

Providing After Prison: Nonresident Fathers' Formal and Informal Contributions to Children



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Incarceration among young, minority, economically disadvantaged men is pervasive in the United States and can impair their employment prospects. Because many of these men are fathers, incarceration also has serious implications for their ability to support their children. This article investigates the associations between incarceration and nonresident fathers' cash and in-kind contributions to their children's household economy. It then examines whether policies intended to protect employment opportunities mitigate the potential costs of incarceration for nonresident fathers' economic support of their children. Using longitudinal data from the Fragile Families and Child Wellbeing Study and new state policy data, we find that paternal incarceration reduces formal and informal support and that some policies offset the incarceration penalty, but clear differences by fathers' race emerge.

Keywords: nonresident fathers, public policy, child support, informal support, incarceration

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Criminal justice contact among young, minority, economically disadvantaged men is pervasive in the United States and has enduring collateral consequences. A criminal record, even for low-level offenses, has lasting repercussions for the economic opportunities available to these men (Pager 2003; Uggen et al. 2014; Western 2001). Because many men who have been incarcerated are fathers (Glaze and Maruschak 2010), criminal justice contact also has serious consequences for their ability to contribute to their children's household economy by hindering accumulation of economic, human, and social capital. Policies that make it more difficult for employers to screen out individuals with criminal records may mitigate these problems and make it easier for former offenders to access stable employment which, in turn, is associated with greater financial support of children and desistance from crime (Apel and Horney 2017; Denver, Siwach, and Buschway 2017). It is less clear, however, whether these policies operate as expected for fathers with histories of incarceration.

Building on a growing body of work that investigates how criminal justice contact influences father involvement (Turney and Wildeman 2013; Waller and Swisher 2006; Geller, Garfinkel, and Western 2011), this study begins by examining the association between having an incarceration history and fathers' cash and in-kind contributions to their children's household economy. We focus specifically on contributions from fathers who live apart from their biological children because nonresidence is the most prevalent living arrangement among fathers who have had contact with the criminal justice system (Glaze and Maruschak 2010). We extend previous research by examining a wider array of economic contributions that nonresident fathers may provide in addition to formal child support, such as informal cash and in-kind support. We also extend research that has focused on economic support provided in early childhood by using longitudinal data to observe the contributions of nonresident fathers from the time of the child's birth through age fifteen. By linking longitudinal survey data from the Fragile Families and Child Wellbeing Study to a new database of state policies, this

study is also uniquely able to examine whether policies intended to protect employment opportunities for individuals with criminal records can mitigate the potential harmful consequences of incarceration for nonresident fathers' provision of economic resources to their children.

INCARCERATION AND FATHERS' CONTRIBUTIONS TO CHILDREN

In 2007, more than 2.7 million children in the United States had a parent in jail or prison (Pew Charitable Trusts 2010), an experience that has lasting implications for the resources available to these children and their households. Children of incarcerated fathers are more likely to face economic hardship and require help from government assistance programs (DeFina and Hannon 2010; Sugie 2012; Sykes and Pettit 2015; Schwartz-Soicher, Geller, and Garfinkel 2011). These disadvantages may reflect fathers' diminished ability to contribute to their children's households. The collateral consequences of incarceration fall most heavily on black families, given that black men are eight times more likely to be incarcerated than white men, and black children are at least four times more likely to experience a father's incarceration than white children (Pew Charitable Trusts 2010; Wildeman 2009; Western and Wildeman 2009).

Qualitative research suggests that economically disadvantaged fathers often prioritize their emotional relationships and time with children over their performance as breadwinners (Edin and Nelson 2013; Hamer 2001; Roy 2004; Waller 2002, 2009). Ethnographic studies of low-income African American families have described the importance of kin-based networks in which family members exchange goods and services to meet immediate family needs. Nonresident fathers and their relatives can play key roles by contributing resources like childcare (Edin and Lein 1997; Roy and Burton 2007; Stack 1975). Although many economically disadvantaged fathers, including those with histories of incarceration, are highly involved in their children's lives (Waller 2009), evidence suggests that paternal incarceration diminishes involvement and contact with children even after release (Geller 2013; Swisher

and Waller 2008; Turney and Wildeman 2013). Some studies find much of this reduction in contact is driven by decreases in the probability that fathers reside with their children (Geller 2013; Turney and Wildeman 2013), though incarceration also reduces father-child contact among nonresident fathers both during and after incarceration (Geller 2013; Swisher and Waller 2008; Western and Smith 2018).

It is less clear, however, whether there are similar reductions in fathers' financial contributions to children post-incarceration. Fathers' provision of formal child support (as mandated by legal child support orders) is the most commonly measured type of financial contribution to their child's household in large-scale surveys and is typically the focus of policies designed to increase nonresident fathers' economic support of their children. However, nonresident fathers may also provide monetary support informally to their children, either instead of or in concert with formal child support payments. Fathers may also provide in-kind (noncash) contributions for their children, such as clothes, diapers, entertainment items, food, medicine, or school supplies. Previous research indicates that in-kind and informal support is viewed differently than formal child support in economically disadvantaged families because of its greater symbolic and emotional significance (Hamer 2001; Kane, Nelson, and Edin 2015; Pate 2002; Roy and Dyson 2010; Waller 2002; Waller and Plotnick 2001). It also contributes more to fathers' and children's feelings of closeness in their relationship than formal child support does (Waller, Dwyer Emory, and Paul 2018). Recent studies also point to the benefits of in-kind support to children over and above formal child support (Nepomnyaschy et al. 2014).

Economic theory suggests that fathers' time and money may be complementary or reciprocal: when fathers contribute, they may also visit in order to monitor that their contributions are being appropriately spent (Weiss and Willis 1985). Fathers may also contribute more support because they are more aware of children's needs and have more opportunities to contribute when they visit (Nepomnyaschy 2007). On the other hand, fathers' time with children may substitute for financial contributions to chil-

dren, consistent with ideas about family adaptation and familism documented in some ethnographic studies of African American and Latino communities (Coltrane, Parke, and Adams 2004; Jarrett and Burton 1999).

Empirical studies find that fathers with a history of incarceration are less likely to provide any economic support to young children (Washington, Juan, and Haskins 2018; Geller, Garfinkel, and Western 2011), and those who do contribute provide a lesser amount (Geller, Garfinkel, and Western 2011). Similarly, fathers with a history of incarceration are more likely to have accrued child support arrears—debt associated with nonpayment or underpayment of formal child support (Turner and Waller 2017; McLeod and Gottlieb 2018; Katzenstein and Waller 2015). A portion of this debt may be owed to the state to reimburse welfare costs, and may include Medicaid birthing costs, interest, and other fines and fees. Fathers' accumulation of arrears leads to less engagement in the formal labor force (Miller and Mincy 2012; Cancian, Heinrich, and Chung 2013), further reducing their formal child support contributions (Cancian, Heinrich, and Chung 2013). Fathers who accumulate arrears can be incarcerated for child support noncompliance and continue to accrue arrears during incarceration (Cozzolino 2018; Zatz and Stoll 2020), suggesting the potential for long-term and compounding negative impacts of incarceration for formal child support and arrears.

Among previously incarcerated fathers, informal cash and in-kind contributions are also apt to be lower because fathers maintain fewer informal support arrangements post-incarceration (Swisher and Waller 2008), and informal support is closely linked to the time they spend with their children (Nepomnyaschy 2007; Turner and Waller 2017; Waller, Dwyer Emory, and Paul 2018). Indeed, one study finds that formerly incarcerated fathers provided goods such as clothes, school supplies, and other material items for their children less frequently than their never-incarcerated counterparts (Washington, Juan, and Haskins 2018). Further, research suggests that formal and informal cash child support are substitutes in that fathers' informal contributions can stop if and when mothers obtain a child support order

and formal support begins to be withheld from their wages (Nepomnyaschy and Garfinkel 2010; Sariscsany, Garfinkel, and Nepomnyaschy 2019).

Two mechanisms have been identified that may link fathers' history of incarceration with lower economic contributions to their children's households. First, as described earlier, previously incarcerated fathers are more likely to live apart from their children (Geller, Garfinkel, and Western 2011; Geller 2013). A large body of work documents lower household resources among children living apart from their fathers (McLanahan, Tach, and Schneider 2013; McLanahan 2004; Carlson and Berger 2013). A much higher prevalence of nonresidence among fathers with incarceration histories may therefore explain lower average financial contributions for this group (Geller, Garfinkel, and Western 2011). Consistent with these findings, the negative association between incarceration and fathers' provision of economic support is strongest for fathers who were previously resident with their children, though it is also observed for children with never-resident fathers (Washington, Juan, and Haskins 2018).

A second mechanism points to the lower earnings of fathers with a history of incarceration to explain their smaller financial contributions (Geller, Garfinkel, and Western 2011). This association reflects the economic vulnerability of these fathers and their precarious place in the formal economy, as demonstrated by many of the articles in this issue. Incarcerated fathers lose wages and employment opportunities and often accrue arrears during their incarceration (Western and Pettit 2005; McLeod and Gottlieb 2018). This economic impairment continues well after release. Formerly incarcerated men face wage penalties lasting up to seven years after release and are less able to find secure employment (Pettit and Lyons 2009; Western 2001). Men with criminal records face pervasive employment discrimination, which is particularly stark for black applicants, for whom race and a criminal record are compounding disadvantages (Pager 2007, 2003; Pager, Western, and Sugie 2009; Pettit and Lyons 2007). Regardless of race, men with criminal records receive callbacks for job interviews half as often as those without records, but because all black men are

called back at a lower rate, this disadvantage is compounded for black men with records (Pager 2003).

It is also possible that men with records may choose not to apply to better jobs because they anticipate discrimination. This process, referred to as identity threat or rejection sensitivity (Naft and Downey 2019), could also lead to worse employment outcomes and fewer resources for the children of men with criminal records. Such fathers may also have less access to, or even withdraw from, social networks that can provide instrumental assistance during the job search process (Lageson 2016b; Smith 2005). Because black men are more likely to experience incarceration than their white counterparts (Pew Charitable Trusts 2010; Western and Wildeman 2009), the economic impairment of a criminal record is particularly relevant to their ability to contribute to their children's households.

POLICY PROTECTIONS FOR FORMERLY INCARCERATED FATHERS

States have adopted multiple strategies to address the disadvantages of formerly incarcerated individuals in the labor market. The most direct approach has been to regulate employer behavior during the hiring process, which can take two forms: regulating the use of records as a basis for hiring decisions or explicitly banning questions about criminal records on applications as in the more recent ban-the-box policies. These regulations, which govern the legal use of records by public and public contract employers, private employers, or licensing agencies (Doleac and Hasen 2016; Legal Action Center 2004), encourage employers to consider individuals with records on a case-by-case basis. Qualitative studies of hiring managers suggest that such personal consideration may increase the likelihood of their employment (Lageson, Vuolo, and Uggen 2015; Pager, Western, and Sugie 2009).

Policies that rely on employers to follow laws regulating the use of records during hiring have a longer history and are more widespread than the more recent ban-the-box policies that explicitly prohibit employers from asking about records (Legal Action Center 2004, 2009; D'Alessio, Stolzenberg, and Flexon 2015). Regu-

lations that rely on employer compliance, however, may be vulnerable to limited enforcement and familiarity among employers and applicants alike. For example, Wisconsin has some of the oldest and most comprehensive state policies incorporating criminal records into employment discrimination laws.¹ Nevertheless, studies conducted within the state have documented record-based hiring discrimination well after the passage of these laws (Pager 2003; Hlavka, Wheelock, and Cossyleon 2015), suggesting that laws may be unknown or disregarded. This is not entirely unexpected, given that enforcing employment discrimination laws may require expensive legal action (Jacobs 2015).

More recent ban-the-box-policies have received a great deal of attention from policy advocates and the popular press (Avery 2019; Rodriguez 2017). A few studies examine the consequences of these policies, providing insight into the mechanisms that may be operating in our analysis. In particular, some research suggests such policies may reduce stereotype avoidance by encouraging job seekers to apply for better-paid and more stable jobs. Indeed, evaluations of local ban-the-box policies in Washington, D.C., and Durham, North Carolina, attribute greater rates of hiring to increases in applications from individuals with records (Atkinson and Lockwood 2014; Berracasa et al. 2016). Despite widespread support for these policies, evidence for their efficacy in improving economic opportunity is mixed. In fact, recent evaluations of ban-the-box policies using more rigorous study designs indicate these policies may fail to improve the employment prospects of black men due to increased racial discrimination (Doleac and Hasen 2016; Vuolo, Lageson, and Uggen 2017; Agan and Starr 2018). One theory advanced to explain this phenomenon is statistical discrimination, the idea that employers may be using race as a stand-in for criminal records to avoid hiring men they believe are more likely to have a record (Doleac and Hasen 2016; Vuolo, Lag-

eson, and Uggen 2017). Although some employers may do so consciously, others may default to implicit stereotypes of black men's criminality, perceiving these applicants less favorably when evaluating their suitability as employees (Agan and Starr 2018). Consistent with these studies, recent work also links policies regulating the legal use of records to lower employment among black fathers (Dwyer Emory 2019).

A second set of policies limits the degree to which information on criminal records is available to employers rather than regulating the ability to use that information. If criminal records are easily available to employers, state laws prohibiting employers from using them may not be enough to protect applicants from discrimination or encourage applicants with records to apply (Hlavka, Wheelock, and Cossyleon 2015; Spaulding et al. 2015; Jacobs 2015). Policies targeting the accessibility of criminal records are thus also potentially important tools for protecting the employment opportunities of individuals with histories of incarceration. State-level variation is substantial in the degree to which official criminal records are readily accessible (Legal Action Center 2004). In states that do not make records easily available, individuals with criminal records may also be less hesitant about applying for positions (Naft and Downey 2019), more engaged with informal networks critical to job-finding (Smith 2005; Lageson 2016b), or given crucial individualized employer assessments (Lageson, Vuolo, and Uggen 2015). Indeed, one study links restricted access to criminal records to greater probability of hiring formerly incarcerated individuals, though potentially to the detriment of individuals without records (Finlay 2008). These policies may also be susceptible to the same racial discrimination seen in studies of ban-the-box and employment policies, given that they also limit employer access to information about records (Doleac and Hasen 2016; Vuolo, Lageson, and Uggen 2017; Agan and Starr 2018).

1. Wisconsin prohibits blanket bans against hiring individuals with criminal records and considering arrests that never led to conviction, and the law clearly defines such uses of records as a violation of state employment discrimination laws outside a small list of excepted professions (Legal Action Center 2004). These policies have been in place since at least 1990.

POLICY PROTECTIONS AND FATHERS' ECONOMIC CONTRIBUTIONS

Considering their implications for fathers' economic opportunities, policies that attempt to mitigate the negative impacts of a criminal justice record on labor market experiences are also likely to have implications for nonresident fathers' contributions to children. The direction of these associations may differ by the type of contribution, however. Fathers involved in the criminal justice system may be incentivized to find formal employment in response to pressure from child support enforcement (Zatz and Stoll 2020) and probation requirements (Seim and Harding 2020). Unlike voluntary forms of support, formal child support is collected primarily through automatic withholding of wages earned in formal employment and thus mechanically related to fathers' employment and earnings (ACF 2016). Thus policies that improve access to stable employment in the formal sector should unambiguously increase fathers' formal child support payments and slow the accrual of arrears, though perhaps not entirely mitigate the cost of a criminal record, given the other structural barriers fathers face to finding high-quality employment (Warner, Kaiser, and Houle 2020).

The implications of these policies are more ambiguous for fathers' provision of informal and in-kind support because these types of support are less directly related to their employment opportunities. Research generally confirms that formal child support and informal cash support are substitutes, and that in-kind support is often provided alongside formal support (Sariscsany, Garfinkel, and Nepomnyaschy 2019; Nepomnyaschy and Garfinkel 2010). Therefore, if policies improve fathers' ability to pay formal support, they may have an inverse association with provision of informal or voluntary cash support and a complementary association with in-kind support. Formerly incarcerated men whose access to the formal labor market is restricted may still be able to work informally, in either off-the-books or underground employment (Sykes and Geller 2017). To the extent that policies restrict formal economic opportunities, fathers may either pay little support of any kind or substitute informal and in-kind contributions to their children's

household if unable to meet formal support obligations paid through withholdings. These alternative employment strategies, however, may increase illegal activity and the risk for reincarceration (Apel and Horney 2017; Denver, Siwach, and Buschway 2017; Uggen 2000), which would reduce fathers' ability to make either formal or informal contributions in the long term. As is true of formal support, however, these relationships with incarceration have largely not been the focus of research.

PRESENT STUDY

This study is the first to consider both the extent of the incarceration penalty for nonresident fathers' provision of multiple types of support and the degree to which protective policies moderate the association between fathers' incarceration histories and their contributions to children. Taking advantage of rich longitudinal survey data from the Fragile Families and Child Wellbeing Study, we examine associations between incarceration and nonresident fathers' contributions to their children's household economy from early childhood (age one) until adolescence (age fifteen). We examine multiple forms of economic support, including nonresident fathers' provision of formal child support, accrual of arrears, informal cash support, and in-kind (noncash) contributions. Although arrears are not direct measures of fathers' contributions, they are of great concern to policymakers because they are disproportionately owed by low-income fathers and are negatively associated with employment, child support payments, and relationships with coparents and children (Cancian, Heinrich, and Chung 2013; Sorensen, Sousa, and Schaner 2007; Miller and Mincy 2012; Turner and Waller 2017).

In addition, using a new dataset of state-by-year policies relating to fathers' reentry into the labor force following criminal justice involvement, we explore whether state policies designed to protect the employment opportunities of individuals with histories of incarceration moderate the association between paternal incarceration and economically disadvantaged men's contributions to their children's household economy. On the basis of research showing potentially harmful effects of such policies

for black men's employment, we also expect that black fathers may benefit less from these policies and may even face additional racial discrimination in states with ostensibly protective policy landscapes.

METHODS

The data for this study come from the Fragile Families and Child Wellbeing Study (FF). The FF interviewed mothers and fathers of approximately five thousand children born in twenty large cities in fifteen states between 1998 and 2000 (baseline) and conducted follow-up interviews when children were one, three, five, nine, and fifteen years old.² Because parents with nonmarital births were oversampled (a 3:1 ratio), these data are ideal for the study of economically disadvantaged nonresident fathers (Reichman et al. 2001). The FF provides extensive longitudinal data on nonresident fathers' contributions of material goods to their children, parent and child characteristics, and family processes that allow us to estimate the association between incarceration and fathers' contributions over and above other predictors of father involvement. Crucially, both father residence and history of incarceration are measured at each follow-up wave, allowing us to identify the population of interest for the present study.

We merge the longitudinal FF survey data (covering the years from 1998 through 2015) with a state-level policy database we collected for this study through an extensive review of state laws and amendment history. These data document employment protection policies for those with histories of criminal justice involvement across these years. Despite the many other areas in which policies could support or impede formerly incarcerated fathers' access to the formal economy, we focus on those relevant for employment, given its salience for fathers' provision of support (Geller, Garfinkel, and Western 2011). Building on the work of the Legal Action Center's Barriers to Reentry Project (2004, 2009), we collected data on eight state policies related to the employment of individu-

als with criminal records (all U.S. states) and ease of access to those records (fifteen states in the FF data) for the years from 1998 through 2014. We describe these policies in detail in the following section. Merging these sources of data enables us to identify the legal employment protections fathers may have received given their state of residence and incarceration history at the time of each follow-up interview. Data are merged using the state in which the father resides because the policies and employment context of these states are most relevant for fathers' ability to provide support for children. Fathers' state is the same as that in which the mother and child reside for the vast majority of families where both parents' states are available, and results are thus nearly identical when data are merged on mothers' state of residence.

Sample

We pool data from five follow-up waves of the FF study based on mother and father core surveys (years one, three, five, and nine) and the primary caregiver survey (year fifteen). Our analytic sample is restricted to observations for which we have valid information on the key dependent (mother-reported formal support, informal support, in-kind support, or arrears) and key independent (combined mother-father reports of paternal incarceration) variables and policies of interest at a given wave ($N = 7,888$).³ As our outcome of interest is nonresident fathers' economic contributions to the household, we exclude observations in which the mother did not live with the focal child at least half the time or reported that the focal child's biological father was no longer alive ($N = 759$). To ensure that fathers were capable of participation in the formal economy, we further exclude observations in which fathers are incarcerated at the time of the survey ($N = 288$). Finally, given the importance of correctly matching fathers to their state of residence, and thus the policy regime of that state in the year of the interview, observations are excluded in two instances. One is if the father's state

2. At age fifteen, only the primary caregiver was interviewed. These respondents were overwhelmingly mothers.

3. Policy data were not available after 2014, so year fifteen interviews conducted in 2016 and 2017 were excluded.

could not be identified ($N = 1,753$).⁴ Another is if he did not live in a U.S. state ($N = 69$) at the time of the mother's interview.⁵

The final analytic sample is an unbalanced panel of 4,890 observations, incorporating 2,254 unique families observed one (834), two (632), three (445), four (257), or five (86) times within the panel. The sample varies between models because observations were included in the panel if they were nonmissing for at least one dependent variable. Data on state policies dealing with criminal records were available only for fathers living in the original fifteen FF states (approximately 95 percent of all cases). Thus sample sizes are slightly smaller for models using this policy variable. With this sample, we used multiple imputation with chained equations to impute missing values for control variables. Most variables were not missing information, and typically fewer than 10 percent of observations were missing, father-reported variables such as impulsivity, nativity, poverty, and employment (approximately 15 to 30 percent missing) excepted. We create twenty imputed datasets, which we use for all analyses.

Measures

Measures of father attributes and contributions are drawn from FF data, while policy data are constructed from our data collection based on variables identified by the Legal Action Center (2004).

Nonresident Fathers' Economic Contributions

This study examines four measures that help us understand nonresident fathers' contributions to children's household economy as reported by mothers at each follow-up wave of the study: formal child support, informal cash support, in-kind support, and child support arrears. At each wave of the FF, mothers who re-

port having a formal child support order are asked how much fathers are obligated to pay under these orders and how much of this amount they actually did pay in the past year. We calculate an annual amount of child support received based on these reports; all monetary values are adjusted for inflation to 2017 dollars. Formal support for mothers who do not have a child support order is coded 0.

Mothers are also asked at each wave about informal cash support that nonresident fathers provide either in addition to or instead of formal child support. We create a measure of informal cash provided in the previous year, given that this is the amount reported in the one-, nine-, and fifteen-year waves. At the three- and five-year waves, the amount is reported over the previous two years. We therefore divide the reported amount by two to create a comparable measure.

In-kind support is measured as the frequency with which the nonresident father buys items the child needs, as reported by the mother. When the child was one, three, five, and nine years old, mothers report how often the father provided age-appropriate items, such as toys, medicine, clothes, food, childcare items (such as diapers at age one), or camp-school tuition (at age nine). Mothers were asked about a list of five to nine items, varying by survey wave. After recoding, responses ranged from 0 (never) to 3 (often), and were averaged across the items to create an index at each survey wave (Cronbach's $\alpha = .91, .90, .90, \text{ and } .94$ respectively). At age fifteen, mothers are asked one question: "Fathers may provide all sorts of items that children need, such as food, clothes, school supplies, camp or school tuition, gifts or other personal items. How often does the father buy or pay for any of these items for the child?" We rescale the responses to be consis-

4. Father's state of residence was drawn from the father interview for 76 percent of the observations. For the remaining 24 percent, observations in which fathers were not interviewed, it was determined by mother reports of how far the father lived from the mother. Fathers who were reported to live fewer than thirty miles away were placed in the mothers' state of residence. Although the baseline FF data collection encompassed only fifteen states, over the five follow-up survey waves, fathers have moved and the geographic distribution includes forty-six states.

5. This restriction excludes fathers living in U.S. territories and Washington, D.C., because policy data and state-level control variables were not consistently available for jurisdictions.

tent with previous survey waves (0 = never, 2 = sometimes, and 3 = often). At some waves, this question is skipped if fathers had not seen the child in the past year; these fathers are coded as never providing in-kind support.

Finally, we consider the amount of child support arrears that fathers have accrued. Mothers with a child support order in place are asked at each wave whether the father has any arrears on that child support order owed to either her or the state and, if yes, the amount owed. We create a total amount of arrears at each survey wave, coding fathers as having no arrears if they have no debt or do not have a child support order. Because arrears may not be owed directly to the mother, mothers may be unaware of obligations to the state. Thus we consider the amounts recorded for this variable to be lower bounds of how much fathers actually owe.

Fathers' Incarceration

Fathers' incarceration history is the main predictor variable in these analyses. To address underreporting of incarceration, we follow previous studies using the FF in creating a combined dichotomous measure of fathers' incarceration history (see, for example, Geller et al. 2012; Wildeman, Turney, and Yi 2016). At each survey wave, fathers are considered to have a history of incarceration if either the mother or father report that the father ever spent time in jail or prison. This variable therefore measures whether the father has ever been incarcerated by the time of the survey, not necessarily new or recent incarceration experiences or other kinds of contact with the criminal justice system.

State Policy Indices

Drawing on the categorizations created by the Legal Action Center (2004) as well as on research on the barriers that formerly incarcerated men face on entering the formal economy, we create two policy indices: an employment policy index and a criminal records index. These capture the distinction between policies that regulate the use of records (employment

policy index), and the ease with which employers can access that information regardless of legality (records policy index). This distinction is particularly important given the challenges associated with enforcing employment laws (Jacobs 2015) because the records policies measure availability of official information as implemented by the state rather than rely on assumptions of employer behavior. To ensure that the policy is relevant for the fathers' economic activity and provision of support, state policies are measured in the year prior to the interview year. The component policies for each index are summarized in table A1.

The employment policy index includes six policies regulating employers' use of criminal records during the hiring process. This six-item index captures whether state law prohibits private employers, public employers, or licensing agencies from having blanket restrictions against hiring individuals with records, and whether these same three entities are prohibited from considering arrests that did not lead to convictions.⁶ The index is constructed as the proportion (0 = none to 1 = all) of these six employment protection policies enacted by a state in a given year. On this index, a score of 0 indicates that the father lives in a state with no restrictions on the legal use of criminal records during hiring (ostensibly least protective); a score of 1 indicates that all six protections are in place (most protective). On average, throughout the study period, states had implemented 30 percent (approximately two of six) of protective policies related to employment, and showed relatively little variation within states over time.

The records policy index captures whether the state maintains a searchable online database of all criminal records or only cases under current criminal justice supervision (probation, parole, corrections). A score of 0 (least protective) indicates that the state makes all criminal records available online, a score of 0.5 indicates that only those under current supervision can be identified, and a score of 1 (most protective) indicates these official records are

6. These policies do not include the more recent ban-the-box policies, which were primarily adopted at the state level in the late 2010s (Avery 2019) and are thus not measured in our policy data or relevant for most of the Fragile Families data time frame.

not easily accessible. On average, states had half of their protective policies related to criminal records access in place; seven states changed their policies over the study period (for state-level descriptive statistics, see table A2).

Control Variables

We include a rich set of controls, based on research on risks for both criminal justice involvement and participation in the formal economy (Sykes and Geller 2017; Washington, Juan, and Haskins 2018), that may confound the relationship between incarceration and fathers' contributions to their children's household. We are careful not to include variables that may be on the causal pathway between incarceration and economic support, such as fathers' work status or earnings, because we are interested in estimating the direct effect of this association. Results were robust, however, to including controls for other relevant but nonconfounding variables such as multipartner fertility and whether parents shared multiple biological children (findings available on request). We also include a number of geographic and state-level controls to account for factors that could confound associations between fathers' incarceration, state policies, and provision of support.

To measure fathers' criminogenic risk, we control for Year 1 measures of previous incarceration, substance use, and fathers' self-reported impulsivity. Fathers' impulsivity is a FF modification of Scott Dickman's (1990) dysfunctional impulsivity scale. Fathers report the extent to which they agree with six statements such as "I often don't think before I act" or "I often say/do things without considering consequences," creating a scale (Cronbach's $\alpha = .84$) ranging from 0 (least impulsive) to 3 (most impulsive). To account for variation in criminogenic risk by age (Farrington 1986), we also control for father age as a time-varying measure. We also include baseline controls for father's education level (less than high school, high school or GED, some college or more), employment, poverty level (deep poverty, poverty, near poverty, and nonpoor), nativity, and race-ethnicity to capture factors that contribute to both criminal justice involvement risk and fa-

thers' participation in the formal economy. Given the salience of racial perception by employers, we classify fathers as being black if they report being either non-Hispanic black or Hispanic black, excepting those who had ever taken the survey in Spanish, because these fathers may face an additional language barrier in the formal economy. Other race-ethnicity categories include non-Hispanic white, Hispanic of any other race, and another racial category. We also control for whether mothers report the same racial-ethnic background as fathers, parents' marital status at the time of the focal child's birth, and a time-varying measure of whether the father was ever coresident with his child. Finally, we control for an indicator of survey wave to adjust for wave-specific variation.

In each state-year, we include one-year lagged measures of the percentage of the state population in poverty (University of Kentucky Center for Poverty Research 2017), percent of the state population unemployed (BLS 2018), imprisonment rate per hundred thousand residents (Carson and Mulako-Wangota 2018), violent and property crime rates per hundred thousand residents (FBI 2018), state-level minimum wages (University of Kentucky Center for Poverty Research 2017), per capita child support expenditures (Mincy, Miller, and De la Cruz Toledo 2016), and census region. All dollar values are adjusted for inflation. To account for the possibility that fathers are responding to policy regimes or economic conditions by moving, we also include a control for whether fathers were living in a different state than the mother at the time of their child's birth. In supplemental analyses, however, we found no evidence that fathers with records move opportunistically to states with more favorable policies.

Analytic Strategy

Our analyses proceed in three stages using our unbalanced family-year panel. First, we estimate the relationship between incarceration and the four measures of fathers' economic contributions to their children's households using random-effects models. Next, we test whether state-level policies moderate the associations between incarceration and economic contributions. Based on the literature dis-

cussed earlier, we expect that the associations between incarceration and fathers' contributions and the degree to which policies moderate this association will differ by fathers' racial-ethnic background. Thus, as a final step, we also estimate models stratified by race, looking separately at fathers who are black (of any ethnicity) versus nonblack. All models are estimated with robust standard errors, which are equivalent to clustering on individuals in a panel model. Sensitivity tests are also conducted to test the robustness of our findings to alternative sample specifications. Findings (available on request) were robust to excluding fathers incarcerated for child support noncompliance and never-incarcerated fathers with histories of conviction or arrest. Because the 2008 recession occurs in the middle of our panel and may have hit the economically vulnerable particularly hard, we omit observations occurring after 2008 as a sensitivity check; results are consistent and thus not driven by the recession. Results are also consistent in multilevel models that nest data at the state level. Finally, to account for the possibility of underlying differences between states that are otherwise unobserved, we include state indicator variables to estimate associations only within states (see table A3). Results are mostly consistent in these state fixed-effects models.

RESULTS

Table 1 presents descriptive statistics for the individual and family-level variables in our analyses for the full sample and by nonresident fathers' incarceration history; it also indicates significant differences between fathers with and without prior incarceration. On average, nonresident fathers contributed approximately \$1,100 of formal and \$930 of informal cash child support per year to their children's households across the panel. They provided low levels (1 = rarely) of in-kind (noncash) support over the period and accrued approximately \$2,700 in arrears. Notably, more than half (55 percent) of the observations were contributed by fathers who had a history of incarceration. As expected, these fathers contributed far less formal and informal cash child support, contributed in-kind support less frequently, and had much higher arrears (nearly three times

higher) than fathers without incarceration histories.

The characteristics of fathers in this sample reflect both the FF oversample of children born to unmarried parents in large cities and the current study's focus on nonresident fathers. Thus fathers in the sample are overwhelmingly nonwhite and have both low levels of education and high baseline poverty levels. In the full sample, approximately 80 percent of fathers were working at the child's birth, 10 percent reported a drug or alcohol problem, and nearly 40 percent had been incarcerated before the focal child reached age one. In general, fathers with incarceration histories were more disadvantaged on all these indicators.

Incarceration and Fathers' Economic Contributions

Table 2 presents results from random-effects regression models of the associations of fathers' incarceration history with their contributions to children's households. These models include all previously discussed individual and state-level controls, other than the employment and records policy index measures, which are included in models shown in tables 3 through 5. The tables report linear coefficients and the absolute value of robust standard errors. Fathers who have been incarcerated provide less formal (\$427) and informal (\$402) cash child support and less frequent (0.31, or one-third of a standard deviation) in-kind support relative to fathers who have not had such an experience. Additionally, fathers who have been incarcerated have on average just over \$2,130 more child support debt (arrears) than those who have not. These associations are consistent with the descriptive results and remain robust to the inclusion of a rich set of individual- and state-level controls.

The associations between fathers' characteristics and their contributions differ across outcomes. Fathers who are older, white (relative to black), and those with some college or higher education (relative to no high school degree) provide more formal support. Fathers who were older ($p < .1$), ever resided with their children, were married at birth, and were nonpoor (relative to deep poverty) provided more informal support. Older fathers ($p < .1$) and those who

Table 1. Descriptive Statistics of Father Attributes

	Full Sample (N=4,890) Mean (SD) or %	Never Incarcerated (N=2,218) Mean (SD) or %	Ever Incarcerated (N=2,672) Mean (SD) or %	Sig Diff
Father contributions (time varying)				
Formal child support (\$)	1,104.44 (2,439.97)	1,405.47 (2,867.58)	856.08 (1,986.67)	***
Informal cash support (\$)	927.45 (2,415.81)	1,306.91 (3,012.10)	619.52 (1,732.21)	***
In-kind support (0-3)	1.07 (0.97)	1.26 (0.98)	0.91 (0.93)	***
Arrears (\$)	2,696.51 (7,907.30)	1,370.68 (5,269.30)	3,818.85 (9,445.87)	***
Father attributes (time varying)				
Age	32.86 (8.39)	33.22 (9.27)	32.56 (7.55)	**
Ever coresident with child (%)	58.26	58.61	57.97	
Living in different state than baseline (%)	5.36	5.00	5.65	
Father attributes (baseline)				
Race (%)				
White, non-Hispanic	12.33	13.39	11.45	*
Black	66.40	64.25	68.19	**
Hispanic	18.04	19.16	17.10	+
Other, non-Hispanic	3.23	3.20	3.26	
Race different from child's mother (%)	16.03	15.42	16.54	
Born in the United States (%)	91.72	88.19	94.66	***
Married at birth (%)	9.59	13.62	6.25	***
Education level at child's birth (%)				
Less than high school	31.62	24.84	37.25	***
High school or GED	43.66	43.00	44.22	
Some college or more	24.72	32.16	18.54	***
Baseline poverty level (%)				
Deep poverty (<.5x FPL)	14.00	10.92	16.55	***
Poverty (<1x FPL)	15.13	13.39	16.58	*
Near poor (<2x FPL)	24.63	22.65	26.27	*
Nonpoor (>2x FPL)	46.24	53.04	40.60	***
Employment at child's birth (%)	79.3	87.3	72.6	***
Drug-alcohol use at child's birth (%)	10.36	5.59	14.31	***
Incarcerated before year 1 (%)	37.39	0.00	68.42	***
Impulsivity one-year (range 0-3)	1.07 (1.11)	0.98 (0.90)	1.14 (1.11)	***

Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study.

Note: Bivariate regressions used to test significance of difference between fathers with and without incarceration histories, significance level of this difference indicated in the final column. SD = standard deviation. FPL = federal poverty level.

+ $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2. Random-Effects Models of Associations Between Incarceration and Fathers' Contributions to Children

	Formal Child Support		Informal Cash Support		In-Kind Support		Arrears	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
Paternal incarceration	-426.95***	(125.24)	-401.91***	(115.07)	-0.31***	(0.05)	2,130.24***	(493.91)
Time-varying father attributes								
Age	13.25*	(6.45)	11.27	(7.21)	0.00*	(0.00)	-29.14+	(16.36)
Ever coresident with child	-146.81+	(87.10)	478.87***	(85.60)	0.35***	(0.04)	-363.46	(296.81)
Moved states since baseline	161.88	(210.72)	57.78	(179.61)	-0.25***	(0.06)	-92.08	(636.46)
Baseline father attributes								
Father race-ethnicity								
Black	-680.53***	(172.27)	-20.13	(151.30)	0.09+	(0.05)	527.16	(373.53)
Hispanic	-245.98	(197.76)	19.51	(184.25)	-0.01	(0.07)	448.67	(477.26)
Other, non-Hispanic	-511.45+	(306.73)	265.85	(412.62)	0.20+	(0.12)	469.42	(1,050.61)
Race different from child's mother	18.39	(128.27)	-137.57	(132.10)	-0.11*	(0.05)	93.21	(336.49)
Born in the United States	183.11	(186.55)	-181.88	(218.58)	0.09	(0.07)	348.35	(565.46)
Married at birth	32.23	(189.66)	396.39+	(210.58)	-0.09	(0.06)	65.07	(515.14)
Education								
High school or GED	189.35*	(85.78)	166.68	(90.46)	-0.01	(0.04)	-459.57	(355.27)
Some college or more	482.48***	(121.09)	251.60*	(120.18)	0.05	(0.05)	-195.25	(463.31)
Household poverty level								
Poverty	-46.83	(137.10)	201.00	(134.04)	0.07	(0.07)	-469.77	(573.29)
Near poor	-18.05	(118.33)	222.24+	(118.78)	0.04	(0.06)	-493.70	(537.86)
Nonpoor	242.74*	(119.51)	417.24***	(122.21)	0.04	(0.06)	-406.24	(521.99)
Employed	190.56*	(93.58)	-109.31	(103.07)	-0.04	(0.05)	-10.14	(449.45)
Drug-alcohol use	-11.78	(115.61)	-20.90	(113.29)	-0.11*	(0.05)	53.23	(442.17)
Early incarceration	-41.69	(111.81)	-92.99	(100.89)	-0.01	(0.05)	-305.18	(564.41)
Impulsivity	1.61	(67.43)	1.27	(62.99)	-0.01	(0.03)	-151.15	(225.77)

State characteristics (lagged)

Poverty rate	-23.06	(25.84)	-5.82	(26.90)	-0.01	(0.01)	190.85*	(89.23)
Unemployment rate	44.22	(54.37)	19.83	(47.38)	-0.01	(0.02)	-38.05	(160.19)
Imprisonment rate	0.63	(0.59)	0.10	(0.61)	0.00	(0.00)	-1.95	(2.24)
Violent crime rate	-0.69	(0.44)	1.01*	(0.46)	-0.00	(0.00)	0.62	(1.40)
Property crime rate	0.03	(0.14)	-0.02	(0.14)	0.00	(0.00)	-0.59	(0.41)
State minimum wage	153.85**	(52.51)	-57.62	(61.11)	0.02	(0.02)	295.28*	(137.56)
Per capita child support expenditures	3.49	(6.48)	-5.11	(7.41)	-0.00	(0.00)	49.61*	(20.60)
Census region								
Midwest	-6.79	(153.87)	-266.05 ⁺	(154.91)	-0.06	(0.06)	1,732.57***	(492.57)
South	299.84	(198.13)	-416.50*	(178.95)	-0.09	(0.08)	1,871.01**	(570.85)
West	-261.69	(195.83)	-196.33	(204.92)	0.03	(0.08)	368.25	(716.94)
Observations	4,704		4,447		4,779		4,613	
Unique observations	2,233		2,158		2,233		2,218	

Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study.

Note: Figures are linear coefficients. Robust standard errors (SE) in parentheses. Models control for wave, father-year random effects.

* $p < .1$; ** $p < .05$; *** $p < .001$

were ever coresident, did not move, and were of the same race as their child's mother provided in-kind support more frequently. Notably, none of the individual-level characteristics considered here were associated with accrual of arrears over and above incarceration; however, fathers who lived in the Midwest or the South had higher arrears than those in the Northeast, as did those in states with higher poverty rates and states that spent more per capita on child support. Fathers who lived in the South also provided less informal support than those living in the Northeast.

Moderation Effects of Policies

Analyses in table 3 explore whether protective policies related to employment and records access for individuals with criminal justice involvement moderate the negative associations between incarceration and fathers' contributions to children's households. The first panel shows the unmoderated incarceration models from table 2 for comparison. The second examines interactions between incarceration and protective employment policies, and the third examines interactions between incarceration and records policies.

With respect to employment policies, we find no significant interactions between such policies and incarceration for the provision of formal, informal, or in-kind support, suggesting that these policies do not reduce the incarceration penalty for these outcomes. We do find a significant and positive interaction with incarceration for fathers' accrual of child support arrears, indicating that these types of policies may actually exacerbate the link between incarceration and greater accrual of arrears. Specifically, in states that have no protective employment policies in place, the incarceration penalty (that is, the difference between the arrears accrued by ever- and never-incarcerated fathers) is \$1,503, but the incarceration penalty in states with all six protective policies is \$1,824 greater.

The findings related to records policies in the third panel are mixed. In particular, we find that the hypothesis that protective policies reduce the penalty associated with incarceration is only supported for some types of contributions. In states that have the most limited ac-

cess to criminal records, the incarceration penalty is reduced by \$2,969 for arrears accrual and \$610 for formal support. The incarceration penalty for informal support, however, is \$438 larger in states that have more protective criminal record policies. At the same time, the incarceration penalties associated with in-kind support are not sensitive to the accessibility of records. Another important series of findings emerge from the third panel. For informal support, formal support, and arrears, the coefficients for the records policy index are also significant, and in what might appear to be unexpected directions. The inclusion of the interaction term between incarceration and the records policy index means that the coefficients for the policy index describe the expected difference in contributions and arrears for fathers with no history of incarceration. This result indicates that these policies have implications for fathers who do and do not have histories of incarceration, an unexpected finding we address in greater detail in the discussion. These findings remain robust in the fixed-effects model as well (table A3), though the policy coefficient does not reach statistical significance in the model of informal support due to large standard errors.

To facilitate interpretation, we also present the results from the bottom panel of table 3 graphically. Based on the interaction models, figure 1 shows the predicted values of formal support, informal support, and arrears by fathers' incarceration history and presence of protective access to records policies. Holding all controls constant, our models indicate that never-incarcerated fathers provide more informal support (\$1,437 versus \$943) but less formal support (\$1,051 versus \$1,551) and thus accrue more arrears (\$2,146 versus \$3,668) when living in more protective states. Fathers with a history of incarceration fare better with respect to arrears, and are predicted to owe less in more protective states (\$2,821 versus \$4,310). Despite the larger incarceration penalty, the higher level of informal support provided by fathers without incarceration histories living in the most protective states means that those with incarceration histories end up paying similar amounts (\$791 versus \$735) in the most and least protective states. Similarly, the amount of

Table 3. Interaction Effects of Incarceration with Policies on Contributions for All Fathers

	Formal Child Support	Informal Cash Support	In-Kind Support	Arrears
Incarceration main-effects models (table 2)				
Incarceration	-426.95*** (106.74)	-401.91*** (114.14)	-0.31*** (0.04)	2,130.24*** (372.85)
Observations	4,704	4,447	4,779	4,613
Unique observations	2,233	2,158	2,233	2,218
Employment policy index interactions				
Incarceration	-413.27** (151.75)	-473.33*** (156.97)	-0.29*** (0.06)	1,503.30*** (548.06)
Policy	-5.57 (255.46)	-288.64 (243.00)	0.13 (0.10)	8.88 (750.00)
Incarceration x policy	-38.64 (240.43)	209.38 (246.48)	-0.06 (0.09)	1,823.29* (888.90)
Observations	4,704	4,447	4,779	4,613
Unique individuals	2,233	2,158	2,233	2,218
Records policy index interactions				
Incarceration	-703.85*** (167.94)	-207.82* (123.67)	-0.32*** (0.06)	3,682.04*** (632.83)
Policy	-500.06** (168.99)	493.62** (183.87)	-0.01 (0.06)	1,481.84*** (420.30)
Incarceration x policy	610.04*** (179.54)	-437.70* (200.58)	-0.01 (0.07)	-2,968.79*** (591.09)
Observations	4,558	4,314	4,637	4,470
Unique individuals	2,177	2,102	2,177	2,160

Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study.

Note: Robust standard errors in parentheses. Models include controls for all variables from table 3.

* $p < .1$; ** $p < .05$; *** $p < .01$; **** $p < .001$

formal support paid by fathers with histories of incarceration is more consistent across states with different policies (\$957 versus \$847) than one might expect given the large incarceration penalty for formal support (-\$704). In short, the results indicate that protective records policies are associated with some disadvantages for never-incarcerated fathers and small gains for their ever-incarcerated counterparts.

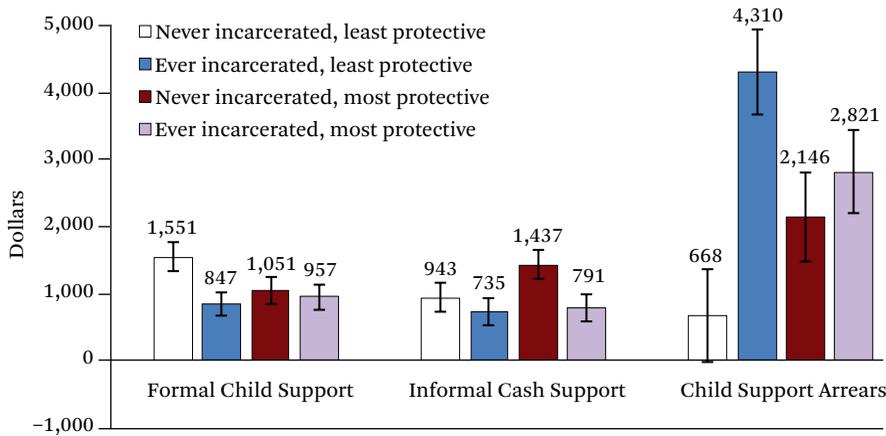
Differences by Race

It is difficult to account for these patterns without a closer examination of race, particularly given the salience of race as a compounding disadvantage for formerly incarcerated men seeking employment (Pager 2003, 2007). Al-

though our sample is majority black (66.4 percent), stratifying the sample by race demonstrates stark differences by race that are masked in the full model. Models estimated for black and nonblack fathers separately (tables 4 and 5), show that records policy associations are concentrated among black fathers.

Black fathers with a history of incarceration provide significantly less formal and informal support, less frequent in-kind support, and accrue more arrears than black fathers who have not been incarcerated (table 4, first panel). As in the full sample, protective employment policies only moderate the association between incarceration and child support arrears (table 4, second panel). This sole significant interaction coefficient indicates that protective em-

Figure 1. Predicted Levels of Father Contributions and Arrears by Incarceration History and Records Policy Regime



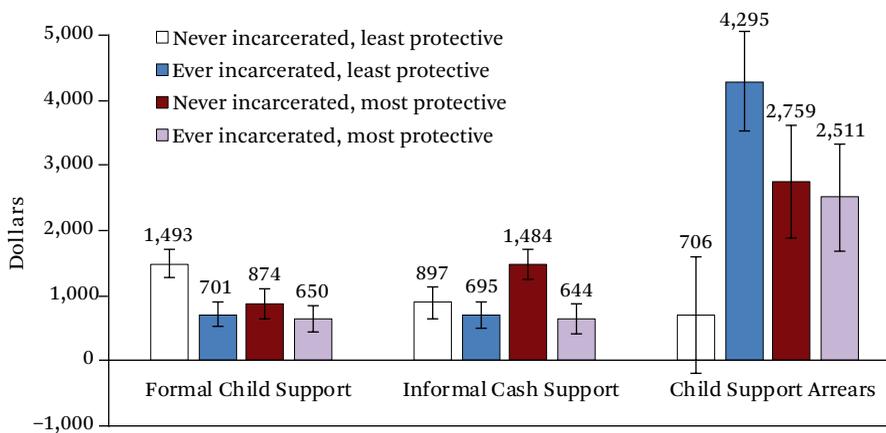
Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study and data on state policies collected by authors. Error bars indicate 95% confidence interval around the predicted levels.

ployment policies may exacerbate the negative association between incarceration and support for black fathers. Living in a state that offers only limited official access to criminal records (table 4, third panel) has significant implications for black fathers both with and without histories of incarceration. More restrictive access to criminal record databases is associated with reduced incarceration penalties for formal

child support and child support arrears, but a relatively larger incarceration penalty for informal child support. The associations presented in table 4 are robust to including state fixed effects (table A3).

As illustrated by the predicted values in figure 2, policies restricting access to criminal records databases are relevant for all black fathers living in more protective states, which

Figure 2. Predicted Levels of Black Father Contributions and Arrears by Incarceration History and Records Policy Regime



Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study and data on state policies collected by authors. Error bars indicate 95% confidence interval around the predicted levels.

Table 4. Interaction Effects of Incarceration with Policies on Contributions for Black Fathers

	Formal Child Support	Informal Cash Support	In-Kind Support	Arrears
Incarceration main-effects models				
Incarceration	-553.03*** (131.33)	-462.32*** (112.08)	-0.27*** (0.06)	1,662.39** (606.67)
Observations	3,116	2,962	3,178	3,031
Unique observations	1,414	1,373	1,421	1,398
Employment policy index interactions				
Incarceration	-532.48*** (155.17)	-446.75** (148.80)	-0.22** (0.07)	763.04 (742.32)
Policy	404.61 (275.03)	-100.82 (252.31)	0.18 (0.13)	635.36 (964.92)
Incarceration x policy	-66.21 (275.55)	-39.63 (252.40)	-0.15 (0.12)	2,488.69* (1,097.28)
Observations	3,116	2,962	3,178	3,031
Unique individuals	1,414	1,373	1,421	1,398
Records policy index interactions				
Incarceration	-791.18*** (187.53)	-201.92 (142.97)	-0.32*** (0.07)	3,588.96*** (797.38)
Policy	-618.86** (205.96)	586.94*** (215.53)	-0.12* (0.07)	2,052.79** (534.04)
Incarceration x policy	567.59** (216.73)	-638.25** (236.34)	0.06 (0.08)	-3,837.09*** (754.03)
Observations	3,011	2,866	3,077	2,929
Unique individuals	1,379	1,338	1,386	1,360

Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study and data on state policies collected by authors.

Note: Robust standard errors in parentheses. Models include controls for all variables from table 3 except paternal race-ethnicity.

* $p < .1$; ** $p < .05$; *** $p < .01$; **** $p < .001$

means that the reduced incarceration penalty may not translate into marked improvements for formerly imprisoned black fathers. Relative to fathers living in states that provide access to a criminal record database, never-incarcerated black fathers living in states that have more limited access to criminal records pay less formal child support (\$874 versus \$1,495), accrue greater child support arrears (\$2,759 versus \$706), and provide more informal child support (\$1,484 versus \$897). In this context, black fathers with a history of incarceration are ultimately predicted to provide statistically similar amounts of formal and informal support across

policy regimes, though accrue slightly less in arrears, despite significant differences in the incarceration penalty across states.

Notably, the interaction models for the non-black sample (table 5) yield quite different results. Unlike in the models for black fathers (table 4), policies do not moderate incarceration penalties, nor are they significantly associated with the contributions of never-incarcerated fathers.

DISCUSSION

In this study, we sought to understand the implications of incarceration for nonresident

Table 5. Interaction Effects of Incarceration with Policies on Contributions, Nonblack fathers

	Formal Child Support	Informal Cash Support	In-Kind Support	Arrears
Incarceration main-effects models				
Incarceration	-189.70 (262.72)	-350.87 (275.12)	-0.38*** (0.08)	3,082.20*** (878.61)
Observations	1,588	1,485	1,601	1,582
Unique observations	819	785	812	820
Employment policy index interactions				
Incarceration	-177.64 (311.47)	-575.21 (368.51)	-0.40*** (0.10)	2,775.27*** (807.93)
Policy	-775.41 (560.18)	-905.91 ⁺ (545.23)	0.02 (0.15)	-1,236.80 (1,009.80)
Incarceration x policy	-35.83 (445.91)	712.16 (533.57)	0.08 (0.15)	975.67 (1,500.76)
Observations	1,588	1,485	1,601	1,582
Unique individuals	819	785	812	820
Records policy index interactions				
Incarceration	-435.36 (357.97)	-387.59 (240.33)	-0.30** (0.10)	3,901.12*** (1,040.01)
Policy	31.41 (320.87)	0.60 (326.21)	0.14 (0.10)	760.84 (729.58)
Incarceration x policy	450.99 (333.72)	50.67 (344.13)	-0.12 (0.12)	-1,617.02 ⁺ (950.48)
Observations	1,547	1,448	1,560	1,541
Unique individuals	798	764	791	800

Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study and data on state policies collected by authors.

Note: Robust standard errors in parentheses. Models include controls for all variables from table 3.

⁺ $p < .1$; ^{*} $p < .05$; ^{**} $p < .01$; ^{***} $p < .001$

fathers' economic contributions to their children's households and the degree to which employment-related policies might mitigate such incarceration penalties. Consistent with prior work and our first hypothesis, we find strong evidence that incarceration reduces nonresident fathers' formal cash, informal cash, and in-kind (noncash) contributions, and increases their accrual of child support arrears. On a population level, this overall finding is particularly concerning for the intergenerational transmission of racial disparities given that black children and their fathers are most likely to experience paternal incarceration (Western and Wildeman 2009; Wildeman 2009).

Our results are more nuanced in regard to how some policies can mitigate some collateral consequences of incarceration, reflecting competing hypotheses about how these policies might operate. On the one hand, policies that limit employers' ability to access or use criminal records in the hiring process may reduce the costs of incarceration for such fathers' contributions to their children's households. On the other hand, these policies may create opportunities for racial discrimination against black men if some employers use racial heuristics to guess about applicants' propensity for incarceration or default to racial stereotypes about criminality. In these cases, the presence

of such policies could negatively affect black fathers, even if they have never been incarcerated.

Our results suggest that both of these things may be occurring simultaneously, depending on the type of policy and outcome examined. First, employment policies that regulate employers' use of criminal records during hiring are associated with a larger incarceration penalty for nonresident fathers' accrual of child support arrears (but not other outcomes). This is particularly evident for black fathers with incarceration histories, for whom living in states where the use of criminal records during the employment process is highly regulated is associated with the accrual of nearly \$2,500 more in arrears relative to those in states in which the use of records is left to employer discretion. To the extent that increased arrears are a signal of fathers' inability to find high-quality jobs in the formal economy, these findings could indicate that employers are either unintentionally or deliberately substituting racial discrimination for criminal record discrimination. This interpretation is consistent with one study looking at these same policies that finds such negative associations with employment among black, but not white, fathers (Dwyer Emory 2019). We do not find evidence that such policies moderate the associations between incarceration and provision of either formal or informal support, nor that these policies increase the arrears of black fathers without records. Together, these patterns suggest that these policies do not improve the economic opportunities available to fathers with incarceration histories. These null findings may also reflect limited awareness or enforcement of these kinds of policies, or successful strategies to offset the costs passed on to children.

Second, policies that limit employers' ability to access official records seem to open up opportunities for racial discrimination despite reducing some discrimination on the basis of criminal history. The incarceration penalty for all fathers' and, in particular, black fathers' provision of formal support and the accrual of arrears is lower in states that have more limited record access than in those that make official records accessible. At the same time, our re-

sults suggest that the benefit from these protective policies to formerly incarcerated fathers was offset by lower levels of formal support and greater accrual of arrears by never-incarcerated fathers living in the same states. Thus, though protective records policies appear to mitigate the incarceration penalty, the broader consequence of these policies is that fathers in protective states pay roughly the same formal support and accrue approximately the same arrears, independent of their incarceration. These findings are evident among our subsample of black fathers but are entirely absent for nonblack fathers. Unlike for the employment policies, the implementation of the access policies we consider is unambiguous because they measure what data the state makes available online rather than laws that must be enforced. Thus differences in findings between the two types of protective policies may reflect the differential implementation of employment and access policies rather than different underlying effects of these policies.

Several potential theories explain the different pattern of results we observe for black fathers, though due to data limitations this article cannot directly evaluate potential mechanisms like employment quality, unemployment, earnings, or indirect pathways through family relationships or contact. Previous scholars have linked ban-the-box policies (Doleac and Hasen 2016; Vuolo, Lageson, and Uggen 2017) and employment policies (Dwyer Emory 2019) that restrict the use of records to statistical discrimination, wherein employers use race as a proxy for criminal justice involvement when they are unable to access prospective employees' criminal records. Our findings are also consistent with a subtler form of racial bias, in which employers may not intentionally use race as a marker but instead default to racial stereotypes about criminality when evaluating black applicants in the absence of other information (Agan and Starr 2018). Because this discrimination plausibly affects access to high-quality jobs for black fathers, it is less likely that formal cash support is withheld from their paychecks and more likely that they accumulate arrears. Thus, never-incarcerated black fathers' provision of formal support and arrears accrual is

more similar to that of fathers with prior incarcerations and worse than those living in states that provide easier access to records.

Our hypotheses for how policies should influence fathers' provision of informal cash and in-kind support were ambiguous, given that research indicates that these voluntary types of provisions can be substitutes for the provision of formal support (Nepomnyaschy and Garfinkel 2010; Sariscsany, Garfinkel, and Nepomnyaschy 2019). Fathers working in the formal economy—whose formal child support is likely to be automatically withdrawn from their paycheck—may be less likely to also make informal cash contributions, though they still may provide in-kind support. Alternatively, fathers who cannot find jobs in the formal economy and thus contribute less formal support and accumulate greater arrears may be able to generate income in the informal or underground economy, allowing them to make informal cash contributions.

Our results indeed point to this type of substitution among black fathers. Although policies that protect access to records are associated with reductions in the incarceration penalty for the provision of formal child support, they are actually associated with increases in this penalty for the provision of informal support. And although they are associated with reduced formal support for black fathers with no incarceration history, they are also associated with increases in informal cash support contributions for this group. This substitution means that children receive comparable cash support from their fathers across policy regimes, but the implications for the fathers themselves are real. Notably, the accrual of arrears and potential substitution of informal or riskier illegal work for formal employment may put fathers at greater risk of future incarceration (Zatz and Stoll 2020). The provision of in-kind support is consistently lower for formerly incarcerated fathers, but neither the size of that difference nor the frequency of provision is sensitive to the policies tested in this study.

Our results should be considered in light of several potential limitations. First, although we include a strong set of state-level controls, we

cannot completely control for all possible state-level differences that could be associated with states' enactment of protective policies and fathers' provision of child support. To address this potential source of bias, we specify fixed-effects models in supplementary analyses that control for unobserved characteristics of states and produce comparable results. Second, we cannot observe how employers actually implement these policies. As mentioned, some evidence suggests that both individuals and employers may not be aware of the existence of these policies. Further, even if employers knowingly violate policies related to asking about criminal records, pursuing employment discrimination cases is costly, timely, and difficult; it is also highly unlikely that employers will be sanctioned (Jacobs 2015). Finally, even when official criminal justice records are not legally available, much information on criminal justice involvement is publicly available via internet searches (Lageson 2016a). These limitations prevent a strong causal interpretation of our findings, and thus we rely on theory and consistency with previous causal studies to interpret our results. We suggest that this is a fertile area for future research.

Second, given data limitations, we can only measure fathers' involvement with the criminal justice system using a variable capturing whether the father had ever been incarcerated by the time of the survey interview. This is a blunt measure of incarceration because it cannot identify important differences in the type of facility, length of incarceration, or conditions of confinement that themselves have important implications for fathers' ability to find work after release. Moreover, this measure also fails to capture the many fathers who have relevant criminal records but not histories of incarceration. As many as half of the fathers in the comparison group of never-incarcerated fathers may have such records (Dwyer Emory 2019). Practically, because policies should also affect these fathers' economic prospects, the comparisons between the two groups may be substantially attenuated, though findings were robust to excluding never-incarcerated fathers with known records from the analysis and using alternative definitions of incarceration. Fi-

nally, measurement error is likely in mothers' reports of both formal child support and arrears. Unlike other kinds of support, these forms of formal support are often automatically withheld or owed to the state rather than the mother (ACF 2016). Mothers, particularly those who have limited interactions with their child's father, may not know the extent to which the father has paid or owes child support. Our measure of arrears and analytic approach also cannot fully capture the bidirectional association between arrears and incarceration, though findings were robust to excluding fathers for whom nonpayment of child support was the primary reason for incarceration. Specifically, child support nonpayment and the resultant arrears can lead to incarceration (Zatz and Stoll 2020), but arrears often accrue during incarceration due to the difficulty of modifying child support orders as well as after release due to men's impaired economic prospects. Although likely measured with some error, these indicators of fathers' contributions to their children's households are the best available and are consistently measured across waves in the survey data.

Incarceration is pervasive in the United States, affecting millions of families every year and generating enduring collateral consequences. Research emphasizes that this experience makes it more likely that fathers live apart from their children (Geller 2013; Geller, Garfinkel, and Western 2011; Western and Smith 2018; Western, Lopoo, and McLanahan 2004), and our findings make it clear that this experience has serious implications for nonresident fathers' ability to provide for their children. Moreover, both incarceration and its negative consequences for fathers' contributions to their children's household economies are concentrated among black families. Policies aimed at addressing the economic opportunities available to these fathers, however, may have more complex implications for fathers' support than previously considered due to the inseparability of race- and criminal record-based discrimination in the United States. If we are to better understand the mechanisms through which these associations operate to determine how policies could better support fathers' ability to provide for their children, additional research is needed.

Table A1. Components of State Policy Indices

Index	State Policy
Employment policy	Private employers cannot ask about or consider arrests that did not lead to convictions when making hiring decisions (yes/limited/no)
	Public employers cannot ask about or consider arrests that did not lead to convictions when making hiring decisions (yes/limited/no)
	Licensing agencies cannot ask about or consider arrests that did not lead to convictions when making hiring decisions (yes/limited/no)
	Private employers cannot issue blanket bans against the hiring of individuals with criminal records (yes/limited/no)
	Public employers cannot issue blanket bans against the hiring of individuals with criminal records (yes/limited/no)
	Licensing agencies cannot issue blanket bans against the licensing of individuals with criminal records (yes/limited/no)
Criminal records policy	State maintains searchable criminal records database (yes/no)
	State maintains searchable supervision records database (yes/no)

Source: Authors' compilation.

Table A2. Attributes of States in Sample, Lagged by One Year (N=246 Unique State Years)

	Mean or %	SD	Minimum	Maximum
State policy scores				
Employment policies	0.33	0.33	0.00	1.00
Criminal records policies ^a	0.55	0.55	0.00	1.00
State attributes, lagged by one year				
Unemployment (%)	5.30	1.50	2.40	10.50
Minimum wage (\$)	7.40	0.98	3.35	9.39
Poverty (%)	12.38	3.10	4.50	21.70
Imprisonment rate (per 100,000 residents)	451.47	149.27	126.00	862.00
Violent crime rate (per 100,000 residents)	463.79	162.29	103.70	903.20
Property crime rate (per 100,000 residents)	3,371.91	846.25	1,718.20	5,849.80
Child support expenditures (per capita)	21.12	7.58	8.50	43.83
Census region (%)				
Northeast	19.9			
Midwest	25.2			
South	41.1			
West	13.8			

Source: Authors' calculations based on state policies data collected by authors for states in the analytic sample.

Note: The primary sample includes thirty-nine unique states due to fathers' residential mobility.

^aN=150 because access policies have been collected for only a subset of states, including the fifteen original Fragile Families states.

Table A3. Interaction Effects of Incarceration with Policies on Contributions for All Fathers, State Fixed Effects

	All Fathers				Black Fathers			
	Formal Child Support	Informal Cash Support	In-Kind Support	Arrears	Formal Child Support	Informal Cash Support	In-Kind Support	Arrears
Incarceration main-effects model								
Incarceration	-416.29*** (126.73)	-403.88*** (115.25)	-0.32*** (0.05)	2,118.90*** (493.58)	-559.43*** (135.95)	-444.33*** (112.38)	-0.28*** (0.06)	1,636.50*** (600.75)
Observations	4,704	4,447	4,779	4,613	3,116	2,962	3,178	3,031
Unique observations	2,233	2,158	2,233	2,218	1,414	1,373	1,421	1,398
Employment policy index interactions								
Incarceration	-380.26* (152.84)	-494.83** (156.97)	-0.29*** (0.06)	1,524.35*** (542.92)	-507.06** (154.41)	-470.99** (150.31)	-0.23*** (0.07)	818.07 (730.98)
Policy	475.91 (540.75)	352.78 (558.69)	0.20 (0.19)	1,619.96 (1,687.45)	774.48 (544.36)	779.74* (426.84)	0.35 (0.27)	1,777.55 (2,731.00)
Incarceration x policy	-105.73 (254.44)	260.82 (244.01)	-0.09 (0.10)	1,740.02* (878.71)	-135.06 (299.59)	63.24 (246.03)	-0.14 (0.13)	2,292.56* (1,030.69)
Observations	4,704	4,447	4,779	4,613	3,116	2,962	3,178	3,031
Unique individuals	2,233	2,158	2,233	2,218	1,414	1,373	1,421	1,398
Records policy index interactions								
Incarceration	-693.10*** (169.50)	-212.10* (122.44)	-0.32*** (0.06)	3,615.09*** (621.07)	-806.90*** (189.76)	-195.15 (141.44)	-0.33*** (0.07)	3,405.16*** (769.86)
Policy	-443.81* (188.50)	229.76 (214.27)	-0.05 (0.07)	1,794.52** (610.16)	-455.52* (226.43)	408.99 (256.25)	-0.15 (0.08)	2,884.12*** (810.62)
Incarceration x policy	593.08*** (181.03)	-412.36* (201.18)	0.00 (0.07)	-2,912.69*** (575.91)	589.89** (215.51)	-615.50** (236.37)	0.07+ (0.09)	-3,629.93*** (724.59)
Observations	4,558	4,314	4,637	4,470	3,011	2,866	3,077	2,929
Unique individuals	2,177	2,102	2,177	2,160	1,379	1,338	1,386	1,360

Source: Authors' calculations based on data from the Fragile Families and Child Wellbeing Study and data on state policies collected by authors.

Note: Robust standard errors in parentheses. Models include controls for all variables from table 3 and state fixed effects.

+ $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$

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