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ABSTRACT

Public enforcement of private child support obligations transfers income from nonresident parents to resident parents (mostly mothers) or, if the mother is receiving welfare, to the state. This paper reviews and synthesizes existing literature on the effects of this transfer of income and presents new empirical evidence on the effects of stronger enforcement on the incomes of mothers and their children. Findings show that more stringent child support enforcement increases the labor supply of mothers who would otherwise have been on welfare, increases slightly or has no effect on the labor supply of nonresident fathers, decreases divorce and nonmarital births, and decreases remarriages of both mothers and fathers. Empirical estimates indicate that stronger child support enforcement increases the income of single mothers and their dependent children by two dollars for each dollar of child support received by single mothers. This implies that the dominant effect of additional child support is to encourage welfare participant single mothers to leave welfare and enter the labor market. This suggests that child support enforcement, in terms of breadth of legislation and administrative expenditures, has an impact on the income of eligible women. (Contains 53 references.) (SM)

JCPR Working Paper 215

Child Support Enforcement: Incentives and Well-Being

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Abstract

Public enforcement of private child support obligations transfers income from non-resident parents (mostly fathers) to resident parents (mostly mothers) or, if the mother is receiving welfare, to the state. Like any other transfer it changes the incentives as it changes the incomes of parents. Economic theory suggests that enforcement will decrease the labor supply of mothers who are not potential welfare recipients, increase the labor supply of mothers who are potential welfare recipients, increase the labor supply of fathers, decrease non-marital births, and increase or decrease divorce and remarriage of both parents.

This paper reviews and synthesizes existing literature on these behavioral effects and presents new empirical evidence on the effects of stronger enforcement on the incomes of mothers and their children. We find that more stringent child support enforcement has increased child support payments and decreased welfare caseloads. Moreover, stronger enforcement increases the labor supply of mothers who would otherwise have been on welfare, increases slightly or has no effect on the labor supply of non-resident fathers, decreases divorce and non-marital births, and decreases remarriages of both mothers and fathers. Finally, our empirical estimates indicate that stronger child support enforcement increases the incomes of single mothers and their dependent children by two dollars for each dollar of child support received by single mothers. This implies that the dominant effect of additional child support is to encourage welfare participant women to leave the assistance roles and to increase their labor supply.

Section I: Introduction

For the majority of women and their dependent children, single parent-hood increases the probability of being poor (Meyer, 1998; Baugher & Lamison-White, 1996). With lower income comes an increasing reliance on public welfare programs. In an effort to encourage the absent fathers to support their children, rather than allowing them to receive government assistance, government has focused more attention on child support legislation. The resulting child support, it is presumed, will: (1) reduce the poverty of women and children in female-headed households; (2) decrease participation in cash-assisted, means-tested welfare programs and government expenditures on such programs; (3) maintain both financial and social links between children and their non-resident parents. Strengthening child support enforcement, like other public policy, also brings with it certain incentives and consequences – some expected, some unexpected. If these incentives imply that more income is added to single mothers' households than just the child support receipt itself generates, then child support enforcement is a very effective policy indeed. Conversely, the incentives may result in less income than child support receipts being added to single mothers' households.

What policy has the government crafted in order to increase child support to the children of single parent families? Only fifty years ago, child support enforcement was strictly a state, and mostly a local, judicial responsibility. Not long after the explosion of welfare caseloads in the 1960s however, Congress added Title IV-D to the Social Security Act and President Ford signed the bill into law in early 1975. Title IV-D created a federal/state child support enforcement program and provided federal funding for seventy-five percent of state expenditures on child support enforcement. Part D established the Federal Office of Child Support Enforcement (OCSE) and required states to create similar offices. These offices were to enforce private child support collections on behalf of individuals collecting the major cash benefit program of the time, Aid to Families with Dependent Children (AFDC).

Further major legislation followed in 1984 and 1988. In general, the provisions in the 1984 Child Support Enforcement Amendments were strengthened by the 1988 Family Support Act (FSA). In 1984 it was required that states produce written numeric guidelines for the calculation of child support awards but use of these guidelines by judges was voluntary. The 1988 FSA, on the other hand, legislated that judges may deviate from these guidelines only with written justification. In 1984 states were required to withhold child support payments from the wages of non-resident parents who were more than one month delinquent with award payments. The FSA legislated immediate withholding of child support from wages for fathers whose children were receiving AFDC as of 1990 and for all OCSE child support cases by 1994. In addition, the FSA required that: child support award amounts be reviewed at least every three years for cases handled by the OCSE; the rate of paternity establishment in non-marital AFDC cases be increased[1]; the social security numbers of both parents appear on the birth certificate of a child; and all parties to a paternity dispute submit to genetic testing upon the request of any party (Garfinkel, 1994; Garfinkel, 1992).

Finally, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 also strengthened child support enforcement provisions. Although the cash assistance welfare provisions are arguably the most well known aspects of PRWORA, the act also affected child support, particularly in the areas of child paternity acknowledgement[2] and collection of obligations. States are required to legislate that a signed voluntary acknowledgement of paternity is considered a legal finding unless rescinded within 60 days or by the date of an administrative or judicial proceeding, whichever is earlier. Additionally, states must establish central state registries of child support orders and centralized collection and disbursement units. These facilitate mass case processing, an ability to match child support

[1] This increase must comprise at least half of the AFDC caseload or the rate of paternity establishment increase by at least three percentage points per year.

payment records against other computer data bases both public and private (for example, local tax and revenue records, unemployment compensation, banks accounts, utilities billing). PROWORA aims to make collection of delinquent child support obligations more proactive, rather than relying on resident parents' complaints to initiate action. This is particularly true with regard to routine cases where states are required to have expedited processes for handling such cases, processes that rely on standard administrative enforcement steps rather than requiring child support enforcement to rely on legal action. Such procedures include liens on unpaid child support imposed administratively rather than requiring court action, subpoenaing relevant information, or ordering genetic tests. It is worth noting, however, that PRWORA provisions do not apply to those who cases are not handled through OCSE and for non-welfare cases participation in the OCSE caseload is voluntary (Legler, 1996; Wolk & Schmahl, 1999).

PRWORA also expands the federal role in child support collection by facilitating collection of obligations across state lines. This includes both a national reporting system for newly hired employees (where information on new employees is compared to a federal registry of child support obligators[3]) and a requirement that states adopt the Uniform Interstate Family Support Act (UIFSA). The UIFSA, among other provisions, requires all states to have long arm statutes and allows direct withholding of child support obligations from wages between states.

Although PRWORA generally increases the federal role in child support enforcement, there are two exceptions. States are no longer required to disregard the first $50 of child support payments when child support is paid to a mother receiving cash assistance under Temporary Assistance to Needy Families (TANF) programs. In addition, the requirement to review every

[2] Note that child support cannot be awarded in nonmaritial cases unless paternity is established.
[3] After matching against a state register.

OCSE administered child support award every three years is no longer in force (Legler, 1996; Wolk & Schmahl, 1999).

In summary, between 1981 and 1999, in every year save three, Congress passed new and stronger child support legislation (Lerman and Sorensen, 2000). This spate of federal legislation transformed child support enforcement from a system characterized by local, judicial discretion into a system increasingly characterized by state or federal administrative regularity (Garfinkel, 1992). These federal acts provide the framework under which child support obligations are made and collected. They also provide incentives for the behavior of both residential and non-residential parents in the labor market, participation in cash assistance benefit programs, marital dissolution and reformation, non-marital births, and a host of other facets of family life.

This paper examines the effects of the child support enforcement revolution on: child support payments; welfare caseloads; both parents' labor supply, divorce, and remarriage; non-marital births; and the incomes of eligible mothers. Section 2 reviews theory and synthesizes existing literature on behavioral effects. Section 3 presents new empirical evidence on the effects of stronger enforcement on the incomes of mothers and their children.[4] The third section describes the data, econometric methods used, and presents results. The fourth section summarizes and concludes.

Section II: Theory and Empirical Evidence

Public enforcement of private child support obligations transfers income from non-resident parents (mostly fathers) to resident parents (mostly mothers) or, if the mother is receiving welfare, to the state. Like any other transfer it provides many incentives as it changes the

incomes of parents. Economic theory suggests that enforcement will decrease the labor supply of mothers who are not potential welfare recipients, will increase the labor supply of mothers who are potential welfare recipients, will increase the labor supply of fathers liable for support, may increase or decrease divorce and the remarriage of both parents, and will deter non-marital births.

We will, in turn, examine the effects of the child support enforcement revolution on child support payments, welfare caseloads, labor supply effects for eligible mothers and fathers, and the effects of child support on family formation: divorce, marriage and non-marital birth. We will conclude this section with a review of the impact of child support on the incomes of single mothers and their children.

(a) Child Support Enforcement's Effects on Child Support Payments

We may assume that stronger child support enforcement will lead to more child support payments from the non-resident father to the resident mother, but this may not necessarily be true. Laws are not always effective, and not always equally effective for all individuals who are impacted. Data on child support receipts of single mothers from the March Current Population Survey from 1979 to 1998 indicate virtually no improvement in the receipt rate for all mothers — from 30% to 31%. On the other hand, child support payments from the fathers of children receiving welfare double — from 8% to 16%. Similarly, according to data reported by the 50 state offices of child support enforcement and compiled by the federal OCSE the proportion of single mothers who were on welfare and had a child support payment nearly doubled – from 13% to 25%. Though federal and state offices of child support enforcement in principle are supposed to serve welfare and non-welfare cases, the focus of legislators and bureaucrats has been on

[4] In the vast majority of cases, the parent that resides with the children is the mother and the nonresident parent is the father. Most literature in this area restricts its focus to family formations of this type. For linguistic convenience these arrangements will be assumed to be true in all cases.

welfare cases. Thus a much larger improvement in child support enforcement for welfare cases over non-welfare cases is to be expected.

Yet the impact of child support enforcement on child support is not merely a question of legislation but also of environment, as a more sophisticated analysis of the data indicates. As documented in Hanson, Garfinkel, McLanahan, and Miller (1996), increases in the proportion of single mothers who have never married and declines in real wages of non-resident fathers has forced the child support enforcement system to swim upstream. (See also, Sorensen and Halpern, 1999.) Unlike divorce and separation cases, never-married cases require that paternity be established before a child support order can be secured. Declines in real wages reduce non-resident father's ability to pay support. These trends understate the effectiveness of the child support enforcement system. Although the prolonged economic boom of the 1990s reverses some of these trends, the data in this analysis go only through 1998 and thus do not reflect the full effects of the extended boom.

Finally, there are a number of academic studies that document a link between specific child support enforcement laws and increases in child support payments or in a particular component of payments. These include blood and genetic testing (Miller & Garfinkel, 1999), laws allowing paternity to be established up to age eighteen (Garfinkel & Robins, 1994), publicizing the availability of IV-D services (Garfinkel & Robins, 1994), establishing numerical guidelines for child support (Meyer et. al., 1996; Thoennes, Tjaden, & Pearson, 1991), requiring income withholding, requiring payments through a third party (Garfinkel and Klawitter, 1990; Beller and Graham, 1993; Garfinkel and Robins, 1994; Freeman and Waldfogel, 1998; Sorensen and Halpern, 1999) and expenditures on child support enforcement (Garfinkel & Robins, 1994; Freeman & Waldfogel, 1998).

In short, there is strong evidence that the nation's efforts to strengthen child support enforcement have succeeded in preventing overall payment rates from falling and in increasing dramatically child support payments from fathers of children on welfare.

(b) Child support enforcement's effects on welfare caseloads

Child support enforcement can decrease welfare caseloads both by reducing the proportion of single mothers who receive welfare and by reducing the prevalence of single mothers. Strong child support enforcement reduces entrances into and hastens exits from welfare by increasing the economic security of mothers outside welfare and by complementing work. Increases in child support increase mothers' income and thereby reduce their need and eligibility for welfare. Compared to welfare, child support is more complementary to work because as mothers' earnings increase, child support payments fall much less rapidly than welfare benefits, and in many states child support does not decline at all. A number of studies document that child support reduces poverty and welfare caseloads (Robins & Dickinson, 1985; Robins, 1986; Garfinkel, Robins, Wong, & Meyer, 1990; Meyer, Garfinkel, Robins, & Oellerich 1991). In terms of flows into and out of welfare, two studies (Meyer, 1993 and Huang, Kunz, & Garfinkel, 2000) using longitudinal data find that child support payments increase the probability of leaving AFDC and reduce the probability of re-entering AFDC.

As described below, economic theory suggests, and some empirical research confirms, that strong child support enforcement may also reduce non-marital births and divorce, thereby reducing the prevalence of single mothers. Because child support can reduce welfare caseloads via multiple routes, estimates of the effects of strong enforcement on any particular route underestimate the total effect. Consequently, such estimates are likely to be misleading. Suppose for example that strong enforcement reduced entrances into welfare by six percent, increased

exits from welfare by six percent, reduced divorce by six percent, and reduced non-marital births by six percent. Each effect by itself is quite small and therefore difficult to detect and isolate at a statistically significant level. But the aggregate effect of all four taken together would be a reduction in caseloads of about one fourth!

Three recent studies relate the strength of child support enforcement to recent aggregate declines in welfare caseloads. Mead (1999) shows that variation in county caseload declines within Wisconsin between 1986 and 1994 are very strongly related to the county's success (or lack thereof) in obtaining child support payments. It is worth noting that Wisconsin has had the largest caseload decline and the strongest child support enforcement system in the nation (Garfinkel, et. al., 1998). In another exploratory note, Mead (2000) finds a similar relationship in national data. Finally, Huang, Garfinkel and Waldfogel (2000) build upon the large body of research devoted to the issue of the determinants of welfare caseloads, none of which has incorporated the effects of child support. They employ annual state panel data from 1980 to 1996 to first replicate previous models and then incorporate the effects of child support. These estimates imply that strengthened child support enforcement explains between one quarter and three-fifths of the caseload decline between 1994 and 1996.

(c) Father's Labor Supply

One of the possible adverse incentive effects of stronger child support enforcement is that fathers may work less. But conventional economic theory predicts that fathers should work more rather than less in response to more stringent enforcement. Stronger enforcement reduces a non-residential father's income which encourages him to work more to make up for the loss. If child support orders automatically increased and decreased over time in response to increases or decreases in his income, the effects on his work effort would be equivalent to the effects of an income tax, which is to say they would be ambiguous. While the decrease in his income would

promote work, the reduction in the reward for work (which comes from the tax child support imposes on work) would reduce work. But only a few dozen counties in the state of Wisconsin have child support orders which are expressed in percentage terms and thereby change automatically with changes in the fathers income. In the rest of the country, child support orders are expressed in fixed dollar terms and are very rarely updated to reflect changes in the incomes of fathers. Thus the only effect predicted by conventional theory is to encourage more work. On the other hand, moving beyond conventional theory, child support could encourage some fathers to work less out of spite or anger toward the mother and may encourage other fathers to substitute underground labor for legitimate earnings in order to avoid enforcement.

Only two studies have examined this issue. Klawitter (1994) finds that, after instrumenting for the child support obligation amount, there is no significant impact of obligation amount on a father's future earnings. This holds true both for fixed sum and percentage of income awards implying that child support officials need worry less about fathers deliberately reducing their labor income in order to decrease their child support. Freeman and Waldfogel (1998) examine the effect of child support enforcement, as opposed to order type as Klawitter (1994) did, on the labor behavior of all non-resident fathers. Using data from the 1986 and 1991 waves of the Survey of Income and Program Participants, the authors examined the effect of child support enforcement policy variables on the difference in labor supply between non-resident fathers and resident fathers. Although the results of the two data years were slightly different, Freeman and Waldfogel conclude that stronger child support enforcement does not reduce the labor supply of non-resident fathers. Indeed, in states in which child support enforcement was strongest non-resident fathers were slightly more likely to be working, as compared to resident fathers, and slightly less likely to work in casual settings or self-employment. When fathers earn money that is paid in cash (as is more likely to happen in casual labor and in self-employment) it is harder for the relevant authorities to ascertain their income and demand child support

obligations be paid. The finding that non-resident fathers were less likely to work in such settings when child support enforcement was more stringent belies the argument that stronger enforcement prompts more fathers to avoid their financial obligations to their children.

(d) Mother's Labor Supply

Although child support payments seem to have little effect on the labor supply of divorced fathers, the receipt of child support may affect a mother's labor supply. Labor supply effects will depend on whether or not a mother receives welfare. When a women does not receive welfare the income effect of increased child support payments dominates her labor supply decision and she reduces her work hours. This occurs because child support payments increase her income but her marginal return from work is unaltered.

On the other hand, child support payments have a totally opposite effect on the labor supply of women participating in welfare. Receipt of child support offers an incentive to increase their labor supply. Most women on welfare work very little or not at all and thus labor supply responses to the presence of child support are, in general, restricted to continuing not to work or increasing their labor supply. Throughout most of the period from which are data are drawn, if a woman combined welfare and child support, the maximum addition to her income would be $50 per month. Child support in excess of $50 per month went to the state rather than the mother. If a women left welfare, however, she received the full amount of her child support. Additionally, work is always more remunerative off welfare than on welfare. Thus increases in child support increase the incentive to leave welfare for work.

Overall, the effect of child support payments on labor supply is ambiguous because the labor supply response to child support payments are in opposite directions for women on welfare and women off welfare. Early investigations of the link between child support and women's

labor supply found a positive correlation between hours of work and child support (Grossman & Hayghe, 1982; Veum, 1992) and simple cross tabulations seemed to imply that women who received child support appeared to work more hours in the labor market. This relationship was upheld when multiple regression techniques were applied (Beller & Graham, 1985; Robins & Dickinson, 1985). However, this result was challenged when Graham and Beller (1989) estimated the effect of child support on labor supply, allowing the participation in welfare to be a endogenous decision.

Using a sample of divorced and separated single women Graham and Beller estimated work hours while including as a regressor a variable that controlled for the choice of welfare participation. In the same study, Graham and Beller also allowed the receipt of child support to be endogenous. Results indicated that women who receive child support are different on unobserved variables from those who do not, and this 'selection' significantly affects the choice of labor hours. Additionally, the 'selection' into welfare participation also has significant influence on labor supply. Graham and Beller found that the receipt of child support reduced the number of hours these women chose to work, once their receipt of child support and their participation in welfare was controlled. When the amount of child support was also allowed to be endogenous, it still reduced the hours of work but the coefficient was no longer statistically significant. (Hu (1999), too, finds in an endogenous model that controls for welfare participation and remarriage that higher child support payments reduce hours of work.)

(e) Marital Dissolution, Marital Reformation and Non-Marital Births

Child support enforcement has been theorized to effect family formation in multiple ways: by influencing whether couples divorce, whether unmarried mothers and fathers marry, and whether never-married individuals have children.

Nixon (1997) examines the impact on child support enforcement on marital dissolution. Divorce will occur if the difference between the sum of the utility of the man and woman before and after divorce is positive. Nixon theorizes that if a husband expects stronger child support enforcement to increase his child support payments then it raises the cost of divorce for him, lowering his utility. On the other hand, if a wife expects to receive more child support after marital dissolution under a strengthened child support program this may make divorce more attractive for her. The net effect of child support enforcement on marital break-up is thus ambiguous.

This situation is, however, affected by the presence of welfare programs for those couples where the wife is likely to go onto welfare if divorce occurs. At the time of analysis the welfare program under consideration was AFDC. Under AFDC program regulations, the first fifty dollars of child support was disregarded and then the welfare benefit reduces one dollar for each additional dollar of child support over fifty. Assuming that the wife's utility after divorce is measured purely by her income and her post-divorce income will make her eligible for AFDC, then only the first fifty dollars of child support is relevant as the additional child support does not change her income[5]. If the husband expects to pay less than fifty dollars under strengthened child support enforcement then the situation is the same as that of non-welfare couples and the effect of child support enforcement on divorce is ambiguous[6]. However, if he expects to pay more than fifty dollars after strengthened child support the situation is altered.

When stronger child support enforcement implies that payments are over fifty dollars there are three possible outcomes. One, he pays at least fifty dollars in child support whether the regulations are strengthened or not. Under this scenario stronger child support reduces the

[5] It is assumed that child support payments and welfare do not alter the woman's labor supply.
[6] Child support payments, if they occur at all, are unlikely to be this low making this situation unusual.

chances of marital dissolution. This occurs because the wife only receives the additional fifty dollars leaving her utility unchanged after divorce under strengthened child support enforcement, but the husband expects to pay more child support thus reducing the appeal of divorce for him (especially as any payment over fifty dollars does not change the welfare of his children). Two, under weaker child support enforcement the child support payments are less than fifty dollars but under stronger enforcement, as indicated, they will be more than fifty. Her utility increases because stronger child support enforcement has increased her additional income (and her utility) from less fifty dollars plus the welfare benefit to fifty dollars plus the welfare benefit. Divorce is, however, more costly for the father and thus, again the final effect is ambiguous. Yet the wife's income rises by so little that the father's decrease in utility is likely to outweigh the utility gain of his wife, making less likely that they will divorce than non-welfare couples. The third possibility is that under weaker child support regulations the father would pay child support under the table (especially if the amount is over fifty dollars) but will be unable to do so under more stringent regulations. Here the stronger child support regulations reduces the wife's income after divorce and also negatively affects the father's utility. Divorce is thus less likely. In summary, in cases where the wife will enter welfare if divorce occurs, stronger child support enforcement has a larger negative effect on divorce than for other couples, reducing the chances of marital dissolution as compared to non welfare couples.

Nixon (1997) confirms this theory estimating the effect of child support enforcement on divorce using data from the March-April match of the Current Population Survey (CPS). Nixon uses the marital history of women to construct a dependent variable that is the probability that a woman divorces in the five years prior to the survey year. She also includes several robustness checks that confirm the results. She finds that stronger child support reduces the chance of divorce and that this effect is larger for couples where the woman will be eligible for welfare. However, the child support enforcement variables used are measured by the OCSE and thus only

represent the enforcement on those mothers who comprise the OCSE caseload – a different sample than divorced mothers in the CPS.

If child support enforcement reduces the chances that couples divorce then what are its effects on single mothers marrying? For poor mothers marriage offers the surest method out of poverty, particularly for divorced mothers (Duncan, 1984). This occurs because of the access a wife gains to her husband's income. Theories on the marriage market have been formed by applying job search models to the issue (Freeman & Waldfogel, 1998; Folk, Graham & Beller, 1992; Yun, 1992; Beller & Graham, 1985). A woman will marry if she receives an offer better than some minimally acceptable offer. The receipt of such an offer depends on the pool of potential partners, the time and effort spent in search and the standards of her minimally acceptable offer.

Child support enforcement, by increasing child support payments, may affect the marriage-income relationship (Folk, Graham & Beller, 1992; Yun, 1992). The increased income may allow her to fund a more thorough search for a new partner and her increased income may generate more and better offers of marriage[7], increasing the probability of marriage (Yun, 1992); however, it may also lower her chances of marriage by raising the quality of her minimally acceptable offer and extending the duration of her search. Women with higher child support payments are likely to have less need of the additional income marriage provides (Freeman & Waldfogel, 1998; Folk, Beller & Graham, 1992; Yun, 1992). The effect of child support enforcement, or at least of child support payments, on women's marriage is ambiguous.

[7] If the women receives child support, it is less likely that a potential partner will be required to support those children as child support does not, legally cease with the marriage of the mother. However, Hill (1992) indicates that a divorced mother's remarriage reduces child support payments from the biological father of the children.

Most of the evidence of the effect of child support on women's marriage comes from studies of divorced women. Folk, Graham and Beller (1992) examine the remarriage of divorced non-Black women using data from the April-March CPS. The study analyzes cross-sectional data pooled over the years 1979 to 1986. The authors indicate that child support receipt is not related to remarriage for those divorced non-Black mothers who remarry quickly (within the first 5 years). For those who are not married five years after their divorce child support does lower the probability of remarriage but the effect is very small. However, as Folk et. al. (1992) indicate, those who remain unmarried after five years may be more homogenous as a group than are the group of women who remain single one year (for example) after their initial divorce. This homogeneity may strengthen the influence of factors, such as child support, that only weakly affect the chances of remarriage in more heterogeneous groups. In addition, those who are unmarried five or more after their divorce may differ from women who remarry more quickly on unobservable factors that also effect their probability of remarrying.

Yun (1992) used Wisconsin data that was longitudinal in nature to examine the remarriage of white divorced women. She was thus able to undertake event history analysis. She finds that the relationship between child support payments and remarriage is not linear. Receiving any child support makes remarriage more likely, but the strength of this influence wanes as the amount of child support paid grows. Additionally, continuity in payment is important. Those mothers who do not receive regular amounts of payment on a steady basis are more likely to remarry. It appears that when the future financial security is less certain, because child support payments are non-existent, low or irregular, remarriage is more attractive than when child support payments are larger and more routine. Yun also examines the men these women take when they remarry using their income and education as measures of the quality of the match. Theory would predict that those who do not receive child support marry men of lower quality, for they must marry more quickly for economic security and can only undertake a short search, while

those who receive larger amounts of child support marry higher quality men. This is upheld when income is used to measure men's quality as a husband, but not when education is used.

What of the remarriage of non-residential fathers? Bloom, Conrad and Miller (1998) investigate the effect of child support enforcement on the remarriage rates of non-resident fathers. Theoretically the effects of strong child support enforcement on remarriage are the mirror image of the effects on mothers, which is to say they are ambiguous. The decrease in income increases the father's incentive to remarry but makes them less desirable partners. They find that stronger enforcement leads to a decline in remarriage. Furthermore, amongst fathers who do remarry, the child support payments that flow to his absent children decrease his non-resident children's poverty but increase the poverty of his stepchildren and the biological children of any new marriage he has undertaken. In simulations, Bloom, Conrad and Miller (1998) find the poverty effects of child support payments to non-resident children are more than offset by the poverty effects such payments have on potential or actual stepchildren.

Single motherhood occurs not only with the dissolution of marriage but also when non-marital childbearing occurs. Given current available methods of contraception, non-marital conception is a matter of choice for men before conception and, with the legality of abortion, a choice for women both before and after conception. Finally, once a non-marital conception has occurred, the couple may jointly decide to make the birth a marital rather than non-marital by marrying. Why then does non-marital child bearing occur and how would child support enforcement alter it? Willis (2000) suggests that non-marital child bearing occurs when women outnumber men, and when women, even low income women, can afford to support children alone. Once the pool of marriageable men have partnered with their choice of available women, there will be women who are unmarried. These women will likely be low income as we can assume that higher income women will make more attractive partners and will tend to marry.

The presence of welfare, however, allows these women to support children even without the help of a second income. This gives the men who father their children an opportunity for what Willis (2000) calls 'costless fatherhood' and thus offers little incentive for them to practice birth control. Stronger child support legislation, however, creates costs for these fathers by requiring them to pay child support. Since both men and women can control contraception, some men who would have fathered children under 'costless' conditions now choose to avoid those costs and prevent conception from occurring. Non-marital births thus decrease[8].

Two studies examine the effect of child support enforcement on the rate of non-marital births. In a state level analysis, Case (1998) examines the effects of five child support enforcement laws on the rate of non-marital births among unmarried women aged 15 to 44. Each law is entered separately into a regression and each is instrumented to avoid bias in the coefficient. Three of the five have significant effects on reducing the rate of non-marital birth[9].

Garfinkel et. al. (unpublished) also performs an aggregate state level analysis similar to that of Case (1998), examining the effect of child support enforcement on non-marital birth rates. However in this study, the strength of child support enforcement is gauged by the paternity establishment rate. Additionally, Garfinkel and his colleagues estimate the influence of welfare generosity on non-marital births. The authors caution that although there is a possibility of omitted variable bias, the results indicate that stronger child support enforcement and reducing welfare generosity both deter non-marital birth. Child support enforcement, however, had a larger effect than that of welfare.

[8] Although increased child support payments may increase the incentive for mother to give birth outside marriage this may have less effect on non-marital birth for two reasons: one, under welfare rules the size of child support payments must be large in order to make more than a fifty dollar difference in the mother's income; two, given contraception may be practiced by either party, both must be ignoring contraception for birth to occur.

(f) Child Support Effects on Mother's Income

Little research looks directly at the effects of child support enforcement or payments on the income of single mothers and their children. However, studies do examine the impact of child support on poverty. Most find that the poverty rates of single mothers' households are higher than those of their non-residential partners (Bartfeld, 2000; Bloom, Conrad & Miller, 1998; Fletcher, 1989; Nichols-Casebolt, 1986). Additionally, child support payments do little to reduce the number of single mother households in poverty although they do reduce the poverty gap of these families by increasing their incomes (Bartfeld, 2000; Meyer & Hu, 1999; Meyer & Kim, 1998; Sorensen & Clark, 1994; Robins, 1986; Oellerich & Garfinkel, 1983). Even if the child support system were perfect[10] many children in female-headed households would still live in poverty (Miller, Garfinkel & McLanahan, 1997; Nichols-Casebolt, 1986). However, Meyer and Hu (1999) suggest that child support payments have comparable anti-poverty effects to social insurance and welfare, and that the effects of child support payments are growing larger over time. Note that these measures of poverty capture the situation of children in female headed households but not the poverty rate of children overall. As suggested by Bloom et. al. (1998), the overall effects may be quite different.

Although little examined, the effects of child support enforcement on the incomes of eligible women is vitally important because these households have such high poverty rates. In addition, examining the effects of child support enforcement and payments on the incomes of eligible women allows us to explore indirectly the behavioral incentives created by child support and the effectiveness of child support. We can assess the effectiveness of more stringent child

[9] However, the standard errors estimated may be understated due to the presence of an instrument in the second stage.

[10] A perfect system being one in which all eligible mothers have an award, the award was calculated using a reasonable uniform standard and all obligations are collected.

support by exploring whether it increases the income of eligible women and therefore their well-being. However, we know from the literature that the income effects of child support payments are not straight-forward. Enforcement of child support and the resultant payments effect the income-producing behavior of eligible women, that is, their labor supply, welfare participation, and divorce, marriage and non-marital birth rates. A dollar increase in child support receipt may thus not produce an additional dollar of income. On the other hand, it may produce more than an additional dollar of income. By measuring how much extra income is provided to single mothers by an extra dollar of child support, we indirectly explore the impact of a subset these incentives — the offsetting labor supply and welfare participation incentives.

Section III. New Estimates of the Effects of Enforcement on Mothers Incomes

(a) Data

The March CPS, administered by the U.S. Census Bureau, is a nationally representatively sample. Information gathered from respondents includes income sources, allowing users to accurately identify child support receipt, and detailed individual and family characteristics that may be associated with child support receipt. The 1979-1999 March CPS are used in order to track trends in single mothers' income and child support payments in the past two decades. A single mother is defined as a currently unmarried and non-widowed woman who lives with her own children, children who are less than eighteen years old. These "single mothers" are all potentially eligible for child support.

Unfortunately, we are unable to identify mothers who are currently married but not to the father of all of their children. Such women are potentially eligible for child support from the children's natural fathers. Exclusion of these women from the sample of child support eligible

women does pose a sample selection problem.[11] However it may be lessened by the circumstance that many fathers reduce or cease child support to women when they remarry (Hill, 1992). Most important, exclusion of remarried mothers does not allow us to include the effects on income via remarriage of child support enforcement.

We focus on two outcomes: mother's total income and child support amount received. Before 1989 March CPS, however, the child support amount was combined with amounts from alimony and other income. We employ the information from 1979-88 CPS-CSS to impute the child support amount in 1979-88 March CPS.[12]

The strength of child support enforcement is measured by the number of key laws a state has adopted and state expenditures per single mother on child support enforcement. We use an index rather than individual laws because the latter is clearly a mis-specification for three reasons. First, child support payments are a multiplicative function of the probability of having a legal obligation, the level of the obligation, and the probability of paying the full obligation. This means that the effects of laws, like genetic testing, that effect the probability of having an obligation depend upon laws and practices that effect the probability of paying what you owe. The effect of each step in the enforcement process depends upon the effectiveness of all the other steps in the enforcement process. Second, each step in the enforcement process is effected by more than one law. The probability of securing a child support obligation, for example, depends on a number of laws, such as: 1) admitting, and more recently requiring, blood and genetic tests in disputed cases, 2) allowing paternity to be established any time before the child's eighteenth birthday, and 3) requiring that paternity must be established for the father's name to go on the

[11] Our thanks to discussant Elizabeth Peters for identifying this problem.
[12] For previous married mothers with child support income, the percentages of child support amount in the amount of child support, alimony, and other income were 87.9, 85.2, 84.4, 86.2 and 82.0 percent for 1978,

birth certificate. Third, effective practices are derived in part, but not in whole, from laws. Good laws that are not effectively enforced may have little effect. Common sense suggests, and Freeman and Waldfogel (forthcoming) show, that effective child support enforcement requires both strong laws and high expenditures on enforcement.

Thus, we create a legislative index to measure state child support legislative vigor adding one to the state's index for each piece of relevant legislation. This legislative index covers each step of the enforcement process: establishing paternity, obtaining orders, and collecting obligations. Specifically, the index includes genetic tests, paternity establishment to age eighteen, numerical guidelines, presumptive guidelines, wage withholding under delinquency, immediate wage withholding for new case, universal wage withholding, and state income tax intercept. We collect information on legislation mainly from various years of National Conference of State Legislatures (NCSL) and OCSE Legislative Tracking System Report (OCSE-LTSR). We consolidate the inconsistencies between NCSL and OCSE-LTSR by examining each state's existing laws in the Library of Congress. We assume there was one-year lag between legislative enactment and implementation. For the measure of child support expenditures for each state, the expenditures reported by OCSE is divided by the number of single-mother families in that state as measured in the March CPS.

(b) Analysis Techniques

Our analysis is based on ordinary least squares (OLS) regression models that treat natural logarithm of mother's income (or child support amounts) as a function of state child support enforcement, unemployment rate, and mother's socioeconomic characteristics.

81, 83, 85, and 87 respectively. The comparable numbers for never-married mothers are 92.5, 93.5, 84.7, 88.0, and 82.4 percent, respectively.

The mother's characteristics include mother's marital status, race, education, age, number of children, and residential location. One important feature of our analysis is that we also take father's income into account. Since the March CPS does not have this information, we adopt a method developed by Garfinkel and Oellerich (1989) to predict father's income.

This method is based on the custodial mother's characteristics to predict non-resident father's income. Specifically, we estimate an income equation for a sample of prime-age (25-60) men, and then apply the coefficients to the custodial mother's characteristics. The coefficients used to predict father's incomes were obtained from regression using 20 years of March CPS (1979-99). For each survey year, we estimate separate models for ever-married white men, ever-married black men, ever-married Hispanic men, never-married white men, never-married black men, and never-married Hispanic men. We model the respondent's annual income as a function of his age, education, residential location, and state environment such as unemployment rate and median wage rate. For ever-married men model, we also take marital status into account (current married, divorced, and separated). The coefficients from the models are then applied to the custodial mother's characteristics to estimate father's income assuming positive assortative mating. Appendix 1 shows the coefficients for the ever-married black men from the 1998 March CPS.

An additional analysis is provided by estimating the impact of child support receipt on mother's income. As child support receipt is endogenous to income, we instrument for it using our child support variables and all other controls. Child support payments are censored at zero and thus this first stage is estimated using a tobit. In the second stage the instrument from the first stage is regressed, using ordinary least squares, on mother's income. The standard errors of the second stage are corrected using Murphy and Topel's (1985) equation (24).

(c) Results

As data is included in our analysis sample for every year between 1978 and 1998, we examine our descriptive statistics over this time period. The trend in our independent variables are displayed in table 1. In the interests of simplicity, the statistics in this table are those for every fourth year between 1978 and 1998. The statistics describe single mothers who are potentially eligible for child support, that is, women who have dependent children whose father is alive but living elsewhere. Remarried mothers eligible for support are not included in the data because they could not be identified as such in the March CPS. In other words, these mothers are separated, divorced or have had children out-of-wedlock[13].

<Table 1 about here>

Over the twenty years described here, the proportion of women potentially eligible for child support who have never been married has grown from nineteen percent in 1978 to forty-six percent in 1998. Equivalently the proportion of women eligible for child support who are divorced or separated has diminished. The proportion of eligible women are white has declined from fifty-seven percent to fifty percent. Similarly the proportion of Black women also declined slightly from a high of thirty-six percent in 1982 to a low of thirty-two percent in 1998. On the other hand, the proportion of Hispanic women potentially eligible for child support has grown in each year examined, from eight percent in 1978 to sixteen percent in 1998.

The proportion of women eligible for child support who have less than a high school degree has also reduced steadily across the time period, whereas the proportion of those with a college education has steadily increased. This reflects the increase in education across the

[13] The statistics included in table 1 are the averages of state means – they are not complied on an individual basis.

American population in general. The number of children, the mother's age and central city residence has remained at a steady level throughout the years 1978 to 1998. Father's income dropped from 1978 to 1982 with the slowing of the economy, before rising again. Another drop occurs between 1990 and 1994, which can be attributed to a second recession and to the decline in male wages a the bottom of the income distribution. The state of the economy is loosely tracked by the average state unemployment rate.

Our child support enforcement variables indicate a growing commitment on the part of states to enforcing child support arrangements. Both the number of laws and the expenditures used to enforce them increased steadily across the twenty years of our analysis.

The trends in income over time for mothers eligible for child support is included in table 2, together with the trends over time with the percentage of income that child support payments comprise. All income figures are presented in constant 1998 dollars.

<Table 2 about here>

Aside from a drop in 1982, the income of mothers potentially eligible for child support has risen over the twenty years in our analysis. The sharpest rise in income is between the years of 1994 and 1998 mirroring the strong economy of the late 1990s. Mothers who receive child support have higher incomes than those who do not, reflecting that women with higher incomes are more likely to receive a child support award as well as the effects of child support awards on total income. However, between 1982 and 1994 the incomes of women who received no child support grew at a faster rate than those of women who were in receipt of child support.

Those eligible mothers with a high school education or more do have higher incomes than those mothers with less than a high school education, and their income grew faster over the period between 1982 and 1998 than their less educated peers. This trend again reflects a general trend in the United States, that of an increased return to education (Murphy & Welch, 1994). Never-married mothers have lower incomes than ever-married mothers, and the average income of never-married dropped precipitously between 1978 and 1982. However, the income of the never married mothers rose enormously between 1994 and 1998 – much faster than their ever-married counterparts. Unsurprisingly, those on welfare have lower incomes than those not receiving welfare (the benefit being means tested). Yet, especially considering the stability of welfare payments over time, the income trend of those on welfare was quite volatile – dropping sharply between 1978 and 1982 and rising rapidly between 1990 and 1994. Again the income trends of never-married mothers and welfare recipient mothers may be attributed to the recession of the early 1980s and the strong economy of the later 1990s.

The second panel of table 2 contains the trend of percent of income that is child support. On average this, like income itself, dropped between 1978 and 1982, dropped again between 1982 and 1986 and rose steadily until 1994. Note, however, that although income among eligible mothers rose on average between 1994 and 1998, the percentage of income that was child support did not. This may reflect the increasing proportion of child support eligible women who are never-married, they being less likely to have any income from child support. Among those who received child support it comprised about one-fifth of income, being a larger percentage of income among those who had a high school education or more than among their less educated peers. As indicated, child support was also a larger percentage of income for ever-married mothers than never-married mothers and among those not receiving welfare than for those who did. However, as a percentage of income child support grew across the entire twenty years

among never married mothers, suggesting some success at collecting child support in paternity cases (i.e. those where the birth was non-marital).

The first set of regression results is displayed in Table 3. The dependent variable is the natural log of total income. In the first column we examine the income of women potentially eligible for child support. In the majority of cases, the independent variables have the expected impacts on single mothers' incomes. Those women who are divorced from their husbands have higher incomes than those separated or never married; minority women have less income than whites and those with less education have lower incomes. Women who are older have more income, as do those whose absent partner is wealthier. The coefficients for the number of children and residence in the central city are more surprising. Our results indicate that those who have more children have more income, and those who live in the central city are also better off. The positive coefficient for children undoubtedly reflects the effect of higher child support payments to women with more children. The positive effect of central city residence is more puzzling. However, single mothers are more likely to be poor than are other Americans. Single mothers with relatively higher incomes may be those who choose to work. Central city residence may be a proxy for better access through transportation to local job markets than can be achieved in suburban or rural areas.

<Table 3 about here>

Our main variables of interest are the child support enforcement variables. We find that if an unmarried mother lives in a state that has more laws enforcing child support, she has a higher income. Indeed, in this model, for each additional law enforcing child support her income rises by two percent holding all else constant. Expenditures on child support collections by the

state also have a positive effect. A woman who lives in a state that spends an additional $100 on child support enforcement will have four percent more to spend per year.

The other columns of table 3 form a robustness check. Child support enforcement should have little or no effect on the incomes of women who are not eligible to receive it. In order to verify our results we estimate the effect of child support enforcement on the incomes of married mothers and women who are unmarried and childless. If child support enforcement were found to have a statistically significant effect on the incomes of unmarried and childless women we could conclude that unmeasured state factors that are related to women's incomes are affecting our measure of child support enforcement within that state. This would imply a bias on the enforcement coefficient.

Examining the results for married mothers and childless women we see that the control variables all have the expected signs, but the coefficients of the child support enforcement variables, though positive, are close to and not statistically different from zero. This is evidence that our state child support enforcement variables are not capturing other state effects on women's income.

Table 4 estimates the effects of interacting the legislation and expenditure variables, while including in the analysis all the independent variables displayed in table 3. All results are compared to the omitted category, states with few laws enforcing child support and little administrative expenditure. The first column again indicates the impact of child support legislation and expenditure on the incomes of those potentially eligible for support – single mothers. The results indicate that there is no significant difference in the incomes of single mothers at any level of administrative expenditure when few laws are in place to enforce child support. When a medium or high number of laws are in place and the expenditure on them is

medium or high then there is a significantly larger impact on single women's incomes than happens with few laws and little expenditure. (A less significant effect is found if a state has strong laws on which little is spent to enforce them.) As might be expected, single mothers' incomes increase the most when they reside in states that both have many laws and spend a large amount to enforce them.

<Table 4 about here>

Again as a further robustness check, the interaction model is also estimated on married mothers and single, childless women (table 4, columns 2 and 3). Interacting the level of legislation and the amount spent on child support enforcement has no effect on the incomes of these women as compared to the effect of states with few laws and little expenditure.

We have explored the effects of child support enforcement on the incomes of eligible women, but this does not inform us of the role of child support in these income effects. Table 5 models the impact of child support enforcement on the percentage of income that is child support. Examining the independent variables we see that divorced women are more likely to rely on child support than are separated or never-married women. Child support also forms a larger percentage of a potentially eligible white woman's income than that of her minority peers. More educated women have a higher percentage of child support in their income stream than do women who have not finished high school, the largest effect being among those who have had some college but who have not yet graduated. Younger women, those with more children and those whose absent partner is more wealthy are also more likely to rely more heavily on child support income.

<Table 5 about here>

The strength of child support legislation has a statistically significant effect on the percent of single mothers' income that is child support. If a potentially eligible woman lives in a state that adds one law to its battery of child support enforcement legislation, the percentage of income that is child support will increase by ten percent, holding all else equal. Yet the amount that the state spends to enforce these laws appears to have no impact on the percentage of income that is child support. Turning to table 6, however, we find that when expenditure is interacted with the strength of laws a significant impact occurs. Again the results are compared to an omitted category - that of few child support enforcement laws interacted with low levels of expenditure. The most statistically significant impact is that of states with many laws and medium to high levels of expenditure. Compared to the omitted category, these states appear to allow women to obtain a larger part of their income through child support. Interestingly, a negative impact occurs when few laws are interacted with medium levels of expenditure. In this situation, potentially eligible women have less of their income deriving from child support than occurs when the laws are few and the expenditures low, a puzzling anomaly.

<Table 6 about here>

The results of our two stage model are displayed in table 7. The first column is used to create an instrument for child support payments but it is interesting in itself. All of the control variables are statistically significant and are in the expected directions. Those who have never been married receive less child support than those who are divorced, with separated women falling in between. Minorities receive less child support than whites, but more educated mothers are paid more in child support than are less educated women (excepting that those who have graduated with a college degree receive less than those who did not complete the degree).

Payments also increase with the mother's age, the number of children and the father's income. Living in the central city reduces the amount a child support a mother receives.

<Table 7 about here>

Child support legislation, together with the expenditure to enforce these laws, increases the amount of child support an eligible mother receives. The most effective combination occurs in states where a high number of laws are present and a medium to high amount is spent on enforcement. This interaction creates a reasonably precise instrument as indicated by the F-statistic scores.

The second column of table 7 shows the influence of child support payments on single mothers' total income. Holding the amount of child support received constant, the control variables are again in the expected direction. (The only exception is the coefficient for African American women that appears to indicate that Black women have more income than White women.) The principal coefficient of interest however is that of child support payments. Our results indicate that for every dollar of child support paid to the mother, her income increases by one dollar and eighty-nine cents.

Theory and previous literature indicates that those women who are not on welfare reduce their labor supply, and therefore their earnings, when they receive more child support. This indicates that each additional dollar received in child support will add less than a dollar to income. A second labor supply effect is created when those on welfare who receive child support increase their labor supply and move off welfare. Although such women lose their welfare benefit, their income increases overall because they gain their full child support payment (which was paid to the government previously to offset their welfare benefit) and the increased income

from labor. Such women have more than one dollar of income for each additional dollar of child support. Women who remain on welfare will only receive an additional dollar of child support if their current child support is less than fifty dollars[14]. Given this, an additional dollar of child support received does not affect the welfare benefit and she gains one more dollar of income for each additional dollar of child support. If she is remaining on welfare any labor supply effects will be very small indeed. Our results imply that the dominant effect of additional child support is to encourage women on welfare to leave the assistance roles, since additional child support appears to increase women's income substantially. A second possibility that reinforces the trend of this result is that child support enforcement is increasing the support paid to those on welfare who originally received less than fifty dollars support.

Section IV. Summary and Conclusion

Public enforcement of private child support obligations has been strengthened substantially in the US during the past quarter century. The objectives were to increase the economic well-being of single mothers and their children and to reduce their dependence on welfare. By transferring income from fathers to mothers, enforcement also alters behavioral incentives of parents. Economic theory suggests that enforcement will decrease the labor supply of mothers who are not potential welfare recipients, increase the labor supply of mothers who are potential welfare recipients, increase the labor supply of fathers, decrease non-marital births, and increase or decrease divorce and remarriage of both parents.

Our review of existing literature on behavioral effects indicates that more stringent child support enforcement has increased child support payments and decreased welfare caseloads. Moreover, stronger enforcement increases the labor supply of mothers who would otherwise have

[14] For the majority of the years in our analysis the AFDC rules were in effect, rules that allowed a women to keep the first fifty dollars of any child support payment made.

been on welfare, increases slightly or has no effect on the labor supply of non-resident fathers, decreases divorce and non-marital births, and decreases remarriages of both mothers and fathers. Finally, our first empirical estimates indicate that stronger child support enforcement increases the incomes of single mothers and their dependent children by two dollars for each dollar of child support received by single mothers. As our data is unable to capture the effects of child support on remarriage, this implies that the welfare participation behavioral incentives for mothers generated by child support receipt outweigh the labor supply effects of women who are not potential welfare recipients.

That child support enforcement effects the incomes only of mothers eligible for support and has no effect on the incomes of ineligible mothers suggests our results are robust. The robustness tests reinforce confidence in the estimated effects of child support enforcement on the incomes of eligible mothers.

This analysis suggests that child support enforcement, in terms of breadth of legislation and administrative expenditures, has an impact on the income of eligible women. In other words, we can increase the income of single mothers effectively through legislative action. This influence is still more powerful when many laws are well enforced through high levels of expenditures. The mere existence of laws is less effective. Similar results on the interaction of laws and expenditures were found by Freeman and Waldfogel (forthcoming).

Given the high poverty levels of single mothers the ability to raise their income is important, but this tells us little about their reliance on child support as a form of income. The results here indicate that as child support enforcement rises not only their incomes but also the proportion of income that comes from child support payments increases. As the percentage of income that is child support is raised we can assume that single mothers place more dependence

upon it as integral part of their income stream.

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Table 1: Trends in Composition of Mothers Eligible to Receive Child Support

Year	1978	1982	1986	1990	1994	1998
The Characteristics of Mothers						
Marital Status						
Never Married	0.192	0.307	0.348	0.392	0.407	0.459
Separated	0.297	0.232	0.204	0.199	0.187	0.159
Divorced	0.510	0.461	0.447	0.408	0.406	0.383
Race						
Black	0.330	0.359	0.339	0.347	0.325	0.316
White	0.574	0.530	0.526	0.516	0.514	0.501
Hispanic	0.082	0.091	0.113	0.110	0.139	0.159
Other	0.013	0.019	0.020	0.025	0.021	0.029
Education						
Below High School	0.364	0.328	0.292	0.273	0.235	0.212
High School	0.375	0.409	0.416	0.450	0.374	0.352
Some College	0.200	0.192	0.213	0.189	0.299	0.319
College	0.061	0.071	0.079	0.088	0.092	0.117
Number of Children	1.908	1.764	1.705	1.741	1.739	1.720
Mother's Age	33.158	31.838	31.998	32.366	32.774	33.480
Central City	0.418	0.394	0.371	0.356	0.341	0.359
Father's Income [1998 dollars]	23212	19070	21252	20039	19685	22702
State Child Support Enforcement						
Legislative Index	0.7 (0.7)	1.4 (1.1)	3.8 (1.0)	6.6 (1.1)	7.7 (0.6)	7.9 (0.2)
Expenditure per single mother family [1998 dollar]	140 (95)	135 (69)	163 (86)	214 (88)	271 (115)	374 (155)
State Unemployment Rate	6.2 (1.1)	9.9 (2.2)	7.1 (1.9)	5.6 (0.8)	6.2 (1.3)	4.7 (1.2)
N	3,327	4,544	4,789	4,872	4,942	4,332
Weighted N (1,000)	4,757	6,608	7,389	7,885	9,038	9,086

Standard Errors in parentheses

Table 2: Trend in Mother's Total Income and Percent of Child Support in Total Income

Year	1978	1982	1986	1990	1994	1998
Total Income						
All Eligible Mothers	16,958	14,938	15,681	16,134	16,866	18,856
Mothers w. Child Support Receipt	24,446	23,891	22,562	23,115	23,065	26,745
Mothers w/o Child Support Receipt	13,814	11,788	12,727	13,144	13,963	15,324
Mothers w. High School or Above Edu.	20,229	17,900	18,840	19,050	19,624	21,761
Mothers w. Education Below High School	11,208	8,840	7,967	8,292	7,843	8,044
Previously Married Mothers	18,231	17,502	19,006	19,755	20,889	23,500
Never-Married Mothers	11,611	9,150	9,459	10,541	10,998	13,376
Mothers without AFDC payments	21,508	19,030	19,929	20,469	20,774	21,149
Mothers with AFDC payments	10,244	7,473	7,484	7,306	8,354	8,608
% of Child Support in Total Income						
All Eligible Mothers	7.17	5.97	5.90	6.12	6.60	6.10
Mothers w. Child Support Receipt	24.26	22.95	19.65	20.43	20.69	19.73
Mothers w/o Child Support Receipt	0.00	0.00	0.00	0.00	0.00	0.00
Mothers w. High School or Above Edu.	9.05	7.22	6.72	7.18	7.11	6.65
Mothers w. Education Below High School	3.87	3.41	3.90	3.28	4.92	4.00
Previously Married Mothers	8.56	8.02	8.04	8.51	8.88	8.69
Never-Married Mothers	1.36	1.36	1.91	2.45	2.70	3.60
Mothers without AFDC payments	10.94	8.49	7.84	8.00	8.10	6.90
Mothers with AFDC payments	1.61	1.38	2.16	2.31	3.32	2.56

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Mothers w. High School or Above Edu.	9.05	7.22	6.72	7.18	7.11	6.65
Mothers w. Education Below High School	3.87	3.41	3.90	3.28	4.92	4.00
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Mothers without AFDC payments	10.94	8.49	7.84	8.00	8.10	6.90
Mothers with AFDC payments	1.61	1.38	2.16	2.31	3.32	2.56

Table 3: The Determinants of Total Income Among Women, 1978-1998
(Dependent Variable – log [Total Income]

Sample	Single Mothers			Married Mothers			Unmarried Women		
Variables	Coeff.	S.E.	P	Coeff.	S.E.	P	Coeff.	S.E.	P
Marital Status									
Divorced	----	----		----	----		----	----	
Never Married	-0.412	0.018	***	----	----		----	----	
Separated	-0.385	0.017	***	----	----		----	----	
Race									
White	----	----		----	----		----	----	
Black	-0.044	0.019	*	-0.099	0.008	***	-0.381	0.024	***
Hispanic	-0.191	0.020	***	-0.124	0.006	***	-0.410	0.028	***
Other	-0.217	0.039	***	-0.056	0.009	***	-0.491	0.040	***
Education									
Below High School	----	----		----	----		----	----	
High School	0.566	0.021	***	0.186	0.007	***	1.271	0.028	***
Some College	0.785	0.028	***	0.258	0.009	***	1.746	0.029	***
College	0.801	0.053	***	0.137	0.014	***	2.189	0.027	***
Mother's Age	0.037	0.001	***	-0.039	0.002	***	0.018	0.001	***
Number of Children	0.106	0.006	***	0.012	0.000	***	----	----	
Central City	0.030	0.015	*	-0.019	0.005	***	0.029	0.017	
Father's Income ($1,000)	0.024	0.002	***	0.026	0.000	***	----	----	
State Child Support Enforcement									
Legislative Index	0.022	0.008	**	0.000	0.002		0.001	0.010	
Expenditure ($100)	0.040	0.010	***	0.005	0.003	+	0.008	0.011	
State Unemployment Rate	-0.008	0.006		-0.010	0.002	***	-0.020	0.007	**
Year Effects									
1978	----	----		----	----		----	----	
1979	-0.048	0.043		-0.016	0.010		0.031	0.056	
1980	-0.123	0.043	**	-0.034	0.010	***	-0.023	0.056	
1981	-0.227	0.043	***	-0.052	0.011	***	-0.009	0.057	
1982	-0.258	0.047	***	-0.034	0.012	**	-0.002	0.061	
1983	-0.318	0.047	***	-0.023	0.012	+	0.006	0.059	
1984	-0.240	0.044	***	-0.036	0.011	***	-0.026	0.056	
1985	-0.263	0.045	***	-0.036	0.011	***	-0.054	0.057	
1986	-0.351	0.048	***	-0.010	0.013		-0.034	0.061	
1987	-0.356	0.051	***	-0.019	0.013		-0.025	0.065	
1988	-0.337	0.053	***	-0.004	0.014		0.064	0.067	
1989	-0.337	0.054	***	0.001	0.014		0.051	0.068	
1990	-0.348	0.063	***	-0.005	0.017		-0.021	0.078	
1991	-0.412	0.067	***	-0.007	0.018		-0.069	0.084	
1992	-0.465	0.068	***	0.006	0.019		-0.067	0.085	
1993	-0.398	0.068	***	-0.015	0.019		-0.114	0.085	
1994	-0.474	0.071	***	-0.048	0.019	*	-0.175	0.088	*
1995	-0.492	0.073	***	-0.076	0.020	***	-0.202	0.091	*
1996	-0.549	0.075	***	-0.070	0.020	***	-0.240	0.092	**
1997	-0.602	0.075	***	-0.088	0.021	***	-0.232	0.093	*
1998	-0.618	0.077	***	-0.087	0.021	***	-0.190	0.094	*
State Effects	Yes			Yes			Yes		
Constant	7.030	0.070	***	9.416	0.015	***	7.560	0.086	***
Adjusted R^2	0.180			0.148			0.128		
N	95,775			342,698			66,683		

*+p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001*

Table 4: Interaction Effects of Child Support Enforcement on Total Income

Sample / Variables	Single Mothers Coeff.	S.E.	P	Married Mothers Coeff.	S.E.	P	Unmarried Women Coeff.	S.E.	P
Low Legislative Index, Low Expenditure	----	----		----	----		----	----	
Low Legislative Index, Medium Expenditure	0.036	0.038		-0.004	0.009		0.018	0.046	
Low Legislative Index, High Expenditure	0.026	0.075		-0.009	0.014		-0.036	0.067	
Medium Legislative Index, Low Expenditure	0.042	0.029		0.003	0.008		0.017	0.042	
Medium Legislative Index, Medium Expenditure	0.142	0.033	***	0.002	0.009		0.011	0.043	
Medium Legislative Index, High Expenditure	0.156	0.041	***	-0.010	0.010		0.035	0.048	
High Legislative Index, Low Expenditure	0.141	0.052	**	0.007	0.018		0.004	0.081	
High Legislative Index, Medium Expenditure	0.183	0.051	***	-0.009	0.014		0.089	0.063	
High Legislative Index, High Expenditure	0.194	0.055	***	-0.001	0.015		0.065	0.067	
Adjusted R^2	0.172			0.147			0.128		

*+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.*

Table 5: The Determinants of Percent of Child Support in Total Income, 1978-1998
(Dependent Variable – log [% of child support in total income]

Variables	Coeff.	S.E.	P
Marital Status			
Divorced	----	----	
Never Married	-4.075	0.075	***
Separated	-3.013	0.069	***
Race			
White	----	----	
Black	-2.625	0.081	***
Hispanic	-2.180	0.085	***
Other	-2.213	0.161	***
Education			
Below High School	----	----	
High School	0.687	0.088	***
Some College	1.069	0.119	***
College	0.491	0.220	*
Mother's Age	-0.024	0.004	***
Number of Children	0.414	0.027	***
Central City	-0.768	0.061	***
Father's Income ($1,000)	0.120	0.007	**
State Child Support Enforcement			
Legislative Index	0.103	0.033	**
Expenditure ($100)	0.028	0.043	
Year Effects			
1978	----	----	
1979	0.074	0.180	
1980	-0.244	0.178	
1981	0.046	0.178	
1982	0.082	0.179	
1983	-0.039	0.179	
1984	0.112	0.180	
1985	0.234	0.187	
1986	0.307	0.200	
1987	0.425	0.213	*
1988	0.153	0.222	
1989	0.422	0.224	+
1990	0.424	0.261	+
1991	0.337	0.281	
1992	0.544	0.283	+
1993	0.696	0.285	*
1994	0.580	0.296	*
1995	0.630	0.307	*
1996	0.367	0.312	
1997	0.242	0.314	
1998	0.332	0.319	
State Effects	Yes		
Constant	-16.535	0.237	***
Adjusted R^2	0.180		
N	95,775		

*+ $p < 0.010$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$*

Table 6: Interaction Effects of Child Support Enforcement on Percentage of Child Support in Total Income

Variables	Coeff.	S.E.	P
Low Legislative Index, Low Expenditure	----	----	
Low Legislative Index, Medium Expenditure	-0.380	0.158	*
Low Legislative Index, High Expenditure	0.390	0.314	
Medium Legislative Index, Low Expenditure	0.302	0.121	*
Medium Legislative Index, Medium Expenditure	0.095	0.135	
Medium Legislative Index, High Expenditure	0.243	0.172	
High Legislative Index, Low Expenditure	0.381	0.216	+
High Legislative Index, Medium Expenditure	0.513	0.215	*
High Legislative Index, High Expenditure	0.705	0.228	**
Adjusted R^2	0.180		

*+ $p < 10$; * $p < .05$; ** $p < .01$; *** $p < .001$.*

Table 7: The Effect of Child Support Payment on Mother's Total Income

Dependent Variable / Variables	First Stage (Tobit) Child Support Payment Coeff.	S.E.	P	Second Stage (OLS) Total Income Coeff.	S.E.	P
Predicted Child Support Amount	----	----		1.89	0.16	***
Marital Status						
Divorced	----	----		----	----	
Never Married	-4236	89	***	-1323	443	**
Separated	-2593	75	***	-1986	321	***
Race						
White	----	----		----	----	
Black	-3123	95	***	868	331	**
Hispanic	-2452	98	***	-1203	287	***
Other	-2190	190	***	795	361	*
Education						
Below High School	----	----		----	----	
High School	1261	104	***	1551	175	***
Some College	1784	137	***	3346	248	***
College	1667	247	***	8896	410	***
Mother's Age	11	5	*	212	7	***
Number of Children	672	30	***	-846	80	***
Central City	-748	69	***	455	135	***
Father's Income ($1,000)	131	8	***	322	20	***
State Child Support Enforcement						
Low Legislative Index, Low Expenditure	----	----		----	----	
Low Legislative Index, Medium Expenditure	-311	175	+	----	----	
Low Legislative Index, High Expenditure	610	343	+	----	----	
Medium Legislative Index, Low Expenditure	389	136	**	----	----	
Medium Legislative Index, Medium Expenditure	89	153		----	----	
Medium Legislative Index, High Expenditure	209	191		----	----	
High Legislative Index, Low Expenditure	383	240		----	----	
High Legislative Index, Medium Expenditure	458	235	*	----	----	
High Legislative Index, High Expenditure	525	250	*	----	----	
State Unemployment Rate	-29	27		-24	41	
Year Effects		Yes			Yes	
State Effects		Yes			Yes	
Constant	-7203	328	***	3914	460	***
Partial F of Instruments		2.92 **			----	
R^2 (Pseudo for Tobit; Adjust for OLS)		0.031			0.310	
N		95,775			95,775	

*+ p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001.*

Appendix 1: The Effect of Demographic Factors on Ever Married Black Men's Income

Variables	Coeff.	S.E.	P
Marital Status			
Married	----	----	
Divorced	-4438	1430	**
Separated	-7310	2068	***
Education			
Below High School	----	----	
High School	8880	1495	***
Some College	15836	1598	***
College	27687	1815	***
Age	1960	382	***
Age Squared	-21	4	***
Central City	-4923	1106	***
Region			
South	----	----	
North East	-460	1703	
North Central	995	1754	
West	2347	1835	
State Unemployment Rate	-1731	573	**
State Median Wage Rate	2494	869	**
Constant	-31902	9658	***
N	1826		
Adjusted R^2	0.187		

Source: 1998 March CPS.
*$p < .05$; **$p < .01$; ***$p < .001$.

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