# Unwed Fathers' Ability to Pay Child Support: Evidence from the Fragile Families and Child Wellbeing Study

**Marilyn Sinkewicz**
**Columbia University**

**Irwin Garfinkel**
**Columbia University**

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This paper uses data from the Fragile Families and Child Wellbeing Study (FFCWS) to present new estimates of nonresident unwed fathers' capacity to pay child support. The child support system in the United States has undergone significant reform over the last quarter century and, in an era of time-limited welfare, some policymakers are promoting child support enforcement as a preferred alternative to welfare in the support of poor children. If child support enforcement is to become an effective tool for child wellbeing, it is imperative to understand the nature and extent of noncustodial fathers' ability to pay.

Prior research on the extent to which nonresident fathers can pay child support indicates that, on average, fathers do not realize their potential to pay. In this paper we build on these studies (Garfinkel and Oellerich 1989; McDonald, Moran and Garfinkel 1990; Miller, Garfinkel and McLanahan 1997; Sorensen 1997).While previous work delineates a gap between actual child support receipt and fathers capacity to pay, it also describes a substantial gradient in fathers' ability to pay by marital status, as well as by race and poverty status. This gradient is important because there is reason to hypothesize that unwed fathers are systematically different from other fathers in their ability to pay child support. They are also the most rapidly growing contingent of fathers. Therefore, the consideration of unwed fathers and an understanding of their place in the spectrum of noncustodial fathers are fundamental to the formulation of effective child support policy. However, this is the group of fathers about which the least is known.

This paper also extends previous research by dealing more effectively with the perennial problems of limited data on fathers and father nonresponse bias. Traditionally, the response to these data limitations has been a resort to complete case analysis or imputations based on various methods such as assortative mating and weighting techniques. Fortunately, the Fragile Families survey achieves exceptionally high response rates in interviews with nonresident unwed fathers. Additionally the study obtains mothers' reports of fathers on crucial indicators, rendering our analysis much less reliant on imputed data and assumptions about assortative mating. When imputation is necessary, our data provides an enriched set of variables upon which to model the missing data. The ensuing analysis is based on the most comprehensive father data to date, employing both fathers' reports of themselves and mothers' reports of fathers from the FFCWS.

The FFCWS follows a cohort of new, primarily unwed parents and their children and provides previously unavailable information on the conditions and capabilities of this population, their relationships, and how public policy affects their lives. In response to a dearth of nationally representative father information, Fragile Families went to exceptional lengths to interview both parents. The FFCWS provides comprehensive data on the objective characteristics of fathers. Additionally, the Fragile Families effort has produced previously unavailable data on the subjective beliefs and attitudes of fathers, as well as on life history events of which mothers may be unaware. The FFCWS sample is nationally representative of all births in U.S. cities with populations over 200,000. It includes 4,898 new births – 3,712 nonmarital and 1,186 marital. Baseline interviews with both parents were conducted shortly after the focal child's birth, and follow-up interviews with both fathers and mothers are being conducted when the child is approximately one,

three and five years of age. We use data from the first two waves - baseline and one-year follow-up. This data is more recent than the data on which previous child support research is based, a significant factor given both the changing numbers and demographic composition of families involved in the provision and receipt of child support.

The estimation of a noncustodial father's ability to pay child support is determined by three factors: 1) his income, 2) the number of children to whom he owes support, and 3) the number of mothers of children owed support. The Wisconsin child support guidelines are applied to fathers' estimated income in order to calculate the unrealized potential of fathers to pay child support. Beyond demographics, Fragile Families provides a rich set of previously unobserved variables which are relevant to the above computations. First, regarding income, data is available on incarceration, mental health and substance abuse, for example, all of which have predictive value in the estimation of fathers' earnings capacity. Second, concerning the number of children owed support, the FFCWS includes fertility history, including multiple-partner fertility, thus allowing a more precise estimate of fathers' prior obligations.

We present our findings of fathers' ability to pay child support as a 5-way comparison of the following models of income estimation and child support standards. First, fathers' annual income is predicted using 1) baseline estimates of earnings using assortative mating criteria – these estimates provide a point of comparison to previous research; 2) our estimates using mothers' actual reports of fathers' characteristics; and 3) our estimates using formerly unobserved variables in the computation of fathers' income. We then apply 3 normative standards, which specify the distribution of income that should be devoted to child support, to the aforementioned models of income estimation in order to estimate fathers' ability to pay child support. The first standard refers only to fathers' current obligations while the second and third standards account for multiple-partner fertility and thus address both prior and current obligations. All three standards are based on the proportions stipulated in the Wisconsin guidelines.

This paper proceeds as follows. The first section reviews previous research. The second section describes the data. The third section presents an overview of the empirical framework and estimation issues. The fourth section presents the findings, and the final section concludes.

**Previous Research**

The reform of child support policy became imperative over the last 20 years as research revealed correlations between the feminization of poverty (Pearce 1978), the increase in the number of children living in female-headed households (Bane and Ellwood 1989; Fuchs 1986), and the decline in the economic status of children - 54 percent of children living in female-headed households in 1990 were living below the poverty threshold (Miller et al. 1997). The reform of child support policy is predicated on a clear understanding of the amount of support that fathers can potentially contribute to the rearing of their absent children.

Based on the assumption that more nonresident fathers can afford to pay more child support, reforms, such as the Family Support Act of 1988, were enacted which aimed to increase both award rates and payment rates. This act increased federal funding for the establishment of paternity and required states to improve their paternity establishment rate, to establish either presumptive or mandatory child support guidelines, and to institute immediate wage withholding for all new child support cases. However, the assumption that nonresident fathers, particularly low income fathers, possess more potential to pay child support than they currently exhibit, has proven difficult to test.

As well as the perennial problem of nonresponse bias, prior research on nonresident fathers' child support obligations has been afflicted by the challenge of measuring the effect of the underrepresentation of absent fathers in survey data. The elusiveness of nonresident fathers is primarily attributable to 3 causes (Sorenson 1997). First, surveys are primarily restricted to noninstitutionalized individuals, and thereby fathers who do not live in households or fathers who are incarcerated are missing from the surveys. Second, specific subpopulations are vulnerable to underrepresentation, including young African American males – a highly relevant group of nonresident fathers. The third reason for the underrepresentation of nonresident fathers is that, based on mothers' reports, there are a significant number of fathers who underreport the number of children they have living apart from them.

In general, the response of researchers to a dearth of national data on nonresident fathers has been the development of two indirect methodologies to estimate father's incomes. The first indirect method of determining nonresident fathers' income, constructed by Garfinkel and Oellerich (1989) and extended by Miller et al. (1997), estimates income as a function of custodial mothers' characteristics overlaid by assortative mating assumptions. The second method, developed by Sorenson (1997) and elaborated by Garfinkel and his colleagues (Garfinkel, McLanahan and Hanson 1998) , uses assortative mating assumptions to reweight the data for a sample of self-identified nonresident fathers to match the number of child support eligible mothers. Both these indirect methods are heavily reliant on assortative mating assumptions, which derive their theoretical framework from Gary Becker's (1981) economic theory of marriage. Becker proposes that positive assortative mating is the optimal outcome in the marriage market, given that the couple will experience higher gains from marriage if the two individuals involved possess relatively similar characteristics. Although some studies suggest that mate selection among unmarrieds is less homogamous on certain dimensions than mate selection among marrieds (Spanier 1983; Schoen and Weinick 1993; McLanahan and Casper 1995)), empirical research generally lends support to Becker's theory by demonstrating that people tend to choose mates who are characteristically similar to themselves(Bumpass and Sweet 1989; Blackwell and Lichter 1998). A recent study of assortative mating among unmarried parents finds that the errors are offsetting (Garfinkel, Glei and McLanahan 2002).

In addition to the 3 studies mentioned above, which estimate the incomes of all nonresident fathers, numerous subgroups have been analyzed using national and subnational data. Comprehensive summaries of various measures of nonresident fathers'

income reported by other researchers have been compiled by Phillips and Garfinkel (Phillips 1993) and Garfinkel et al. (1998). The critique of these studies is that they suffer to varying degrees from noninclusion, nonresponse bias, and a lack of generalizability, and that many are based on outdated information that fails to reflect recent trends in fertility and current economic circumstances (Garfinkel et al. 1998; Sorenson 1997; Miller et al. 1997).

Fortunately, the FFCWS evades many of these problems. Not only do participants in the FFCWS comprise a nationally representative sample of nonmarital births in large urban cities in the U.S., a sample in which both fathers and mothers are interviewed, but the FFCWS takes exceptional measures to interview all fathers and, in fact, some fathers are interviewed in prison. Thus couples data can be analyzed for consonance. Moreover, FFCWS collects pertinent information from mothers regarding fathers, which may be utilized in the event of missing father data due to baseline nonresponse or, thereafter, to attrition. Therefore our estimates are not only more recent, but they also rely on data which are better suited to the exercise. This in turn permits us to verify previously stated assumptions and to employ simplified methods that are less computationally awkward.

**Data**

The data for our examination of unwed fathers' ability to pay child support come from the first two waves of the Fragile Families and Child Wellbeing Study (FFCWS). As previously mentioned, the FFCWS follows a cohort of new parents and their children and supplies formerly unavailable information about the conditions and capabilities of unwed parents and their children. The FFCWS collects data on approximately 4700 births (3600 nonmarital and 1100 marital) in 75 hospitals in 20 cities across the United States. The data are representative of nonmarital births in each of the 20 cities and also in U.S. cities with populations over 200,000. Baseline data collection took place from spring 1998 through fall 2000. Seventy percent of the fathers of eligible newborns completed baseline interviews. Because fathers were eligible for the study only if their newborn child's mother completed an interview (90 percent of eligible mothers completed interviews at baseline), the response rate of eligible fathers was 78 percent. Follow-up interviews are being conducted with both parents when the focal child is one, three and five years old. Most extant data on unwed fathers is potentially flawed due to high nonresponse rates and a lack of information on whether and how fathers in the sample differ from those who were missed. By contrast, the FFCWS is a population-based survey that achieves exceptionally high response rates from fathers and, furthermore, obtains data from mothers regarding nonrespondent fathers.

The aim of the FFCWS is the integration into an innovative framework of three areas of great interest to policymakers: nonmarital childbearing; welfare reform; and the role of fathers. All three of these areas are highly relevant to research and policy formulation concerning child support. This national study employs a stratified random sample of all U.S. cities with populations greater than 200,000. The stratification criteria include the strength of the child support system and the strength of the local labor market. The former are characterized primarily by: 1) the paternity establishment rate; 2) the

proportion of AFDC cases with a child support award; and 3) the proportion of AFDC cases with a payment. The latter are characterized primarily by unemployment rates. Thus, the goals and design of the FFCWS render it uniquely appropriate to the analysis of nonresident fathers' ability to pay child support.

## Empirical Framework and Estimation Issues

The estimation of the aggregate ability of nonresident fathers to pay child support requires data on the income of the father and on the number of absent children to whom the father owes support. We perform 3 simulations of fathers' ability to pay child support. The simulations are operationalized as follows:

**Table 1. Child Support Simulations**

| Simulation | Fathers' Annual Earnings Estimation | Child Support Obligation |
|---|---|---|
| 1 | Model 1:<br>demographics based on assortative mating | current obligations |
| 1 | Model 2:<br>actual demographics | current obligations |
| 1 | Model 3:<br>actual demographics plus previously unobserved characteristics | current obligations |
| 2 | Model 3:<br>actual demographics plus previously unobserved characteristics | Standard 1:<br>first prior, then current obligations |
| 3 | Model 3:<br>actual demographics plus previously unobserved characteristics | Standard 2:<br>prior plus current obligations |

Next, we present our methodology for estimating fathers' annual earnings followed by our methodology for estimating the potential of nonresident fathers to pay child support under the normative standards.

### *Earnings Methodology*

Because all absent fathers do not report their earnings at 1-year follow up, and to avoid limiting the analysis to complete case observations, ordinary least squares regression analyses based on fathers who report annual earnings at 1-year follow up (792 cases) are used to obtain predicted annual earnings for the full contingent of fathers who were both unmarried at the birth of the focal child and nonresident at 1-year follow up (2170 cases). We develop three models for estimating fathers' annual earnings. In all three models the selection of the independent variables is based on human capital theory (Becker 1981; Schiller 1984), that is, the variables are chosen primarily because of their assumed contribution to fathers' earning potential. In all models, respondents who report 'other race' as their racial/ethnic category are coded as 'White' due to the small number of 'other race' respondents. The regression models are defined as follows. In all models $\varepsilon$ denotes an assumedly uncorrelated random disturbance factor.

The first regression equation takes the form

$$y_{am} = \beta_{0am} + d_{am}\beta_{1am} + \varepsilon_{am} \quad (1)$$

where $y_{am}$ is father reported annual earnings at 1-year follow up and $d_{am}$ is a vector of mothers' demographic characteristics from the baseline interview to which assortative mating criteria are applied. The demographic variables include race, age and education. The first model is chosen to provide a set of benchmark estimates which parallel previous research and to provide a basis for the evaluation of the validity of assortative mating criteria. The following assortative mating assumptions are utilized: fathers are two years older than mothers; fathers have the same educational attainment as mothers; and fathers are members of the same racial/ethnic group as mothers. These criteria are selected because they are straightforward and they are similar to those used in prior research (Garfinkel et al. 2002).

The second regression model is similar to the first except that rather than using assortative mating predictors, actual reports of fathers' demographic characteristics are used:

$$y_{act} = \beta_{0act} + d_{act}\beta_{1act} + \varepsilon_{act} \quad (2)$$

Again, $y_{act}$ is father reported annual earnings at 1-year follow up but in this model $d_{act}$ is a vector of actual reports of fathers' demographics at the baseline interview. The demographic variables include: mothers' reports of fathers' race, age and education; self-reports of whether fathers are U.S. born; and the city of the fathers' baseline interview. In the few cases where mothers' reports of fathers' race, age and education are missing, assortative mating values (see Model 1) are substituted for the missing variables.

The third regression model extends the second model by including a vector of previously unobserved characteristics of the father:

$$y_{pu} = \beta_{0pu} + d_{act}\beta_{1pu} + d_{pu}\beta_{2pu} + \varepsilon_{pu} \quad (3)$$

As in the first two models, $y_{pu}$ is father reported annual earnings at 1-year follow up and $d_{act}$ is the same vector of actual reports of fathers' demographics as appears in Model 2. In Model 3 $d_{pu}$ constitutes a vector of previously unobserved father characteristics related to incarceration and health status. These variables include mothers' reports of whether: the father is currently in jail or prison; the father has ever spent time in jail or prison; the father's physical or mental health limits his work; and the father's drug or alcohol use limits his work.

Some variables are missing in the vectors of actual characteristics and previously unobserved characteristics. Rather than drop observations with missing values, we use the following method to enable the retention of the larger sample. We include full sets of indicators for actual race, age, education and U.S. born (Models 2 and 3); and for previously unobserved current incarceration, any incarceration, physical/mental health limits work, and drug/alcohol limits work (Model 3). For each of the previously unobserved variables, the category "missing" is included as a separate indicator variable in the respective vector of actual or previously unobserved characteristics. The

coefficients reported therefore represent the effect of the variable conditional on its value being observed.

To determine if interaction terms should be included in the models, we estimate separate equations for Whites, Blacks and Hispanics, and an all-race equation that incorporates interaction terms. The interaction terms include rage, age and education (Model 1); and race and incarceration (Model 3). Based on a comparison of the weighted means and the coefficients, the findings reported in this paper do not include interaction terms.

Predictions of fathers' annual earnings are computed by combining the coefficients from each of the three earnings equations with the covariates from the full sample of fathers who are unmarried at baseline and nonresident at 1-year follow up. Obtaining earnings estimates for the nonresident fathers is the first step in calculating child support obligations. The next step is applying decision rules about how much of their earnings fathers should be required to pay in support of their absent children.

***Child Support Methodology***

The decision rules concerning the distribution of earnings are referred to as normative standards. They operationalize a range of rationale regarding issues such as what income to consider and the relative needs of the fathers' various dependents. All states are mandated to develop and implement their own guidelines. The simulations in this paper are based on the Wisconsin guidelines for numerous reasons. First, they were chosen because they are representative of an attempt to establish a standard for child support orders by what is regarded as a bellwether state in the social policy arena. Second, while not simplistic, Wisconsin guidelines are simple and easily understood. Third, they have been utilized in previous research and thus provide a point of reference. The Wisconsin guidelines are based on percentages of pretax income (fathers' annual earnings in our case) applied as follows: 17 percent for one child; 25 percent for two children; 29 percent for three children; and 34 percent for five or more children (Wisconsin Department of Workforce Development 2004). In cases where mothers' reports of number of children are missing, the missing data is replaced by the mean (1 child).

Simulation 1:

The first simulation references only the current obligation to the children that the father has with the focal mother. Based on the number of children the father has with the focal mother, the amount of the child support payment is computed by applying the respective percentage to the father's full earnings.

Simulation 2:

The second and third simulations incorporate child support obligations to other families in calculating the fathers' ability to support the new family, but do so in 2 different manners—i.e. with 2 different child support standards. The first standard takes account of fathers' dependents with other mothers by applying the respective percentages to the full

earnings. The resulting child support payment is subtracted from the full earnings to yield the reduced earnings. Then the focal mothers' dependents are considered by applying the respective percentages to the reduced earnings. If the father has prior obligations (children with other mothers), then his current obligation (children with the focal mother) will be less than the amount in simulation 1. However, if the father has prior obligations, he will be obliged to pay more child support in total.

Simulation 3:

The third simulation incorporates an alternative standard that simply sums the number of children from prior mothers and the current mother. Based on the total number of children with all mothers, the support payment is computed by applying the respective percentage to the father's full earnings. This standard, as compared to the first treats all children equally, reduces the total obligation of fathers, and reduces payments to all families owed support.

**Results**

Our discussion of the results begins with an examination of the descriptive statistics displayed in Table 2. Table 2 describes the means or percentages, and the number of nonmissing observations for all variables used in the analyses. The statistics used in the earnings models are presented for both the observed earnings estimation sample (fathers who report earnings at 1-year follow up) and the earnings prediction sample (all fathers who are unmarried at baseline and nonresident at 1-year).

The interplay of factors evidenced in Table 2 portends that predicted earnings based on the 3 estimation models will not differ substantively from each other. First, note that there is little difference in means between assortative mating demographics and actual demographics. Second, note that the means of the previously unobserved variables do not vary much between the two samples except for the missing data. On the other hand, the high proportion of fathers with multi-family obligations, suggests that all previous studies that have ignored this may be seriously overestimating unwed fathers ability to pay child support.

Table 2 shows that with respect to assortative mating demographics (Model 1) and actual demographics (Model 2), there are no large differences between the means. Moreover the relatively small differences in means are offset by both intra-variable and inter-variable differences. Consider the following example of intra-variable competition. Compared to Model 1, proportionately more fathers in Model 2 are younger than 19 years but this is offset by the fact that more fathers are older than 30 years. Similarly, compared to Model 1, fewer fathers in Model 2 have less than a high school education but also fewer fathers have a college education. Therefore for these two variables the means of the two samples will be comparable suggesting that the predicted earnings will also be similar. We also see the moderating effect of competition between variables. Compared to Model 1, the sample in Model 2 has proportionately fewer White and more Black fathers suggesting that predicted earnings in Model 2 might be smaller than predicted earnings in Model 1.

At the same time, Model 2 has proportionately more older fathers suggesting that the decrease in predicted earnings due to racial/ethnic distribution may be offset by an increase in predicted earnings due to age distribution.

The results of estimating fathers' earnings using the three regression models appear in Table 3. The coefficients of the demographics, based both on assortative mating and actual reports, are of the expected sign, are large, and are mostly statistically significant. As expected, annual earnings predicted by Model 1 are close to earnings predicted by Model 2. In Model 3, the coefficients of the previously unobserved variables proceed in the expected direction. The effect of fathers' current incarceration is large and negative but is also the only statistically significant previously unobserved characteristic. The effect of fathers having spent any time incarcerated is also substantial. But the coefficients on the missing indicator variables are heterogeneous and therefore serve to moderate the overall effect of the previously unobserved characteristics on earnings. Thus annual earnings predicted by Model 3 are again similar to those predicted by Models 1 and 2. It is surprising that we find little difference in earnings when previously unobserved variables are included and because this result is mainly due to missing variables, we will investigate further using more sophisticated statistical techniques for addressing missing data such as multiple imputation and regression analysis. The mean values of the predicted annual earnings for each regression are within one percent of each other: $21,595 for Model 1 (assortative mating demographics); $21,359 for Model 2 (actual demographics); and $21,564 for Model 3 (previously unobserved variables).

The results of the child support simulations appear in Table 4. The father's predicted mean annual earnings, the number of the father's children, and then the father's potential child support payments due to prior and current obligations are presented. The first iteration of simulation 1, which applies current obligations to earnings estimated on assortative mating demographics, produces an estimated mean child support payment per nonresident father of $4,064. The second iteration of simulation 1, which applies current obligations to earnings estimated on actual demographics, produces a mean child support estimate of $4,005. We expect the child support estimations from the first two iterations of simulation 1 to be comparable because the predicted annual earnings on which each is based are extremely close. Similarly, iteration 3, which applies current observations to earnings predicted on previously unobserved characteristics, yields a mean child support payment of $4,028. However, the payment estimated by Simulation 2, which first applies prior obligations to father's annual earnings and then, after subtracting what father owes to his children by other mothers, applies current obligations to reduced earnings, yields the highest mean child support payment. Columns 4 and 5 indicate that if child support obligations to other families are taken into account, the father's ability to support the current family is only $3455 or $3104 rather than $4028, which is to say that previous estimates of the ability of unwed fathers to support families owed support is overestimated by between 17 and 30 percent.

## Summary and Conclusion

Our analyses are intended to compare estimates of nonresident fathers' ability to pay child support under two normative child support standards that incorporate multiple family obligations and based on predicted earnings using assortative mating assumptions; actual reports of fathers' demographics; and formerly unobserved characteristics.

Concerning earnings estimations, our study provides a test of the robustness of assortative mating assumptions. Like Garfinkel et al. (2002), we find departures from assortative mating assumptions have offsetting errors so that the net effects are quite small. The evidence indicates that assortative mating assumptions are robust relative to mothers' actual reports of fathers' demographics. Mean annual earnings estimates of approximately $21,500 differ by no more than 1 percent. Our findings suggest that estimates of unwed fathers' ability to pay child support may be overestimated by as much as one third if multiple partner fertility is not taken into account.

Our future research includes comparing our estimates to those from prior research and improving our earnings predictions based on formerly unobserved characteristics (incarceration, mental and physical health, and substance abuse) by addressing the problem of missing data with more sophisticated statistical techniques. Preliminary research by Sinkewicz (2004) suggests that incarceration, mental and physical health, and substance abuse all have predictive value for FFCWS fathers' earnings. We will improve our earnings estimates by using multiple regression and multiple imputation procedures and thereby take full advantage of the rich set of previously unobserved variables available in the FFCWS.

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## Table 2: Summary Statistics

| | Estimation Sample | | Prediction Sample | |
|---|---|---|---|---|
| | **Mean (std. dev.) or Percentage** | **# non-missing** | **Mean (std. dev.) or Percentage** | **# non-missing** |
| **Fathers' Annual Earnings** | | | | |
| Fathers' Report | $21,360 (19,134) | 792 | | |
| Model 1 assortative mating | | | $21,595 (4,975) | 2,161 |
| Model 2 actual | | | $21,359 (7,853) | 2,170 |
| Models 3 – 5 previously unobserved | | | $21,564 (8,413) | 2,170 |
| **Fathers' Children** | | | | |
| Biological Children With Focal Mother | | | | 1,624 |
| 1 | | | 55 | |
| 2 | | | 13 | |
| 3 | | | 4 | |
| 4 | | | 2 | |
| 5 or more | | | 1 | |
| Missing | | | 25 | |
| Biological Children With Other Mothers | | | | 1,448 |
| 0 | | | 32 | |
| 1 | | | 14 | |
| 2 | | | 10 | |
| 3 | | | 5 | |
| 4 | | | 3 | |
| 5 or more | | | 3 | |
| Missing | | | 33 | |
| **Mother's Demographics** | | | | |
| Race | | 791 | | 2,166 |
| White | 14 | | 17 | |
| Black | 63 | | 59 | |
| Hispanic | 19 | | 24 | |
| Age | | 792 | | 2,167 |
| Less than 21 years | 38 | | 32 | |
| 21-29 years | 48 | | 50 | |
| 30 years and older | 14 | | 18 | |
| Age - assortative mating (+2yrs) | | 792 | | 2,167 |
| Less than 21 years | 13 | | 12 | |
| 21-29 years | 66 | | 63 | |
| 30 years and older | 21 | | 25 | |
| Education | | 792 | | 2,168 |
| Less than high school | 39 | | 41 | |
| High school graduate | 31 | | 32 | |
| Some college | 26 | | 22 | |
| College degree | 4 | | 5 | |

## Table 2: Summary Statistics (continued)

| | Estimation Sample | | Prediction Sample | |
|---|---|---|---|---|
| | Mean (std dev) / Percentage | # non-missing | Mean (std dev) / Percentage | # non-missing |
| **Fathers' Demographics** | | | | |
| Race | | 792 | | 2,170 |
| White | 11 | | 14 | |
| Black | 65 | | 62 | |
| Hispanic | 20 | | 24 | |
| Age | | 792 | | 2,170 |
| Less than 21 years | 20 | | 16 | |
| 21-29 years | 55 | | 54 | |
| 30 years and older | 26 | | 30 | |
| Education | | 792 | | 2,170 |
| less than high school | 32 | | 37 | |
| high school graduate | 42 | | 40 | |
| some college | 23 | | 19 | |
| college degree | 3 | | 4 | |
| US Born | | 707 | | 1,352 |
| No | 8 | | 8 | |
| Yes | 81 | | 54 | |
| Missing | 11 | | 38 | |
| City | | 792 | | 2,170 |
| 1 Oakland | 5 | | 7 | |
| 2 Austin | 6 | | 7 | |
| 3 Baltimore | 8 | | 8 | |
| 4 Detroit | 9 | | 8 | |
| 5 Newark | 7 | | 8 | |
| 6 Philadelphia | 7 | | 8 | |
| 7 Richmond | 8 | | 8 | |
| 8 Corpus Christi | 6 | | 6 | |
| 9 Indianapolis | 7 | | 6 | |
| 10 Milwaukee | 8 | | 7 | |
| 11 New York | 5 | | 7 | |
| 12 San Jose | 5 | | 6 | |
| 13 Boston | 2 | | 2 | |
| 14 Nashville | 3 | | 2 | |
| 15 Chicago | 2 | | 3 | |
| 16 Jacksonville | 2 | | 2 | |
| 17 Toledo | 3 | | 2 | |
| 18 San Antonio | 2 | | 2 | |
| 19 Pittsburgh | 3 | | 2 | |
| 20 Norfolk | 3 | | 2 | |

## Table 2: Summary Statistics (continued)

| | Estimation Sample | | Prediction Sample | |
|---|---|---|---|---|
| | Mean (std dev) / Percentage | # non-missing | Mean (std dev) / Percentage | # non-missing |
| **Fathers' Characteristics Previously Unobserved** | | | | |
| Currently Incarcerated | | 673 | | 1,356 |
| Yes | 5 | | 8 | |
| No | 80 | | 55 | |
| Missing | 15 | | 37 | |
| Ever Incarcerated | | 676 | | 1,460 |
| Yes | 34 | | 32 | |
| No | 51 | | 35 | |
| Missing | 15 | | 33 | |
| Mental/Physical Health Limits Work | | 620 | | 1,313 |
| Yes | 6 | | 5 | |
| No | 72 | | 55 | |
| Missing | 22 | | 40 | |
| Drugs/Alcohol Limits Work | | 610 | | 1,298 |
| Yes | 10 | | 9 | |
| No | 67 | | 51 | |
| Missing | 23 | | 40 | |

Notes: The estimation sample consists of fathers who are unwed at baseline, and who are nonresident and report earnings at 1-year follow up. The prediction sample consists of fathers who are unwed at baseline and nonresident at 1-year follow up.

## Table 3: Regression Models for Estimating Fathers' Annual Earnings

| | (1) Assortative Mating Demographics | (2) Actual Demographics | (3) Previously Unobserved Characteristics |
|---|---|---|---|
| **Demographics – Assortative Mating** | | | |
| Race | | | |
| Black | **-4,887.01**** | | |
| | (1,794.37) | | |
| Hispanic | -1,672.06 | | |
| | (2,227.64) | | |
| Age | | | |
| 21-29 years | 2,750.68 | | |
| | (2,037.94) | | |
| 30 years and older | **7,736.18**** | | |
| | (2,445.62) | | |
| Education | | | |
| High school graduate | 1,519.88 | | |
| | (1,642.80) | | |
| Some college | **3,516.62*** | | |
| | (1,755.93) | | |
| College degree | **13,611.17**** | | |
| | (3,427.50) | | |
| **Demographics - Actual** | | | |
| Race | | | |
| Black | | **-7,635.69**** | **-7,826.34**** |
| | | (2,008.08) | (2,039.57) |
| Hispanic | | -2,002.98 | -2,376.44 |
| | | (2,501.31) | (2,512.62) |
| Age | | | |
| 21-29 years | | 2,418.78 | 3,066.05+ |
| | | (1,717.79) | (1,738.04) |
| 30 years and older | | **7,164.02**** | **7,733.81**** |
| | | (2,019.75) | (2,050.75) |
| Education | | | |
| High school graduate | | **5,099.69**** | **4,953.48**** |
| | | (1,549.70) | (1,560.82) |
| Some college | | **11,174.89**** | **10,496.60**** |
| | | (1,860.12) | (1,888.96) |
| College degree | | **17,315.24**** | **15,855.79**** |
| | | (3,899.52) | (3,928.95) |
| US Born | | | |
| US born | | 1,511.51 | 2,069.89 |
| | | (2,626.25) | (2,630.62) |
| US born missing | | 678.62 | 1,755.28 |
| | | (3,150.34) | (3,177.22) |
| City | | | |
| 2 Austin | | -4,205.32 | -5,009.00 |
| | | (3,925.92) | (3,929.81) |
| 3 Baltimore | | 2,766.81 | -680.15 |
| | | (3,704.78) | (5,283.92) |
| 4 Detroit | | **9,025.08*** | 5,768.12 |
| | | (3,670.36) | (5,213.41) |
| 5 Newark | | 4,727.57 | 1,306.76 |
| | | (3,785.87) | (5,312.21) |

## Table 3: Regression Models for Estimating Fathers' Annual Earnings (continued)

| | (1) Assortative Mating Demographics | (2) Actual Demographics | (3) Previously Unobserved Characteristics |
|---|---|---|---|
| 6 Philadelphia | | 313.73 | -2,552.67 |
| | | (3,847.79) | (5,436.29) |
| 7 Richmond | | 1,463.98 | -1,219.28 |
| | | (3,700.26) | (5,296.52) |
| 8 Corpus Christi | | -1,074.97 | -3,976.07 |
| | | (4,108.68) | (5,522.81) |
| 9 Indianapolis | | -1,744.16 | -4,669.97 |
| | | (3,828.45) | (5,455.20) |
| 10 Milwaukee | | -4,122.88 | -7,318.48 |
| | | (3,712.81) | (5,434.43) |
| 11 New York | | 754.94 | -2,626.42 |
| | | (4,131.95) | (5,615.49) |
| 12 San Jose | | **9,718.53*** | 6,961.89 |
| | | (4,278.24) | (5,691.72) |
| 13 Boston | | 8,635.32 | 4,975.04 |
| | | (5,796.39) | (7,009.29) |
| 14 Nashville | | -5,078.90 | -7,615.50 |
| | | (4,899.90) | (6,223.14) |
| 15 Chicago | | -3,314.64 | -6,499.67 |
| | | (5,368.67) | (6,509.06) |
| 16 Jacksonville | | -574.34 | -3,916.53 |
| | | (5,264.21) | (6,594.54) |
| 17 Toledo | | -4,017.54 | -7,268.33 |
| | | (4,852.38) | (6,172.12) |
| 18 San Antonio | | -1,738.68 | -5,263.18 |
| | | (5,935.33) | (7,229.30) |
| 19 Pittsburgh | | -5,412.73 | -8,837.36 |
| | | (4,775.22) | (6,224.65) |
| 20 Norfolk | | 367.03 | -2,502.09 |
| | | (4,977.17) | (6,231.04) |
| **Fathers' Characteristics Previously Unobserved** | | | |
| Incarceration | | | |
| Currently incarcerated | | | **-5,441.03+** |
| | | | (3,054.51) |
| Currently incarcerated missing | | | 1,842.57 |
| | | | (2,791.21) |
| Ever incarcerated | | | -2,491.71 |
| | | | (1,587.07) |
| Ever incarcerated missing | | | 74.58 |
| | | | (2,769.41) |
| Physical/Mental Health | | | |
| Physical/mental health limits work | | | -1,445.35 |
| | | | (2,739.54) |
| Physical/mental health limits work missing | | | -3,484.93 |
| | | | (3,797.60) |
| Drugs/alcohol limits work | | | -1,265.01 |
| | | | (2,257.28) |
| Drugs/alcohol limits work missing | | | 1,224.55 |
| | | | (3,576.65) |

## Table 3: Regression Models for Estimating Fathers' Annual Earnings (continued)

| | (1) Assortative Mating Demographics | (2) Actual Demographics | (3) Previously Unobserved Characteristics |
|---|---|---|---|
| Constant | 19,358.44** | 16,151.24** | 19,907.80** |
| | (2,358.95) | (4,354.31) | (5,865.40) |
| Observations | 791 | 792 | 792 |
| R-squared | 0.06 | 0.16 | 0.17 |

Standard errors in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%
Notes: The sample used for these results consists only of fathers who are unmarried at baseline, and who are nonresident and report earnings at 1-year follow up.

## Table 4: Nonresident Fathers' Ability To Pay Child Support

| | Simulation 1 | Simulation 1 | Simulation 1 | Simulation 2 | Simulation 3 |
|---|---|---|---|---|---|
| **Earnings Estimation Model** | 1: Assortative Mating Demographics | 2: Actual Demographics | 3: Previously Unobserved Characteristics | 3: Previously Unobserved Characteristics | 3: Previously Unobserved Characteristics |
| **Child Support Obligation** | Current Obligations | Current Obligations | Current Obligations | First Prior, Then Current Obligations | Prior Plus Current Obligations |
| **Fathers' Annual Earnings** | | | | | |
| **Mean Predicted** | $21,595 | $21,351 | $21,551 | $21,551 | $21,551 |
| **Number of Fathers' Children** | | | | | |
| **Prior Obligations** | | | | 1.1 | 1.1 |
| **Current Obligations** | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| **Child Support Owed** | | | | | |
| **Prior Obligations** | | | | $3,091 | $2,278 |
| **Current Obligations** | $4,064 | $4,005 | $4,028 | $3,455 | $3,104 |
| | $4,064 | $4,005 | $4,028 | $6,546 | $5,382 |

Notes: All earnings are in 1998 dollars.