Single Mother's Unemployment Experiences After a Job Placement: Children's Educational and Psychological Outcomes

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Single Mothers' Unemployment Experiences After a Job Displacement:

Children's Educational and Psychological Outcomes

Abstract

Job displacement leads to unemployment, but the length of unemployment following a displacement varies substantially. Job losses negatively affect child outcomes, but little is known about the effects of the aftermath of job losses on children. Using the National Longitudinal Survey of Youth 1979's weekly employment indicators, this study examines variations in single mothers' unemployment following a job displacement, and looks at the effects on children's educational outcomes (high school completion, college attendance, college completion) and psychological outcomes (using scale of depression). Using logistic regression and propensity score matching models, I find that increased unemployment time following a job displacement significantly affects children's chances of high school completion. However, no effects are seen for college attendance and completion, and some models show a decrease in children's depression in their late twenties, suggesting that unemployment following a job displacement may not be as detrimental to child wellbeing as might be expected.

Introduction

 Job displacement refers to the loss of a job due to reasons other than quitting or being fired. Job displacement can lead to a period of unemployment, but the length of unemployment following a displacement varies substantially, in some cases not occurring at all, as the worker transitions seamlessly into another position or perhaps a secondary job. Additionally, job displacements can occur more than once during a parent's career, and they can occur at a time of many or few other layoffs. This paper examines the length of time spent unemployed after a job loss, focusing on single mothers. Brand and Simon Thomas (2014) find significant decreases in high school completion and college attendance as well as increases in depression among children whose single mothers were displaced. However, they do not look at the time spent unemployed following each job displacement.

 More time spent unemployed is likely to mean more income lost and more time spent in a potentially high-stress situation of needing to find re-employment, so it seems plausible that a longer time spent unemployed could have increasingly adverse effects on children's outcomes, especially single mother's children as she provides the main household income and is potentially the only adult in the household to set the emotional tone. On the other hand, simply the event of being laid off from a job might be traumatic enough that variation in time spent unemployed following the lay-off does not add increasing negative effects for children. In this study, I examine variations in unemployment length for single mothers who were displaced from their jobs and the effects on children's educational and psychological outcomes to move toward a more nuanced understanding of the effects of parental job displacement on children's educational and psychological outcomes.

Background

Job displacement is involuntary: a loss is generally due to plant closings, company relocation, or company downsizing. Since it is involuntary, people are not necessarily as prepared - mentally and in terms of job seeking - for a job loss as they might be if they chose to quit a job. A displacement does not include being fired, thus theoretically eliminating concerns over personal characteristics that might cause someone to be terminated from his job. It is unsurprising that such a disruption in career plan and financial situation would affect the life course in a negative manner. Indeed, job displacement has been shown to have adverse effects on earnings and job quality (Couch, Jolly & Placzek 2011; Fallick 1996; Farber 2005; Jacobson, LaLonde, and Sullivan 1993; Kletzer & Fairlie 2003; Podgursky and Swaim 1987; Ruhm 1991; Topel 1990), marriage (Charles and Stephens 2004), geographical stability (Oreopoulos, Page, and Stevens 2008), social participation (Brand and Burgard 2008), and mental and physical health (Brand, Levy, and Gallo 2008; Burgard, Brand and House 2007; Dooley, Fielding and Levi 1996; Gallo et al. 2000; Jahoda 1982; Kessler, Turner and House 1989; Leana and Feldman 1992; Turner 1995; Warr and Jackson 1985). While some displaced workers never experience unemployment after a displacement, others are out of work for substantial lengths of time (Chan and Stevens 2001; Fallick 1996; Seitchik 1991). Job seekers who lose hope of and motivation for finding a job after being out of work for longer periods of time can become permanently displaced (Seitchik 1991). It is reasonable to expect that the many adverse effects of displacement would vary according to the post-displacement employment trajectories.

As Furstenburg, Rumbaut, and Settersten (2005) point out, "...families of origin are a (if not the) central safety net for many young people - and a serious risk for others." (23) This is particularly true for the children of single mothers, since they often provide the only adult role in

the household. Research has shown that parental job losses affect children in various ways. Stevens and Schaller (2011) find that job loss among parents leads to increases in grade retention for their children; Kalil and Ziol-Guest (2008) find the same effect after a father's job loss as well as higher rates of school suspension and expulsion. Brand and Simon Thomas (2014) find that children whose single mothers are displaced when the child is in high school are less likely to finish high school and attend college compared to children whose mothers were not displaced. However, these papers do not address the aftermath of the job displacement, which is likely (but not guaranteed) to be some period of unemployment.

Unemployment affects income, even with the benefit of unemployment insurance. Parental financial problems affect their children (Dahl & Lochner 2005), and new evidence shows that the academic achievement gap between children from high- and low-income families is increasing (Reardon 2011). Poverty in early childhood has been linked to outcomes such as lower adult earnings and lower rates of school completion (Duncan, Yeung, Brooks-Gunn & Smith 1998; Duncan, Ziol-Guest & Kalil 2010). Unemployment also affects psychological wellbeing (Jackson & Warr 1984; McKee-Ryan et al. 2005; Graetz 1993), and children could be sensing these issues in their households and picking up on their mother's psychological state. This points to the possibility for more severe effects for children if parental displacement leads to longer periods of unemployment, and thus longer periods of reduced income and psychological challenge.

Most work on job displacement, especially with its effects on children, has focused on fathers' job displacements. This paper focuses instead on single mothers. As Brand and Simon Thomas (2014) note, many children spend time in a household with a single mother, and the effects of a job displacement in a household with only one income and potentially one adult

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setting the tone in the household, may be particularly strong. No study to date has explored how post-displacement variation in single mothers' unemployment impacts children. If the severity of the displacement aftermath does affect the severity of outcomes on children, this could create a graduated pathway of intergenerational downward mobility: for example, if children choose lower levels of education (fewer high school diplomas, fewer years of college), they are more likely to have lower paying jobs (Borgen & Rumbaut 2011) and will have a higher propensity for being displaced (Brand & Simon Thomas 2014), compared to a trajectory of higher levels of education prior to the parental displacement event. Effects on the psychological wellbeing of children could have a similar impact.

As parental job displacement affects children's educational and psychological outcomes (Brand & Simon Thomas 2014), variation in severity of a displacement's effects could lead to a variation in these outcomes. Children's educational outcomes that could be affected by a parental job shock include high school completion and college attendance and completion. Children's psychological outcomes are analyzed by outcomes of depression scale in their early and late twenties (20-24 and 25-29 years old).

Data

The National Longitudinal Study of Youth 1979 (NLSY79) and the Child-Mother File, collected and published by the Bureau of Labor Statistics (BLS; 2012), are a good fit for this project for several reasons. First, the substantial length of the study allows for inclusion of mothers and their children, with the ability to look at child outcomes into early adulthood. Second, the NLSY79 asks respondents for employment status every week of the study. With 1,741 weeks included, this gives great insight into changes in employment status following a job

loss. Third, the Child-Mother File includes a variety of questions about the child's educational choices in each year, allowing for inclusion of the outcomes listed earlier.

This study uses data from 1979 through 2010. Using the weekly employment status data, I construct a variable to indicate employment for each week in the survey. Using those variables, I construct variables to indicate being unemployed for more than 6 months and for more than 12 months; these cut-off points reflect divisions made by Addison and Portugal (2004) to assess effects of unemployment benefits on re-employment, by Machin and Manning (1999) to describe the experience of long-term unemployment, and by Arulampalam (2001) to look at wages following a job loss. I also construct a variable indicating any unemployment weeks versus no weeks spent unemployed following a job displacement. Counts of weeks unemployed are truncated at 52 weeks (12 months). In order to capture those whose displacement occurs later in the year and whose unemployment hence can spill into the following year, I count into the following year on each count. Since I truncate at 52 weeks, this does not result in a skewed distribution for those who were laid off earlier in the year but whose unemployment spills into the next year as well.

As mentioned earlier, this study limits analysis to mothers who experienced a job displacement and who were not married or partnered at the time of the job displacement. Additionally, respondents are only included if the displacement occurred when their child was between 0 and 17 years old. Finally, children who are not at least 19 years old in 2011 are excluded from the analysis as they are unlikely to have reached the educational outcomes considered. I also lose respondents due to missingness in the weekly employment data. My overall sample size includes 1,280 mothers matched with their children. Then, I only run analyses on the children whose mothers experienced a job displacement prior to the

unemployment spell, which creates a final sample size of 619 children matched with their mothers. Figure 1 shows an overview of this sample creation process. Multiple imputation on weeks unemployed does not substantially increase this sample size, so I use the non-imputed variables for weeks unemployed.

For the educational outcomes, respondents are considered to have completed high school if they report 12 or more years of education by age 19. They are considered to have attended college if they report more than 12 but less than 16 years of schooling by age 21; they are coded to have graduated college if they report 16 years or more of schooling by 24 years of age.

For the psychological outcomes, I use measures from the Center for Epidemiologic Studies Depression Scale (CESD). The NLSY79 asks a series of questions using this scale that can be combined into a rating by averaging the scores on each item together; I then re-center the scores to run from 0 to 1. This measures the respondent's level of depression, where scores closer to 1 mean more likely to be depressed.

I include maternal time-invariant covariates (race/ethnicity, mother's years of education, family status at age 14, growing up in the South, ASVAB mental ability, Rotter Locus of Control, delinquency as a child), maternal time-varying covariates as measured at child's age 0 (age, number of children, marital status, high school completion, region of residence, employer tenure, working in manufacturing or trade), and child characteristics (gender, race/ethnicity). I exclude mother's college completion as a covariate because none of the mothers in my sample had completed college when their child was born. I impute missing variables for mother's years of education, growing up in the South, ASVAB mental ability, Rotter Locus of Control, and delinquency as a child. Descriptive statistics for these covariates and the children's outcome variables are shown in Table 1, divided by unemployment lengths. It is important to note first

that this is clearly a more disadvantaged sample than a nationally representative sample would be,

which makes sense since the mothers have experienced a job loss and were unmarried at the time

of that job loss. Secondly, there are clear differences between respondents who were unemployed

for more time or even any time at all, comparing being unemployed for 12 months to less than 12

months, 6 months to less than 6 months, and being unemployed at all to not experiencing

unemployment.

Methods

The effects of unemployment length variations on child outcomes are examined using

logistic regression models and propensity score matching models. Logistic regression models

analyze both educational and psychological outcomes; propensity score models analyze only

educational outcomes due to the continuous structure of the psychological variables.

Logistic models take the form of:

$$\log(\frac{p}{1-p}) = \beta_0 + \beta_1 * x_1 + \beta_2 * x_2 + ... + \beta_i * x_i \tag{1}$$

where p is the probability of being displaced for a specific length of time (6 months vs.

less than 6 months, 12 months vs. less than 12 months, any unemployment vs. no

unemployment), x_i is the set of covariates being examined in this model, β_0 is the constant, and

the other β_i's signify the set of coefficients for each variable. Covariates were discussed in the

previous section. Models use a clustering correction for families with more than one child (i.e.,

two or more children as respondents linked to the same mother). I report results for models

without covariates, models with a limited set of covariates (this is discussed further in the Results

section), and models with all covariates.

Propensity score matching methods assume that there are two potential outcomes (Rubin 1974): in this case, a mother can either be displaced for a certain length of time or not be displaced for that length of time (either way, the mother experiences a displacement, and is unmarried at the time of displacement). Only one of those outcomes is observed (Holland 1986), but in a large sample such as the NLSY79 provides, children can be matched as looking similar on a variety of individual characteristics except that one has a displaced parent who experiences a certain length of unemployment (i.e., more than 6 months, or more than 12 months) and the other does not (i.e., their length of unemployment post-displacement is less than 6 months, or less than 12 months).

Then, the outcomes for each of the matched pair can be compared to calculate an estimate of the effect of the post-displacement unemployment time, or the difference between the potential outcomes (δ_i). Following Morgan and Winship (2007) and Rubin (1974), this means

$$\delta_i = y_i^{d=1} - y_i^{d=0} \tag{2}$$

The models follow the methodology used in Brand and Simon Thomas (2014); that is, the propensity scores are estimated using the following equation

$$P_i = p(d_i = 1 \mid X) = \log \frac{d_i}{1 - d_i} = (\sum_{k=0}^{K} \beta_k X_{ik}) \tag{3}$$

where P_i is the set of propensity scores, and β and X are the sets of coefficients and covariates again, and the average treatment effect on the treated (*TT*)

$$E(\delta \mid d = 1, P) = E(y^{d=1} - y^{d=0} \mid d = 1, P) \tag{4}$$

and the average treatment effect on the untreated (*TUT*)

$$E(\delta \mid d = 0, P) = E(y^{d=1} - y^{d=0} \mid d = 0, P) \tag{5}$$

are examined and reported. I report results for models that use all covariates to calculate propensity scores.

Results

Figures 2a and 2b show that the number of weeks spent unemployed after a displacement varies substantially – Figure 2a include all respondents, and Figure 2b does not include the number of single mothers who spent either no time or twelve months or more unemployed in order to view the substantial variation that occurs in the weeks in between those measures. Indeed, as reported in Table 1, 29% of the sample experiences no unemployment, but among those who do, 58% experience more than six months of unemployment, and nearly 48% experience a year or more.

In results not shown here (but available upon request) using OLS regression models, I find that Black and Hispanic respondents are more likely to experience longer periods of unemployment. I also find that job tenure and being employed in manufacturing negatively predict unemployment length, meaning that people who have been in a job for a longer time period before being laid off, fare better in finding a new job, and those in manufacturing also have an easier time becoming re-employed. For manufacturing, this may mean that those mothers were already working more than one job and hence transitioned seamlessly to the other job when one was lost, or that may mean that those jobs are more often hiring. Finally, I find that those who have more children when the child respondent is born are more likely to experience a lengthier unemployment following a displacement. I use these covariates – Black, Hispanic, job tenure, manufacturing, number of children at child age 0 – to create a set of limited covariates; I

run logistic regression models with no covariates, with this limited set of covariates, and with all covariates included.

These three sets of logistic regression results, as log-odds, are shown in Table 2, for all child outcomes and for three different divisions of unemployment time lengths. Regardless of unemployment time length, children of mothers who are unemployed longer following a job displacement are less likely to complete high school by age 19. However, the results for children's college attendance, and college completion are remarkably statistically insignificant. That is to say, when mothers are unmarried and are laid off, and then experience a year or more of unemployment, this does not affect their children's college-going outcomes beyond the effect of the job loss itself. We know from prior literature that a parental job loss (Kalil & Ziol-Guest 2008; Stevens & Schaller 2011) and specifically a single mother's job loss (Brand & Simon Thomas 2014) has a severe and significant impact on their child's educational outcomes; indeed, this analysis shows that the subsequent unemployment spell can further differentiate child outcomes for high school completion. However, this does not mean that the subsequent unemployment spell creates any differentiation among children whose mothers experience the job loss and unemployment for college attendance and completion. This is a surprising finding, since lack of income following a job loss is often cited as a mechanism for the negative effects of a job loss, and those who spend more time unemployed would suffer greater income losses.

Models comparing unmarried mothers who spend any time unemployed to those who do not spend time unemployed show slightly significant effects on college completion, surprisingly improving the chances of college completion for their children (in partially and fully controlled models), and a decreased chance of depression for children when they are in their later twenties.

Thus, it appears that spending any time unemployed might have some benefits for children of single mothers in this sample.

Table 3 shows results from propensity score models, which confirm the findings for educational outcomes. Again, children are less likely to complete high school (for all models) and slightly more likely to complete college (for mothers experiencing any unemployment).

Conclusion

The time that single mothers spend unemployed following a job displacement lowers their children's chances of high school completion, though there is also some slight evidence of greater chances of college completion. This means that even after the mother's displacement derails children's educational plans and psychological wellbeing, the variation in time spent out of the labor force can further affect these child outcomes. This speaks not only to the importance of the event of a single mother being laid off, but also the potential consequence of being out of work for varying amounts of time, to her children.

The results for college attendance and completion run counter to what might be expected, given the income loss that the unemployed incur. If displacement is not beneficial to a worker's mental health, then it seems that increased time spent unemployed would not be beneficial either. Between ongoing income and psychological struggles, it seems that increasing time spent unemployed would have increasing negative effects on children. However, that does not seem to be the case in this study when looking at children's college outcomes.

Especially given the relative disadvantage of the children and mothers in the sample, it is possible that unemployment insurance or other benefits are mitigating the effects of unemployment following the job displacement, which would be good news for policy-makers.

Indeed, around two-thirds of the single mothers in this sample who experience a job loss report being on welfare at some point. However, the negative consequences for children's high school completion illustrate that single mothers' longer unemployment time still disadvantages children. As the job loss criteria makes sure that quitting or being fired are not included as job displacements, it does not seem to be a selective sample in who experienced the event that precipitates the unemployment spell. However, that is not to say that this is not a selected sample in other ways: these are all children of mothers who experienced a job displacement and were unmarried at the time of this displacement. The relatively small size of the sample also means that all results should be interpreted with caution.

As the United States continues to struggle with high unemployment following the Great Recession (Grusky, Western & Wimer 2011), delving into details surrounding job displacement and how children are affected is timely. Given that any maternal unemployment time leads to lower chances of high school completion for children, this could perhaps inform future policy interventions. Looking at the results of this study regarding children's college attendance and completion, these suggest that it also makes sense to ensure that single mothers have high job security. Essentially, once the post-displacement unemployment starts, the damage to their children's educational attainment is already done, especially for children's college outcomes. Children's high school outcomes are further affected as unemployment time increases. It is interesting to think about what this means for these children's eventual labor market experiences, since less schooling makes someone more susceptible to lay-offs. This suggests that these findings could have intergenerational implications.

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Table 1: Descriptive Statistics											
	Unemployed for 12 months or more		Unemployed for less than 12 months		Unemployed for 6 months or more		Unemployed for less than 6 months		Unemployed for any time		Not unemployed
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Maternal time-invariant covariates												
Black (0/1)	0.539	(0.499)	0.494	(0.501)	0.538	(0.499)	0.485	(0.501)	0.522	(0.500)	0.500	(0.501)
Hispanic (0/1)	0.224	(0.417)	0.145	(0.353)	0.226	(0.419)	0.123	(0.329)	0.210	(0.407)	0.117	(0.322)
(Grand)mother's years of education	9.508	(2.872)	9.795	(2.886)	9.525	(2.848)	9.842	(2.920)	9.399	(2.936)	10.290	(2.644)
(Grand)parents' intact family age 14 (0/1)	0.468	(0.500)	0.565	(0.496)	0.507	(0.501)	0.535	(0.500)	0.503	(0.501)	0.556	(0.498)
(Grand)parents' southern residence (0/1)	0.459	(0.486)	0.439	(0.493)	0.461	(0.489)	0.432	(0.491)	0.468	(0.491)	0.401	(0.484)
Mental ability (ASVAB) (-3-3)	-0.432	(0.597)	-0.350	(0.607)	-0.410	(0.609)	-0.360	(0.596)	-0.400	(0.601)	-0.363	(0.609)
Rotter locus of control scale (6-14)	9.469	(2.251)	9.387	(2.058)	9.496	(2.254)	9.330	(2.001)	9.508	(2.192)	9.227	(2.041)
Delinquency (0/1)	0.751	(0.414)	0.803	(0.385)	0.758	(0.412)	0.807	(0.381)	0.783	(0.395)	0.768	(0.411)
Maternal covariates at child age 0												
Age	21.305	(3.825)	21.836	(4.051)	21.409	(3.959)	21.823	(4.122)	21.412	(3.788)	22.000	(4.304)
Number of children	2.133	(1.382)	1.778	(1.064)	2.075	(1.331)	1.769	(1.073)	2.023	(1.310)	1.761	(1.021)
Marital or cohabiting partner (0/1)	0.363	(0.482)	0.435	(0.496)	0.368	(0.483)	0.446	(0.498)	0.387	(0.488)	0.433	(0.497)
High school completion (0/1)	0.629	(0.484)	0.704	(0.457)	0.648	(0.478)	0.696	(0.461)	0.660	(0.474)	0.689	(0.464)
College completion (0/1)	0.003	(0.058)	0.000	(0.000)	0.003	(0.053)	0.000	(0.000)	0.002	(0.048)	0.000	(0.000)
Region (0/1)	0.392	(0.489)	0.355	(0.479)	0.392	(0.489)	0.346	(0.477)	0.371	(0.484)	0.376	(0.486)
Employer tenure (weeks)	6.186	#####	13.208	#####	7.453	#####	13.188	#####	7.814	#####	14.857	#####
Manufacturing worker (0/1)	0.085	(0.279)	0.207	(0.406)	0.086	(0.281)	0.211	(0.409)	0.155	(0.363)	0.144	(0.352)
Trade worker (0/1)	0.166	(0.373)	0.148	(0.356)	0.148	(0.355)	0.169	(0.376)	0.148	(0.356)	0.178	(0.383)
Child characteristics												
Male (0/1)	0.502	(0.501)	0.537	(0.499)	0.507	(0.501)	0.538	(0.499)	0.517	(0.500)	0.528	(0.501)
Black (0/1)	0.539	(0.499)	0.494	(0.501)	0.538	(0.499)	0.485	(0.501)	0.522	(0.500)	0.500	(0.501)
Hispanic (0/1)	0.224	(0.417)	0.145	(0.353)	0.226	(0.419)	0.123	(0.329)	0.210	(0.407)	0.117	(0.322)
Child outcomes in young adulthood												
High school completion (0/1)	0.610	(0.489)	0.713	(0.453)	0.606	(0.489)	0.748	(0.435)	0.627	(0.484)	0.758	(0.429)
Some college attendance (0/1)	0.300	(0.459)	0.332	(0.472)	0.302	(0.460)	0.338	(0.474)	0.309	(0.463)	0.338	(0.475)
College completion (0/1)	0.084	(0.279)	0.086	(0.280)	0.091	(0.288)	0.076	(0.266)	0.097	(0.296)	0.051	(0.222)
CESD age 20-24 (0-1)	0.240	(0.182)	0.252	(0.188)	0.245	(0.184)	0.247	(0.186)	0.243	(0.187)	0.255	(0.179)
CESD age 25-29 (0-1)	0.252	(0.216)	0.255	(0.193)	0.247	(0.211)	0.262	(0.194)	0.243	(0.208)	0.282	(0.192)
N (out of 493 total)	295		324		359		260		439		180	
Percentage of total sample	47.7%		52.3%		58.0%		42.0%		70.9%		29.1%	

Notes: Sample is restricted to children whose mothers were not continuously married and living with their spouse, for whom we have data on weekly employment status, and who experienced a job loss when their child was between 0 and 17 years old. Sample only includes children who were at least 19 years old in 2010.

Table 2: Children's outcomes for mothers who experience 12 months, 6 months, or any unemployment, logistic regression models									
	Unemployed for 12 months			Unemployed for 6 months			Unemployed for any time		
Children's outcomes	No control variables	Limited control variables	All contral variables	No control variables	Limited control variables	All contral variables	No control variables	Limited control variables	All contral variables
High school completion	-0.466 *	-0.234	-0.192	-0.657 **	-0.463 *	-0.477 *	-0.623 *	-0.455 †	-0.511 †
College attendance	-0.148	0.212	0.220	-0.168	-0.163	0.159	-0.135	0.159	0.127
College completion	-0.017	0.151	0.193	0.197	0.405	0.531	0.681	0.889 †	0.948 †
CESD (20-24)	-0.012	-0.019	-0.029	-0.002	-0.007	-0.009	-0.013	-0.009	-0.011
CESD (25-29)	-0.002	-0.006	-0.006	-0.015	-0.020	-0.022	-0.039 †	-0.043 †	-0.041

Notes: These results are for mothers who experienced unemployment as compared to mothers who did not experience unemployment after a job displacement. Analyses include mothers who experienced a job loss when their child was between 0 and 17 years old and were unmarried at the time of the job loss. Only mothers with weekly employment data are included. Only children who were at least 19 years old in 2010 are included; N=619. Results for educational outcomes are log-odds; results for mental health outcomes are regression estimates. Models with limited control variables include controls for mother's and child's race (Black, Hispanic), mother's number of children at child age 0, mother's job tenure at child age 0, mother's job in manufacturing. Models with full controls also include controls for mother's background (grandmother's education, intact family), mother born in the South, mother's ability, mother's Rotter Locus of Control score, mother's delinquency, mother's age at child age 0, mother's marital status at child age 0, mother's education at child age 0, mother's job in trade, region, and child's gender.

Table 3: Children's outcomes for mothers who experience 12 months, 6 months, or any unemployment, Propensity Score Matching models									
	Unemployed for 12 months			**Unemployed for 6 months**			**Unemployed for any time**		
Children's outcomes	Unmatched differences	**Propensity score kernel matching, TT**	Propensity score kernel matching, *TUT*	Unmatched differences	**Propensity score kernel matching, TT**	Propensity score kernel matching, *TUT*	Unmatched differences	**Propensity score kernel matching, TT**	Propensity score kernel matching, *TUT*
High school completion	-0.104 *	-0.081 †	-0.082 †	-0.142 ***	-0.139 **	-0.108 *	-0.131 **	-0.138 **	-0.133 **
College attendance	-0.032	-0.023	-0.008	-0.036	-0.027	-0.010	-0.030	-0.017	-0.025
College completion	-0.001	0.009	0.009	0.015	0.034	0.028	0.045	0.055 †	0.048 †

Notes: These propensity score matching results are for mothers who experienced unemployment as compared to mothers who did not experience unemployment after a job displacement. Analyses include mothers who experienced a job loss when their child was between 0 and 17 years old and were unmarried at the time of the job loss. Only mothers with weekly employment data are included. Only children who were at least 19 years old in 2010 are included; N=619. Propensity scores are calculated using covariates for mother's and child's race (Black, Hispanic), mother's number of children at child age 0, mother's background (grandmother's education, intact family), mother born in the South, mother's ability, mother's Rotter Locus of Control score, mother's delinquency, mother's age at child age 0, mother's marital status at child age 0, mother's education at child age 0, mother's job tenure at child age 0, mother's job in manufacturing, mother's job in trade, region, and child's gender.
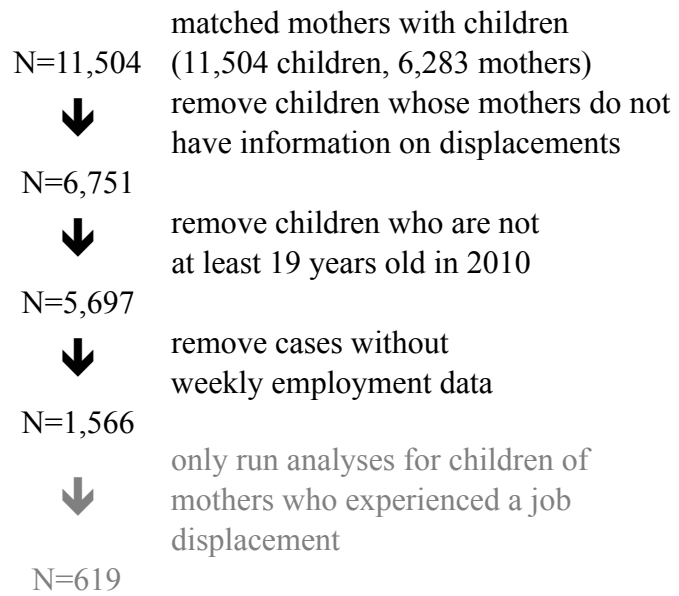
Figure 1: Sample Creation

N=11,504

matched mothers with children
(11,504 children, 6,283 mothers)

⬇

remove children whose mothers do not
have information on displacements

N=6,751

⬇

remove children who are not
at least 19 years old in 2010

N=5,697

⬇

remove cases without
weekly employment data

N=1,566

⬇

only run analyses for children of
mothers who experienced a job
displacement

N=619

Figure 2a: Distribution of Weeks Unemployed Following a Displacement, All Weeks

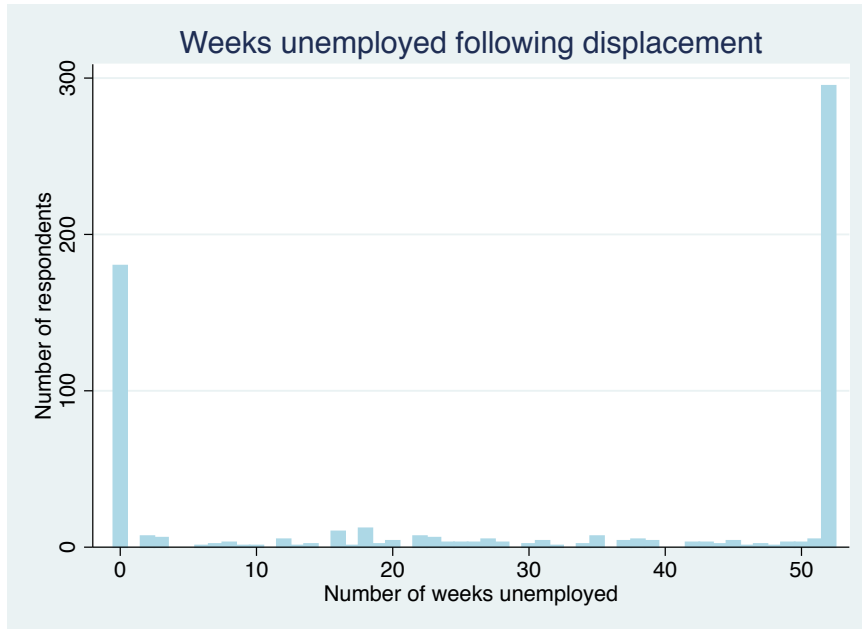Weeks unemployed following displacement

Figure 2b: Distribution of Weeks Unemployed Following a Displacement, Excluding 0 and 52 Weeks

Weeks unemployed following displacement