The Great Recession and Child Support Compliance

Ronald B. Mincy[§]
Maurice V. Russell Professor of Social Policy and Social Work Practice
Columbia University School of Social Work
Columbia Population Research Center

Elia De la Cruz Toledo
Columbia University School of Social Work
Columbia Population Research Center

Extended Abstract

In this longitudinal study we estimate the reduced-form association between aggregate unemployment and child support compliance between 1998 and 2010 –a period that includes the great recession, using previously unavailable data of fathers' residence from the Fragile Families and Child Well-being Study (FFCWS) and multiple imputation of missing fathers to select unemployment rates in fathers' labor markets. The main question of interest is: What is the effect of aggregate unemployment in local labor markets on child support payments during the great recession? We analyze this question on two different outcomes, both of which are measured using categorical specifications: *frequency of payments* and *amount paid*.

Previous studies of child support relied on surveys of child support receipt by mothers, rather than child support payments by fathers, and they used mothers' human capital characteristics to impute fathers' earnings or income or the unemployment rate in mothers' location to represent relevant labor market conditions. However, male unemployment rates have raised more than female unemployment rates in every recession since the early 1980s.

Our main contribution to the child support literature is that, through a more accurate specification of the unemployment rate at fathers' metropolitan area of residence and an augmented sample size, we provide estimates of the association of the economic recession on child support compliance outcomes. The empirical strategy we used relies on a *probit* model of the following form:

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$$Y_{ijt} = \alpha_j + \beta Unemployment_{imt} + \gamma \underline{X_i} + \lambda_t + \delta_i + \varepsilon_{it} \quad (1)$$

Through a maximum likelihood strategy, this model describes the probability that the outcome of interest Y_{ij} takes on the value of one of the alternatives. In this model, Y_{ij} represents the two measures of child support compliance: *frequency of payment* and *amount paid* for the $i^{\text{-th}}$ father and *j* represents a father's choice. In the case of *frequency of payment*, the binary choices are: "always or often pays", that takes on the value of 1, or "never pays" that takes on the value of 0. In the case of *amount paid* the alternatives are "pays full or some amount" (equal to 1) or "pays nothing" (equal to 0). The omitted categories are "never pays" and "pays nothing", respectively.

Our "variable of interest" is the aggregate unemployment rate associated with the *m* metropolitan area of residence reported by the $i^{\text{-th}}$ father. The main specification for the unemployment rate is lagged one-year from the father's interview. On a sensitivity analysis, we tested our model using the unemployment rate at the *m* metropolitan area of mothers' residence (the specification most commonly used in this literature). On further analyses we also used the current unemployment rate at fathers' and mothers' local labor markets.

The $\underline{X}$ is a vector that includes all the control variables for the $i^{\text{-th}}$ mother's and father's characteristics. We also included child-age fixed effects and individual fixed effects to account for time-invariant unobserved heterogeneity, to then remove a potential source of omitted variable bias. In this model, λ_t is the child-age fixed-effect that absorbs variation for common shocks to unemployment across the years, δ_i is the individual fixed effect and ε_{ijt} is an error assumed to be distributed independently across individuals and independently from λ_t and δ_i. The key coefficient is β that measures the association between the unemployment rate and child support compliance. To account for missing data, we used a multiple imputation (MI) technique to create an algorithm consisting of chained iterations. MI is a flexible, simulation-based statistical technique for handling missing data.

On average, once individual and time-specific factors are held constant, the unemployment rate is negatively associated with father's frequency of payment and also with the amount a father pays. A 5 percentage-point increase in the lagged unemployment rate, that captures the increase on the national unemployment rate during the recent recession, is associated with an 11 percentage-point decrease in the probability that a father pays child support frequently (always of often) and a 12 percentage-point decrease on a father's probability of paying child support (in full or some of the amount).

Our sensitivity analyses confirmed that the associations between unemployment and child support outcomes did not attain statistical significance when we relied on the unemployment rate in mothers' labor markets, as previously portrayed in the literature. We concluded that using a measure of unemployment at mother's and not at father's labor market provides inaccurate estimates of the effect of unemployment on compliance that reflect attenuation bias and measurement error. It is worth noting that since each mother's and father's local unemployment rate is presumably measured at the same point in time, the differences between the two reflect mainly geographic differences and not also differences in date of measurement.

Finally, having unemployment rates at both mothers' and fathers' metropolitan areas of residence, we are able to measure the extent of the attenuation bias coefficient. This coefficient could be used as a calibration factor on models that estimate the effects of unemployment on

child support outcomes where only mother's unemployment rates are available. First, we would calculate father's and mother's standardized unemployment rates by subtracting their respective sample mean and then diving by its standard deviation, then the standardized unemployment rate is included in the equation (1), previously outlined. The last step is to take the ratio of the standardized estimated coefficients and this would result in the attenuation bias coefficient or correction factor.

Economic shocks, such as the great recession, tend to negatively affect more severely those vulnerable due to their economic condition. Among these individuals, there is a growing over-representation of fragmented families in the United States. Thus, a better understanding of the relation between labor market conditions of non-resident fathers and child support compliance is an important policy-relevant issue. In an attempt to detect the magnitude of such economic shocks on these families' wealth we looked at child support compliance outcomes.