age at the 1999 introduction of the MOI is collinear to their age at birth of the youth. Consequently, fathers who

Table 12: Mechanisms from Youth in Focus Data (Measured at Age 18)

	Full Matched Sample			RD Estimation				
	Mean	Std. Dev.	Obs.	Estimate	p-value	H_a	one-sided p-value	Obs.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Health and Control Perception								
Depression (Dummy)	0.149	0.357	877	0.027	0.794	<0	0.603	109; 56
Health limiting work (Dummy)	0.085	0.279	870	-0.158	0.198	<0	0.099	112; 58
External locus of control (Dummy)	0.200	0.400	610	-0.140	0.250	<0	0.125	118; 53
Panel B: Attitudes								
Unemployment benefits too low (Dummy)	0.534	0.499	796	-0.257*	0.084	<0	0.042	175; 82
Government responsible for unemployed (Dummy)	0.493	0.500	829	0.054	0.649	<0	0.676	100; 48
Importance of own education (Scale 1–4)	3.440	0.643	875	0.569**	0.034	>0	0.017	107; 57
Importance of parental education (Scale 1–4)	2.635	0.914	875	0.012	0.992	<0	0.504	136; 67
Importance of own job (Scale 1–4)	3.559	0.578	877	-0.315	0.158	>0	0.921	114; 59
Importance of own ambition (Scale 1–4)	3.714	0.505	873	-0.354*	0.066	>0	0.967	97; 54
Panel C: Support, Employment, and Instability								
Financial support in last 12 months (Dummy)	0.601	0.490	878	0.240	0.139	>0	0.070	103; 54
Amount of financial support in last 12 months ($)	2717.581	5264.040	480	-358.177	0.822	>0	0.589	60; 24
Ever employed (Dummy)	0.878	0.327	877	0.092	0.171	>0	0.085	80; 45
Number of houses lived in	5.261	4.575	857	-1.440	0.173	<0	0.087	87; 46
Number of schools attended	3.458	2.132	878	-0.405	0.276	<0	0.138	89; 49
Panel D: Behavior and Education								
Risky/delinquent behaviors (Dummy)	0.199	0.400	608	-0.039	0.520	<0	0.260	69; 35
Year 10 Dropout (Dummy)	0.138	0.345	878	0.104	0.475	<0	0.762	124; 62
Year 12 Dropout (Dummy)	0.339	0.474	846	0.136	0.583	<0	0.709	116; 55
University entrance rank obtained (Dummy)	0.418	0.494	849	-0.030	0.922	>0	0.539	105; 52

Note: TDS2-E and YIF wave 1 Matched Analysis Sample. Means, standard deviation, and number of observations in full matched analysis sample (columns 1 to 3). Local linear regression discontinuity estimate of fathers being subject to the MOI with triangular kernel (column 4) with robust p-value (column 5), robust one-sided p-value of H_0 (column 7) versus H_a (column 6), and number of observations (column 8) chosen from full matched analysis sample on either side of the cut-off (Control; Treatment) by symmetric MSE-minimizing bandwidths. *p<0.1, **p<0.05, ***p<0.01.

sided hypothesis tests that investigate whether a range of outcomes improved for the treated youths (alternative hypothesis, H_a) or not (null hypothesis, H_0). Results are presented in columns 6 and 7. Our limited sample size (column 8) implies that we lack estimation precision; consequently, we focus our discussion on results that are significant at the 10 percent level.

We first investigate whether the reduction in unemployment benefit receipt we observe for youths is a result of an improvement in health (i.e., a reduction in depression or work limitations) or a change in people's perceptions of control (see Table 12, Panel A). While there is no significant effect of the MOI on the incidence of depression, those young people whose fathers were subject to the MOI are 15.8 percentage points (186 percent compared to the mean) less likely to report that their health limits their ability to work. They are also 14.0 percentage points (70 percent) less likely to have an external locus of control, though this effect does not quite reach statistical significance at the 10 percent level.

Cultural theories of intergenerational welfare often rest on the proposition that growing up in welfare-reliant families (or neighborhoods) may weaken young people's work ethic and self-reliance by reducing the stigma or information costs associated with welfare receipt (see Boschman et al., 2019, for a review). Consequently, we test whether young people with fathers who were subject to the MOI are: (i) less supportive of generous unemployment benefits; (ii) more likely to view having an education, job, and ambition as important for getting ahead in life; and (iii) less likely to believe that having educated parents is the key to life success (Panel B). We find that, relative to their peers, young people with fathers who were subject to the MOI are 25.7 percentage points (48 percent) less likely to believe that unemployment benefits are too low. They also place more weight on the importance of having an education for getting ahead in life. Both effects are statistically significant at the 10 percent level. Interestingly, we find that young people with fathers subject to the MOI do not place a greater weight on jobs and ambition for getting ahead in life; in fact, they are significantly less likely to view these as important pathways to success. Taken together, our results indicate that the MOI may have reduced reliance on unemployment benefits by altering work-welfare attitudes.

Young people in welfare-reliant families are less likely to receive financial support from their parents (Cobb-Clark and Gørgens, 2014); this is an important pathway linking parents' and

were subject to the MOI had their child at age 23 or younger. Simple means comparisons reflect these adverse conditions with youths in the treatment group generally answering less favorably across almost all dimensions of the survey than youths in the control group.

young-adult children's welfare reliance (Bubonya and Cobb-Clark, 2020). Consequently, we test whether young people with fathers affected by the MOI are more likely to receive financial support from their parents (Panel C). We find that there is a significant 24.0 percentage point difference in the chances that young people received any financial support in the previous 12 months, though the amounts of support (conditional on receiving it) do not differ. Youths whose fathers were subject to the MOI also have a higher likelihood (10 percent) of ever having been employed by age 18. The additional financial support available to young people with fathers subject to the MOI may assist them in investing in their own human capital reducing the need for subsequent unemployment benefits.

Instability in children's environment—as measured through the number of schools they attend or houses they live in—is also an important mechanism linking parents' welfare receipt to that of their young-adult children (Bubonya and Cobb-Clark, 2020). We find that the MOI may have reduced the welfare reliance of young adults by reducing the instability in their schooling and living arrangements. Specifically, young people with fathers affected by the MOI live in fewer houses (27 percent) and attend fewer schools (12 percent). The former effect is statistically significant at the 10 percent level, while the latter does not quite reach statistical significance at that level.

Finally, we find no evidence that the reduction in unemployment benefit receipt among young people whose fathers were subject to the MOI is due to their delinquent and/or risk-taking behavior (Panel D). Nor does it stem from disparity in the chances of: (i) dropping out of high school before completing either 10^{th} or 12^{th} grade; or (ii) completing high school with an academic rather than vocational degree. At the same time, young people's attitudes towards the importance of education for getting ahead in life have changed in response to their fathers being subjected to the MOI. It is important to note that our survey outcomes are measured at age 18 and thus only capture secondary education. Future research investigating whether access to tertiary education is a pathway through which unemployment experiences are passed from parents to their children would be particularly useful.

7 Conclusion

Active labor market policies are likely to have consequences not only for welfare recipients themselves, but also for their children. Quantifying these intergenerational policy impacts is a crucial step in understanding not only program returns, but also the ease with which disadvantaged children achieve upward social and economic mobility. Our research makes an important contribution by evaluating the intergenerational consequences of an Australian activation policy—the 1999 Mutual Obligations Initiative—that tightened benefit eligibility through an expansion of the activity test applied to young people (aged 34 or younger) who were long-term unemployed. Specifically, we adopt a regression discontinuity approach and exploit administrative data from Australia's national social security system to evaluate the impact that requiring unemployed fathers to engage in non-search activities (e.g., training, volunteering, or part-time employment) has on their children more than a decade later.

We find that unemployed fathers who were subject to the 1999 MOI spent less time on unemployment benefits, reducing their total benefits by $1,100 during their children's adolescence. Importantly, those children are substantially (18 percent) less likely to receive unemployment benefits when they become young adults (aged 21 to 28), leading to a $800 reduction in benefits received per person, on average. Critically, we demonstrate that the impact of the MOI in reducing unemployment benefits is not the result of fathers, mothers, or their young-adult children increasing their receipt of other welfare benefits; rather the MOI resulted in an overall reduction in welfare dependence in both generations. Thus, we provide important causal evidence that activation measures have the potential to generate long-lasting benefits—even on future generations—raising the social and economic returns to such policies. Active labor market policies targeting parents may be a useful tool in the fight to reduce intergenerational welfare dependence and increase social and economic mobility.

At the same time, our results clearly indicate that the mechanisms linking welfare receipt across generations are likely to be complex and multi-faceted. We find no evidence, for example, that young adults' unemployment experiences are directly tied to their fathers' duration of or total benefit receipt. Thus, the impact of the MOI on young people does not appear to operate through a reduction in the intensity of their fathers' unemployment experiences *per se*. Instead, the effect of the MOI is largest for: (i) those with fathers who were unemployed long-term and

more likely to undertake mutual obligation activities; (ii) those growing up in families in which fathers were more likely to be present; and (iii) young men. This points to the importance of the MOI's expanded non-search activity requirements (e.g., training volunteering, part-time work) and gender-specific role modeling as likely mechanisms through which the benefits of active labor market policies are transferred from one generation to the next. Importantly, ancillary analyses indicate that the beneficial effect of the MOI in reducing young people's unemployment benefit receipt stems from an overall improvement in their family circumstances that resulted in better health, changes in work-welfare attitudes, greater parental financial support, and reduced instability while growing up.

Future research exploring these conclusions in more depth and in other contexts would be particularly valuable. Our research demonstrates, for example, that family circumstances during adolescence have consequences well into adulthood. This complements an expansive literature focused on early childhood experiences. There is little reason to believe, however, that the extent of intergenerational disadvantage—and the mechanisms through which it operates—are necessarily the same across these two critical periods of human development. Future research which addresses these issues by conducting parallel analyses of both age groups are likely to be especially insightful. Moreover, our ancillary analyses are best characterized as indicative given their limited statistical power. Nonetheless, they suggest several promising avenues for further research. Large-scale, representative survey data, for example, increasingly provide measures of people's attitudes towards work vs. welfare, allowing the role of beliefs in intergenerational welfare receipt to be investigated in more detail. Finally, shedding light on the origins of gender-specific patterns in intergenerational disadvantage is crucial in light of changing gender norms and employment patterns.

References

Almond, D., J. Currie, and V. Duque (2018). Childhood Circumstances and Adult Outcomes: Act II. *Journal of Economic Literature 56*(4), 1360–1446.

Bastiaans, M., R. Dur, and A. C. Gielen (2019). Labor market and health effects of an activation program for the long-term inactive. Mimeo.

Black, D. A., J. A. Smith, M. C. Berger, and B. J. Noel (2003). Is the Threat of Reemployment Services More Effective Than the Services Themselves? Evidence from Random Assignment in the UI System. *American Economic Review 93*(4), 1313–1327.

Borland, J. (2014). Dealing with unemployment: What should be the role of labour market programs? *Evidence Base 2014*(4), 1–21.

Borland, J. and Y.-P. Tseng (2011). Does 'Work for the Dole' work?: an Australian perspective on work experience programmes. *Applied Economics 43*(28), 4353–4368.

Boschman, S., I. Maas, M. H. Kristiansen, and J. C. Vrooman (2019). The reproduction of benefit receipt: Disentangling the intergenerational transmission. *Social Science Research 80*, 51–65.

Breunig, R., D. A. Cobb-Clark, Y. Dunlop, and M. Terrill (2003). Assisting the Long-Term Unemployed: Results from a Randomised Trial. *The Economic Record 79*(244), 84–102.

Breunig, R., D. A. Cobb-Clark, T. Gørgens, C. Ryan, and A. Sartbayeva (2009). User's Guide to the Youth in Focus Data Version 2.0. Youth in Focus Project Discussion Paper Series, The Australian National University.

Breunig, R., D. A. Cobb-Clark, T. Gørgens, and A. Sartbayeva (2007). User's Guide to the Youth in Focus Data Version 1.0. Youth in Focus Project Discussion Paper Series, The Australian National University.

Bubonya, M. and D. A. Cobb-Clark (2020). Pathways of Disadvantage: Unpacking the Intergenerational Correlation in Welfare. IZA Discussion Papers 12893, Institute of Labor Economics (IZA).

Calonico, S., M. Cattaneo, M. H. Farrell, and R. Titiunik (2017). `rdrobust`: Software for regression-discontinuity designs. *Stata Journal 17*(2), 372–404.

Calonico, S., M. D. Cattaneo, and R. Titiunik (2014). Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs. *Econometrica 82*(6), 2295–2326.

Card, D., J. Kluve, and A. Weber (2010). Active Labour Market Policy Evaluations: A Meta-Analysis. *The Economic Journal 120*(548), F452–F477.

Cattaneo, M. D., N. Idrobo, and R. Titiunik (2019). *A Practical Introduction to Regression Discontinuity Designs: Foundations*. Elements in Quantitative and Computational Methods for the Social Sciences. Cambridge University Press.

Chadwick, L. and G. Solon (2002). Intergenerational Income Mobility among Daughters. *The American Economic Review 92*(1), 335–344.

Chetty, R., N. Hendren, and L. F. Katz (2016). The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment. *American Economic Review 106*(4), 855–902.

Cobb-Clark, D. A. and T. Gørgens (2014). Parents' economic support of young-adult children: do socioeconomic circumstances matter? *Journal of Population Economics 27*(2), 447–471.

Cobb-Clark, D. A., N. Salamanca, and A. Zhu (2019). Parenting style as an investment in human development. *Journal of Population Economics 32*(4), 1315–1352.

d'Addio, A. C. (2007). Intergenerational Transmission of Disadvantage: Mobility or Immobility across Generations? A Review of the Evidence for OECD Countries. OECD Social, Employment and Migration Working Papers No. 52, OECD Publishing.

Dahl, G. B. and A. C. Gielen (2020). Intergenerational Spillovers in Disability Insurance. *American Economic Journal: Applied Economics (forthcoming)*.

Dahl, G. B., A. R. Kostøl, and M. Mogstad (2014). Family Welfare Cultures. *The Quarterly Journal of Economics 129*(4), 1711–1752.

Dahlberg, M., K. Johansson, and E. Mörk (2009). On Mandatory Activation of Welfare Recipients. IZA Discussion Papers 3947, Institute of Labor Economics (IZA).

De Haan, M. and R. C. Schreiner (2018). The Intergenerational Transmission of Welfare Dependency. CReAM Discussion Paper Series 1810, Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London.

Department of Family and Community Services (2001). Income support recipients at June 1999. Research FaCS Sheet 10.

Doepke, M. and F. Zilibotti (2017). Parenting With Style: Altruism and Paternalism in Intergenerational Preference Transmission. *Econometrica 85*, 1331–1371.

Fredriksson, P. and B. Holmlund (2006). Improving Incentives in Unemployment Insurance: A Review of Recent Research. *Journal of Economic Surveys 20*(3), 357–386.

Grübl, D., M. Lackner, and R. Winter-Ebmer (2020). Intergenerational Transmission of Unemployment: Causal Evidence from Austria. IZA Discussion Papers 13068, Institute of Labor Economics (IZA).

Hartley, R., C. Lamarche, and J. P. Ziliak (2017). Welfare Reform and the Intergenerational Transmission of Dependence. IZA Discussion Papers 10942, Institute of Labor Economics (IZA).

Heckman, J. J., R. J. LaLonde, and J. A. Smith (1999). The Economics and Econometrics of Active Labor Market Programs. In Ashenfelter and Card (Eds.), *Handbook of Labor Economics*, pp. 1865–2097. Elsevier, Amsterdam.

Howard, J. (1999). 'Building a Stronger and Fairer Australia: Liberalisation in Economic Policy and Modern Conservatism in Social Policy.' Address to the Australia Unlimited Roundtable, 4 May 1999. Accessed 9 September 2019: https://webarchive.nla.gov.au/awa/19991031130000/http://www.pm.gov.au/media/pressrel/1999/AustraliaUnlimitedRoundtable.htm.

Hoynes, H. W. and D. W. Schanzenbach (2018). Safety Net Investments in Children. *Brookings Papers on Economic Activity 2018*(1), 89–150.

Immervoll, H. and S. Scarpetta (2012). Activation and employment support policies in OECD countries. An overview of current approaches. *IZA Journal of Labor Policy 1*(1), 9.

Keely, B. (2015). *Income Inequality: The Gap between Rich and Poor*. OECD Insights. OECD Publishing, Paris.

Lim, H. H. F. (2008). The Impact of Mutual Obligation on Mature Age NewStart Allowance Recipients: a program evaluation. Discussion Paper 65, NATSEM, University of Canberra.

Markussen, S. and K. Røed (2016). Leaving Poverty Behind? The Effects of Generous Income Support Paired with Activation. *American Economic Journal: Economic Policy 8*(1), 180–211.

McCoull, F. and J. Pech (2000). Trans-generational income support dependence in Australia: Early evidence. In P. Saunders (Ed.), *Reforming the Australian welfare state*, pp. 91–111. Australian Institute of Family Studies, Melbourne.

McVicar, D. (2014). The impact of monitoring and sanctioning on unemployment exit and job-finding rates. *IZA World of Labor 49*.

OECD (2014). Social Expenditure Update – Social spending is falling in some countries, but in many others it remains at historically high levels. OECD Publishing, Paris.

OECD (2019). Social Expenditure Update – Public social spending is high in many OECD countries. OECD Publishing, Paris.

Oreopoulos, P., M. Page, and A. H. Stevens (2008). The Intergenerational Effects of Worker Displacement. *Journal of Labor Economics 26*(3), 455–483.

Pech, J. and F. McCoull (2000). Transgenerational welfare dependence: Myths and realities. *Australian Social Policy 1*, 43–68.

Plug, E., B. van der Klaauw, and L. Ziegler (2018). Do Parental Networks Pay Off? Linking Children's Labor-Market Outcomes to Their Parents' Friends. *Scandinavian Journal of Economics 120*(1), 268–295.

Raper, M. (2000). Examining the assumptions behind the welfare review. In P. Saunders (Ed.), *Reforming the Australian welfare state*, pp. 250–270. Australian Institute of Family Studies, Melbourne.

Rege, M., K. Telle, and M. Votruba (2011). Parental Job Loss and Children's School Performance. *Review of Economic Studies 78*(4), 1462–1489.

Richardson, L. L. (2002). Impact of the Mutual Obligation Initiative on the Exit Behaviour of Unemployment Benefit Recipients: The Threat of Additional Activities. *Economic Record 78*(243), 406–421.

Rosenfeld, R. A. (1978). Women's Intergenerational Occupational Mobility. *American Sociological Review 43*(1), 36–46.

Saunders, P., T. Eardley, and C. Evans (2000). Community Attitudes Towards Unemployment, Activity Testing and Mutual Obligation. *Australian Bulletin of Labour 26*(3), 211–235.

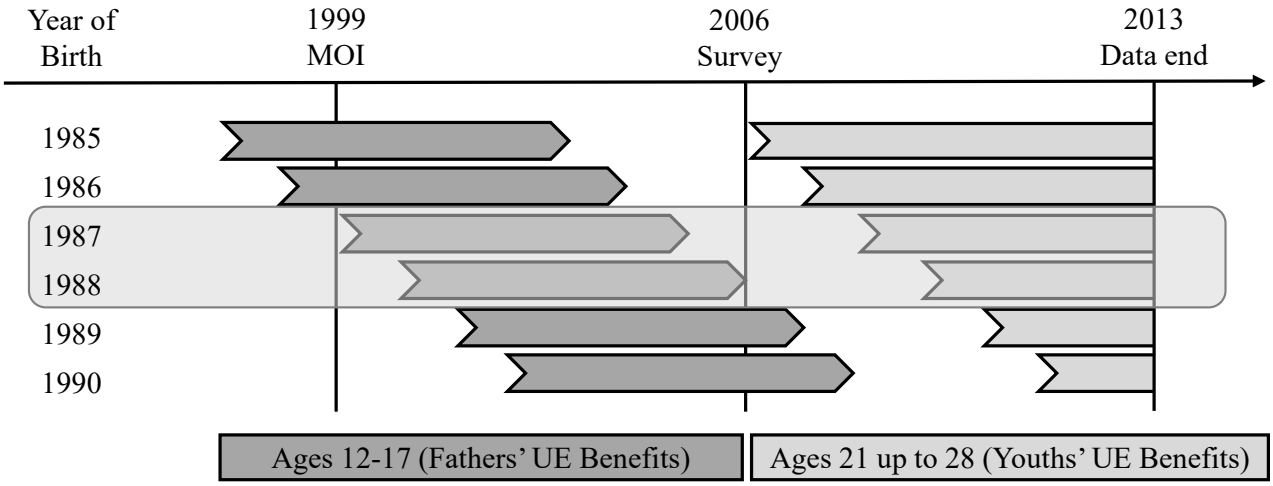
Schwenkenberg, J. M. (2014). Occupations and the evolution of gender differences in intergenerational socioeconomic mobility. *Economics Letters 124*(3), 348–352.

Steinberg, L. (2014). *Age of Opportunity: Lessons from the New Science of Adolescence.* Houghton Mifflin Harcourt.

Whiteford, P. (2010). The Australian Tax-Transfer System: Architecture and Outcomes. *Economic Record 86*(275), 528–544.

Appendix

Figure A.1: Construction of Data



Note: Own illustration of TDS2-E Analysis Sample, with focal youth cohort highlighted.

Table A.1: Description of Variables—Unemployment Benefits

Incidence	=1 if ever received unemployment benefits in period; 0 otherwise
Duration (in weeks)	Total weeks of unemployment benefit receipt in period
Duration $\geq$ 3, 6, or 12 months	=1 if total duration of unemployment benefit receipt $\geq$ 3, 6, or 12 months; 0 otherwise
Amount	Total amount (in 2013 constant AUD, $) received in unemployment benefits in period
No. of spells	Number of unique spells in period defined by at least one calendar month without unemployment benefits paid in-between
Duration of longest spell (in months)	Count of calendar months within longest spell in period (potentially censored)
Total duration of all spells (in months)	Count of calendar months within all spells in period (potentially censored)
Average duration of spells (in months)	Total duration divided by no. of spells

Note: TDS2-E Data.

Table A.2: Description of Variables—Control Variables and Mechanisms

Control Variables	
Indigenous (father/youth/mother)	=1 if Aboriginal and/or Torres Strait Islander
Age at childbirth (father/mother)	Father's/Mother's age (in years) at birth of youth
Partnered to mother on July 1, 1999 (father)	=1 if father married to or in de-facto partnership with mother on July 1, 1999; 0 otherwise
No. of FTB/FPA cared kids (father)	Total number of children father cared for ever in our data for Family Tax Benefits or Family Payment and Family Allowance purposes; ≥4 is truncated at 4
FISP before July 1, 1999 (father/ mother)	=1 if father/mother received family income support (income support within a family group for Family Tax Benefits/Family Payment and Family Allowance purposes) before July 1, 1999; 0 otherwise
UE benefits before July 1, 1999 (father/ mother)	=1 if father/mother received unemployment benefits between 1996 and July 1, 1999; 0 otherwise
Female (youth)	=1 if female; 0 otherwise
Age (youth)	Youth's age at December 31, 2013 (in years)
Year of birth (youth)	Youth's year of birth (1985–1990)
Month of birth (youth)	Youth's month of birth (January–December)
Mechanisms	
Incidence of receiving any other welfare	=1 if ever received Disability Support Pension, Carer Payment, Parenting Payment Partnered, or Parenting Payment Single in period; 0 otherwise
Incidence (benefit-specific)	=1 if ever received specific benefit in period; 0 otherwise
Duration (any other welfare/benefit-specific)	Total weeks of any other welfare/specific benefit receipt in period
Amount (any other welfare/benefit-specific)	Total amount (in 2013 constant AUD, $) received in any other welfare/specific benefit in period
Depression	=1 if ever been told by a health professional that they suffer from depression or anxiety or if been treated for a mental or emotional issue; 0 otherwise
Health limiting work	=1 if health limits (or would limit) the amount of work youth could do.; 0 otherwise
External locus of control	=1 if locus of control measure is in the top quintile; 0 otherwise. Measure is obtained via principal component analysis based on 7 items answered on a 4-point scale
Unemployment benefits too low	=1 if youth agrees more to 'Benefits For Unemployed People Are Too Low And Cause Hardship' than to 'Benefits For Unemployed People Are Too High And Discourage Them From Finding Jobs'; 0 otherwise
Government responsible for unemployed	=1 if youth believes that it is mainly the government's responsibility to ensure people have enough to live on if they become unemployed rather than the individual's or their family's responsibility; 0 otherwise

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Importance of own education	Youth's view on importance of own education for getting ahead in life on scale from 1 (does not matter at all) to 4 (extremely important)
Importance of parental education	Youth's view on importance of parental education for getting ahead in life on scale from 1 (does not matter at all) to 4 (extremely important)
Importance of own job	Youth's view on importance of own job for getting ahead in life on scale from 1 (does not matter at all) to 4 (extremely important)
Importance of own ambition	Youth's view on importance of own ambition for getting ahead in life on scale from 1 (does not matter at all) to 4 (extremely important)
Financial support in last 12 months	=1 if parents or anyone else assisted the youth financially in last 12 months; 0 otherwise
Amount of financial support in last 12 months	Total amount (in $) of financial support the youth received in last 12 months, conditional on receiving it
Ever employed	=1 if youth has ever been employed; 0 otherwise
Number of schools	Number of schools the youth has attended
Number of houses	Number of houses the youth has lived in
Risky/delinquent behaviors	=1 if risky/delinquent behaviors measure is in the top quintile; 0 otherwise. Measure is obtained via principal component analysis of questions surveying smoking, marijuana and illicit drug use, problems with alcohol, trouble with police, juvenile offending, running away from home, hanging out with a bad crowd, having been or getting someone pregnant
Year 10 Dropout	=1 if youth did not complete high school with a Year 10 certificate; 0 otherwise
Year 10 Dropout	=1 if youth did not complete high school with a Year 12 certificate; 0 otherwise
University entrance rank obtained	=1 if youth obtained a university entrance rank (Australian Tertiary Admission Rank, ATAR); 0 otherwise

Note: TDS2-E and Youth in Focus Data.

Table A.3: Summary Statistics of Main Unemployment Benefit Outcome Variables

	Entire Sample				Control	Treatment
	Mean (1)	Std. Dev. (2)	Min (3)	Max (4)	Mean (5)	Mean (6)
Fathers						
Duration (in weeks)	80.614	83.555	2	314	78.235	89.692
Duration $\geq$ 3 months	0.771	0.420	0	1	0.759	0.817
Duration $\geq$ 6 months	0.645	0.479	0	1	0.629	0.703
Duration $\geq$ 12 months	0.482	0.500	0	1	0.466	0.545
Amount (in $)	18,792	20,609	1	101,856	18,210	21,015
Observations					*38,742*	*10,155*
Youths By Age 23						
Incidence (Dummy)	0.188	0.391	0	1	0.186	0.197
Duration (in weeks)	8.154	22.089	0	124	7.736	9.747
Amount (in $)	2,151	5,976	0	37,970	2,035	2,591
Observations					*38,742*	*10,155*
Youths By Age 24						
Incidence (Dummy)	0.237	0.425	0	1	0.234	0.250
Duration (in weeks)	13.042	32.662	0	158	12.274	16.119
Amount (in $)	3,453	8,871	0	59,196	3,238	4,311
Observations					*35,327*	*8,827*
Youths By Age 25						
Incidence (Dummy)	0.289	0.453	0	1	0.284	0.311
Duration (in weeks)	18.924	43.694	0	210	17.689	24.103
Amount (in $)	5,033	11,918	0	84,700	4,685	6,493
Observations					*31,569*	*7,526*
Youths By Age 26						
Incidence (Dummy)	0.279	0.448	0	1	0.275	0.297
Duration (in weeks)	20.436	49.735	0	262	19.127	26.373
Amount (in $)	5,457	13,613	0	108,832	5,096	7,094
Observations					*21,891*	*4,825*
Youths Ever						
Incidence (Dummy)	0.252	0.434	0	1	0.254	0.247
Duration (in weeks)	19.471	50.358	0	412	18.580	22.872
Amount (in $)	5,204	13,776	0	127,260	4,946	6,185
Observations					*38,742*	*10,155*

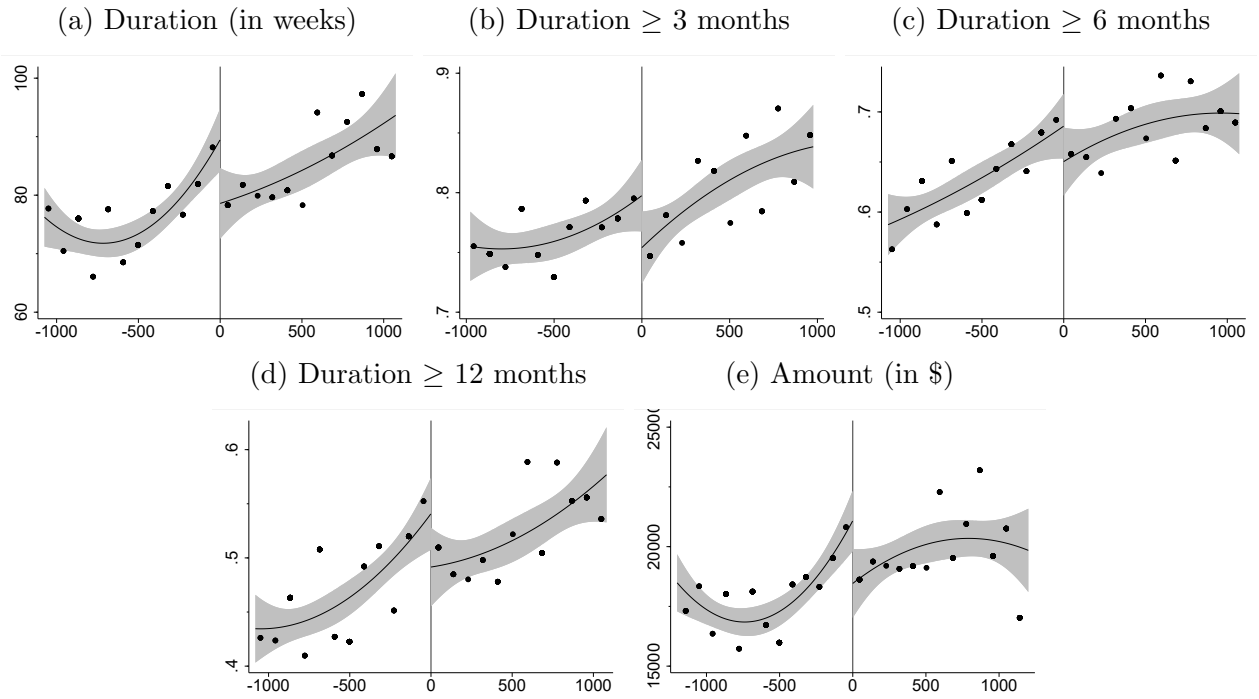
Note: TDS2-E Analysis Sample. Summary statistics of main unemployment benefit outcome variables.

Table A.4: Continuity Tests of Demographics

	Mean (1)	Std. Dev. (2)	RD Estimate (3)	p-value (4)
Fathers				
Indigenous (Dummy)	0.105	0.307	-0.015	0.356
Age at childbirth (in years)	28.834	6.905	0.014	0.965
Partnered to mother on July 1, 1999 (Dummy)	0.680	0.467	-0.012	0.505
No. of FTB/FPA cared kids=1 (Dummy)	0.042	0.200	-0.006	0.266
No. of FTB/FPA cared kids=2 (Dummy)	0.198	0.399	0.005	0.529
No. of FTB/FPA cared kids=3 (Dummy)	0.242	0.428	-0.010	0.778
No. of FTB/FPA cared kids≥4 (Dummy)	0.518	0.500	0.004	0.884
FISP before July 1, 1999 (Dummy)	0.132	0.339	0.013	0.588
UE benefits before July 1, 1999 (Dummy)	0.501	0.500	0.014	0.609
Youths				
Female (Dummy)	0.485	0.500	0.014	0.419
Indigenous (Dummy)	0.144	0.351	-0.024	0.212
Age (in years)	26.097	1.379	-0.014	0.965
Born 1985 (Dummy)	0.116	0.320	-0.016	0.175
Born 1986 (Dummy)	0.113	0.316	0.004	0.500
Born 1987 (Dummy)	0.318	0.466	0.024	0.097
Born 1988 (Dummy)	0.253	0.435	-0.010	0.472
Born 1989 (Dummy)	0.103	0.305	-0.001	0.777
Born 1990 (Dummy)	0.097	0.296	-0.002	0.715
Born Jan (Dummy)	0.116	0.320	-0.013	0.215
Born Feb (Dummy)	0.106	0.308	0.002	0.807
Born Mar (Dummy)	0.120	0.325	-0.014	0.193
Born Apr (Dummy)	0.041	0.198	0.001	0.809
Born May (Dummy)	0.043	0.202	0.003	0.760
Born Jun (Dummy)	0.043	0.203	0.001	0.924
Born Jul (Dummy)	0.120	0.324	-0.002	0.780
Born Aug (Dummy)	0.042	0.201	0.002	0.760
Born Sep (Dummy)	0.040	0.196	-0.005	0.620
Born Oct (Dummy)	0.112	0.316	0.027	0.009
Born Nov (Dummy)	0.105	0.306	0.009	0.351
Born Dec (Dummy)	0.112	0.315	-0.008	0.341
Mothers				
Indigenous (Dummy)	0.111	0.314	-0.006	0.640
Age at childbirth (in years)	25.916	5.760	-0.135	0.613
FISP before July 1, 1999 (Dummy)	0.830	0.375	-0.003	0.639
UE benefits before July 1, 1999 (Dummy)	0.043	0.202	0.007	0.514

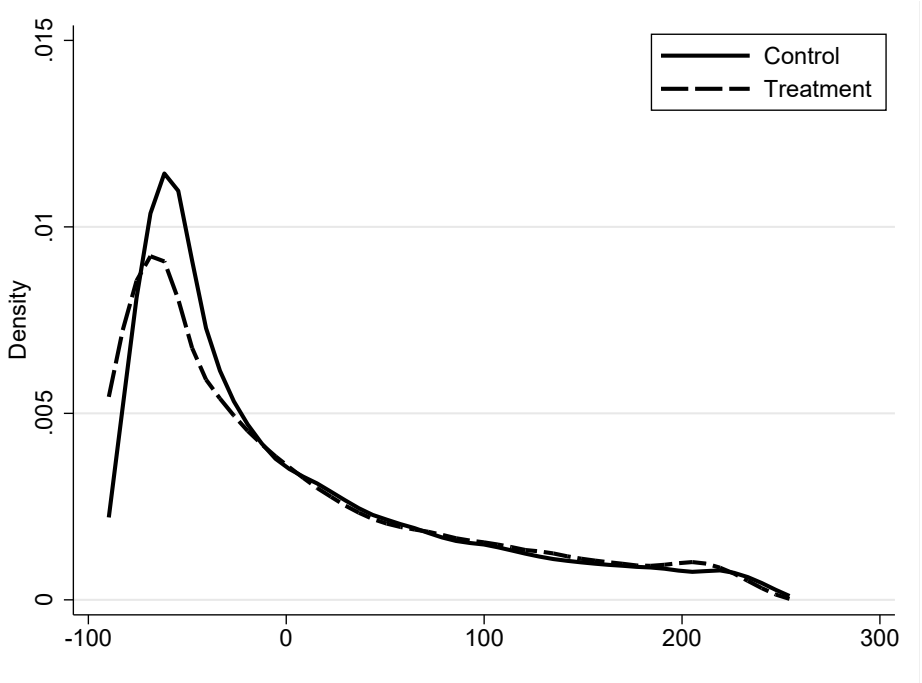
Note: TDS2-E Analysis Sample. Summary statistics of demographic variables (columns 1 and 2), local linear regression discontinuity estimate of fathers being subject to the MOI (column 3) with robust p-values (column 4). Demographic characteristics are available for a total of 48897 observations (fathers and youths; including 30086 unique fathers) and 48084 observations (mothers). The statistics are at the youth, not family, level. This means that the circumstances of young people in large families are overrepresented in the averages. Abbreviations: FTB (Family Tax Benefits), FPA (Family Payment and Family Allowance), Family Income Support (FISP), UE (Unemployment).

Figure A.2: Fathers' Unemployment Benefit Receipt During Youths' Adolescence, Quadratic Fit



Note: TDS2-E Analysis Sample within symmetric MSE-minimizing bandwidths from main RD estimations for each outcome. Quadratic fit and 95% confidence interval, means at quarterly level.

Figure A.3: Distribution of Fathers' Unemployment Benefit Duration



Note: TDS2-E Analysis Sample within symmetric MSE-minimizing bandwidths from main RD estimation. Residuals are obtained from a regression, controlling for a constant and linearly for age in days on July 1, 1999. Number of observations: 8131 (Control) and 5454 (Treatment).

Table A.5: Fathers' and Youths' Unemployment Benefit Receipt with Constant Bandwidth Across Samples and Outcomes

Panel A: Fathers' Unemployment Benefit Receipt During Youth's Adolescence					
	Duration				Amount
	in weeks	$\geq$ 3 months	$\geq$ 6 months	$\geq$ 12 months	in $
	(1)	(2)	(3)	(4)	(5)
RD Estimate	-7.348*	-0.030*	-0.028	-0.043*	-1393.876
	(0.077)	(0.081)	(0.154)	(0.055)	(0.166)
Obs. Control	8131	8131	8131	8131	8131
Obs. Treatment	5454	5454	5454	5454	5454
Panel B: Youths' Unemployment Benefit Receipt					
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Incidence (Dummy)					
RD Estimate	-0.036***	-0.042***	-0.059***	-0.054**	-0.046***
	(0.009)	(0.009)	(0.002)	(0.019)	(0.002)
Obs. Control	8131	7243	6335	4297	8131
Obs. Treatment	5454	4765	4070	2663	5454
Duration (in weeks)					
RD Estimate	-1.408*	-2.294*	-3.406*	-3.739	-3.184*
	(0.063)	(0.058)	(0.061)	(0.143)	(0.071)
Obs. Control	8131	7243	6335	4297	8131
Obs. Treatment	5454	4765	4070	2663	5454
Amount (in $)					
RD Estimate	-357.116*	-592.664*	-883.953*	-1178.280*	-796.066
	(0.090)	(0.076)	(0.078)	(0.096)	(0.101)
Obs. Control	8131	7243	6335	4297	8131
Obs. Treatment	5454	4765	4070	2663	5454

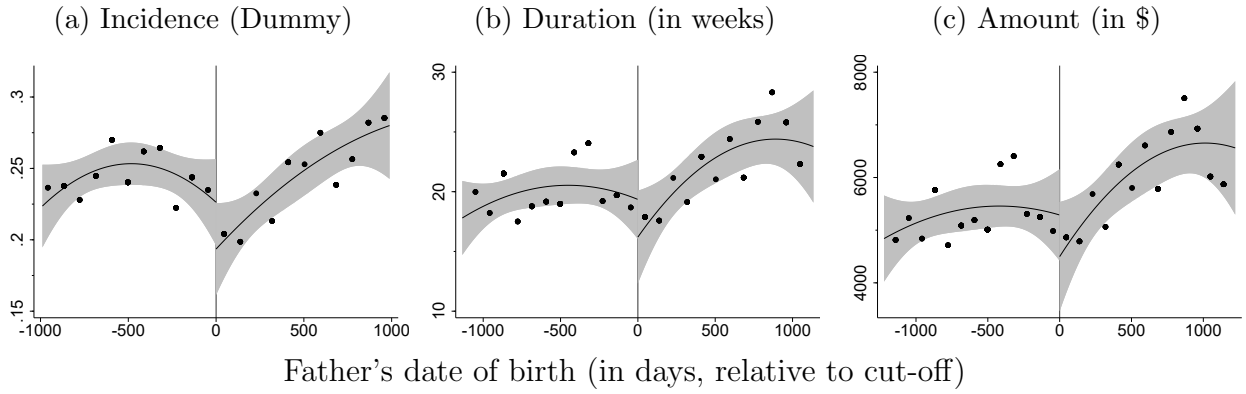
Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by the symmetric bandwidth that is chosen to be MSE-minimizing in the estimation for fathers' duration in weeks, 1075 days (1941 days for the bias correction bandwidth). *p<0.1, **p<0.05, ***p<0.01.

Table A.6: Fathers' Unemployment Benefit Receipt in Spells

	Number and Duration (in calendar months) of Spells			
	No. of spells	Duration of longest spell	Total duration of all spells	Average duration of spells
	(1)	(2)	(3)	(4)
RD Estimate	-0.087	-0.633	-1.721*	-0.620
	(0.482)	(0.351)	(0.082)	(0.304)
Obs. Control	12127	8903	8488	7843
Obs. Treatment	7093	5796	5616	5330

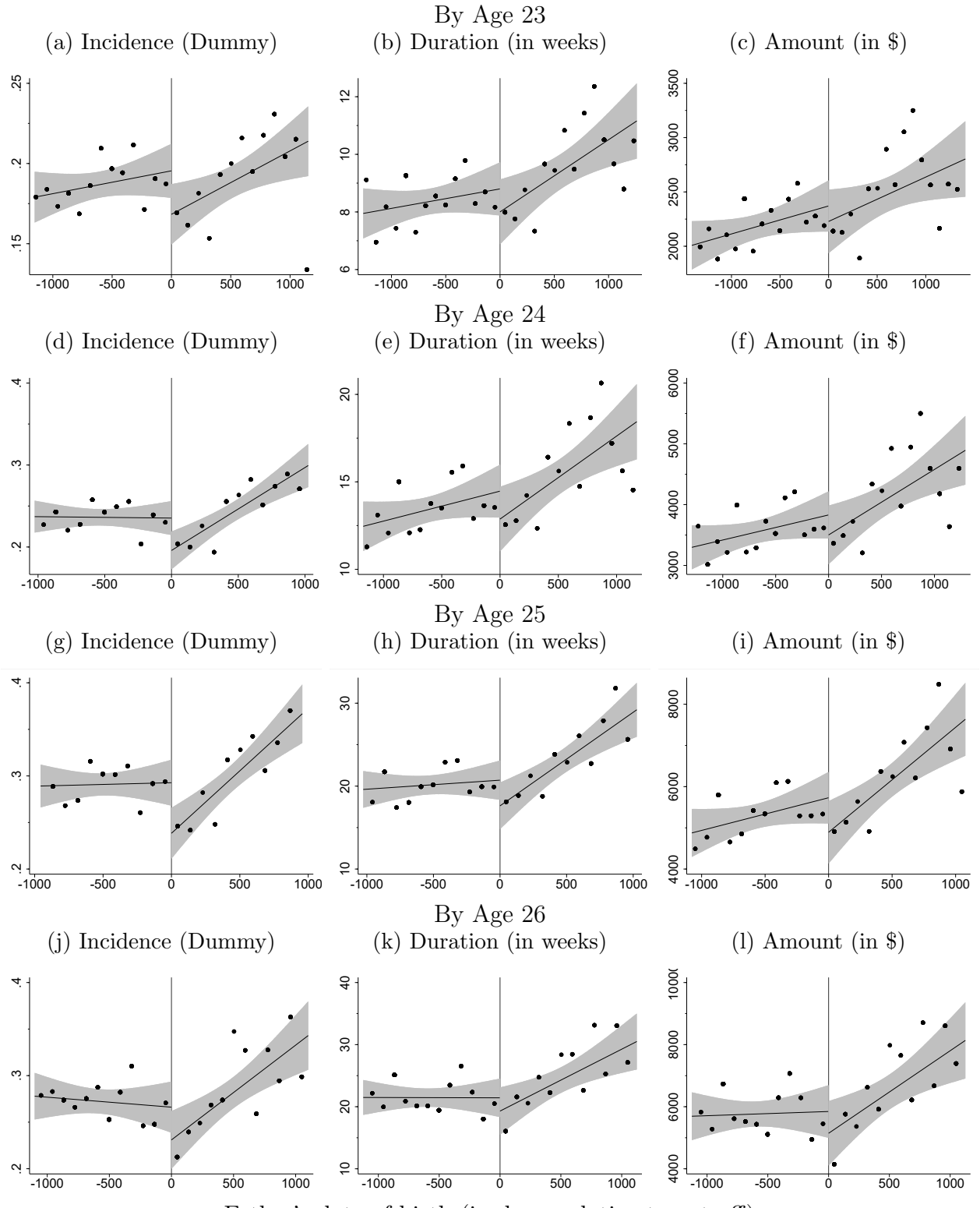
Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1039 and 1556 days). *p<0.1, **p<0.05, ***p<0.01.

Figure A.4: Youths' Unemployment Benefit Receipt Ever, Quadratic Fit



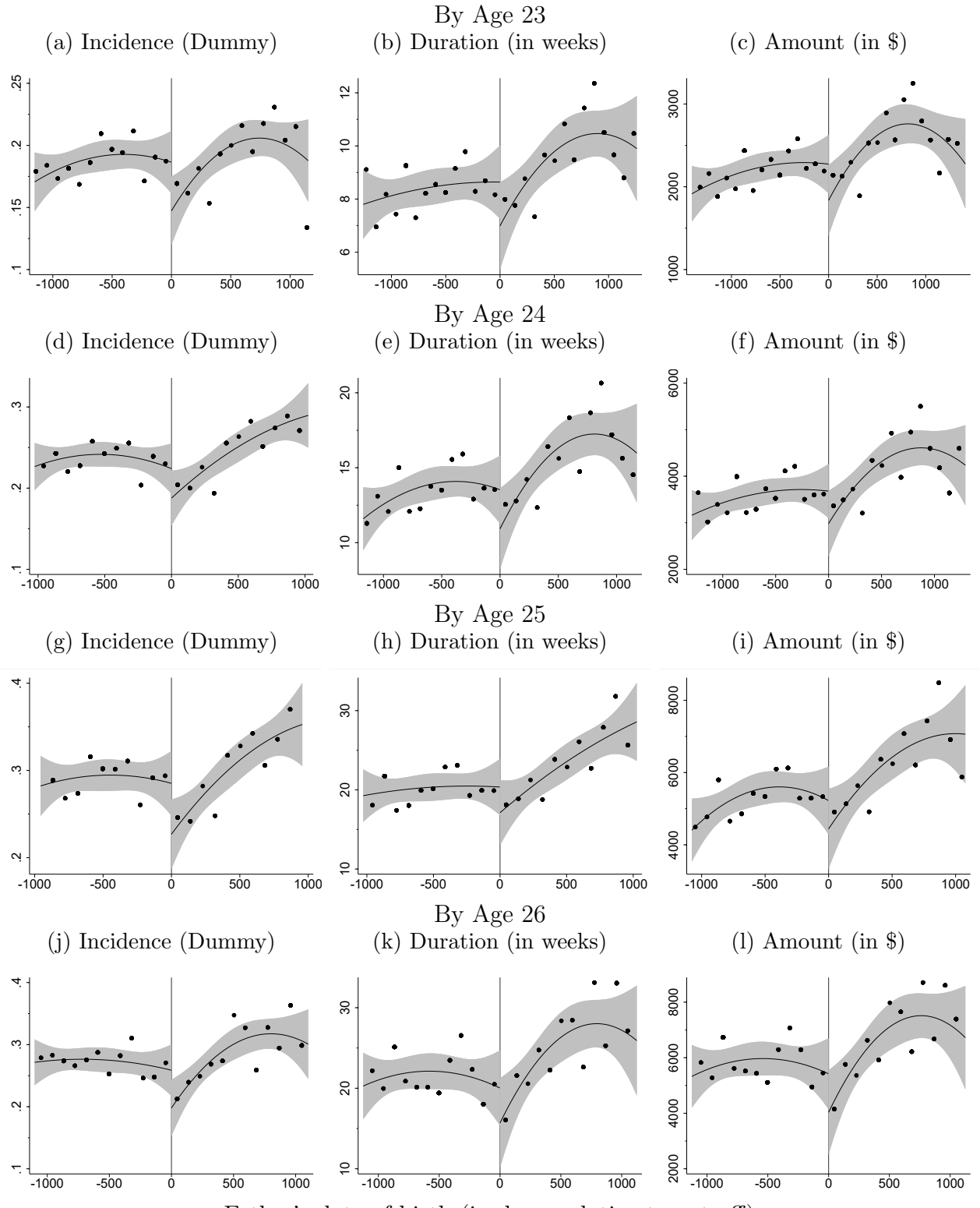
Note: TDS2-E Analysis Sample within symmetric MSE-minimizing bandwidths from main RD estimations for each outcome. Quadratic fit and 95% confidence interval, means at quarterly level.

Figure A.5: Youths' Unemployment Benefit Receipt By Age, Linear Fit



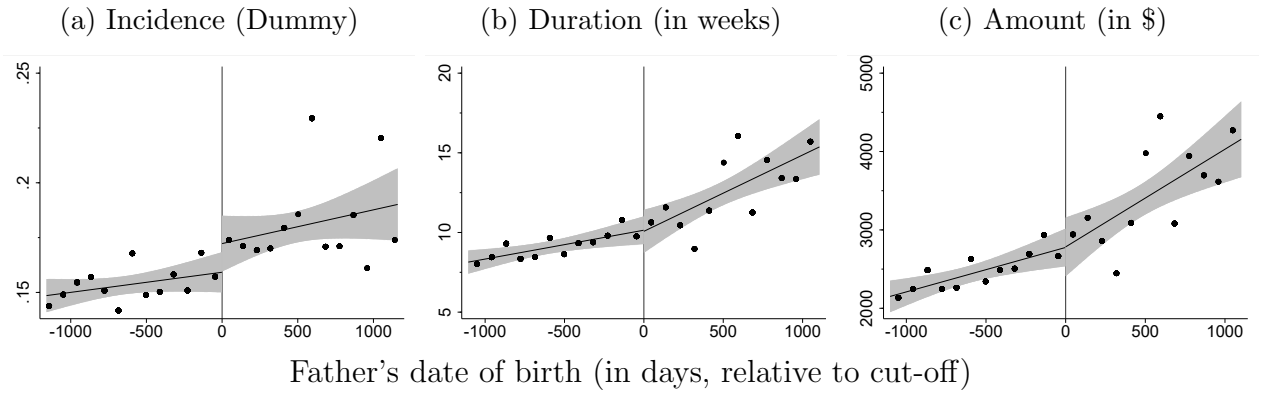
Note: TDS2-E Analysis Sample within symmetric MSE-minimizing bandwidths from main RD estimations for each outcome. Linear fit and 95% confidence interval, means at quarterly level.

Figure A.6: Youths' Unemployment Benefit Receipt By Age, Quadratic Fit



Note: TDS2-E Analysis Sample within symmetric MSE-minimizing bandwidths from main RD estimations for each outcome. Quadratic fit and 95% confidence interval, means at quarterly level.

Figure A.7: Placebo Graphs—Youths' Unemployment Benefit Receipt Ever With Fathers Never on Unemployment Benefits During Youths' Adolescence (Ages 12–15)



Note: TDS2-E Sample conditional on father receiving no unemployment benefits when the youth was between ages 12 and 15, within symmetric MSE-minimizing bandwidths from main RD estimations for each outcome. Linear fit and 95% confidence interval, means at quarterly level.

Table A.7: Youths' Unemployment Benefit Receipt Conditional on Positive Incidence

	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Duration (in weeks)					
RD Estimate	2.371	1.860	3.277	2.036	3.427
	(0.388)	(0.696)	(0.526)	(0.838)	(0.643)
Obs. Control	2603	2522	3017	1859	3686
Obs. Treatment	1456	1508	1688	1001	1905
Amount (in $)					
RD Estimate	633.136	471.235	936.137	10.985	1075.243
	(0.446)	(0.716)	(0.480)	(0.922)	(0.556)
Obs. Control	2359	2382	2788	1870	3301
Obs. Treatment	1391	1449	1619	1007	1811

Note: TDS2-E Analysis Sample restricted to youths with positive unemployment receipt incidence, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1463 and 1887 days). *p<0.1, **p<0.05, ***p<0.01.

Table A.8: Sensitivity Analyses Method—Fathers' Unemployment Benefit Receipt During Youths' Adolescence

	Duration				Amount
	in weeks	$\geq$ 3 months	$\geq$ 6 months	$\geq$ 12 months	in $
	(1)	(2)	(3)	(4)	(5)
Main Results (for Comparison)					
RD Estimate	-7.348*	-0.032*	-0.028	-0.043*	-1108.185
Panel A: Controlling for Demographics[a]					
RD Estimate	-7.814**	-0.034*	-0.027	-0.044**	-1340.728
	(0.047)	(0.061)	(0.155)	(0.045)	(0.134)
Observations	7878; 5306	7071; 4912	8058; 5367	7795; 5258	8816; 5737
Panel B: Polynomial Order 2					
RD Estimate	-7.269*	-0.042*	-0.036	-0.049*	-1325.469
	(0.084)	(0.067)	(0.118)	(0.050)	(0.191)
Observations	18579; 8561	13057; 7335	16185; 8093	16949; 8240	18948; 8612
Panel C: Polynomial Order 3					
RD Estimate	-8.645	-0.045*	-0.040	-0.056*	-1694.097
	(0.193)	(0.091)	(0.201)	(0.090)	(0.271)
Observations	18358; 8527	19275; 8654	20723; 8953	20866; 8990	19330; 8667
Panel D: Epanechnikov Kernel					
RD Estimate	-7.946*	-0.031*	-0.028	-0.045**	-1232.320
	(0.059)	(0.085)	(0.148)	(0.047)	(0.183)
Observations	7385; 5123	7172; 4976	7454; 5150	7400; 5129	8469; 5610
Panel E: Uniform Kernel					
RD Estimate	-8.962**	-0.024	-0.035*	-0.050**	-1243.941
	(0.036)	(0.119)	(0.088)	(0.030)	(0.185)
Observations	6570; 4629	7019; 4888	6102; 4437	6405; 4556	7216; 5022
Panel F: Asymmetric Bandwidth					
RD Estimate	-4.240	-0.034**	-0.026	-0.039*	-585.419
	(0.207)	(0.041)	(0.146)	(0.057)	(0.405)
Observations	12613; 5813	10764; 4934	9272; 5759	9378; 5922	12679; 6168
Panel G: Fixed Bandwidth at 5 Years					
RD Estimate	-2.993	-0.010*	-0.012	-0.020*	-419.067
	(0.102)	(0.074)	(0.134)	(0.058)	(0.208)
Observations	14396; 7696	14396; 7696	14396; 7696	14396; 7696	14396; 7696
Panel H: Coverage Error Rate Minimizing Inference[b]					
RD Estimate	-7.348	-0.032	-0.028	-0.043	-1108.185
	(0.211)	(0.108)	(0.176)	(0.173)	(0.191)
Observations	8131; 5454	7292; 5072	8131; 5454	8191; 5468	9169; 5936

Note: TDS2-E Analysis Sample, regression discontinuity estimations of fathers being subject to the MOI controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment). Unless otherwise specified, local linear estimates with symmetric MSE-minimizing bandwidths and triangular kernel. *p<0.1, **p<0.05, ***p<0.01. [a]Fathers' Indigenous status, family income support and unemployment benefit receipt before July 1, 1999, no. of FTB/FPA cared for children fixed effects, marital status to mother on July 1, 1999; youths' gender, Indigenous status, month of birth fixed effects; mothers' age at childbirth, Indigenous status, family income support and unemployment benefit receipt before July 1, 1999. 813 observations are excluded because of missing information on mothers. [b]Robust p-values obtained through coverage error rate minimizing bandwidth.

Table A.9: Sensitivity Analyses Method—Youths' Duration on Unemployment Benefits

	Duration (in weeks)				
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Main Results (for Comparison)					
RD Estimate	-1.337*	-2.239*	-3.392*	-3.724	-3.168*
Panel A: Controlling for Demographics[a]					
RD Estimate	-1.294*	-2.140*	-3.368*	-3.737	-3.025*
	(0.073)	(0.068)	(0.063)	(0.134)	(0.076)
Observations	9930; 6233	8261; 5185	6184; 3984	4504; 2729	8854; 5764
Panel B: Polynomial Order 2					
RD Estimate	-1.551	-2.588	-3.828	-4.417	-3.606
	(0.167)	(0.139)	(0.121)	(0.153)	(0.130)
Observations	12009; 7058	10489; 6043	9490; 5267	6533; 3419	12127; 7093
Panel C: Polynomial Order 3					
RD Estimate	-1.787	-2.982	-4.266	-4.170	-3.906
	(0.130)	(0.107)	(0.112)	(0.212)	(0.114)
Observations	18369; 8531	16310; 7373	14757; 6350	11448; 4268	19782; 8762
Panel D: Epanechnikov Kernel					
RD Estimate	-1.084	-2.214*	-3.644**	-3.773	-3.365*
	(0.103)	(0.058)	(0.048)	(0.135)	(0.050)
Observations	11589; 6905	8548; 5318	5658; 3776	4289; 2659	8587; 5651
Panel E: Uniform Kernel					
RD Estimate	-1.460*	-2.658**	-2.461	-3.700	-2.939*
	(0.056)	(0.035)	(0.112)	(0.131)	(0.064)
Observations	7792; 5305	6637; 4499	7419; 4517	4002; 2566	8476; 5612
Panel F: Asymmetric Bandwidth					
RD Estimate	-1.580**	-2.622**	-3.929**	-6.000***	-3.822**
	(0.024)	(0.021)	(0.021)	(0.006)	(0.019)
Observations	17821; 4947	16459; 4022	15155; 3292	12916; 2215	19155; 4544
Panel G: Fixed Bandwidth at 5 Years					
RD Estimate	-0.832*	-1.326*	-2.152*	-2.837	-2.026*
	(0.065)	(0.058)	(0.062)	(0.143)	(0.072)
Observations	14396; 7696	12921; 6688	11362; 5706	7790; 3697	14396; 7696
Panel H: Coverage Error Rate Minimizing Inference[b]					
RD Estimate	-1.337	-2.239	-3.392	-3.724	-3.168
	(0.288)	(0.306)	(0.447)	(0.261)	(0.354)
Observations	9666; 6172	8000; 5096	6023; 3941	4556; 2768	8649; 5684

Note: TDS2-E Analysis Sample, regression discontinuity estimations of fathers being subject to the MOI controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment). Unless otherwise specified, local linear estimates with symmetric MSE-minimizing bandwidths and triangular kernel. *p<0.1, **p<0.05, ***p<0.01. [a]Fathers' Indigenous status, family income support and unemployment benefit receipt before July 1, 1999, no. of FTB/FPA cared for children fixed effects, marital status to mother on July 1, 1999; youths' gender, Indigenous status, month of birth fixed effects; mothers' age at childbirth, Indigenous status, family income support and unemployment benefit receipt before July 1, 1999. 813 observations are excluded because of missing information on mothers. [b]Robust p-values obtained through coverage error rate minimizing bandwidth.

Table A.10: Sensitivity Analyses Method—Youths' Amount of Unemployment Benefits

	Amount (in $)				
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Main Results (for Comparison)					
RD Estimate	-306.976	-546.218*	-884.503*	-1169.430*	-776.598*
Panel A: Controlling for Demographics[a]					
RD Estimate	-282.744	-511.912*	-869.501*	-1190.128*	-743.351
	(0.125)	(0.099)	(0.073)	(0.083)	(0.107)
Observations	11877; 6950	9396; 5636	6592; 4156	4480; 2722	9670; 6108
Panel B: Polynomial Order 2					
RD Estimate	-393.940	-673.236	-995.111	-1393.751*	-912.856
	(0.192)	(0.150)	(0.133)	(0.098)	(0.153)
Observations	12251; 7135	10652; 6105	9583; 5289	6513; 3416	12193; 7118
Panel C: Polynomial Order 3					
RD Estimate	-448.748	-765.897	-1096.911	-1375.662	-971.090
	(0.163)	(0.128)	(0.132)	(0.132)	(0.152)
Observations	18697; 8580	16506; 7404	14943; 6375	10869; 4175	19874; 8791
Panel D: Epanechnikov Kernel					
RD Estimate	-270.898	-458.294	-954.658*	-1178.342*	-817.835*
	(0.134)	(0.115)	(0.054)	(0.093)	(0.081)
Observations	11719; 6937	10090; 5938	6169; 4012	4349; 2678	9110; 5903
Panel E: Uniform Kernel					
RD Estimate	-365.140*	-643.334*	-747.633*	-1189.799*	-716.938*
	(0.083)	(0.063)	(0.085)	(0.090)	(0.093)
Observations	8317; 5529	7229; 4757	6820; 4277	4239; 2647	8949; 5819
Panel F: Asymmetric Bandwidth					
RD Estimate	-410.384**	-692.768**	-1025.556**	-1809.584***	-983.649**
	(0.030)	(0.024)	(0.028)	(0.003)	(0.027)
Observations	17718; 5410	16362; 4388	15006; 3367	13170; 2202	18911; 4791
Panel G: Fixed Bandwidth at 5 Years					
RD Estimate	-213.800*	-345.562*	-555.470*	-908.104*	-496.147
	(0.095)	(0.079)	(0.082)	(0.097)	(0.105)
Observations	14396; 7696	12921; 6688	11362; 5706	7790; 3697	14396; 7696
Panel H: Coverage Error Rate Minimizing Inference[b]					
RD Estimate	-306.976	-546.218	-884.503	-1169.430	-776.598
	(0.230)	(0.271)	(0.463)	(0.165)	(0.336)
Observations	10859; 6657	8905; 5491	6351; 4075	4559; 2770	9353; 6012

Note: TDS2-E Analysis Sample, regression discontinuity estimations of fathers being subject to the MOI controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment). Unless otherwise specified, local linear estimates with symmetric MSE-minimizing bandwidths and triangular kernel. *p<0.1, **p<0.05, ***p<0.01. [a]Fathers' Indigenous status, family income support and unemployment benefit receipt before July 1, 1999, no. of FTB/FPA cared for children fixed effects, marital status to mother on July 1, 1999; youths' gender, Indigenous status, month of birth fixed effects; mothers' age at childbirth, Indigenous status, family income support and unemployment benefit receipt before July 1, 1999. 813 observations are excluded because of missing information on mothers. [b]Robust p-values obtained through coverage error rate minimizing bandwidth.

Table A.11: Sensitivity Analyses Sample—Fathers' Unemployment Benefit Receipt During Youths' Adolescence

	Duration				Amount
	in weeks	$\geq$ 3 months	$\geq$ 6 months	$\geq$ 12 months	in $
	(1)	(2)	(3)	(4)	(5)
Main Results (for Comparison)					
RD Estimate	-7.348*	-0.032*	-0.028	-0.043*	-1108.185
Panel A: Defining Youths' Adolescence as Ages 12–15					
RD Estimate	-7.354**	-0.034*	-0.041*	-0.049**	-1037.530
	(0.027)	(0.064)	(0.058)	(0.042)	(0.147)
Observations	6279; 4421	6279; 4421	6843; 4723	6584; 4608	7611; 5083
Panel B: Subsample of Focal Youths (born between Oct 1987 and Mar 1988)					
RD Estimate	-5.418	-0.005	-0.026	-0.004	-1068.489
	(0.216)	(0.635)	(0.269)	(0.704)	(0.282)
Observations	3324; 2193	3646; 2330	3444; 2243	4036; 2501	3548; 2287
Panel C: Excluding Indigenous Fathers					
RD Estimate	-3.940	-0.030	-0.016	-0.031	-726.469
	(0.298)	(0.137)	(0.379)	(0.139)	(0.429)
Observations	8382; 4914	7056; 4420	8315; 4887	8723; 5075	8824; 5099

Note: TDS2-E Subsamples of Analysis Sample with 42530 (Panel A), 21451 (Panel B), 43746 (Panel C) observations, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment) by symmetric MSE-minimizing bandwidths. *p<0.1, **p<0.05, ***p<0.01.

Table A.12: Sensitivity Analyses Sample—Youths' Duration on Unemployment Benefits

	Duration (in weeks)				
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Main Results (for Comparison)					
RD Estimate	-1.337*	-2.239*	-3.392*	-3.724	-3.168*
Panel A: Defining Youths' Adolescence as Ages 12–15					
RD Estimate	-1.217	-1.993	-3.276*	-3.478	-2.792
	(0.117)	(0.111)	(0.089)	(0.206)	(0.128)
Observations	8878; 5712	8069; 5027	6130; 3871	4383; 2627	8941; 5739
Panel B: Subsample of Focal Youths (born between Oct 1987 and Mar 1988)					
RD Estimate	-2.073	-2.719	-4.313	-6.047	-5.257
	(0.180)	(0.205)	(0.140)	(0.205)	(0.140)
Observations	2970; 2019	2995; 2032	2992; 2031	1700; 1107	2970; 2018
Panel C: Excluding Indigenous Fathers					
RD Estimate	-1.436*	-2.391*	-3.736*	-5.641**	-3.726*
	(0.084)	(0.075)	(0.064)	(0.038)	(0.057)
Observations	6702; 4279	5758; 3656	5125; 3189	3459; 2076	6484; 4181

Note: TDS2-E Subsamples of Analysis Sample with 42530 (Panel A), 21451 (Panel B), 43746 (Panel C) observations, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment) by symmetric MSE-minimizing bandwidths. *p<0.1, **p<0.05, ***p<0.01.

Table A.13: Sensitivity Analyses Sample—Youths' Amount of Unemployment Benefits

	Amount (in $)				
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Main Results (for Comparison)					
RD Estimate	-306.976	-546.218*	-884.503*	-1169.430*	-776.598*
Panel A: Defining Youths' Adolescence as Ages 12–15					
RD Estimate	-285.262	-472.060	-849.163	-1139.848	-700.267
	(0.159)	(0.146)	(0.103)	(0.131)	(0.160)
Observations	10313; 6221	9273; 5423	6610; 4082	4332; 2608	9404; 5915
Panel B: Subsample of Focal Youths (born between Oct 1987 and Mar 1988)					
RD Estimate	-444.342	-586.083	-959.216	-1700.859	-1158.250
	(0.255)	(0.276)	(0.203)	(0.194)	(0.207)
Observations	3163; 2130	3209; 2148	3131; 2113	1794; 1149	3107; 2099
Panel C: Excluding Indigenous Fathers					
RD Estimate	-370.991	-639.303*	-1016.123*	-1705.099**	-977.947*
	(0.104)	(0.081)	(0.067)	(0.024)	(0.068)
Observations	6742; 4307	5807;3673	5132; 3197	3483; 2081	6605; 4235

Note: TDS2-E Subsamples of Analysis Sample with 42530 (Panel A), 21451 (Panel B), 43746 (Panel C) observations, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off (Control; Treatment) by symmetric MSE-minimizing bandwidths. *p<0.1, **p<0.05, ***p<0.01.

Table A.14: Placebo Estimation—Preponing Reform Cut-off by One Year

Panel A: Fathers' Unemployment Benefit Receipt during Youths' Adolescence					
	Duration				Amount
	in weeks	$\geq$ 3 months	$\geq$ 6 months	$\geq$ 12 months	in $
	(1)	(2)	(3)	(4)	(5)
RD Estimate	-0.145	0.031	0.033	0.010	-692.405
	(0.955)	(0.573)	(0.506)	(0.819)	(0.659)
Obs. Control	1793	1922	1997	1861	1807
Obs. Treatment	1652	1818	1887	1725	1681
Panel B: Youths' Unemployment Benefit Receipt					
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Incidence (Dummy)					
RD Estimate	0.003	-0.012	-0.007	0.010	-0.003
	(0.961)	(0.776)	(0.978)	(0.703)	(0.968)
Obs. Control	1894	1727	1643	1248	2066
Obs. Treatment	1787	1614	1525	1142	1928
Duration (in weeks)					
RD Estimate	0.151	-0.322	-0.867	1.560	0.465
	(0.968)	(0.954)	(0.994)	(0.740)	(0.695)
Obs. Control	1913	1865	1688	1259	1986
Obs. Treatment	1810	1732	1555	1150	1868
Amount (in $)					
RD Estimate	64.043	-13.511	-194.315	383.116	111.879
	(0.971)	(0.900)	(0.979)	(0.843)	(0.721)
Obs. Control	1876	1855	1697	1259	2020
Obs. Treatment	1755	1713	1562	1150	1904

Note: TDS2-E Analysis Sample restricted to control group with cut-off date preponed by one year, local linear regression discontinuity estimations of fathers being subject to the preponed placebo reform with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 242 and 324 days). *p<0.1, **p<0.05, ***p<0.01.

Table A.15: Placebo Estimation—Fathers Never on Unemployment Benefits During Youths' Adolescence (Ages 12–15)

	Youths' Unemployment Benefit Receipt				
	By Age 23	By Age 24	By Age 25	By Age 26	Ever
	(1)	(2)	(3)	(4)	(5)
Incidence (Dummy)					
RD Estimate	0.001	0.009	0.022*	0.033**	0.013
	(0.934)	(0.411)	(0.081)	(0.037)	(0.173)
Obs. Control	31107	26830	20876	11149	29392
Obs. Treatment	11474	9666	7793	4480	11225
Duration (in weeks)					
RD Estimate	-0.142	0.047	0.312	0.874	0.147
	(0.576)	(0.859)	(0.978)	(0.638)	(0.929)
Obs. Control	28711	25838	20767	14211	27402
Obs. Treatment	11103	9526	7778	4928	10864
Amount (in $)					
RD Estimate	-30.543	20.601	81.574	210.098	55.281
	(0.604)	(0.873)	(0.989)	(0.709)	(0.955)
Obs. Control	28682	25359	20587	14269	27265
Obs. Treatment	11100	9450	7753	4935	10849

Note: TDS2-E Sample conditional on father receiving no unemployment benefits when the youth was between ages 12 and 15, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1019 and 1222 days). *p<0.1, **p<0.05, ***p<0.01.

Table A.16: Youths' Other Welfare Receipt by Gender

	Incidence of Receiving Other Welfare (Dummy)				
	Any Other Welfare	Disability Support Pension	Carer Payment	Parenting Payment Partnered	Parenting Payment Single
	(1)	(2)	(3)	(4)	(5)
Panel A: Male					
RD Estimate	-0.002	0.001	-0.000	-0.000	-0.002
	(0.978)	(0.823)	(0.940)	(0.931)	(0.570)
Obs. Control	5697	5829	5052	6298	6001
Obs. Treatment	3453	3498	3154	3656	3553
Panel B: Female					
RD Estimate	0.013	-0.003	0.011	-0.002	0.012
	(0.635)	(0.565)	(0.157)	(0.726)	(0.663)
Obs. Control	6519	7803	5034	5072	6231
Obs. Treatment	3633	3934	3163	3172	3554

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1251 and 2037 days). Other welfare encompasses Disability Support Pension, Carer Payment, Parenting Payment Partnered, and Parenting Payment Single. *p<0.1, **p<0.05, ***p<0.01.

Table A.17: Mothers' Welfare Receipt During Youths' Adolescence

	Disability Support Pension	Carer Payment	Parenting Payment Partnered	Parenting Payment Single
	(1)	(2)	(3)	(4)
Incidence (Dummy)				
RD Estimate	-0.006	0.006	-0.023	0.034
	(0.463)	(0.793)	(0.257)	(0.228)
Obs. Control	11918	10085	9173	11807
Obs. Treatment	7021	6345	5926	6959
Duration (in weeks)				
RD Estimate	-1.722	1.073	-2.975	5.896
	(0.410)	(0.475)	(0.435)	(0.326)
Obs. Control	11032	11699	11471	10843
Obs. Treatment	6700	6907	6850	6637
Amount (in $)				
RD Estimate	-419.505	312.652	-456.095	1316.142
	(0.448)	(0.444)	(0.542)	(0.532)
Obs. Control	10619	11152	11995	10871
Obs. Treatment	6537	6766	7033	6647

Note: TDS2-E Analysis Sample, local linear regression discontinuity estimations of fathers being subject to the MOI with triangular kernel, controlling for youths' year of birth fixed effects. Robust p-values in parentheses. Observations reported are the number of observations chosen on either side of the cut-off by symmetric MSE-minimizing bandwidths (between 1211 and 1554 days). *p<0.1, **p<0.05, ***p<0.01.