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Child Support Enforcement, Incarceration, and the Labor Market Outcomes of Noncustodial Fathers

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ABSTRACT

CHILD SUPPORT ENFORCEMENT, INCARCERATION, AND THE LABOR MARKET

OUTCOMES OF NONCUSTODIAL FATHERS

By

SOMMER RAYNE DELGADO

JANUARY, 2025

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Most prior examinations on the influence of incarceration on labor market outcomes find that the criminal justice system excludes people from employment. This study examines the nexus of the criminal justice and child support systems' influence on labor market outcomes while examining a contrast of traditional labor market exclusion: the threat of incarceration for child support nonpayment, which may push fathers with child support debt to accept low-wage work. Using data from The Future of Families and Child Wellbeing Study, this study utilizes variation between cities to examine how child support policies affect noncustodial parents in terms of their employment and wages in a replication of the work of Zatz and Stoll (2020). This study provides support for the theory that punitive child support enforcement policies negatively impact the wages of noncustodial fathers with arrears who are most vulnerable to the threat of punishment for nonwork but does not find significant relationships between child support enforcement and employment.

CHILD SUPPORT ENFORCEMENT, INCARCERATION, AND THE LABOR MARKET
OUTCOMES OF NONCUSTODIAL FATHERS

BY

SOMMER RAYNE DELGADO

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree
of
Master of Science
in the
Andrew Young School of Policy Studies
of
Georgia State University

GEORGIA STATE UNIVERSITY
2025

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2025

ACCEPTANCE

This thesis was prepared under the direction of the candidate's Thesis Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Master of Science in Criminal Justice in the Andrew Young School of Policy Studies of Georgia State University.

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DEDICATION

For my mother, Aida Zaldo, who inspired and encouraged me as I began this work but is not here to see me finish it. With love and gratitude. I love you, mom.

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Chapter I: Introduction

In the United States, each state governs its child support policies, including how child support is calculated and if arrears, or past-due child support payments, accrue interest. Federal law dictates some aspects of state policy, such as the requirement that states establish child support orders in all cases where the custodial parent receives Temporary Assistance for Needy Families (TANF) and that child support payments made in such cases are assigned to the state as reimbursement to the state and federal governments for welfare costs (Office of Child Support Enforcement, 2014). Custodial parents who are approved for TANF benefits must comply with state child support enforcement agencies to establish child support orders for the parents of their minor children. These cooperation requirements allow for some exceptions determined by each state, most commonly in the case of domestic violence (Roberts, 2005). Similar child support cooperation requirements exist in other public benefits programs, including Food Stamps, Medicaid, the State Children’s Health Insurance Program (SCHIP), and child care (Roberts, 2005).

For low-income noncustodial parents whose child support obligations are a larger share of their income, arrears can grow rapidly and become “insurmountable and unsustainable” (Brito, 2019). Noncustodial payments with minor children must pay their current child support payment in addition to a portion of their arrears each month according to payment plans established by the court. The extent to which the state meaningfully considers the earning potential of noncustodial parents can also lead to child support obligations out of reach for poor parents. When a noncustodial parent fails to make child support payments, the state child support enforcement agency has several options to enforce the child support order and collect the arrears, including driver’s license suspensions, federal income tax withholding, and property liens. The

most aggressive enforcement mechanism utilized to enforce child support orders is incarceration. State child support agencies use laws on civil contempt or criminal nonsupport to incarcerate noncustodial parents in arrears and, theoretically, induce payments. Cozzolino (2018) estimates that “one in seven fathers who owe child support spends time in jail for it” (p.14). This study will examine the relationship between jail for child support nonpayment and noncustodial fathers’ employment and wages.

Examinations of the intersection of the child support and criminal justice systems are relatively new, and most previous studies focus on child support and its implications for fathers exiting prison (Haney, 2018; Link & Roman, 2017; Meyer & Warren, 2011; Roman & Link, 2017). In these studies, child support debt is a collateral consequence of incarceration. Few studies examine the use of incarceration in response to child support debt. The lack of research in this area is rooted in difficulty accessing data on the child support system and, particularly, the use of enforcement mechanisms on noncustodial parents in arrears. Previous work on the intersection of the welfare and criminal justice systems typically excludes the child support system, which is implicated as an intermediary between these two systems due to child support cooperation requirements (Cozzolino, 2018).

Using data from The Future of Families and Child Wellbeing Study (FFCWS), this study utilizes variation between policy environments to assess how the threat of punitive child support enforcement policies affects noncustodial fathers in the context of employment and wages. FFCWS is a longitudinal survey that follows 4,989 infants born in 20 cities in the United States. FFCWS data, although traditionally used in examinations of parental involvement and child-rearing, have become an essential source of information for individuals studying the effects of parental incarceration on families (Geller et al., 2016). I hypothesize that cities that more

frequently use punitive child support enforcement mechanisms, such as incarceration, will pressure noncustodial fathers to enter the workforce or work more hours at lower wages. The pressure of this threat of incarceration could, theoretically, entrap low-income fathers into more dangerous, unreliable, lower-wage work through child support policies. Fathers could not pursue training and employment that could benefit their families in pursuit of paying off their child support arrears, which may accrue interest.

In this study, I utilize a city-level policy treatment variable constructed by Zatz and Stoll (2020) to examine the effect of the threat of incarceration sanctions for child support nonpayment on noncustodial fathers' employment and wages. Fathers' annual hours worked are used to measure their employment, and hourly wage rates are used to measure their wages. The incarceration policy variable is the percentage of noncustodial fathers in arrears who have experienced a jail sanction in the city.

In the next chapter, I examine the literature in three specific areas, although these areas overlap: first, I explore the use of incarceration for child support nonpayment; second, I introduce the literature regarding the child support enforcement system, child support debt, and welfare cooperation laws; and finally, I present the literature regarding the labor market effects of child support and incarceration.

Chapter II: Literature Review

While several recent studies examine the overlap between the criminal justice and child support systems, few studies focus on the collateral consequences associated with the criminalization of child support nonpayment for individuals who struggle to pay their child support debt.

Incarceration for Child Support

Most analyses of the growth of the criminal justice system focus on prison incarceration and expansion through traditional means, such as reforms to criminal sentences in the federal and state legislatures. However, “criminal law and criminal justice institutions increasingly represent only the most visible tentacles of penal power” (Beckett & Murakawa, 2012, p. 222). The authors’ conception of the shadow carceral state implicates various institutions, including immigration and family courts. These institutions function as increased and compounded surveillance, particularly of socially and racially marginalized communities (Beckett & Murakawa, 2012).

Even in the absence of intentional changes in policy, Beckett and Murakawa (2012) demonstrate institutional adaptations that have significantly enhanced the ability of non-criminal justice actors to impose carceral sanctions. Despite longstanding legal prohibitions on the incarceration of indigent debtors, there is evidence that this practice continues for individuals who are unable to pay three types of debt in particular – consumer debt, child support orders, and other legal financial obligations, such as fines and fees (Beckett & Murakawa, 2012). The most common means of circumventing legal prohibitions is the use of civil contempt laws rather than criminal prosecution. In these civil proceedings, the debtor is incarcerated for not complying

with a court order rather than for not paying their debt (Beckett & Murakawa, 2012; Patterson, 2008).

For child support orders and other types of legal financial obligations, incarceration is prohibited as a sanction unless they have the means to pay their debt but refuse to (Beckett & Murakawa, 2012). In the United States, the calculation of child support payments can include imputing hypothetical earnings for individuals deemed voluntarily unemployed or underemployed. The California Supreme Court upheld the use of incarceration for child support debt, finding incarceration was an appropriate sanction for a child support debtor who does not adequately seek and accept employment available to them according to their education, experience, and physical ability. The trial judge assessed that the unemployed father “could get a job flipping hamburgers at McDonald’s” (Zatz & Stoll, 2020). The child support system not only expects noncustodial parents to pay enough according to what they earn but also to find employment that affords them enough to pay what the court deems appropriate (Zatz & Stoll, 2020).

Like fines and fees, researchers and legal scholars have referred to the modern child support system as a debtor’s prison, where indigent parents are incarcerated because of their inability to pay court-ordered child support (Patterson, 2008). Unlike criminal violations, respondents in child support cases are not afforded due process or other protections the Constitution provides, including the right to an attorney. Child support obligors are not guaranteed legal counsel in child support proceedings or in civil contempt hearings on their failure to pay their court-ordered child support, even though such hearings may result in their incarceration (Patterson, 2008). As a result, many child support orders are set without meaningful consideration of an individual’s ability to pay (Patterson, 2008).

Finally, parents who have experienced incarceration may reenter society with a host of economic and social disadvantages, including large sums of child support debt that accrued while they were incarcerated and unable to work. McLeod and Gottlieb (2018) find that fathers who experience incarceration are more likely to have significant child support debt and that these fathers tend to have higher child support arrears than fathers who have not experienced incarceration. Some states consider incarceration voluntary unemployment, which allows payments and interest to accrue during periods of incarceration when the noncustodial parent is removed from the labor market. Some states will consider modifying child support orders during periods of incarceration. However, these modifications are not done automatically and often must be brought to the court by the incarcerated noncustodial parent (Meyer & Warren, 2011).

Haney (2022) observed 1,200 child support cases and conducted qualitative interviews with 145 formerly incarcerated fathers. She finds the effects of child support policies are compounded for fathers who experience incarceration, creating “feedback loops of disadvantage” where fathers face further entrenchment in the criminal justice system as their child support debt continues to grow. Policies that enforce punitive measures against these formerly incarcerated child support debtors contribute to the outcomes that policymakers and the public ascribe to indebted fathers, including disengagement from their families, children, and formal institutions, and often, reincarceration (Haney, 2022).

Child Support Debt, Welfare Cooperation, and the Realities of Low-Income Families

The 1980s and 1990s were characterized by strong bipartisan support for reforms to the child support and welfare systems under the assumption that more punitive child support policies would address societal concerns relating to poverty, welfare use, and single-parent homes (Battle, 2018; Haney, 2022). Children born to never-married parents increased from 5.3% in

1960 to almost 27% in 1980. The percentage was higher for Black families, with 57% of children born to never-married parents. Public support for the welfare system declined as “the face of welfare continued to shift from white widowed mothers to never-married Black mothers” (Battle, 2018, p. 452). These changes in public perception regarding welfare – including the popularization of terms like “deadbeat dads” and “welfare queens” – led to strong support for child support policy reforms intended to recover welfare costs from “undeserving” families (Battle, 2018).

Child support enforcement divisions were established in 1975 with the primary purpose of refunding the costs associated with the Aid to Families for Dependent Children (AFDC), which provided cash benefits primarily to low-income women with minor children. Before 1975, child support and welfare were viewed as substitutes, and each dollar of child support received by families reduced their public benefit by a dollar. Upon the implementation of child support enforcement systems in 1975, all collected child support on behalf of TANF families was used to offset the administrative costs associated with the child support enforcement and welfare programs, ensuring TANF families’ incomes went unchanged whether or not the child support was collected (Cancian et al., 2008).

In 1984, the federal government mandated that the first \$50 of child support collected monthly was passed through to families receiving AFDC benefits. However, the government retained the balance to pay back state and federal costs associated with AFDC (Dubey, 1995; Solomon-Fears, 2016). At the same time, child support enforcement began deducting the child support obligation from the noncustodial parent’s paychecks, a process known as wage withholding. This process made noncustodial parents with stable, regular employment unlikely

to default on their obligations and thus likely contributed to a change in the population of noncustodial parents with arrears (Miller & Mincy, 2012).

In the early 1990s, welfare retrenchment and child support enforcement became a legislative priority and led to child support and welfare system reforms. The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) was signed into law in 1996, replacing AFDC with Temporary Assistance for Needy Families (TANF) and significantly reforming the child support enforcement system. Compared to AFDC, TANF was time-limited and no longer an entitlement, increasing the families' reliance on child support income (Cancian et al., 2008). The child support reforms were intended to increase collections by child support obligors. These reforms included creating a new hire reporting system, streamlining paternity establishment, modernizing collections and disbursements of child support payments, and creating and endorsing new penalties for nonpayment, including asset seizure and professional and driver's license revocations (Sorensen & Oliver, 2002). States had to use one of three different child support guideline formulas based on the estimated costs of supporting minor children. In these three formulas, noncustodial parents with lower incomes must pay a higher proportion of their income (Miller & Mincy, 2012). PRWORA also allowed state child support enforcement agencies to order noncustodial parents to participate in "work activities" required of custodial parents who receive TANF benefits (Zatz, 2020).

PRWORA also mandated TANF recipients' cooperation with child support enforcement agencies by reducing their benefit amounts by at least 25 percent as a penalty if they did not comply (Farrel et al., 2003). Each state governed how this cooperation requirement was implemented, including the extent of the penalty, what is considered a "good cause" exception to the cooperation requirement, and what is required of the custodial parent to be eligible for any

exceptions. There is evidence that benefits may be terminated shortly after custodial parents are found to be noncompliant with child support enforcement. An investigation by Hager (2021) in New Mexico found that TANF applicants were sent forms requesting they provide, under penalty of perjury, the noncustodial parent's current and former addresses, employer information, vehicle information, any information regarding assets such as bank accounts, and the address of immediate family and friends. Child support enforcement also requested the date the applicant believes the child was conceived and why the applicant believes that to be the correct date. Mothers in this investigation reported interviews with state child support employees who questioned them about their sexual history and pressured them to submit their children to undergo genetic testing (Hager, 2021). According to the state's acting director of the Child Support Enforcement Division, custodial parents must provide a police report, restraining order, or notarized affidavit regarding their risk of domestic violence to obtain an exception from the cooperation requirements (Hager, 2021).

The federal cooperation mandate may have contributed to fundamentally changing the population of families with child support orders because many families who qualify for TANF have noncustodial parents who also have low incomes. Between 1999 and 2001, the percentage of child support enforcement program cases with child support orders increased by 64 percent, where the median state had established orders in 70 percent of all cases (Farrel et al., 2003). Mincy and Sorensen (1998) analyzed pre-PRWORA data from 1990 and found that between 16 and 33 percent of noncustodial fathers were not "deadbeat dads" but instead faced significant barriers to paying their child support due to low incomes, defined as yearly incomes below \$6,800. These fathers are like custodial mothers who are long-term welfare recipients – both are disproportionately young and never married, with less educational attainment and work

experience. Recent estimates find that about 50 percent of state child support caseloads are families who are currently receiving TANF or have received it in the past (Cozzolino, 2018). The Office of Child Support Enforcement (2014) reported that a quarter of all child support debt is owed to the state to reimburse welfare benefits.

At least 11 million individuals have child support debt, and the majority of the debt is owed by obligors with very low reported incomes (Sorensen et al., 2007). In a study of nine large states' child support arrears, researchers found that 70% were owed by child support obligors who reported no income or reported income of \$10,000 a year or less. For these noncustodial parents, the median child support order represented 83% of their reported income, and the median payment was 7% (Sorensen, Sousa, & Schaner, 2007). Other factors contributing to the amount of debt owed include assessing interest on arrears and including retroactive support. States that charge interest on child support arrears experienced more significant growth in arrears than states that did not charge interest (Sorensen et al., 2007). Additionally, some states assess child support retroactively to the child's date of birth in some cases, which could include healthcare costs from the child's birth. This practice has been reformed in some states, leading to variability in the use of retroactive support (Sorensen et al., 2007).

Finally, about 10 percent of noncustodial parents in arrears who were not matched in a year's worth of quarterly wage data (i.e., debtors who were not reported to their state of residence as employees) are incarcerated. About 9 percent of noncustodial parents in arrears receive Social Security Income benefits, while 6 percent receive Supplemental Security Income benefits. These data suggest that about a quarter of noncustodial parents in arrears are entirely removed from the labor market (Sorensen et al., 2007).

Incarceration, Child Support, and the Labor Market

Previous research on the labor market influence of incarceration has shown strong negative effects on both employment and earnings (Holzer et al., 2003, 2005; Western & Beckett, 1999). Western and Beckett (1999) examined the short- and long-term impacts of the growth of incarceration on labor market outcomes. In the short term, the primary influence of increased incarceration on the labor market is through the removal of men from the labor force, which removes them from being counted in the unemployment rate and, thus, artificially inflates employment numbers. In the long term, however, evidence shows that individuals exiting incarceration have significant barriers to the labor market, which would increase the unemployment rate. Through the mid-1990s, Western and Beckett (1999) find that increasing incarceration rates, including high rates of recidivism, compensate for increased unemployment among formerly incarcerated people. Aligned with this view, much of the recent work on incarceration and employment has focused on exclusion from the labor market rather than increased pressure to enter jobs of lower quality (Zatz, 2020).

Holzer et al. (2003) distinguished between supply-side and demand-side effects of incarceration on labor market participation. Supply-side effects include the inability of incarcerated people to accumulate work experience and work skills, as well as increases in the availability of illegal work through exposure to criminal social networks. Health and behavioral effects of incarceration may also influence post-incarceration labor market prospects, whether through exacerbating problematic substance use or facilitating behavioral changes like social withdrawal. Demand-side effects include employers' reluctance to hire individuals with criminal records and occupational licensing restrictions that lower the available pool of eligible candidates. These effects ultimately lead to poor employment market prospects for individuals

with histories of incarceration, which may lead to lower-paying, less reliable employment in informal or illegal economies. Importantly, employers' willingness to hire individuals with criminal records has been shown to have critical interactions with the individual's race, where black individuals with criminal records have intensified adverse effects (Holzer et al., 2003).

Measuring the effects of incarceration on labor market participation and familial relationships is difficult due to several factors that select individuals into low labor market prospects and incarceration. For example, men may participate in illegal activities because they lack opportunities or skills that would open traditional labor market jobs (Geller et al., 2011). Geller et al. (2011) examined the impact of incarceration histories on noncustodial fathers' ability to support their children financially. Paternal incarceration affects families in two ways: first, by removing the father from the household and labor market during incarceration, and second, by limiting the father's earnings after their release from incarceration. The authors find that men with incarceration histories contribute about \$1,300 less to their children every year compared to never-incarcerated men, which represents about one-quarter of the amount families receive in a year in the sample (Geller et al., 2011). This decrease in support is due primarily to two factors: first, the influence of incarceration on father's labor market participation, and second, the influence of incarceration on a family's relationship quality, particularly the reduced likelihood that formerly incarcerated fathers will live with their children following periods of incarceration (Geller et al., 2011).

Some recent studies examine the threat of incarceration as a labor market influence that drives people into the labor market rather than excluding them from it. Work requirements enforced by the criminal justice system exist explicitly in probation and parole, for example, where supervisees must secure employment as a condition of their release and risk revocation to

incarceration if they do not meet this condition. Similarly, the literature on criminal fines and fees and child support suggests they incentivize work by penalizing nonwork with incarceration. Finally, the probation and parole systems reinforce both fines and fees and child support debts (Zatz, 2020). Zatz (2020) suggests these “carceral work mandates” influence the labor market by defining “the conditions workers must accept, provide employers the power to trigger state violence against their workers, remove certain forms of work from employment law protections entirely, and displace or discipline other workers not directly subject to these mandates” (p. 306).

The criminal justice system has historically been used to criminalize nonwork, particularly in the years following the emancipation of enslaved Black people in the United States (Jones, 2018; Kaplan-Lyman, 2012; Kohler-Hausmann, 2015). In the South, states passed laws that criminalized vagrancy, unemployment, and labor mobility, which were enforced predominantly against newly freed Black people (Jones, 2018; Zatz, 2020). The fines associated with violating these laws increased, and individuals who could not pay them were incarcerated or had their legal debts transferred to private employers (Jones, 2018; *Timbs v. Indiana*, 2018; Zatz, 2020). Years later, in 1945, the governor of Florida penned a letter requesting the state’s sheriffs more actively enforce laws that required individuals to work. These laws and their enforcement, rationalized as preventing laziness, were incentivized by allowing sheriff’s offices to keep the fines collected up to \$7,500 annually (Jones, 2018). Today, similar arguments about laziness are used to justify punitive child support enforcement actions, including incarceration, against noncustodial parents who are deemed underemployed or “deadbeat” (Lollar, 2018). These policies demand work, penalize nonwork, and, theoretically, coerce child support debtors to accept subordinated, precarious labor they would otherwise reject (Zatz, 2020).

Most previous investigations on the role of child support on labor market outcomes analyze child support as a tax on earnings, which suggests that child support orders would disincentivize work in the formal labor market. Many low-income fathers have child support orders that constitute between 20 and 35 percent of their income. Further, noncustodial fathers in arrears who have regular employment can have up to 65 percent of their net income withheld from each paycheck (Holzer et al., 2005). Holzer et al. (2005) examine the labor force effects of increased child support enforcement and incarceration on young Black men in the 1990s, a group disproportionately impacted by both the criminal justice and child support systems. During this period, the labor force activity for their sample of 16-to-24-year-olds and 25-to-34-year-olds dropped about 16 and 13-14 percentage points, respectively, when controlling for demographic and labor market changes. The authors find that incarceration and child support account for most of the declines in the labor force activity of young Black men who have a high school education or less, particularly for the older of the two age groups (Holzer et al., 2005).

Some previous work, however, does find increased employment following periods of incarceration, although these studies have generally identified short-term effects. Seim and Harding (2020) analyzed the labor market outcomes of a cohort of parolees in Michigan. This study compared TANF's "help and hassle" model to similar models used in parole to encourage employment. Parole officers, according to this view, "mix practices of policing with social work to encourage compliance" with work mandates (Seim & Harding, 2020, p. 174). The authors found that parole increases the chances of employment for parolees compared to after the parolees are discharged from parole but that this employment generally produces low wages, particularly for Black parolees. Black parolees earned wages below the poverty line, on average; white parolees earned wages below 150 percent of the poverty line, on average, across most of

the observed quarterly data (Seim & Harding, 2020). Similar studies have found short-term increases in employment following incarceration that eventually return to levels similar to pre-prison employment (Pettit & Lyons, 2007; Sabol, 2007). It is unclear if increased employment is due primarily to the threat of incarceration or other sanctions (“the hassle”) or through increased assistance with employment opportunities (“the help”); however, limited earnings potential may indicate little expansion of work opportunities (Zatz & Stoll, 2020).

On the other hand, child support enforcement relies primarily on the hassle or threat of enforcement actions against noncustodial parents in arrears. This dynamic may be changing with programs introduced in recent years to expand work opportunities for noncustodial parents in arrears, such as fatherhood programs and parental accountability courts. The National Conference of State Legislatures (2022) lists diversion and employment programs in several states that focus on increasing employment and training opportunities as an alternative to incarceration. These programs include Parental Accountability Courts in Georgia, a court diversion program called NCP Choices in Texas, and a Division of Child Support-led program in Washington State called Alternative Solutions. These and similar programs across the country frequently pair employment and training support – primarily in the form of referrals to employment-focused programs – with partial or full debt forgiveness for state-owed child support arrears, modifications of child support orders, and assistance with driver’s license or professional license suspensions resulting from child support arrears (NCSL, 2022). To date, evaluations have focused on the impact of debt forgiveness programs. Little is known about these programs’ impact on employment and wages, family relationships, or other areas of interest outside of child support payments – including the use of sanctions, including incarceration, against participants.

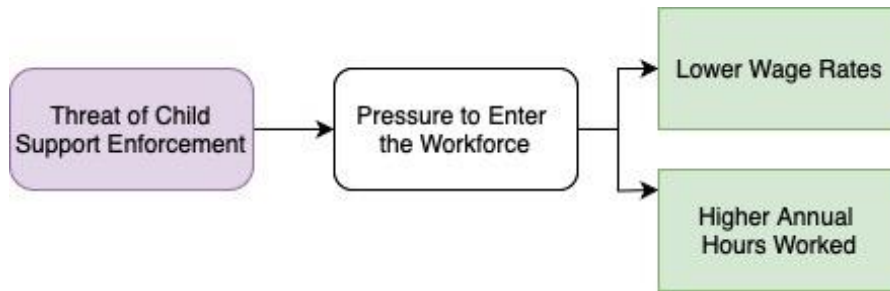
Zatz and Stoll (2020) examined the relationship between the threat of incarceration for child support nonpayment and employment. The researchers found that cities that use punitive child support enforcement mechanisms, such as incarceration, as a sanction for child support nonpayment have noncustodial parents who report more hours of work but lower wages (Zatz & Stoll, 2020). Their findings suggest that noncustodial parents may be incentivized to work by harsh child support enforcement policies; however, such policies may also affect their ability to obtain education or training that might allow them to achieve higher wages. The authors also note that such policies may create downward pressure on labor standards, depressing wages by lowering the reservation wage and reducing bargaining power. These mechanisms select individuals for jobs of lower quality (Zatz & Stoll, 2020). According to this view, the threat of incarceration shapes the bottom of the labor market by ensuring there will always be a pool of available workers willing to accept jobs of lower quality.

Current Study

This study will analyze how the threat of child support enforcement affects the wages and employment of noncustodial fathers as a replication of Zatz and Stoll (2020). Figure 1 below shows the impact theory regarding the relationship between the threat of child support enforcement and expected labor market outcomes. The threat of child support enforcement creates pressure to enter the workforce, which leads fathers to accept jobs of lower quality and increase employment effort. In this model, the percentage of noncustodial fathers in arrears who experience a jail sanction in each city represents the threat of child support enforcement. Job quality is measured by wage rates. Employment is measured by annual hours worked.

Figure 1

Child Support Enforcement and Labor Market Outcomes



Hypotheses

I hypothesize that cities with more punitive child support enforcement will have lower job quality and higher employment effort among noncustodial fathers in the sample. The null hypothesis for job quality is $H_0: \beta_1 \text{Enforcement} * \text{NCF} - \text{Arrears} = 0$, or that fathers in arrears have equal wages compared to custodial fathers. The alternative hypothesis for job quality is $H_1: \beta_1 \text{Enforcement} * \text{NCF} - \text{Arrears} < 0$, or fathers in arrears have lower wages compared to custodial fathers. For annual hours worked, the null hypothesis is $H_0: \beta_1 \text{Enforcement} * \text{NCF} - \text{Arrears} = 0$, or that fathers in arrears have equal annual hours worked compared to custodial fathers. The alternative hypothesis is $H_1: \beta_1 \text{Enforcement} * \text{NCF} - \text{Arrears} > 0$, or fathers in arrears have higher annual hours worked compared to custodial fathers.

Chapter III: Methodology

This study utilizes data from The Future of Families and Child Wellbeing Study (FFCWS), a longitudinal survey that follows 4,989 infants born during the years 1998 to 2000 in 75 hospitals in 20 large cities across the United States. The weighted sample represents families of children born in United States between 1998-2000 in cities with populations larger than 200,000 (Geller et al., 2018). The survey systematically oversampled unwed parents, and data collection was designed to improve cooperation of unwed fathers. The cities sampled in FFCWS were chosen due to high variation in access to welfare benefits, child support enforcement, and the strength of the labor market (Bendheim-Thoman Center for Research on Child Wellbeing, 2008). There is evidence of high variation between states, and even cities within states, in terms of their use of child support enforcement mechanisms. Using FFCWS' restricted data provides information to quantify enforcement experienced by parents at the city level, comparing differences in child support enforcement across policy environments.

FFCWS data, although frequently used in examinations of parental involvement and child rearing, have become an important source of information for individuals studying the effects of parental incarceration on families (Geller et al., 2011). In this study, I utilized city-level policy treatment variables, similar to those constructed in Zatz & Stoll (2020), to examine the effect of the threat of incarceration sanctions for child support nonpayment on noncustodial father's employment and wages.

Another motivation for this study was to explore how welfare-child support cooperation influences the relationship between child support enforcement and labor market outcomes. While exploring FFCWS' measures, I found the survey questions on TANF use and child support order establishment by families were not sufficient to test this relationship. The survey asked if the

parent had received any income from welfare or TANF in the last year but not whether TANF receipt led to the child support order. For individuals who reported both TANF receipt and establishment of a child support order in the last year or since the previous survey, there was no way to determine which occurred first. In the final analysis, TANF use by custodial parents is used as a control variable, and the results include descriptive statistics comparing families who reported TANF use to families who had never used TANF.

Dependent Variables

Wage Rate

The hourly wage rate provides a measure of job quality. I constructed the wage rate using the fathers' responses to the questions "About how much (do/did) you usually earn in (this/that) job, before taxes and deductions?" and "Per what time period do you usually earn this amount?" The wage rate is calculated based upon the time period and value reported. Weekly earnings were calculated for individuals reporting weekly, biweekly, bimonthly, monthly, yearly, hourly, and daily earnings. Daily earnings were calculated using daily earnings and daily hours, or reported hours worked per week divided by five. I then divided weekly earnings by weekly hours to create the hourly wage rate.

Several decisions were made in the coding process for wage rates that could produce measurement error. Still, each decision was made to reduce the measurement error introduced. For example, actual reported wages or hours worked were used rather than imputed in any circumstances where data was available – such as for weekly hours, daily hours, and hours worked per week. The respondents were not asked how many days they worked per week, so five days per week was imputed for individuals who reported daily hours. The median number of hours per week was 40, and the mean was 44, indicating that five days of work per week was a

reasonable imputation of days worked per week. I also examined whether wage rates moved in expected directions across other non-imputed variables. When plotting the wage rate by education, for example, the wage rate moves in the expected direction with each additional stage of educational attainment, which validates the coding decisions utilized. Fathers with wages less than \$1.00 or more than \$50.00 per hour were removed as outliers.

The final analysis on wages excludes fathers who reported wages from previous jobs while unemployed. The survey question on wages includes fathers' reports of their wages at their most recent job for fathers who report they have not worked at a regular job in the last week. The intention of the analysis of fathers' wage rate is to understand the impact of enforcement on job quality among the employed. Additionally, including measures of fathers' wages at their most recent regular job without including measures of the length of time the father has been unemployed and reasons for transitions out of employment would introduce unnecessary measurement error. These unemployed fathers are included in the analysis of annual hours worked, which measures transitions in and out of employment.

Annual Hours Worked

Annual hours worked is included as a measure fathers' employment effort. Fathers' annual hours worked is calculated using fathers' responses to the question: "How many hours (do/did) you usually work per week at (this/that) job? Include regular overtime hours..." multiplied by the response to the question, "In the last 12 months, how many weeks did you work (at your job/all of your regular jobs)? If you worked the entire year, but used paid vacation time or sick time, you worked 52 weeks." Fathers who had not worked at a regular job in the week before the survey but who reported hours per week and weeks per year regarding their most recent employment in the last 12 months had their annual hours included as a measure of

their work effort. Fathers who reported annual hours worked greater than 3,000 hours were removed from the final sample as outliers. A full-time job at 40 hours per week is 2,080 hours per year.

Independent Variables

Father Status (Custody and Child Support Status)

The father status variable categorizes fathers by both child support and custody status. The FFCWS survey asks questions to both the father and mother of the focal child regarding the length of time the father lives with the focal child, whether the father has established legal paternity, and whether a formal child support case exists for the focal child. If a child support case has been established, the survey asks whether the father has arrears on child support payments or owes reimbursement for birthing costs. From these questions, I constructed four categories, as in Zatz & Stoll (2020): custodial father (CF), noncustodial father with no child support order (NCF-Only), noncustodial father with a child support order but no arrears (NCF-Order), and noncustodial father with arrears (NCF-Arrears). When father is not in the sample due to attrition or other nonresponse, the mother's responses to these questions are used to categorize the father.

Custodial fathers spend 100% of the time with the focal child, whether they are married or cohabitating with the child's mother or are separated from the mother but have physical custody of the child. Noncustodial fathers spend less than 100% of the time with the child and are further categorized by the presence or absence of a legal child support order and arrears. These distinctions are important in the context of the research questions because the threat of child support enforcement mechanisms will be felt most by noncustodial fathers with arrears, particularly compared to custodial fathers, who do not experience the child support enforcement

system or the threat of child support enforcement. The questions in FFCWS ask specific custody and child support questions only concerning the focal child, which means that some fathers may experience the enforcement of child support orders concerning other, non-focal children, particularly children who have a different mother than the focal child and would have a separate child support order. FFCWS asks several questions that can be used to determine the number of biological children a father has, how many of those children are with the focal mother, and how many of those children do not live with the father. This exclusion would make the custodial fathers more like fathers with arrears regarding the effects on wages, and therefore would create a positive bias on β_1 *Enforcement* toward null results.

Although couple data are essential in alleviating bias due to attrition, relying on the mother's reports of the father's experiences with child support enforcement may also introduce bias. Factors that influence attrition may also affect the relationship between parents in a way that may make mothers overestimate arrears or underestimate child support payments provided by the noncustodial father. Additionally, mothers may have the perception that fathers are not paying child support due to welfare reimbursement policies that allow the state to keep child support payments when the mother receives Temporary Assistance for Needy Families (TANF) benefits. It is also possible that mothers' reports are more accurate than fathers' reports, in that fathers are incentivized to minimize their arrears (Miller & Mincy, 2012). Miller and Mincy (2012) conducted a validity check on mothers' reports in response to questions about the amount of arrears owed by the noncustodial father by regressing the arrears amount reported by mothers on city-level child support enforcement and found mothers' reports of arrears to be reliable.

With respect to these fathers with missing data, it is assumed that fathers who are less involved in their child's life are more likely to contribute to attrition. Given my hypotheses

regarding child support status and wages, these uncategorized fathers likely have lower wage rates, and their exclusion would bias the results toward null with respect to their hourly wage rate. For annual hours worked, however, the exclusion of these fathers might result in a positive bias, as it is expected that uncategorized fathers might work fewer hours. These fathers may not have child support orders due to difficulty locating them or other reasons correlated with their attrition, and in this case, their exclusion would make the NCF-Only more like NCF-Orders and NCF-Arrears.

Policy variable

The restricted FFCWS data allowed me to analyze city-level differences in the use of child support enforcement mechanisms against noncustodial fathers in arrears. I calculated the percentage of fathers in each city who have experienced a jail sanction for child support nonpayment, which I refer to as *enforcement*. This enforcement policy variable utilizes city-level data from the survey regarding parents' experiences with child support enforcement mechanisms, which allows me to examine how city-level variation in child support enforcement affects the employment and wages of noncustodial fathers.

Other Control Variables

Fathers' characteristics were used as control variables, including the father's prior incarceration, age, race, educational attainment, and nativity. Due to how the survey asked about incarceration, the father's prior incarceration variable is a constructed variable based on the parents' response to whether or not the father had ever been incarcerated at each wave. I explored more sensitive incarceration measures, including the length of incarceration, which was measured by asking parents about the beginning and ending years of their most recent incarceration. I chose not to utilize those measures because they were not sufficiently sensitive to

measure the amount of time a parent had been incarcerated over time, and there were inconsistencies in how the questions were asked across waves. The restricted data allow for city-level controls for the city where the focal child was born and that city's unemployment rate during the interview wave. Although additional city characteristics were analyzed, they were not included in the final analysis because they did not contribute to the model more than including the city the child was born in and that city's unemployment rate in a given wave. The data for the fourth wave of the FFCWS data (2007-2010) were collected, in part, during the years of the Great Recession (2007-2009), which caused dramatic disruptions to the labor market. Including the city-level unemployment rate and wave of the interview as control variables contributed to understanding the impact of child support enforcement outside of these labor market factors.

Although I found survey questions could not adequately measure child support-welfare cooperation, I used custodial mothers' reports of TANF use as a control variable to better understand the financial circumstances of noncustodial fathers of focal mothers who use TANF and to ensure the effect of enforcement in the analysis was not biased by the economic realities of custodial parents. While these measures of TANF use by custodial parents over time cannot measure the motivation behind establishing legal child support orders and the impact cooperation laws have on parents, these measures provide important context to understand these families better.

Addressing Attrition

Attrition is a common concern for longitudinal surveys, particularly for unmarried fathers examined in this study. FFCWS intentionally utilized data collection methods the researchers anticipated would increase participation among unmarried fathers, including conducting baseline interviews with fathers shortly after the child's birth. The researchers referred to this as the

“magic moment,” wherein fathers were more likely to be physically present in their child’s lives and more willing to be interviewed (Reichman et al., 2001). FFCWS has been more successful than previous surveys in collecting data among its target population. Throughout the five waves, 96% of married fathers and 87% of unmarried fathers at baseline were interviewed at least once, and in the most recent wave available, 58% of unmarried fathers were included in the sample (Geller et al., 2018).

Attrition by unmarried fathers is likely to introduce selection bias because fathers who are less involved in their children's lives may also be less likely to be included in the sample. However, the weighted sample accounts for design, baseline nonresponse, and attrition (Geller et al., 2018). This study compared unweighted and weighted regressions to assess whether the sample weights address attrition. Additionally, FFCWS utilizes proxy interviews, asking mothers and fathers about their background, behavior, and experiences and about the other parent's background, behavior, and experiences. This strategy allows the collection of information about parents even in waves where they are not in the sample (Geller et al., 2018). Obtaining information about unmarried fathers by proxy is especially useful for fathers who are not included in a wave or multiple waves due to incarceration.

Interaction Models

Utilizing an interaction model allows for conditional hypotheses (Brambor et al., 2006). Zatz and Stoll (2020) utilized an interaction model for incarceration and financial sanctions and found that “the positive effect of jail sanctioning upon annual hours worked declines with increased financial sanctioning” (p. 68). This interaction term allowed the researchers to test their theory about the competing effects of jail and financial sanctions. Financial sanctions are typically considered a tax on earnings, which disincentivizes workers and depresses the time they

spend working. Alternatively, incarceration sanctions would incentivize workers to accept lower wages and work more hours because they must make enough money to support themselves and comply with court orders (Zatz & Stoll, 2020).

In this study, an interaction model is used to examine the interaction between the father’s custodial and child support status and the enforcement policy variable, allowing for an analysis of how the dependent variables differ by the father’s custodial and child support status. This model allows me to test the theory that noncustodial fathers with arrears are most at risk of sanctions and, therefore, will be most affected by the policy treatment variable. A second interaction between city-level jail enforcement and financial sanctions facilitated an analysis of the unique contribution of incarceration and financial sanctions, which are expected to have slopes in opposite directions. Finally, a third interaction between race and father status shows whether the effects of enforcement vary by race.

Analytic Model and Estimation Methods

Model 1, which examines the effect of the threat of incarceration on fathers’ annual hours worked, is as follows:

$$\begin{aligned}
 \text{Annual Hours Worked} = & \beta_0 + \beta_1 \text{ Enforcement} + \beta_2 \text{ FinEnforcement} + \beta_3 \text{ NCF-Arrears} \\
 & + \beta_4 \text{ NCF-Orders} + \beta_5 \text{ NCF-Only} + \beta_6 \text{ IndivChar} + + \beta_7 \text{ City} \\
 & + \beta_8 \text{ Wave 4} + \beta_9 \text{ Wave 5} + \beta_{10} \text{ Unemployed} + \beta_{11} \text{ Enforcement} * \text{ NCF-Arrears} \\
 & \beta_{12} \text{ Enforcement} * \text{ NCF-Orders} + \beta_{13} \text{ Enforcement} * \text{ NCF-Only} \\
 & + \beta_{14} \text{ FinEnforcement} * \text{ NCF-Arrears} + \beta_{15} \text{ FinEnforcement} * \text{ NCF-Orders} \\
 & + \beta_{16} \text{ FinEnforcement} * \text{ NCF-Only} + \varepsilon
 \end{aligned}$$

Where *Annual Hours Worked* is the fathers' annual hours worked; *Enforcement* is the city-level child support enforcement rate; *FinEnforcement* is the city-level child support financial sanction rate; *FatherStatus* is a categorical variable that represents father's custody and child support status, where Custodial Fathers are the excluded category; *IndivChar* is individual-level characteristics that operate as controls, including father's age, race, educational attainment, nativity, prior incarceration, recent regular employment status, and mother's TANF use; *City* is a categorical variable which measures the city of birth of the focal child; *Wave* is a categorical variable for the survey wave, to control for wave effects; *Unemployed* is the city's unemployment rate in a given wave, and two interactions between three of the focal independent variables: *Enforcement* and *Father Status*, and *FinEnforcement* and *Father Status*. These interactions create six additional estimates: *Enforcement * NCF-Arrears*, *Enforcement * NCF-Orders*, *Enforcement * NCF-Only*, *FinEnforcement * NCF-Arrears*, *FinEnforcement * NCF-Orders*, *FinEnforcement * NCF-Only*. These interactions test whether the effect of enforcement or financial enforcement on *Annual Hours Worked* varies by *Father Status*.

Model 2, which examines the effect of the threat of incarceration on fathers' hourly wage rate, is as follows:

$$\begin{aligned}
 \text{Wage Rate} = & \beta_0 + \beta_1 \text{ Enforcement} + \beta_2 \text{ FinEnforcement} + \beta_3 \text{ NCF-Arrears} \\
 & + \beta_4 \text{ NCF-Orders} + \beta_5 \text{ NCF-Only} + \beta_6 \text{ IndivChar} + \beta_7 \text{ City} \\
 & + \beta_8 \text{ Wave 4} + \beta_9 \text{ Wave 5} + \beta_{10} \text{ Unemployed} + \beta_{11} \text{ Enforcement} * \text{ NCF-Arrears} \\
 & + \beta_{12} \text{ Enforcement} * \text{ NCF-Orders} + \beta_{13} \text{ Enforcement} * \text{ NCF-Only} \\
 & + \beta_{14} \text{ FinEnforcement} * \text{ NCF-Arrears} + \beta_{15} \text{ FinEnforcement} * \text{ NCF-Orders} \\
 & + \beta_{16} \text{ FinEnforcement} * \text{ NCF-Only} + \varepsilon
 \end{aligned}$$

Where *Wage Rate* is the hourly wage rate; *Enforcement* is the city-level child support enforcement; *FinEnforcement* is the city-level child support financial enforcement; *FatherStatus* is a categorical variable that represents father's custody and child support status, where Custodial Fathers are the excluded category; *IndivChar* is individual-level characteristics that operate as controls, including father's age, race, educational attainment, nativity, prior incarceration, if father has multiple jobs, and mother's TANF use; *City* is a categorical variable which measures the city of birth of the focal child; *Wave* is a categorical variable for the survey wave, to control for wave effects; *Unemployed* is the city's unemployment rate in a given wave, and two interactions between three of the focal independent variables: *Enforcement* and *Father Status*, and *FinEnforcement* and *Father Status*. These interactions create six additional estimates: *Enforcement * NCF-Arrears*, *Enforcement * NCF-Orders*, *Enforcement * NCF-Only*, *FinEnforcement * NCF-Arrears*, *FinEnforcement * NCF-Orders*, *FinEnforcement * NCF-Only*. These interactions test whether the effect of enforcement or fine enforcement on *Wage Rate* varies by *Father Status*.

The analysis utilizes Ordinary Least Squares (OLS) regression to estimate annual hours worked and the wage rate. The wage rate model excludes all noncustodial fathers who are not employed. The annual hours worked model includes unemployed fathers' reports of annual hours worked over the twelve months before their interview in that wave. Various tests were conducted, including testing several regressions using the log of each dependent variable and comparing weighted and unweighted regressions. The final analysis uses the level of both the wage rate and annual hours worked and utilizes the father's wave 2 city weights.

Chapter IV: Results

Describing Fathers

Appendix A shows descriptive statistics for the fathers in this study by Father Status using the final weighted dataset. On average, custodial fathers work more hours than fathers with arrears – 2,009 hours compared to 1,611 hours annually. Custodial fathers also have a higher wage rate, at \$18 per hour, compared to \$12 per hour for fathers with arrears. On most measures, as expected, fathers with child support orders (NCF-Orders) are more like custodial fathers than fathers with arrears (NCF-Arrears) and noncustodial fathers without child support orders (NCF-Only). These fathers have the means to pay their child support orders.

Fathers who had experienced a jail sanction for child support were not included in the sample to test a general deterrent effect rather than the direct effect of enforcement. However, these fathers are of interest to this study, so I describe them briefly. Table 1 shows descriptive statistics of the sample by whether the father had experienced a jail sanction.

In the weighted sample, 9.7% of fathers with arrears experienced a jail sanction. As expected, fathers categorized as NCF-Arrears comprised 72% of those who experienced a jail sanction. Fathers in other categories may have arrears related to their child support orders for non-focal children and, thus, also experienced sanctions. Fathers who experienced a jail sanction worked much fewer hours, on average, at 1,300 annual hours compared to 2,080 annual hours for fathers who had never experienced a jail sanction. Fifty-nine percent of fathers who had experienced a jail sanction were in a family with a mother who reported using TANF. Fathers with more education were less likely to experience a jail sanction, with 50% of fathers without a high school degree experiencing a jail sanction compared to 0% of fathers with a college degree. Finally, of fathers who had experienced a jail sanction, 86% of them were Black.

Table 1*Enforcement by Father Characteristics*

Variable	Enforcement (Jail for CS)		p-value²
	No N = 513,025¹	Yes N = 4,320¹	
Annual Hours Worked	2,080 (1,820, 2,340)	1,300 (560, 2,080)	<0.001
Wage Rate	14 (10, 22)	9 (7, 11)	<0.001
Father Status			<0.001
<i>CF</i>	385,623 (75%)	540 (13%)	
<i>NCF-Arrears</i>	32,059 (6.2%)	3,098 (72%)	
<i>NCF-Only</i>	46,656 (9.1%)	207 (4.8%)	
<i>NCF-Order</i>	48,687 (9.5%)	475 (11%)	
Father Race			<0.001
<i>White</i>	144,477 (28%)	372 (8.6%)	
<i>Black</i>	155,970 (30%)	3,711 (86%)	
<i>Hispanic</i>	185,973 (36%)	166 (3.8%)	
<i>Other Race</i>	26,295 (5.1%)	71 (1.6%)	
Father Age	35 (30, 40)	31 (29, 37)	0.047
Father Nativity			0.060
<i>U.S. Born</i>	346,317 (73%)	4,107 (100%)	
<i>Foreign Born</i>	129,892 (27%)	0 (0%)	
Father Education			0.014
<i>Less than high school</i>	116,025 (23%)	2,150 (50%)	
<i>High School graduate</i>	127,373 (25%)	1,449 (34%)	
<i>Some college</i>	148,681 (29%)	721 (17%)	
<i>College graduate</i>	117,993 (23%)	0 (0%)	
Father Ever Incarcerated	122,041 (24%)	4,320 (100%)	<0.001
Mother Ever TANF Use	124,520 (25%)	2,466 (59%)	<0.001

¹Median (Q1, Q3); n (%); Wave 2 Weights²Design-based KruskalWallis test; Pearson's X²: Rao & Scott adjustment**Findings**

The most consistent finding across model specifications is that individual factors have an outsized role in shaping labor market outcomes, with no statistically significant effects found consistently for child support enforcement on annual hours worked. My null hypothesis is not rejected. Further, I found that the employment effects of policies that threaten fathers with child support arrears with jail time were vulnerable to changes in model specification. None of the interactions I tested for annual hours worked were significant. Some evidence is provided,

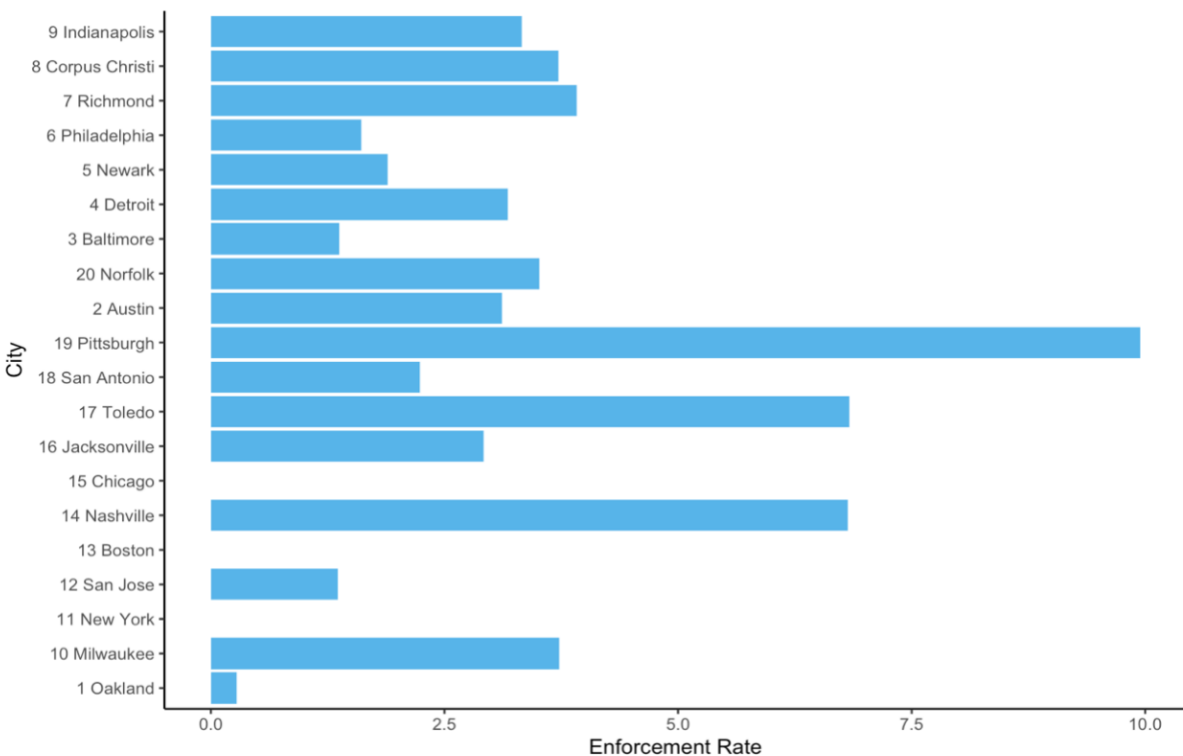
however, regarding the negative effect of enforcement on wages for fathers most vulnerable to the threat of enforcement. The primary findings of interest are discussed below.

Enforcement

Figure 2 below shows the enforcement rates calculated for each city in the sample. The data show variation in enforcement among cities, with a high of 9.95% enforcement in Pittsburgh and a low of 0.00% in Chicago, Boston, and New York. These policy environments provided the variation needed to test how enforcement mechanisms may influence the labor market characteristics of fathers.

Figure 2

Child Support Enforcement by City



The effect of enforcement on wages for fathers with arrears was consistently negative.

The final model in Table 2 shows that higher levels of enforcement decrease wages among

noncustodial fathers in arrears compared to custodial fathers. Fathers in arrears make, on average, \$0.80 less ($t = -4.01, p < 0.01$) per hour for every one-percent increase in enforcement compared to custodial fathers. Appendix B includes the full final wage rate regression (“Final Wages Model”) compared to several earlier regressions with fewer interactions. While analyzing how these effects differ by father’s race was of interest to this study, the interaction between enforcement and father’s race was not significant in any of the tested models.

Table 2

Wage Rate Model

Wage Rate Model	Beta	95% CI¹	p-value
enforcement * Father Status			
enforcement * NCF-Arrears	-0.80	-1.3, -0.34	0.004
enforcement * NCF-Only	0.20	-0.93, 1.3	0.7
enforcement * NCF-Order	-0.54	-1.1, 0.03	0.060

¹CI = Confidence Interval

The analysis found no relationship between enforcement and fathers’ annual hours worked. A father’s annual hours worked shows their employment and work effort over the last year. However, fathers who had not worked in the previous year were not included in this measure, which may have biased the results toward null. Although including these fathers in the analysis and imputing 0 annual hours for them was explored, the survey questions tested were insufficient to make these imputations (discussed further below on p. 43 on replication). The regression models tested for annual hours worked are presented in Appendix C. The final hours model removes the interactions, which were not found to be significant in any model.

Impact of Individual Factors on Wages

Among employed fathers, individual factors had a larger impact on the father’s hourly wage rate, including the father’s race, nativity, and educational attainment. In particular, Black

fathers made significantly less, on average, compared to white fathers. The final model shows that Black fathers made \$4.16 less ($t = -3.65$, $p < 0.01$) per hour compared to white fathers. There were no statistically significant effects for Hispanic fathers or fathers whose race was categorized as “other.” Foreign-born fathers made \$4.62 less ($t = -3.51$, $p < 0.01$) than fathers born in the United States. As expected, fathers with at least some college education made significantly more than fathers who had not graduated high school. Some college education earned fathers an additional \$3.57 per hour ($t = 3.57$, $p < 0.01$), on average, while fathers with college degrees made \$11.57 ($t = 9.20$, $p < 0.001$) per hour. Additionally, fathers with custodial mothers who received TANF benefits earned \$2.82 ($t = -2.72$, $p < 0.05$) less than fathers with custodial mothers reported never receiving TANF.

Impact of Individual Factors on Hours

The number of hours a father worked per year was also primarily impacted by the father’s characteristics. While the interactions between Enforcement and Father Status were not significant, the final hours model shows that fathers with child support arrears, on average, worked less than custodial fathers. Additionally, individual characteristics that strongly predict wage rates were stronger predictors of annual hours. Black fathers, previously incarcerated fathers, and fathers without recent regular employment worked significantly fewer hours per year. As expected, fathers with recent regular employment worked significantly more annual hours. Education, nativity, and TANF use by custodial mothers were not significant in the final hours model.

Limitations

Many of the study’s limitations are inherent to survey research, particularly longitudinal research, and understanding the impact of attrition on the sample over time. While the FFCWS’

weights were designed to address study attrition, differential attrition likely influences the study's final sample, particularly for fathers with the characteristics of interest in this study: fathers with child support arrears, previously incarcerated fathers, fathers in families who use TANF, and Black fathers. Additionally, survey respondents may want to exaggerate or diminish their responses to specific questions. Several of the survey questions of interest in this study are sensitive and stigmatized, including relationships between parents of minor children, the financial support fathers provide to their children, receipt of TANF benefits, the economic circumstances of families, and family incarceration histories.

While I worked to reduce the amount of measurement error using the data available, the survey's questions are not perfect measures of the concepts at issue for this study. For example, some questions were asked differently in different waves, and other key variables required imputation where data were missing. Skip patterns in survey administration can also introduce limitations by reducing the sample size. Where logical imputations were possible for individuals who were skipped due to survey administration, I created a variable with imputed values and compared them to those with only substantive responses. In conducting this study, I analyzed and imputed responses when they were logical and avoided imputations that would bias results toward rejecting the null hypothesis. Additionally, there was evidence that the measures that relied on imputation were representative, including wage rates.

Chapter V: Discussion

This study provides evidence that a commonly used child support enforcement mechanism may lead to diminished wages for some noncustodial fathers. Some of the fathers studied here, particularly Black fathers, fathers with incarceration histories, and fathers in families where the custodial mother uses TANF, are more likely to be vulnerable to the threat of enforcement but also have significantly lower wages outside of this threat. The study highlights important relationships between policy and practice and their impact on families and communities. Policies theoretically aimed at short-term increases in child support payments may ultimately undermine noncustodial fathers' ability to seek employment and wages that sufficiently support themselves and their children. If the choice is to "get to work or go to jail," as Zatz (2020) identified, individuals will accept jobs they would otherwise not consider. The system not only pressures parents to accept low-wage, low-quality jobs but also prevents them from pursuing education and training that might benefit themselves and their families.

Ultimately, this study supports previous research that shows the precarious financial situations of low-income families that are most vulnerable to the effects of punitive child support enforcement. In alignment with the saying, "You can't get blood from a turnip," this study shows that the economic circumstances of many families with child support debt are impacted by a host of intersecting and compounding realities. These parents are not unwilling to provide for their children – instead, they cannot provide the support the government deems appropriate. As parents exit periods of incarceration, for example, their incarceration history will have a negative impact on their employment and wages. This impact is compounded for Black parents with incarceration histories. These individual factors have a large impact on parents' labor market outcomes, which provides some evidence that punitive child support enforcement mechanisms

are insufficient to improve their families' economic circumstances. Instead, programs should focus on connecting indebted parents to resources that will improve their ability to support themselves and their families. In light of the continued increases in the cost of living, including for necessities like food and shelter, understanding the impact of these policies is critical.

Future Research

This study provides additional context by which the relationship between family structure, incarceration, and child support can be further examined. Although this study did not find significant effects of enforcement on hours worked, future studies should utilize different, more sensitive employment measures. Further research on the fathers who experience child support enforcement, particularly punitive sanctions like incarceration, is also warranted. Like Zatz and Stoll (2020), this study found no significant effects when analyzing interactions between enforcement and race. Given what we know about the differential influences of the criminal justice and child support systems for Black fathers, these relationships warrant further analysis. Additionally, with new programs for child support debtors being implemented across the United States every year, more thorough evaluations of these programs are needed.

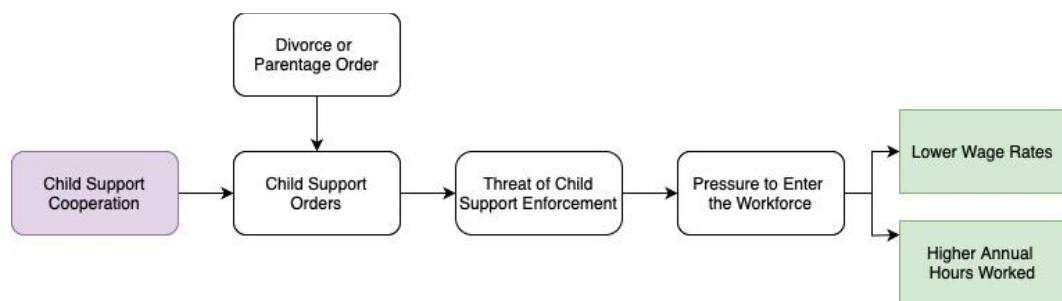
Finally, given the measures for welfare and child support in the FFCWS data, I could not directly test how welfare-child support cooperation policies influence the relationship between child support enforcement and labor market outcomes for noncustodial fathers. Future research should explore how state compliance with federal welfare and child support cooperation laws influences the relationship between the threat of child support enforcement and labor market outcomes. Researchers could also utilize state-level policies, such as child support pass-through laws and exceptions to child support-welfare cooperation, to examine their impact on fathers' labor market outcomes.

Figure 3 below describes the impact theory I developed regarding the relationship between child support cooperation and labor market outcomes. This model is reliant upon two main assumptions: first, that there is interstate variation in the establishment of child support orders among families who receive TANF, and second, that families that receive TANF benefits are likely to consist of a low-income custodial parent and a low-income noncustodial parent. If these assumptions are true, states that aggressively pursue child support orders against families who use TANF will have a different population of noncustodial fathers who may be more vulnerable to the labor market influence of threats of incarceration. This would lead, in theory, to a population of parents with child support orders who are unable to pay them. Some evidence of that is provided here, in that fathers in families where the custodial parent uses TANF had significantly lower wages.

These findings make sense, given that it is common for parents to have similar financial circumstances.

Figure 3

Child Support Cooperation and Labor Market Outcomes



On Replication

A significant challenge in replicating a published paper’s work is interpreting the authors’ description of their methodology. In attempting to replicate the work of Zatz and Stoll (2020), the different ways complex surveys can be interpreted and coded into relatively simple concepts

became very clear. Below, I discuss some of the challenges I faced in replicating the variables utilized in Zatz and Stoll (2020).

Father Status

Despite many attempts at revisiting the Father Status variable, I could never replicate the number of fathers assigned to NCF-Order (23.75% of the total sample of fathers) reported by Zatz and Stoll (2020). In reviewing the metadata, very few people responded affirmatively to the one question on the survey I found related to the presence of a legal order. I tested making the NCF-Order category cumulative so that fathers who reported a child support order in one wave were automatically assigned to NCF-Order unless they reported arrears in a subsequent wave, and fathers in NCF-Order were still below 20% of the total sample as fathers with orders. I chose not to use this strategy in the analysis because child support orders can be terminated or modified. I utilized mother and father responses at each wave to categorize fathers.

Annual Hours Worked

Zatz and Stoll (2020) describe creating the measure for annual hours worked by “taking the average hours per week the respondents report working in most recent formal employment and multiplying by the number (including zero) of weeks worked in formal employment over the past year.” In their results, Zatz and Stoll (2020) also report that less than 10% of their observations for annual hours were for fathers with 0 hours. I did not find any responses from fathers in my sample who reported zero weeks worked in formal employment over the past year. There was an earlier question on the survey, however, that asked parents if they had worked at a regular job the week before their interview, which is the best measure the survey provides of employment status. When creating the measure for annual hours worked, I considered whether to impute zeros for individuals who responded no to working at a regular job the week before their

interview. However, in the interest of better understanding the employment and work effort of parents in the study, I left the data as is for individuals who were unemployed but reported the average hours per week from their most recent employment. The measure of weeks worked is measured over the last 12 months, which provides a reasonably accurate measure of work effort, even for individuals who are currently unemployed but worked at a regular job at some time in the last 12 months.

Chapter VI: Conclusion

This study provides evidence that child support enforcement policies depress wages for noncustodial fathers with arrears who are most vulnerable to the threat. While there was no evidence in this analysis of a similar resulting increase in hours worked, this study provides important context by which these concepts can continue to be explored. The relationships at issue in this study are complex, and measures of them are frequently challenging to obtain. Looking forward, researchers should continue to explore how child support policies affect low-income families, particularly those affected by incarceration. Finally, as jurisdictions across the country roll out changes to child support policy and practices, from child support debt reduction programs to parental accountability courts, we should prioritize understanding how these changes impact parents in arrears and their families by ensuring adequate funding for data collection and research.

Individual factors greatly impact fathers' wages and employment, including the father's race, incarceration history, nativity, and educational attainment. Many fathers with child support debt have very low incomes and are likely also facing educational and other barriers to improving their circumstances. Given this economic reality for many families at risk of incarceration for child support nonpayment, we should consider the goal of punitive enforcement and work to shift how our communities perceive parents with child support debt.

Appendix A: Summary Statistics

Table 3

Summary Statistics

Characteristic	N	Father Status				
		Overall N = 5,269 ¹	CF N = 3,223 ¹	NCF- Arrears N = 657 ¹	NCF-Only N = 585 ¹	NCF-Order N = 804 ¹
Wage Rate	5,269	16 (9)	18 (10)	12 (7)	13 (7)	13 (7)
Annual Hours	5,269	1,913 (661)	2,009 (592)	1,611 (774)	1,717 (737)	1,918 (658)
Father Age	5,263	33 (7)	34 (7)	32 (7)	32 (7)	33 (8)
Father Nativity	4,969					
<i>U.S. Born</i>		4,132 (83%)	2,356 (77%)	596 (96%)	495 (91%)	685 (93%)
<i>Foreign Born</i>		837 (17%)	711 (23%)	23 (3.7%)	48 (8.8%)	55 (7.4%)
Father Race	5,264					
<i>White, Non-Hispanic</i>		1,207 (23%)	939 (29%)	87 (13%)	67 (11%)	114 (14%)
<i>Black, Non-Hispanic</i>		2,360 (45%)	1,069 (33%)	439 (67%)	381 (65%)	471 (59%)
<i>Hispanic</i>		1,484 (28%)	1,069 (33%)	113 (17%)	117 (20%)	185 (23%)
<i>Other</i>		213 (4.0%)	144 (4.5%)	18 (2.7%)	20 (3.4%)	31 (3.9%)
Father Education	5,242					
<i>Less than high school</i>		1,333 (25%)	779 (24%)	164 (25%)	176 (30%)	214 (27%)
<i>High school</i>		1,492 (28%)	765 (24%)	237 (36%)	213 (37%)	277 (35%)
<i>Some college</i>		1,708 (33%)	1,052 (33%)	230 (35%)	162 (28%)	264 (33%)
<i>College graduate</i>		709 (14%)	611 (19%)	24 (3.7%)	29 (5.0%)	45 (5.6%)
Father Ever Incarcerated	5,265	1,950 (37%)	863 (27%)	428 (65%)	289 (49%)	370 (46%)
Mother Ever TANF Use	5,028	1,747 (35%)	778 (25%)	364 (57%)	271 (50%)	334 (46%)
Survey Wave	5,269					
<i>Wave 3</i>		1,995 (38%)	1,364 (42%)	189 (29%)	213 (36%)	229 (28%)
<i>Wave 4</i>		1,832 (35%)	1,109 (34%)	234 (36%)	210 (36%)	279 (35%)
<i>Wave 5</i>		1,442 (27%)	750 (23%)	234 (36%)	162 (28%)	296 (37%)

¹Mean (SD); n (%); Unweighted

Appendix B: Wages Regressions

Table 4

Wages Regressions

	Final Model	Model Interact	Model Less Financial	Model Less	Model No Financial
(Intercept)	12.139** (3.147)	11.974* (3.205)	12.372* (3.169)	12.124** (3.151)	13.546*** (3.012)
Enforcement	-0.158 (0.161)	-0.022 (0.302)	-0.209 (0.236)	-0.152 (0.158)	-0.101 (0.137)
NCF-Arrears	-2.088 (1.605)	-2.184 (1.659)	-2.107 (1.670)	0.087 (1.036)	0.076 (1.037)
NCF-Only	-0.918 (1.208)	-0.916 (1.174)	-0.931 (1.178)	-1.950 (1.178)	-1.987 (1.175)
NCF-Order	1.561 (1.135)	1.530 (1.171)	1.567 (1.184)	1.070 (0.941)	1.041 (0.932)
Finenforcement	0.152 (0.122)	0.188 (0.127)	0.146 (0.121)	0.153 (0.114)	
Black	-4.158** (1.140)	-4.238+ (1.654)	-4.274* (1.658)	-4.127** (1.144)	-4.146** (1.152)
Hispanic	-1.805 (1.277)	-2.016 (1.607)	-2.066 (1.614)	-1.849 (1.276)	-1.872 (1.285)
Other Race	0.482 (1.963)	-0.111 (2.742)	-0.149 (2.746)	0.438 (1.987)	0.446 (1.988)
Age	0.138 (0.076)	0.138 (0.076)	0.138 (0.076)	0.136+ (0.075)	0.136+ (0.075)
High School	1.094 (0.731)	1.072 (0.725)	1.067 (0.723)	1.116 (0.730)	1.100 (0.733)
Some College	3.573** (1.000)	3.563* (0.989)	3.559* (0.990)	3.594** (1.015)	3.568** (1.016)
College Graduate	11.568*** (1.257)	11.538*** (1.250)	11.528*** (1.250)	11.565*** (1.252)	11.568*** (1.251)
Foreign Born	-4.623** (1.318)	-4.631* (1.327)	-4.629* (1.330)	-4.611** (1.316)	-4.625** (1.315)
Incarceration	-0.492 (0.761)	-0.517 (0.738)	-0.523 (0.739)	-0.507 (0.757)	-0.532 (0.762)
TANF Mother	-2.817* (1.035)	-2.834+ (1.034)	-2.826* (1.036)	-2.775* (1.046)	-2.755* (1.047)
Multiple Jobs	-1.248+ (0.552)	-1.233+ (0.567)	-1.232+ (0.568)	-1.330* (0.524)	-1.345* (0.524)
Survey Wave 4	1.663* (0.634)	1.838* (0.637)	1.698* (0.643)	1.711* (0.642)	1.084 (0.727)
Survey Wave 5	3.160* (1.249)	3.139+ (1.240)	3.116+ (1.251)	3.203* (1.252)	3.341* (1.221)

Appendix B: Wages Regressions (Continued)

Unemployment Rate	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Enforcement × NCF-Arrears	-0.805**	-0.808**	-0.826**	-0.447*	-0.428+
	(0.201)	(0.168)	(0.170)	(0.201)	(0.197)
Enforcement × NCF-Only	0.204	0.183	0.183	-0.056	-0.032
	(0.493)	(0.481)	(0.482)	(0.325)	(0.324)
Enforcement × NCF-Order	-0.540+	-0.568+	-0.559+	-0.627*	-0.621*
	(0.246)	(0.263)	(0.259)	(0.206)	(0.204)
Finenforcement × NCF-Arrears	0.428	0.443	0.438		
	(0.234)	(0.238)	(0.238)		
Finenforcement × NCF-Only	-0.255	-0.247	-0.245		
	(0.270)	(0.262)	(0.262)		
Finenforcement × NCF-Order	-0.104	-0.084	-0.092		
	(0.182)	(0.184)	(0.183)		
Finforcement × finenforcement		-0.016			
		(0.016)			
Enforcement × Black		0.021	0.038		
		(0.285)	(0.287)		
Enforcement × Hispanic		0.146	0.173		
		(0.305)	(0.307)		
Enforcement × Other Race		0.460	0.482		
		(0.793)	(0.795)		
Num.Obs.	4126	4126	4126	4126	4126
R2	0.460	0.460	0.460	0.459	0.458
R2 Adj.	-277.463	-555.400	-444.239	-201.904	-185.225
AIC	28874.9	28893.4	28892.2	28875.5	28877.4
BIC	219630.5	416351.9	337640.4	166717.9	155060.1
Log.Lik.	109623.77	207967.84	-168616.256	-83179.977	-
	0	7			77355.231
RMSE	7.66	7.67	7.67	7.66	7.65
Mother City Incl	Yes	Yes	Yes	Yes	Yes

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

Appendix C: Hours Worked Regressions

Table 5

Hours Worked Regressions

	Hours Log	Hours Weighted	Hours Indv+ Weighted	Hours Final Weighted
(Intercept)	7.526*** (0.017)	2052.206*** (38.241)	1556.731*** (171.478)	1552.599*** (171.525)
Enforcement	-0.005 (0.005)	5.554 (8.460)	-1.458 (8.649)	-0.661 (8.574)
NCF-Arrears	-0.378*** (0.043)	-408.061*** (108.217)	-176.150 (99.079)	-192.064* (65.076)
NCF-Only	-0.273*** (0.043)	-279.038* (134.634)	-30.535 (140.429)	-65.267 (105.778)
NCF-Order	-0.076+ (0.039)	-140.556 (94.461)	43.715 (62.565)	38.327 (46.452)
Enforcement × NCF-Arrears	0.006 (0.010)	-22.488 (24.682)	-7.914 (20.650)	
Enforcement × NCF-Only	0.007 (0.012)	-16.302 (30.582)	-25.270 (30.890)	
Enforcement × NCF-Order	-0.005 (0.009)	-8.361 (17.110)	-3.442 (12.207)	
Fine Enforcement			-1.448 (5.745)	-1.584 (5.728)
Black			-218.971** (57.057)	-209.038*** (39.812)
Hispanic			-60.150 (76.558)	-45.764 (61.547)
Other Race			-88.432 (126.704)	-122.092 (86.704)
Age			-0.578 (1.722)	-0.585 (1.723)
High School			71.859 (61.178)	72.205 (58.884)
Some College			98.716 (57.816)	100.045 (57.798)
College Graduate			93.549 (61.285)	95.742 (60.369)
Foreign Born			83.303 (48.881)	81.396 (49.378)
Incarceration			-165.146** (45.169)	-167.153** (43.997)

Appendix C: Hours Worked Regressions (Continued)

Father Employed			506.354***	510.243***
			(74.990)	(73.975)
Mother Used TANF			-8.239	-6.676
			(52.786)	(52.141)
Survey Wave 4			7.067	5.942
			(35.865)	(35.404)
Survey Wave 5			29.047	30.200
			(44.580)	(44.003)
Unemployment Rate			0.000	0.000
			(0.000)	(0.000)
Enforcement × Black			4.486	
			(11.807)	
Enforcement × Hispanic			11.050	
			(20.401)	
Enforcement × Other Race			-25.707	
			(31.354)	
Num.Obs.	5269	5269	4740	4740
R2	0.038	0.052	0.184	0.183
R2 Adj.	0.037	-109.927	-482.181	-275.543
AIC	88878.8	82169.2	72761.4	72730.0
BIC	88937.9	124050.7	102512.8	105104.5
Log.Lik.	-5310.482	-61986.797	-51061.728	-52382.956
RMSE	0.66	646.42	590.81	590.81
Mother City Incl	No	No	Yes	Yes

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

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Vita

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