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Unemployment insurance effects on child academic outcomes: Results from the National Longitudinal Survey of Youth

Sharon Kukla-Acevedo [a,*], Colleen M. Heflin [b]

[a] Central Michigan University, United States
[b] University of Missouri, United States

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ABSTRACT

Despite evidence linking parental unemployment spells and negative child outcomes, there is very little research that explores how participation in the Unemployment Insurance (UI) Program could buffer these effects. Using the National Longitudinal Survey of Youth 79 (NLSY79) and Children of the NLSY79 data, we estimate a series of fixed effects and instrumental variables models to estimate the relationship between UI participation and the Peabody Individual Achievement Test (math and reading comprehension). Once we control for the non-random selection process into UI participation, our results suggest a positive relationship between UI participation and PIAT math scores. None of the models suggests a negative influence of UI participation on child outcomes.

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1. Introduction

The American economy is undergoing a fundamental restructuring. The unemployment rate, while substantially below the high of 10.1% in October 2009, remains at 6.7% 52 months later in February 2014 (Bureau of Labor Statistics, 2014). While the national unemployment rate has continued to improve, the number of long-term unemployed, defined as those out of the labor market 27 or more weeks, remains at historic highs of 3.8 million or 37.0% of all unemployed. Both the high levels and durations of unemployment mark these economic times as substantially different from prior economic cycles. Over an individual's lifetime, most workers will experience multiple spells of unemployment. From 1978 to 2010, only 9% of U.S. workers did not experience an unemployment spell with the average number of spells experienced at five (Marmor, Mashaw, & Pakutka, 2013). It is with this policy context in mind that this paper examines the ability of participation in the Unemployment Insurance Program to buffer recipients' children from the effects of unemployment and the accompanying income shock.

Prior research demonstrates a negative causal effect of unemployment on individuals' future earnings (Jacobsen, LaLonde, & Sullivan, 1993; Stevens, 1997). Unemployment spells are also correlated with negative mental health outcomes, especially in fathers (Artazcoz, Benach, Borrell, & Cortes, 2004). The damaging effects of unemployment extend to future generations, as well. Parental job displacement, especially of fathers, leads to children's lower annual earnings (Oreopoulos, Page, & Huff Stevens, 2008) and a host of negative educational outcomes, including lower grade point average (Rege, Telle, & Votruba, 2011), increased probability of grade retention (Stevens & Schaller, 2011), and an increased probability of dropping out of high school (Kalil & Ziol-Guest, 2005; Rege et al., 2011).

This paper is the first of which we are aware to model the relationship between participation in unemployment insurance and children's outcomes. We use data from the National Longitudinal Survey of Youth 1979 cohort to examine adult participation in UI and the association with children's achievement outcomes. These panel data allow us to control for the non-random selection process into UI participation. In the section that follows, we lay out program details of UI and provide a conceptual model linking UI to child outcomes. Then we provide details regarding our data, measures and models employed. Our results suggest that UI program participation may be related to child outcomes, although the nature of this relationship is nuanced. While the models controlling for within-child variance suggest some positive relationships, the models controlling for non-random selection into UI suggest that UI participation is unrelated to child academic outcomes. None of the models suggests a negative influence of UI participation on child outcomes. This is noteworthy because other income-support programs, such as the Temporary Assistance to Needy Families Program, have been linked to reduced cognitive and behavioral outcomes in children and adolescents (Ku & Plotnick, 2003; Lohman, Pittman, Levine Coley, & Chase-Landsdale, 2004). In the final section, we outline the limitations of our study and discuss implications for both research and policy.

1.1. UI receipt and child outcomes: theory and hypotheses

The Unemployment Insurance Program is a joint federal-state program that operates as social insurance for short-term periods of

* Corresponding author at: 235 Anspach Hall, Mount Pleasant, MI 48859-0001, United States.
E-mail address: kukla1sa@cmich.edu (S. Kukla-Acevedo).

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unemployment. In order to qualify, unemployed workers must meet both monetary eligibility guidelines, based on employment and earnings over the prior 20 months, and non-monetary requirements, which are determined reason for work separation. Historically, regular state UI benefits for most recipients last for 26 weeks (6 months). States fund regular unemployment insurance benefits from taxes received from state employers. After exhausting regular benefits, during periods of high unemployment, recipients may be eligible for "extended benefits" as a result of federal and state legislation. Significant state variation exists in the operation of UI with regard to eligibility requirements, benefit amounts, and duration of eligibility.

UI was designed as a counter-cyclical program: When the economy is strong and unemployment levels are low, participation levels in UI should be low and of a short duration. However, during times of economic hardship, such as during the Great Recession of 2008, UI caseloads are expected to grow substantially and the duration may be expanded. As a result of seven federal legislative actions from June 2008 through April 2010, the altered UI program extended the allowable receipt duration from 26 weeks up to 99 weeks, as well as provided for a $25 week supplement.

Because UI participation is not means-tested and is a part of the safety net that is considered social insurance (along with other popular programs such as Social Security, Medicare and Disability Insurance), there has historically been little social stigma attached to participation. Nonetheless, participation among eligible populations is far from complete. According to estimates from Currie (2006), participation among those eligible is the range of 72 to 83%. While Currie suggests that the transaction costs of applying for benefits might explain the moderately high non-participation rates, Ebenstein and Stange (2010) test this hypothesis using state-level differences in application procedures for UI and find that this is not the case. However, Shaefer and Wu (2011) report that participation among eligible low-educated single women is lower among women with children than among childless women suggesting that barriers to participation may exist for certain disadvantaged groups of eligible unemployed.

States provide UI to displaced workers to minimize the negative effects of unemployment spells that might be associated with reduced income levels. Much is known about the harmful effects of parental unemployment spells on children (Kalil & Ziol-Guest, 2008; Oreopoulos et al., 2008; Rege et al., 2011; Stevens & Schaller, 2009) and the positive relationship between permanent income and child wellbeing (Dahl & Lochner, 2012; Duncan, Morris, & Rodrigues, 2011).

There are several possible pathways through which income could affect children's achievement outcomes. An improvement in mother's income may affect the quality of the home environment, material conditions, parenting skills and child care to which the child is exposed (Blau, 1999; Dahl & Lochner, 2012; Guo & Harris, 2000; Mayer, 1997; Smith, Brooks-Gunn, & Klebanov, 1997). Evidence for an income effect seems to be strongest at the bottom of the income distribution (Duncan & Brooks-Gunn, 1997; Smith et al., 1997) and on the cognitive development for preschool age children (Duncan & Brooks-Gunn, 1997; Duncan, Yeung, Brooks-Gunn, & Smith, 1998).

Substantial scholarly attention focuses on the effect of permanent income levels on childhood achievement outcomes. The effects of transitory income on children's achievement outcomes are not as well understood. If transitory income is also associated with children's outcomes, then all else equal, UI participation should be positively associated with child outcomes, assuming the source of income is unimportant. Theoretically, UI receipt could alleviate harmful effects of unemployment by buffering the household from the income shock associated with the job loss.

In reality, UI benefits are not designed to be perfect substitutes for lost wages: the size of the maximum UI benefit varies by state and provides a partial wage replacement only. Some states provide an extra amount if the UI participant has dependent children. On average, UI replaces about 50% of lost wages, up to state maximum benefit amounts. However, because of the state ceilings on benefits, UI tends to replace a higher share of low-wage earnings than high-wage earnings (Stone & Chen, 2013). Because of the positive income effect and the lack of evidence regarding hassles or stigma of participation, there should be an unambiguously positive effect of participation. We hypothesize that child outcomes will be higher in households with an unemployed, UI-participating mother than in households where the unemployed mother does not receive UI.

2. Methodology

2.1. Methods

This paper estimates the UI participation effects on child academic outcomes. Observed UI benefit receipt is the result of both an eligibility determination and a participation decision. Not all who experience a job separation are eligible for the UI program — there are both monetary and non-monetary requirements related to earning history and the circumstance around the job separation. Quitting a job, losing a job for cause, working part-time, or seeking part-time work may all be correlated with child outcomes. If this is the case, then these unobserved factors will distort the causal impact of UI benefit receipt on child development.

As a consequence, to examine the impact of the UI program on child outcomes, we must account for at least two sources of bias — selection bias related to program eligibility and selection bias related to program take-up.[1] To address the first source of selection bias, that related to UI monetary and non-monetary eligibilities, the sample includes only those parents who were estimated to be eligible for unemployment benefits at the time of their unemployment spell. Mothers were determined to have met the monetary requirements if they earned the annual wage requirement in their state of residence and were working at least three out of the previous four quarters.[2,3] Mothers were included in the sample if they lost their job through no fault of their own (laid off) in the previous twelve months and they were in the labor force/looking for work during their unemployment spell. This sample selection strategy excludes a number of UI-eligible mothers. In many states, individuals are still able to qualify for UI if the individual quit for good cause connected to the work. However, eligibility in these cases depends on fact-finding obtained from the individual and the employer. We selected the more conservative sample because of the variation in state UI policy on separations for cause and because we do not have data on the fact-finding reports. Using this sample selection method, we compare the UI effects on children of unemployed, eligible mothers who do participate to the UI effects on children of unemployed, eligible mothers who do not participate.

In terms of take-up, the main concern is endogeneity bias — that women who participate in UI are different from women who do not participate in UI in ways that might affect their children's outcomes. This is most problematic when unobserved differences, such as mothers' interpersonal dynamics or ability to consistently follow routines, might be correlated both with their ability to pursue UI benefits and their children's academic outcomes. Currie and Cole (1993) note that welfare

[1] Measurement error is a third source of bias that may affect the UI estimates, but the literature does not provide guidance on the precision of UI self-report measures. We acknowledge this potential bias, but it is beyond the scope of this paper to explore measurement error in UI self-reported data.

[2] Our monetary requirements for sample inclusion differ slightly from those that are typically defined by the states. Most states require that UI recipients work four out of the previous five calendar quarters, and in each quarter they earn a minimum income. The timing of NLSY data collection from 1986 to 2010 led to our use of an approximation (every two years). We believe this specification is adequate because previous research indicates that few individuals, even those with low levels of education, are ineligible for the UI program due to monetary requirements, which are relatively easy to meet (O'Leary & Kline, 2010; Shaefer, 2010; Shaefer & Wu, 2011).

[3] We are grateful to Alix Gould-Werth and Luke Shaefer for sharing the state UI program parameter data.