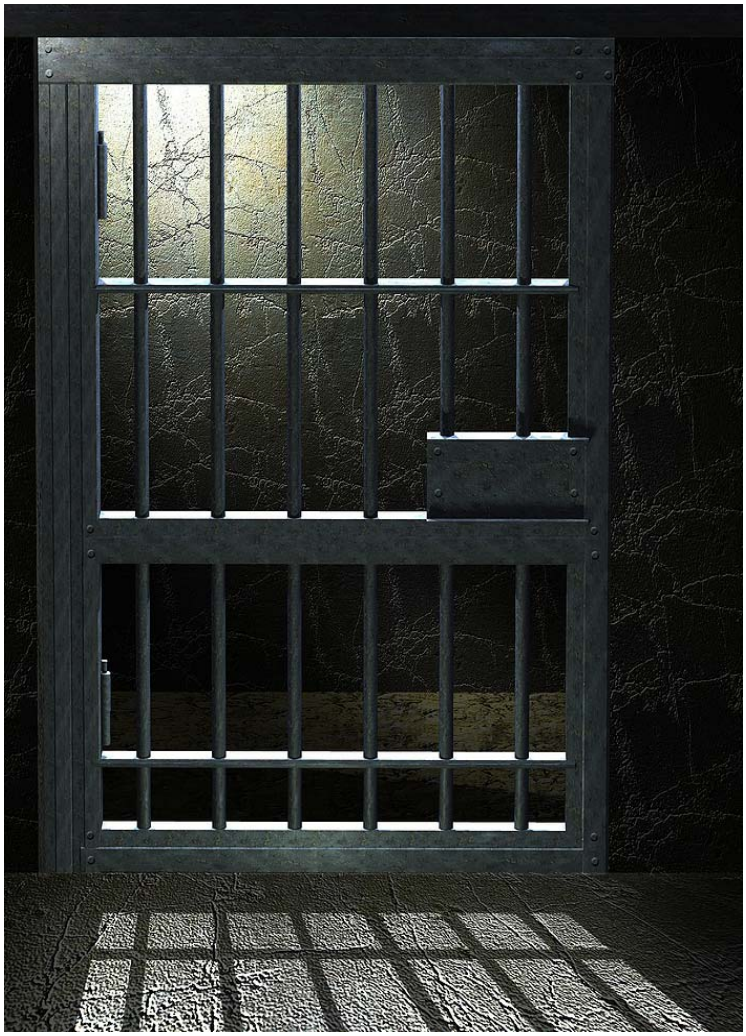
Child Support, Debt, and Prisoner Reentry:

Examining the Influences of Prisoners' Legal and Financial Obligations on Reentry



Final Report to the National Institute of Justice

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Abstract

Former prisoners are increasingly facing the burden of financial debt associated with legal and criminal justice obligations in the U.S., yet little research has pursued how—theoretically or empirically—the burden of debt might affect key outcomes in prisoner reentry. To address the limited research, we examine the impact that having legal child support (CS) obligations has on employment and recidivism using data from the Serious and Violent Offender Reentry Initiative (SVORI). In this report we describe the characteristics of adult male returning prisoners with child support orders and debt, and examine whether participation in SVORI was associated with greater services receipt than those in the comparison groups (for relevant services such as child-support services, employment preparation, and financial and legal assistance).

We also examine the lagged impacts that child support obligations, legal employment and rearrest have on each other. Results from the crossed lagged panel model using GSEM in STATA indicate that while having child support debt does not appear to influence employment significantly, it does show a marginally significant protective effect—former prisoners who have child support obligations are less likely to be arrested after release from prison than those who do not have obligations. We discuss the findings within the framework of past and emerging theoretical work on desistance from crime. We also discuss the implications for prisoner reentry policy and practice.

Keywords: prisoner reentry, criminal justice debt, child support, employment, legal obligations, recidivism, desistance, generalized structural equation modeling

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Executive Summary

Background

Former prisoners are increasingly facing the burden of financial debt associated with legal and criminal justice obligations (Bannon, Nagrecha, & Diller, 2010). Debt can result from unpaid fines, court fees, treatment fees, law enforcement fees, restitution, and child support orders. A 2004 study found that upon release, 62% of respondents reported having legal/financial debt related to the criminal justice system (Visher, LaVigne, & Travis, 2004). Child support obligations can substantially add to this burden of debt. While little research exists on how much former prisoners owe in child support, estimates suggest between 13 to 24 percent of released prisoners owe over $400 per month in child support (Griswold, Pearson, Thoennes, & Davis, 2004).

Often, child support orders continue unmodified during a prisoner's incarceration. This can lead to large outstanding sums at the time of release. In one of the few studies in this area, the median total for child support debt across state and local prisoners was estimated to be about $10,000, such that half of prisoners owed more than $10,000 and half owed less (Pearson, 2004). Qualitative research and anecdotal evidence suggest this debt and related correctional debt from fines and fees can create significant barriers to successful reentry. Because returning prisoners often have to pay large portions of their salary to government agencies and/or the mothers of their dependent children, it has been suggested that incentives to work are reduced. Legal debt may create a disincentive to find any work at all (Harris, Evans, & Beckett, 2010; McLean & Thompson 2007). In terms of recidivism, this disincentive to find work in the formal labor market could increase recidivism by pushing former prisoners into the illicit economy. Alternatively, having this debt could increase ties to family and children, possibly promoting desistance.

Despite this bleak economic outlook for returning prisoners with child support debt and extant theory that informs why it may matter vis-à-vis key outcomes such as employment and recidivism, no large-scale or national studies have examined how the obligations associated with child support or other accruing debt influence these outcomes in the reintegration process. The current work addresses this empirical gap using longitudinal data from the multi-site Serious and Violent Offender Reentry Initiative (SVORI) to examine the associations among child support

orders, employment and recidivism.

Research Questions

- Are the demographic, criminal justice and employment-related characteristics of incarcerated men with child support orders significantly different in any important way from incarcerated males without child support orders?
- Did SVORI clients receive more support and services related to child support orders and modification of debt after release from prison compared to non-SVORI participants?
- Does having legal child support obligations decrease the likelihood of employment in later waves, net of key demographic and criminal justice history factors?
- How does employment influence the relationship between child support debt and recidivism?
- Is family instrumental support a significant predictor of reduced recidivism or increased employment in models assessing the relationship between child support obligations, employment and recidivism?

Data and Key Theoretical Variables

Data used in these analyses, made available through ICPSR, are from 1,011 adult men with children under age eighteen that were part of the evaluation of the multi-site, longitudinal Serious and Violent Offender Reentry Initiative (SVORI) (Lattimore et al., 2012; Lattimore & Visher, 2014). Subjects involved in the study had extensive criminal histories, substance abuse problems, low involvement in the legitimate labor market, and generally high levels of needs across a range of domains (Lattimore, et al., 2012). The SVORI impact evaluation study focused on 12 programs, and respondents were interviewed at four time points, providing a longitudinal examination of the reentry success. Respondents were interviewed approximately 30 days prior to their release from institutional corrections. Follow-up interviews were conducted at three, nine, and 15 months post release. Re-incarcerated respondents were re-interviewed in prison or jail. At three months, 60% (603) were successfully re-interviewed; 61% (616) were interviewed at nine months; and 66% (672) at 15 months. Forty-two percent of respondents (429) were successfully interviewed at each wave.

Dependent Variables

Employment was measured as a binary (Y/N) variable at each wave indicating if the respondent supported himself via a legitimate job since the last interview. Baseline items asked about legitimate employment six months prior to incarceration. Respondents were coded as "1" if they reported legitimate employment in response to the question: "how did you support yourself since the last interview/in the six months before you were incarcerated?" **Recidivism** was operationalized as rearrest, which was as a Yes/No dichotomous outcome measured at 3, 9, and 15 months using official arrest data from the National Crime Information Center (NCIC). The strength of this measure is that, unlike self-reported crime that suffers from moderate attrition, this outcome has very little missing data, and for the small amount that is missing, reincarceration data can help to inform what happened to these subjects (details are provide in the Methods section). The respondents in the study were released between 2004 and 2006, and the data on these rearrests were gathered in 2008 and 2009. This resulted in a post-release follow-up period of at least 21 months for all participants (Lattimore & Visher, 2014).

Key Independent Variables

In line with recent research (Miller & Mincy, 2012), **child support (CS)** was measured at each wave using the dichotomous variable "Are you currently required to pay child support for any of your children under age 18?" At baseline, respondents were asked "Were you required to pay child support for any of your children under age 18 during the six months before you were incarcerated?" A measure of child support arrears was also assessed for use in the analyses. **Family instrumental support** was included as a theoretically important covariate measured at each follow-up wave as the sum of five items probing the degree to which family members provided support in the following domains: housing, transportation, employment, substance abuse, and financial support. Responses ranged from "strongly disagree" (0) to "disagree" (1) to "agree" (2) to "strongly agree" (3). Thus, the scale ranged from 0 – 15 with higher values indicating more support. Cronbach's alpha was .89 at each wave for this variable.

Additionally, we used a number of covariates and control variables typically used in recidivism analyses. The description of these variables can be found in the full report.

Results from Descriptive Analyses

Key findings from research questions 1 and 2 are presented below.

- Of the 1011 males reporting having children under 18, 312, or 31%, were required to pay child support during the six months prior to incarceration. Of the 312, only 57% of those with required payments reported having made the payments prior to their incarceration. The overwhelming majority (92%) owed back support (i.e., had child support debt).
- Of those with child support orders, roughly a quarter (27%) had their child support orders modified while they were incarcerated.
- Five states had at least 60% of their respondents who reported that they owed over $5,000 in back support (Iowa, Kansas, Missouri, Nevada and South Carolina).
- Adult males with child support orders were significantly older, had more past convictions (controlling for age), were less likely to be convicted of a violent crime for their instant incarceration, were more likely to have had alcohol and other drug treatment (pre-incarceration), and had fewer days incarcerated with regard to their instant incarceration.
- Compare to respondents with minor children but without CS, those with CS reported a higher need for child-related support services and a higher likelihood of receiving any child-related service while incarcerated. Males with CS were also more likely to be employed six months prior to their incarceration and reported lower amounts of income from illegal activity compared to males with minor children but without CS.
- For those with CS, among the most oft-cited top needs at baseline was the need for a job. After the need for a job, the five most frequently identified top needs were: (1) a driver's license, (2) education, (3) job training, (4) child support payment assistance, and (5) child support debt modifications.
- There were only a handful of respondents with child support orders and jobs who appeared to make a good wage pre-incarceration—only 18 respondents reported having jobs where they make over $15 per hour.
- During the first three months after release from prison, among those with CS, 28% of respondents reported receiving assistance in finding employment, 21% received assistance in obtaining employment documents, and 17% received job training. Eleven percent received assistance modifying CS obligations, and 3% reported child support

payment assistance. Only 2% of those with need reported receiving help with money management.

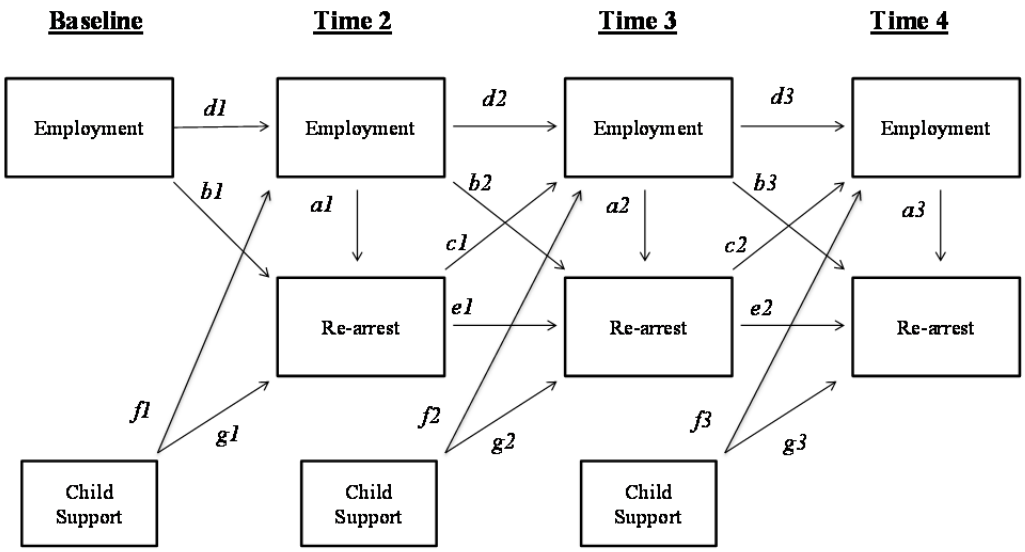
- SVORI clients with a reported baseline need for help with modifications of CS debt were more likely to receive the service in the three months post incarceration (16%) than those respondents not in SVORI programming (5%). The difference was marginally significant at p=0.059.
- In count regression models, receiving SVORI programming significantly increased the incidence rate (179%) of receiving an additional child support-related service, job- or financial assistance-related service ($p < .001$).

In summary, we can conclude that those respondents in the SVORI group were more likely to receive a child support-related service or related financial or legal services than those respondents who did not receive the SVORI programming. When examining services provided in prison, a significantly higher mean percentage of males received child-related services if they had a child support obligation (compared to those that did not have child support orders) since services included those related to having child support obligations. However, the full regression model (Table 10), showed that having child support obligations was not significantly associated with receiving more services related to having child support orders or related debt. Perhaps this is so because it was only through SVORI participation that males received detailed needs assessments and/or case management that made it possible to have services tailored to the needs of the individual.

Conceptual Model and Longitudinal Modeling Approach

To address the remaining research questions we created and tested a longitudinal cross lagged panel model using a structural equation framework. This model estimates the effect of having child support obligations on employment and recidivism over time. In addition, it estimates the impacts that employment has on rearrest within the same waves, and the lagged effects that these outcomes have on each other over time.

Conceptual Model for Longitudinal Assessment of Child Support, Employment and Recidivism



Baseline interviews conducted approximately 30 days prior to institutional release. Time 2, Time 3, and Time 4 interviews conducted at 3-, 9-, and 15-months, respectively.

Key Findings from the Cross Lagged Panel Models vis GSEM

- Findings show that the effect of having legal child support obligations before incarceration was associated with a marginally significant 43% reduction in the odds of re-arrest at the three-month interview ($p < .10$, two-tailed).
- Reporting child support obligations at the three-month interview reduced the odds of an official arrest between the three- and nine-month interview by 32%, although the association did not reach conventional significance ($p = .17$).
- Current employment significantly reduced the odds of re-arrest for two out of three cross-sectional paths examined. The path was not significant for employment at nine months on arrest at 9 months, which missed conventional alpha levels at $p = .19$.
- Longitudinal analyses showed that employment at the preceding time point did not affect changes in recidivism at the next wave.
- However, for one path, re-arrest significantly predicted changes in employment at the next wave. The effect of being arrested between release and the three-month interview was associated with a 41% reduction in the likelihood of reporting employment between the three- and nine-month interviews ($p < .01$).

- Family instrumental support only showed a marginally significant impact on one outcome in one wave, and it was not in the expected direction. A one-unit increase in instrumental support at the 15-month interview was associated with a 4% decrease in the odds of reporting employment in the same wave ($p < .10$). Other models tested if family instrumental support had lagged impacts on either outcome; no significant effects were found.

Discussion of Key Longitudinal Findings

Our analyses sought to assess whether child support debt in particular affects key outcomes in reentry. In terms of recidivism, we reviewed the theoretical literature to show that the potential effect of having a child support obligation could either be positive or negative. The current analyses found that those who had child support debt were *less* likely to be rearrested compared to those who did not report having this obligation (though the effect was only marginally significant). From a desistance and life course framework, one could argue that a child support obligation acts as a key social tie that binds former prisoners with their families upon community release. Whether this increase in informal control is the mechanism behind these findings is an area ripe for further inquiry.

Some researchers and reentry advocates have suggested that burdensome legal financial obligations associated with criminal justice processing, including child support debt, act as a barrier to reentry and can push former prisoners back into illegal activity. Our findings do not suggest that having one type of debt obligation—child support—acts as a force that fosters criminal behavior. This finding has implications for judicial decisionmakers and prisoner reentry advocates who are concerned that levying substantial child support obligations on non-custodial fathers may have adverse consequences in terms of offending.

In terms of legitimate employment, having a child support obligation did not appear to have any significant effects on this outcome. Perhaps there is no association between the two. Or maybe there was not sufficient time in the model for any effect to appear. For example, if having child support affects certain structural barriers in reentry such as being unable to clean up a criminal record history, this could then have an impact on employment, but the effect could be lagged more than what was modeled in our data. Regardless, our results indicate that there is no

support for the hypothesis that men are disillusioned with their criminal justice and economic situation upon release from prison and, as a result, turn away from legitimate employment.

Additional work might try to uncover any potential mechanisms connecting child support debt and reduced reoffending to see if increased attachments and involvements with family might indeed be responsible for some of the associations found here. Qualitative and mixed methods research may be particularly well suited to get at this question. Finally, the current work focused solely on one type of debt, but ex-prisoners are burdened with many other types, including fines, user fees, and restitution. These debts are very different in nature and come from different sources. As such, their impacts on several policy-related outcomes of interest could be highly variable.

Conclusions

The financial obligations that encumber criminal justice populations have risen markedly in recent years, yet how the burden of debt impacts released prisoners is not known. We addressed this empirical gap by using a large, multistate, longitudinal reentry data set and examined the impact that child support obligations have on recidivism and employment. While no evidence was found that this debt hinders or facilitates employment, we did find that those with this debt were slightly less likely to be arrested during the observation period.

Chapter 1. Introduction and Research Questions

In 2012, there were 637,411 releases from state and federal prisons (Carson & Golinelli, 2013). Recidivism data from the Bureau of Justice Statistics show that over three quarters of prisoners released from state prisons will be rearrested within 5 years (Durose, Cooper, & Snyder, 2014). Across the wide range of reentry strategies and programs, only a handful of interventions have produced reductions in recidivism. The growing number of null and negative findings regarding community-based reentry programs has led some scholars to expand their focus from the much-studied broad domains of employment, mental health, substance abuse and housing, to include an examination of how correctional *policies* might influence recidivism and specifically, how these policies might impact a prisoner's readiness for and access to services and supported reentry opportunities. This area of study includes how the legal financial obligations of prisoners might impact the community reintegration process.

Released prisoners often face substantial financial burdens. These include—but are not limited to—fines, court fees, treatment fees, law enforcement fees, restitution, and child support orders. A recent multi-state study found that upon release, nearly two-thirds (62%) of respondents reported having legal/financial debt related to the criminal justice system (Visher, La Vigne, & Travis, 2004). Child support obligations add to the burden of debt. According to the Bureau of Justice Statistics (BJS), the majority of state and federal prisoners are parents of children under the age of eighteen and 88 percent of fathers with minor children are *non-custodial* parents (Glaze & Maruschak, 2008). Estimates suggest that between 13 to 24 percent of released prisoners owe more than $400 per month in child support (Griswold, Pearson, Thoennes, & Davis, 2004). Moreover, there is evidence that the scale of debt among criminal justice populations is unprecedented (Bannon, Nagrecha, & Diller, 2010; McLean & Thompson,

2007).

Often, child support debt continues to accrue throughout a prisoner's incarceration. A 2002 study of fathers in the correctional system in Massachusetts found that virtually every prisoner with a child support order owed at least some amount of "back due" support. The median total for child support debt across state and local prisoners was estimated to be about $10,000, such that half of prisoners owed more than $10,000 and half owed less (Pearson, 2004). The few other existing studies corroborate these estimates (Griswold, Pearson, & Davis, 2001; Ovwigho, Saunders, & Born, 2005). Qualitative research and anecdotal evidence suggest this debt and related correctional debt from fines and fees can create significant barriers to successful reentry. Because returning prisoners often have to pay large portions of their salary to government agencies and/or the mothers of their dependent children, it has been hypothesized that incentives to work are reduced. Indeed, many have suggested that legal debt creates a disincentive to find any work at all (Burch, 2011; Harris, Evans, & Beckett, 2010; McLean & Thompson 2007). In terms of recidivism, this disincentive to find work in the formal labor market could push ex-prisoners into the illicit economy. Furthermore, the consequences of failure to pay legal financial obligations may be great. A study from Washington state found that of returning prisoners who owed debt, one-fourth reported that an arrest warrant had been issued because of failure to pay and most were subsequently incarcerated for nonpayment (Harris et al., 2010).

Despite this bleak economic outlook for returning prisoners with child support debt, no large-scale or national studies have examined how legal financial obligations associated with child support or accruing debt influence key outcomes in the reintegration process. The current work attempts to begin to address this empirical gap using longitudinal data from the multi-state

Serious and Violent Offender Reentry Initiative (SVORI) to examine the association among child support orders, employment and recidivism. The bulk of this report summarizes empirical analyses that rely on path analysis via Generalized Structural Equation Modeling (GSEM). We also provide a descriptive picture of those male returning prisoners who have child support orders and the relationships among relevant criminal justice, demographic and employment-related characteristics. The report is organized as follows: we first outline the key research questions examined, and then in Chapter 2, we define child support obligations and review the current literature on debt associated with criminal justice populations, and particularly child support debt, and how theory informs the relationship between debt and reentry-related outcomes. Chapter 3 describes the SVORI dataset and the key variables used in this report. Chapter 4 provides a descriptive picture of male respondents who have child support and examines service needs and service receipt related to having child support obligations and associated debt. Chapter 5 presents the analytic model for the examination of the research questions in longitudinal framework, presents the results of the longitudinal analyses and discusses the findings and how they are relevant for policy and practice.

Research Questions

The research questions for this study were guided by our key goal to examine the influence of child support orders and related debt on recidivism.

1. Are the demographic, criminal justice and employment-related characteristics of incarcerated men with child support orders significantly different from incarcerated males with minor children without child support orders?
2. Did SVORI clients receive more support and services related to child support orders and modification of debt after release from prison than non-SVORI participants?

3. Does having legal child support obligations decrease the likelihood of employment in later waves, net of key demographic and criminal justice history factors?
4. How does employment influence the relationship between child support debt and recidivism?
5. Is family support a significant predictor of reduced recidivism in models assessing the relationship between child support obligations, employment and recidivism?

Note that in our research proposal to NIJ we indicated we would examine the research question: *Does having legal child support obligations and associated debt increase the likelihood of having illegal employment (concurrently and later employment)?* After we obtained the dataset and ran preliminary analyses we found that the number of returning prisoners reporting illegal employment was too low to use the variable in our longitudinal models. Only 3.36% (33 individuals) reported receiving any income from illegitimate sources in the three months post incarceration. In addition, the correlation coefficient between owing back support three months out and reporting any illegitimate income during the three months post incarceration was very small and not significant: $r(712)= 0.067$; $p = 0.32$. As a result of these data issues, we did not address this question.

Chapter 2. Background and Literature Review

Child Support in America

The Child Support Enforcement program was established in 1975 to help limit public expenditures in the welfare program. As such, at the time, the program only enforced orders for non-welfare families by request; the core goal was cost recovery from those already in the welfare system (Cancian, Meyer, & Han, 2011). It wasn't until 1980 that the child support enforcement program made permanent enforcement activities on behalf of all families. Mothers receiving Temporary Assistance for Needy Families (TANF) are required to pursue child support from the NCP, even though those mothers might not believe it is in the family's best interest. In many child support cases, payments that are made do not go to the dependent family; child support payments made by the NCP go directly to the federal government to offset welfare costs (Cancian, Meyer, & Han, 2011).

The laws that govern legal child support orders vary by state, but for the most part, determinations of child support are usually incorporated into family law cases, which cover divorce, separation, paternity, custody, and visitation. Today, child support experts generally agree that child support serves to reduce the financial insecurity and the likelihood of living in poverty among children and custodial parents. In addition, by helping to prevent a family from entering the public welfare system, it also reduces public spending on welfare (Waller & Plotnick, 1999). Overall, these goals ensure that children receive their fair share of their parents' income and reinforce parental responsibility.

For newly convicted offenders with child support orders sentenced to prison or jail, the status of the order upon entry to the institution will vary greatly by state; in some states, the order can be modified such that the case is placed on inactive status and the prisoner does not pay child

support while incarcerated. The "Personal Responsibility and Work Opportunity Act" (PRWORA) of 1996—and specifically the "Bradley Amendment"—legislated that child support debts could not be modified retroactively. Policy is more flexible with the modification of orders prospectively. These decisions were left completely up to the states, leading to wide disparities in modification across the states because the legal principle applied by state courts in this determination process is whether "substantial changes in earning capacity" have occurred. Unemployment can qualify as one of these substantial changes, but the status of unemployment cannot be voluntary unemployment. As of 2014, inmates in 21 states are ineligible for prospective child support modification during the time they serve their sentences.

Although some states allow for prospective modification, states do not routinely reduce an order when an individual enters prison (U.S. Department of Health and Human Services, Office of Child Support Enforcement [OCSE], 2012) and the burden is often left to the prisoner, and hence, many prisoners are not aware that their child support cases can be modified or placed on inactive dockets during their incarceration. The ones that do may lack the requisite knowledge to complete the modification paperwork (Cammett, 2010; Pearson, 2004). For those that enter the process of order modification, the application process takes an average of three to seven months (U.S. Department of Health and Human Services, Office of Child Support Enforcement [OCSE], 2006). Overall, these issues are implicated in the mounting debt that released prisoners face and create potential barriers to community reintegration, as described in more detail below.

Rising Debt among Individuals in the Criminal Justice System

It is not only child support-related debt that impacts prisoners and released prisoners. In recent years there has been a dramatic increase in the application of legal financial obligations on criminal justice defendants (Beckett & Harris, 2011; Harris et al., 2010; Levingston & Turetsky,

2007). In addition to child support payments, under the umbrella of legal financial obligations are fines, restitution, and "user fees." Fines are punitive and are applied during the court process. Restitution is monies that defendants pay to victims for damage caused. The last category of legal financial obligations—"user fees"—is a relatively new phenomenon whereby criminal justice agencies such as police, courts, jails, prisons, and probation and parole charge clients for passing through their "cog" in the system (Bannon et al., 2010). Amounts charged to these defendants are highly discretionary, and there is considerable variability in how much is charged across various jurisdictions. Scholars have implicated the recent economic downturn in America as the catalyst for the emergence of these user fees: agencies are trying to recoup from defendants funding they have lost from state governments (Bannon et al., 2010; Beckett & Harris, 2011).

With regard to child support debt, many former prisoners face unprecedented large sums of debt upon reentry into the community (Cammett, 2010; Mincy & Sorensen, 1998; Ovwigho et al., 2005; Pearson, 2004; Sorensen, 1997). This is largely the result of two factors. First, as described earlier, PRWORA stipulated that child support orders could not be modified retroactively under any conditions, resulting in prisoners with large amount of arrears. And second, once released, and in about half of the states, former prisoners are assessed taxes on their child support arrears. Because these arrears are usually large, and because the taxes compound over time, already large debt burdens often increase dramatically in the few years after release. In California, for example, using administrative data on noncustodial parents who owe back child support, Sorenson (2004) found that taxes levied specifically on these arrears represented the largest contributor to escalating debt burdens.

Once released into the community, former prisoners are responsible for repaying these debts, usually via probation, parole, or child support enforcement offices. Although national estimates are lacking, some data have shown that former prisoners can have roughly $5,000 in unpaid (non-child support) debt upon release (Bucklen & Zajac, 2009). The Massachusetts study previously cited found that parolees had accrued an average debt of $5,250 during their imprisonment (Thoennes, 2002). A study that examined the intersection of incarceration and child support in Maryland by choosing a random sample of non-custodial fathers with child support orders, found that of the subsample that was incarcerated at the time of the study (n=68), the median child support arrears was roughly $16,000 (Ovwigho, Saunders & Born, 2005). Even more alarming, arrears ranged from $552 to $70,305. For the formerly incarcerated subsample (n=246), median arrears were $11,554, with a range from $32 to $108,394.

Why Does Rising Debt Matter for Reentry?

Rising criminal justice debt should interest scholars and policymakers alike for four key reasons. First, prisoner debt may delay release dates and often becomes a stipulation of probation or parole—for which non-payment can result in a return to jail (American Civil Liberties Union, 2010). In Pennsylvania, inmates eligible for parole cannot be released until they pay a compulsory fifty-dollar fee (Evans, 2014). Although debtors' prisons were formally deemed unconstitutional in *Tate v. Short* (1971), incarceration for criminal justice debt non-payment continues to happen (Cammett, 2010; Patterson, 2008). In *Tate v. Short*, the U.S. Supreme Court decided that debtors could not be incarcerated for nonpayment unless they "willfully" did not pay their debts. The term "willfully" is a source of controversy that has caused many debtors to remain incarcerated for debt nonpayment—different courts and different judges have widely varying interpretations of what is willful nonpayment. Of course, as others have pointed out, not

only is this practice constitutionally questionable, but because of the high costs of incarceration it is likely fiscally questionable as well (Bannon et al., 2010).

Second, a sizable proportion of the criminal justice population is socio-economically disadvantaged (Pettit & Western, 2004). Some research has shown that criminal justice debt can be a source of stress and strain for former prisoners (Martire, Sunjic, Topp, & Indig, 2011; Richards & Jones, 2004). Descriptive work has also shown that former prisoners identified criminal justice-related debt as a reason for recidivating (Martire et al., 2011). Other scholars have cited qualitative evidence that criminal justice debt can be "crushing" and that it is antithetical to the goals of prisoner reentry and rehabilitation (Richards & Jones, 2004).

Third, there is a real need for children and families to receive financial support from their previously incarcerated fathers. However, because a large proportion of the criminal justice population consists of low income earners, it is essential to strike an appropriate and realistic balance between providing for dependent offspring while not causing harm to the obligor (i.e., the person who owes child support), such as incarceration for nonpayment, or punitive measures for nonpayment such as driver's suspension (which could hinder employment) (Bannon et al., 2010; Holzer, Offner, & Sorensen, 2005). Research has shown that orders are often unrealistically high—in that they do not represent ability to pay (Cammett, 2010; Patterson, 2008; Pearson, 2004; Sorensen, 2004). Analysis of payment data by the federal government has shown that, for poor noncustodial fathers, when orders represent a smaller percentage of their income, the fathers are more likely to pay (U.S. Department of Health and Human Services, Office of Inspector General [OIG], 2000) .

Finally, it is theoretically plausible that rising child support and other debt could affect reentry-related outcomes, such as employment obtainment and recidivism. It is these policy-

relevant areas to which we now turn.

Child Support Debt and Recidivism

Although the relationship between child support obligations and recidivism has been rarely discussed in the criminological literature, there are multiple plausible theoretical frameworks which might explain why having child support obligations and related debt might influence recidivism or desistance from crime. Some theories lead to the suggestion that there might be a protective relationship between child support debt and recidivism, where the debt acts as a protective factor against continued offending; other theories suggest that debt will increase the likelihood of continued offending. These are reviewed below.

Life course criminology (Sampson & Laub, 1993), which emphasizes the factors implicated in crime continuity and desistance beyond adolescence (Cullen, 2011), offers a number of principles relevant to the relationship between debt and reentry success. First, because child support systems link former prisoners with their families, having this formal requirement in place could foster parental or familial involvement and attachment. This key bond to family may encourage desistance by structuring routine activities and giving the former prisoner a new sense of purpose and identity (Laub & Sampson, 2003). Indeed, Seltzer, McLanahan, & Hanson (1998) found that requiring parents to pay child support increased parental involvement between the paying fathers and his dependent children. However, virtually no other studies to date have addressed these linkages empirically. Second, former offenders have offered historical narratives indicating that parental responsibilities acted as a turning point (Laub & Sampson, 2003). Becoming a parent changes routine activities and likely inculcates a new sense of responsibility among most parents. However, this heightened sense of parental responsibility could be realized more slowly for some parents than others.

Maruna (2001) highlighted the key role of identity transformation in his study of desisters and persisters in Liverpool. Desisters tended to acknowledge their past and tie it into a narrative of how they have changed into a "new" person. An example Maruna offers is how some former prisoners begin a new career helping people currently struggling with substance abuse or problems with the law. This calling inculcates a sense of purpose, and leads to identity change (Maruna, 2001). Applied to the present situation, it is possible that having an active child support order acts as a catalyst for eventual identity change. Former prisoners, realizing their prior absence in their children's lives, can create a narrative whereby they acknowledge they were once "deadbeat" dads, but now they have the duty and purpose of supporting their loved ones. This shift can serve as the basis for identity or attitudinal change.

Alternatively, being required to pay what could amount to hefty child support payments could act as a financial strain (Agnew, 2006) large enough to "push" or motivate people to offend, possibly in the form of revenue-generating or acquisitive crimes. If, in the eyes of former prisoners, this strain is associated with their families, it could damage relationships further, weakening the informal control of ties to family. In an Australian sample of released prisoners, Martire et al. (2011) found that 60% of their sample reported that their debt adversely affected their relationship with their partner; 60% reported that it hurt their family relationships. A study of parolees in Pennsylvania found that those who had criminal justice debt[1] reported having a harder time "making ends meet" than did those without debt (Bucklen & Zajac, 2009). However, there were no significant differences in recidivism between those who had and those who did not have this debt. Martire et al. (2011) reported descriptive statistics indicating that debt associated with criminal justice was a perennial source of stress (64% reported it as stressful). Thirteen percent of this sample cited debt as the motivating factor for their last acquisitive crime (Martire

et al., 2011). In addition, qualitative evidence has linked debt with acquisitive crimes (Sutton, 1995). Sutton (1995) showed that some property offenders—shoplifters in particular—are motivated by their large, outstanding debt burdens.

Child Support Debt and Employment

Theorists from various disciplines have argued that rising child support debt could lead to reductions in formal employment and labor force participation (Holzer et al., 2005; Miller & Mincy, 2012; Pirog, Klotz, & Byers, 1998; Pirog & Ziol-Guest, 2006). Pirog, Klotz, & Byers (1998) demonstrated that child support orders for economically disadvantaged fathers typically ranged from 20-35 percent of their income. In addition, payroll and other taxes on this group meant that their marginal tax rates were as high as 60-80% (Primus, 2006). Should these fathers have outstanding payments, federal law allows states to garnish up to 65% of their take-home pay (Sorensen & Oliver, 2002). Given these stringent parameters, theorists have argued that noncustodial fathers are incentivized not to work, or to find work in the underground economy where their incomes will not be detected.

Alternatively, having child support debt might affect employment through causing the emergence of other important structural barriers in reentry. Research has shown that having a criminal record can make finding employment very difficult for former prisoners (Pager, 2007). As a response to this trend, advocacy groups have attempted to reduce this barrier by expunging stale criminal records. Scholars have contributed to this effort by showing that sufficiently old convictions fail to predict future criminality (Blumstein & Nakamura, 2009). However, in many jurisdictions, prevailing policy prohibits criminal record expungement for former prisoners who still have outstanding child support debt (Vallas & Patel, 2012). In addition, in several states the first penalty for nonpayment of child support is a driver's license suspension (Bannon et al.,

2010; Cammett, 2010; Levingston & Turetsky, 2007), which could affect employment by excluding those jobs that require driving, and also by limiting the job search to a narrower geographic area.

However, it is also plausible that having a child support order could be positively related to employment after prison. As others have theorized (see Visher, Debus-Sherrill, & Yahner, 2011), having financial debt could be a motivating factor to find more employment as former prisoners who have debt would need to earn more to keep up with both debt payments and regular expenses.

Empirical evidence on the question of whether child support and other debt impact employment is mixed and is limited to a few studies. Analyzing a sample of young African American men with low education, Holzer, Offner, and Sorensen (2005) found that the increasingly strict child support enforcement policies at the state-level were associated with significant declines in their labor force participation. For noncustodial fathers in the Fragile Families study, Miller and Mincy (2012) found that having child support was associated with lower average weeks worked later in time in the formal economy. This effect was contingent on amount of debt and amount of income: people with high debt and low income worked less in the formal economy; those with low debt burdens and a high income reported more time in legitimate employment. Though not focused on child support in particular, two additional studies examined the effect of debt generally on employment. Visher, Debus-Sherrill, & Yahner's (2011) analysis of the data on released prisoners in three states showed that having debt slightly increased the proportion of time worked post release to the community, although the effect did not reach conventional levels of statistical significance. In Martire et al.'s (2011) sample from Australia, 67% of respondents reported that having debt made it harder to find employment. For

ex-prisoners returning to the community, it remains unclear theoretically and empirically how the obligation of paying child support and related debt affects employment.

Given the very limited empirical examination of the effects of debt on recidivism, and the limited evidence that debt affects employment, the purpose of this study is to address this empirical gap. Considering the dramatic growth in the child support system and its strict enforcement since the PRWORA (Cammett, 2010; Patterson, 2008), we investigate the effects that having child obligations and related debt has on both of employment and recidivism in a longitudinal framework. In the next chapter we describe the data and methods used to examine the research questions.

Chapter 3. The Dataset and Key Measures

Data used in these analyses, made available through ICPSR, are from a subsample of 1697 adult men that were part of the evaluation of the multi-site, longitudinal Serious and Violent Offender Reentry Initiative (SVORI) (Lattimore et al., 2012; Lattimore, Steffey & Visher, 2009). Subjects involved in the study had extensive criminal histories, substance abuse problems, low involvement in the legitimate labor market, and generally high levels of needs across a range of domains (Lattimore, et al., 2012). Forty-one percent of the subjects were in prison most recently for a violent offense, 25% for property offenses, and 34% for drug offenses. The modal types of violent offenses were robbery and assault. Of this male sample, 1,011 were parents of children under age 18. As our analysis is centered on the role of child support obligations, we have chosen this subgroup for use in the present analyses.

The SVORI impact evaluation study focused on 12 programs from the following states: Indiana, Iowa, Kansas, Maine, Maryland, Missouri, Nevada, Oklahoma, Pennsylvania, South Carolina and Washington. Strategies for selecting an eligible control/comparison group varied by program site due to inherent difficulties in crime and justice evaluation research (Lum & Yang, 2005). In particular, some reentry programs were already underway by the time the evaluation effort was funded and slated to begin. Therefore, two sites used a randomized design, and the remaining sites used a two-stage quasi-experimental design whereby respondents were propensity-score matched to ensure comparability between experimental and control/comparison groups (Shadish, Cook, & Campbell, 2001). This procedure produced a strong balance between SVORI and non-SVORI groups (Lattimore, Steffey & Visher, 2009).

The dataset was chosen for the current study because it represents a rare multi-state opportunity to examine child support obligations, child support debt, and employment as

possible factors related to recidivism. For the current study, the treatment and comparison group males are examined together; although we control for SVORI treatment assignment, we are not interested in differences between these groups (although we control for possible differences).[2]

SVORI respondents were interviewed at four time points, providing a longitudinal examination of reentry success. Respondents were interviewed approximately 30 days prior to their release from institutional corrections. Follow-up interviews were conducted at 3, 9, and 15 months post release. Re-incarcerated respondents were re-interviewed in prison or jail. At three months, 58% (984) were successfully re-interviewed; 61% (1,035) were interviewed at nine months; and 66% (1,113) at 15 months. Forty-two percent of respondents were successfully interview at each wave. With respect to respondents with children under 18, 60% (603), 61% (616), and 66% (672) were re-interviewed at three, nine, and 15 months, respectively. Forty-two percent of this subsample (n = 429) were successfully interviewed at each wave. Table 1 shows the full SVORI adult male sample interviewed at each wave, along with the subsample of males with minor children.

Table 1. Male SVORI Data set Sample Size, by Wave

	W1 (30 days pre-release)		**W2 (3 months post release)**		**W3 (9 months post release)**		**W4 (15 months post release)**	
	Males	Males with Minor Children	Males	Males with Minor Children	Males	Males with Minor Children	Males	Males with Minor Children
SVORI	863	508	529	323	565	336	582	337
Comparison	834	503	455	280	470	280	531	335
Total	1,697	1,011	984	603	1,035	616	1,113	672

At the time of their first interview, the mean age of male subjects was 29.6 years old. Approximately 59% percent of the subjects were Black, 30% were White, and 11% identified as Hispanic or other. At baseline, 31% of respondents reported having an active child support order before their incarceration (312 of 1,011 respondents).

A number of variables were used to conduct analyses to answer the research questions. Below, we describe the main variables that are used in our longitudinal analyses, beginning with the dependent variables. The full correlation matrix for all key variables can be found in the Appendix.

Dependent Variables

Employment was measured as a binary variable at each wave indicating if the respondent supported himself via a legitimate job since the last interview. Respondents were coded as "1" if they reported legitimate employment in response to the question: "how did you support yourself since the last interview," and "0" if they did not report legitimate employment. This operationalization is in line with much of the research on employment among offending populations (Skardhamar & Savolainen, 2014). Baseline employment was coded as "1" if the respondent reported legitimate employment in the six months prior to the instant incarceration, and "0" if he did not. Baseline employment status was used as a control in longitudinal models.

Recidivism was operationalized as rearrest, which was as a (1/0) dichotomous outcome measured at 3, 9, and 15 months using official arrest data from the National Crime Information Center (NCIC)[3]. These administrative data were collected by the SVORI researchers and they contain rearrests recorded by the Federal Bureau of Investigation. SVORI researchers elected to request these data from the NCIC rather than individual states in an effort to capture arrests of individuals outside of their state. The final data files were obtained by SVORI researchers in

2008 and 2009. The strength of this measure is that, unlike self-reported crime that contains missing data due to attrition, this outcome has little missing data. Of the 1,011 subjects in our sample, rearrest data are available for 951 respondents, or 96%. For those respondents who had missing data on rearrest, official record, time-varying data on reincarceration was inserted into the rearrest variable and used as a proxy measure. Thus, our rearrest outcome variable contained no missing cases.[4] The subjects in the study were released between 2004 and 2006, and the data on these rearrests were gathered in 2008 and 2009. This resulted in a post-release follow-up period of at least 21 months for all participants (Lattimore & Visher, 2014).

Key Independent Variables

In line with recent research (Miller & Mincy, 2012), child support (CS) was measured at each wave using the dichotomous variable "Are you currently required to pay child support for any of your children under age 18?" At baseline, respondents were asked "Were you required to pay child support for any of your children under age 18 during the six months before you were incarcerated?" A measure of child support arrears was also assessed for use in the analyses. Respondents were asked at each wave: "Do you owe back child support?" Models were run with child support operationalized both ways. Because results were very similar and using "child support obligation" instead of "back support" yielded higher statistical power in the longitudinal models, we used "*having a child support order"* as the key child support variable in all analyses.[5] Of the 312 male respondents who had a child support order at baseline, 89% indicated they owed back support; 4% did not answer the question on back support. As described in Chapter 5, final models used child support obligations reported in a previous wave to predict key outcomes at later waves.

Family instrumental support was included as a theoretically important covariate (Laub & Sampson, 2003; Visher, Debus-Sherrill , & Yahner, 2011) measured at each follow-up wave as the sum of five items probing the degree to which family members provided support related to housing, transportation, employment, substance abuse, and financial. Responses ranged from "strongly disagree" (0), "disagree" (1), "agree" (2), and "strongly agree" (3). The scale ranged from 0 to 15 with higher values indicating more support. The Cronbach's alpha was high (a=.89) at each wave. This variable was measured contemporaneously to the outcome variables (i.e., reported by the respondent in the same wave).

Type of offense for which the respondent was currently serving a sentence (i.e., the instant incarceration) was measured as "property offense," with other types of offenses as the reference category. **Age at first arrest**, a measure often found in reentry evaluation studies (Lattimore et al., 2012; Lattimore & Visher, 2014), was also included as a covariate to control for criminal justice risk. **Supervision status** ("on supervision") measured if the respondent was on probation or parole (1/0) at each subsequent interview. To control for variation that might be due to SVORI participation, we created a dichotomous indicator (**SVORI participation**) of whether the respondent was part of the treatment condition. **Job services** was measured at each wave with the item: "Have you received any educational or employment services in prison/since release/in the last six months?"

Research has shown that physical health is often a significant predictor for obtaining and retaining a job (Visher et al., 2011). Therefore, we included a measure of physical health as a predictor in the paths to employment outcomes. **Physical health problems** reflects the following baseline items: "Does your health now limit you in moderate activities—such as moving a table or playing basketball—a lot (2), a little (1), or not at all (0)?" and "Does your health now limit

you a lot (2), a little (1), or not at all (0) when climbing several flights of stairs?" The variable ranged from 0 – 4 with higher scores indicating worse health. The Cronbach's alpha was .81.

Re-incarcerated status—A dummy indicator was used to identify respondents who were re-incarcerated at each follow-up interview point. All reincarcerated subjects were interviewed.[6]

The following demographics were measured at baseline and considered time invariant. **Race** was measured using the dummy variable "African American" with "White" and "Hispanic/other" as the reference category. **Age** was measured as chronological age at release from the instant incarceration. An education indicator measured whether the respondent completed high school or received a GED (**high school/GED**).

Married/partner was measured as a dichotomous variable—where the value of "1" indicated whether the person was married or had a steady partner. This variable was measured as *time variant*, to account for respondents who might change their marital status after release from prison.

Sex was not included in our analyses as our sample only contained men in the SVORI. We chose to restrict the analyses to men for this study as child support obligations largely burden men, especially incarcerated men (Sorenson, 1997; Sorenson & Oliver, 2002).

Chapter 4: Who has Child Support Debt?

The current chapter describes the characteristics of the men who reported being required to pay child support and those who have accrued child support debt. We first examine descriptive characteristics for the sample and then take a closer look at the past and current employment-related characteristics for those required to pay child support versus those without child support obligations. For this descriptive section we do not use imputation to address missing data, but report the number of respondents with missing data, where appropriate.

Only males with children were asked questions about child support payments and related debt. Of the 1,697 men in the SVORI sample, 13 respondents (0.77%) did not answer the question related to having children. Of the remaining respondents, 1056, or 63%, reported having at least one child, with 1,011 men, or 60%, having children under the age of 18. The percentage who report having children in the SVORI sample is somewhat larger than the national numbers provided by Bureau of Justice Statistics (BJS) (Glaze and Maruschuk, 2008). BJS reported that 52% of male state inmates indicated they had children under the age of 18 (the data are based on 2004 Survey of Inmates in State and Federal Correctional Facilities).

Table 2 shows the frequency distribution for the number of children that respondents had for those respondents with minor children (n=1011). Forty percent of the sample with minor children (25%) reported having one child and 16% reported having four or more. Of the 1,011 males reporting having children under 18, 312, or 31%, were required to pay child support during the six months prior to incarceration. Of this group, only 57% of those with required payments reported having made the payments prior to their incarceration. The overwhelming majority (92%) owed back support (i.e., had child support debt). Table 3 summarizes these numbers and shows the amount of child support debt reported.

Table 2. Respondents' Number of Children, SVORI Male Sample with Children under 18 (n=1011)	
Number of Children	**%**
1	40.26
2	26.81
3	16.82
4	9.20
5	3.36
6 or more	3.55

Table 3. Descriptive Statistics for Males with Child Support Obligations (n=312)[a]	
Provided primary care for at least one child pre-incarceration	41.48%
Made the payments (before current incarceration)	57.37
Had court order for support modified while incarcerated	26.50
State forgave/decreased some or all of back support	6.72
Owes no back child support	7.97
Owes less than $1,000 in back child support	7.84
Owes $1,000 to $2,999	15.30
Owes $3,000 to $4,999	18.43
Owes $5,000 or more	58.43
Missing info on amount of back child support	*18.27*

[a]Percentages calculated on valid cases (excludes missing)

An interesting point from Table 3 is that roughly 42% of males with child support orders indicated that they had primary care responsibilities for at least one child before their incarceration. The question was asked to respondents as follows: *"During the six months prior to your incarceration this time, did you (if involved in steady relationship and lived with that person before incarceration: did you and your partner) have primary care responsibilities for any of your own children under the age of 18? By 'your own' we mean your biological or legally adopted children. By 'primary care responsibilities' we mean that the children lived with you most of the time, you fed and clothed them, and that you were not paid for this?"* If a respondent indicated having primary care responsibilities, it could be that he was informally taking care of

the children for whom he owed child support, or that he had additional children for whom he was responsible that were not associated with the child support order. It is not possible to understand this from the data. Looking across the entire SVORI sample, those with and without child support orders, 48% indicated they had primary care responsibilities for at least one child. This is very similar to the findings from the Bureau of Justice Statistics' 2004 Survey of Inmates in State and Federal Correctional Facilities data—54% of fathers in state prisons indicated they had primary financial responsibility for at least one minor child (Glaze & Maruschak, 2008).[7]

Table 3 also shows that roughly a quarter (27%) of the sample reported having had their child support orders modified while they were incarcerated.[8] Of the 12 states represented in the SVORI sample there were differences in the percentages of respondents reporting they made the payments, owed over $5,000 and had their order changed while incarcerated (see Table 4). Tests of statistical significance were not conducted because the cell sizes were too small. There was a wide range across states in the percentage of respondents who reported making their child support payments in the period before incarceration, from a low of 35% in Maryland to 75% in Indiana. Table 4 shows that there were five states where 50% or more of their respondents reported that they owed over $5,000 in back support. The percentage of respondents reporting they had their orders modified also varied widely across states. This is likely due to different laws regarding whether child support orders can be modified during an incarceration. It is notable that half the respondents in Washington State had their orders modified. In Washington State, another 27% indicated that the state forgave or decreased the amount of back support owed. Five states had no respondents report that the state forgave or decreased back pay.

Table 4. Differences on Child Support Order Characteristics at Baseline, by State [a]

State	Made payments before incarceration	Owed over 5K	Had order changed while incarcerated?	State decreased/ forgave back support
Indiana	75.00%	50.00%	20.00%	15.00%
Iowa	68.63	66.66	31.37	6.12
Kansas	45.45	45.45	27.27	0.00
Maine	36.84	47.37	27.78	5.88
Maryland	35.14	40.54	25.81	0.00
Missouri	46.67	53.33	13.33	0.00
Nevada	52.63	63.16	37.50	7.69
Ohio	50.00	33.33	0.00	0.00
Oklahoma	46.67	46.67	30.77	0.00
Pennsylvania	63.89	22.22	42.86	3.70
S. Carolina	70.91	54.54	11.11	10.42
Washington	42.86	21.43	50.00	27.27

[a]Percentages calculated on valid cases (excludes missing)

Table 5 shows the demographic and criminal justice-related characteristics of the men with minor children who had child support orders, those who did not, and highlights statistically significant differences between the two groups. The results of this table and the following table address our first research question [RQ1]: Are the demographic, criminal justice and employment-related characteristics of incarcerated men with minor children with child support orders significantly different from incarcerated males with minor children without child support orders? There are significant differences in means for a number of variables. Males with child support orders are, on average compared to the rest of the male SVORI sample with children under 18, significantly older, have more past convictions (controlling for age), less likely to be convicted of a violent crime for their instant incarceration, more likely to have had alcohol and other drug treatment (pre-incarceration), and have had fewer days incarcerated with regard to

their instant incarceration.

Table 5. Baseline Difference of Means T-Tests for Key Demographics, Respondents with Child Support vs. Without, for Respondents with Children under 18

Variable	Mean for those with CS	Mean for those without CS	*t*-value
Age at release	30.43	29.13	-2.97**
Black	0.55	0.63	2.37*
White	0.36	0.27	-3.00**
Married/partner	0.48	0.48	0.01
High school/GED	0.62	0.58	-1.22
Family CJ history	0.59	0.59	-0.09
Peers CJ history	0.68	0.64	-1.39†
Age at 1st arrest	16.47	15.84	-1.94†
Homeless prior to incar.	0.13	0.12	-0.39
Arrest rate	0.54	0.52	-0.52
Number juv. incarc.	3.67	3.89	0.44
Number of prison stays	1.58	1.59	0.06
Conviction rate	0.24	0.21	-2.18*
Drug conviction for instant incar.	0.38	0.37	-0.32
Violent conviction for instant incar.	0.32	0.43	3.15**
Prop. conv for instant incar.	0.24	0.22	-0.60
AOD treatment	0.57	0.48	-2.57*
Alcohol use—recent	0.84	0.82	-0.58
Days incarcerated	769.99	905.60	2.91**

†p < .10, *p < .05, **p < .01, ***p <.001

Table 6 highlights significant differences in means for the job-related characteristics of men with minor children who have child support orders compared to men who do not have child support orders. This table also includes relevant items for service needs and receipt and a number of scales for interpersonal and psychological characteristics. Male respondents with child support reported an increased need for child-related support services and a higher likelihood of receiving any child-related service while incarcerated. They were also more likely to be employed six months prior to their incarceration and reported receiving a lower amount of money from illegal income and the difference in number of hours per week worked at a job pre-incarceration

approaches significance, with those with child support orders reporting more hours. Males with child support on average had significantly higher scores on the depression scale.

Table 6. Baseline Difference of Means T-Tests for Employment, Service Need and Receipt, and Interpersonal Variables, Respondents with Child Support vs. Without, Respondents with Children under 18

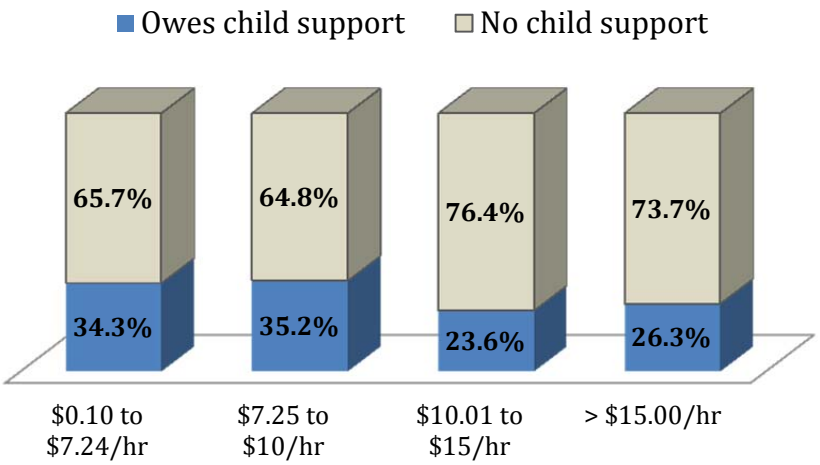
Variable	Mean for those with CS	Mean for those without CS	*t*-value
Self-reported need for employment services	0.99	0.99	-0.84
Self-reported need for child-related services	0.96	0.79	-9.55***
Received any employment skills in prison	0.73	0.74	0.15
Received any child-related skills training-prison	0.36	0.25	-3.71***
Employed 6 months prior to incarceration	0.74	0.66	-2.43*
Hours/week at pre-inc job	43.36	41.02	-1.87†
Supported self with illegal activity prior to incar. (yes/no)	0.41	0.47	1.86†
Amount illegal income (1=all to 5=none)	3.83	3.48	-3.33**
Legal cynicism scale	5.43	5.67	1.26
Ready for change scale	14.04	13.85	-1.12
Anxiety scale	7.79	7.41	-1.89
Depression scale	8.77	8.13	-2.43*
Hostility scale	6.58	6.34	-1.39
Interpers. sensitivity scale	7.65	7.33	-1.42

†p < .10, *p < .05, **p < .01, ***p <.001

Because there were significant differences in means for job-related characteristics, and jobs are an important aspect of one's ability to pay child support, we examined the hourly pay pre-incarceration for SVORI respondents with jobs. For those respondents with a job in the six months prior to incarceration (n=1083), the average hourly salary for the entire SVORI sample was $10.52. For those with child support, the hourly salary was $10.72. Figure 1 shows the

differences in hourly pay pre-incarceration between those with child support orders when pay is broken down into four ranges. The proportion of men with child support is much lower in the two lower hourly pay ranges than compared to the two highest ranges ($10 to $15 per hour and over $15 per hour). There were only a handful of respondents with child support orders and jobs who appeared to make a good wage pre-incarceration—only 18 respondents reported having jobs where they made over $15 per hour (not shown). It is not known whether the respondents worked full time at these higher paying jobs and whether the jobs were permanent.

Figure 1. Hourly salary for those employed pre-incarceration



To further understand the needs of individuals with child support orders we examined the SVORI data to determine the key needs reported by the respondents. The SVORI evaluation interviewers asked respondents to report on a number of needs across a wide range of domains. After the respondents answered either yes/no to a list of prompted needs, asked respondents to list their top two needs. Table 7 reports the frequencies for male respondents with child support for whether a skill/services was listed as a "top two" need. The table reports frequencies at baseline and at three months post-release. The three-month frequencies are weighted to correct

for attrition. Needs related to children or child support are highlighted in bold text. At baseline, 15% of respondents with CS reported child support payment assistance as a top two need. Interestingly, this percentage dropped to 13% at three months, but the percentage reporting the need for child support *modifications* as a top need increased from 13% at baseline to 18% at three months post incarceration. Furthermore, this increase put the need at the third most frequently listed top 2 need (from this list of needs).[9]

Table 7. Top Needs[a] Identified by Fathers with Child Support Orders

	Baseline	Wave 2 (3 mos.)
A job	30.2%	24.7%
Driver's license	24.4	29
More education	16.4	11.8
Job training	15.1	6.5
Child support payment assistance	**14.5**	**12.9**
Child support debt modification	**12.9**	**17.7**
Place to live	12.9	14
Financial assistance	12.2	11.8
Transportation	7.1	14.5
Access to food/clothing	5.1	0.5
Medical care	4.5	3.8
Custody modification	**4.2**	**3.2**
Parenting Skills	**4.2**	**8.6**
Alcohol/Drug Treatment	4.2	3.8
Life Skills	2.6	0.5
Personal Relationships Skills	2.6	2.2
Health Insurance (public)	2.6	6.5
Mental Health Care	2.6	3.8
Money Management Skills	2.3	3.8
Religious Assistance	2.3	3.8
Legal Assistance	**1.9**	**4.8**
Documents for Employment	1.6	0.5
Child Care	**1.0**	**1.1**
Public Financial Assistance	1.0	1.1

[a]Percentage of respondents who chose need as a "top two" need across all their stated needs

Another interesting finding related to one's parenting obligation is that the frequency of reporting needing parenting skills as a top need more than doubled after release from prison (as did legal assistance, which may be related to an interest in modifying child support orders or

payments). With regard to the needs that were most often reported as top needs, the most oft-cited top needs at baseline were the need for a job and a driver's license. These were also the highest ranked top needs after release (although their ranking flipped).

In the next section, we examine our second research question: *Did SVORI clients receive more support and services related to child support orders and modification of debt after release from prison than non-SVORI participants?* Table 8 reports descriptive data on how many fathers with a child support obligation reported certain child support service needs and other related service needs, as well as how many received those services by the three-month interview. We focus only the period three months post incarceration because this is typically the crucial reentry period for returning prisoners (Petersilia, 2003), and we want to limit issues with attrition.

On average, 68% of respondents reported having service needs in the following domains: (1) job training, (2) child support payment assistance, (3) modifications in child support debt, (4) custody modifications, (5) legal assistance, (6) financial assistance, (7) documents for employment, (8) a job, and (9) money management skills. The highest ranked among these domains was financial assistance, with 85% of fathers with child support reporting it as a need. The next four most identified child-support related needs were child support payment assistance (79%), modifications in child support debt (77%), job training (76%), and a job (73%). Of the needs listed in the table, the least frequently cited need was legal assistance (54%).

The subsequent columns reflect the percentage of fathers (SVORI and non-SVORI) with child support who identified having these needs and reported receiving services in these areas. Twenty-eight percent of respondents reported receiving assistance in finding employment, and 21% received assistance in obtaining employment documents. Seventeen percent received job training. Eleven percent received assistance modifying child support obligations, and 3%

reported child support payment assistance. In the remaining needs categories, less than 5% received services for these child-support related needs. The final two columns indicate, as expected, that SVORI respondents who reported having service needs in these areas were more likely to receive them than non-SVORI respondents. Although more SVORI clients received each of the services listed, the differences were only significant or marginally significant for three service areas: job training, modifications in child support debt and assistance finding a job. The lack of significance in some of the other differences may likely be due to small cell sizes. Notably, 16% of SVORI clients received assistance paying child support compared to only 5% of respondents not in the SVORI program, and no non-SVORI respondents reported receiving job training at three months out compared to roughly a quarter in SVORI.

Table 8. Child Support-Related Service Needs from Baseline and Receipt at 3 Months

	All Male Respondents with CS		SVORI Clients v. Comparison Group for Those Who Reported Need	
	Reported as a Need at Baseline (those with CS)	Of Those with Need, Percentage Received 3 Months Post Incarceration (those with CS)	SVORI Clients Received Service (3 Mos.)[a]	Non-SVORI Received Service (3 Mos.)[b]
Job training	76.28%	16.67%	23.33%†	0%
CS payment assistance	79.35	3.47	5.06	1.54
Modifications in CS debt	86.59	11.48	16.42†	5.45
Custody modifications	49.03	1.08	2.00	0.00
Legal assistance	53.85	5.00	8.00	2.00
Financial assistance	85.26	3.66	4.60	2.60
Employment documents	47.76	21.43	21.74	21.05
Assistance finding a job	73.63	27.86	36.84**	17.19
Money management	67.95	2.34	2.90	1.69

†p < .10, *p < .05, **p < .01, ***p <.001; CS = Child Support; [a]denominator is all SVORI treatment group respondents with CS who reported need at baseline; [b] denominator is non-SVORI respondents with CS who reported need for this service at baseline.

Table 9 is a count regression model predicting the number of services received in the three months post-release for those who reported child support obligations at baseline. The count of services variable was created by summing the dichotomous variables for receipt of the nine different services related to child support obligations, related debt or finding employment that are listed in Table 8. Although the scale had a possible maximum value of 9, the values ranged from 0 to 6, with 57% of the wave 2 respondents indicating they didn't receive any of the 9 services. The regression analysis uses the propensity score-based treatment weights created by SVORI researchers (see Lattimore & Visher, 2009:27-30). Results produce incidence rate ratios (IRR), which can be interpreted as the independent effect of a one-unit change in X on the incidence rate of Y, in our case receiving an additional child support-related service. Receiving the SVORI treatment significantly increased the incidence rate (179%) of receiving an additional child support-related service ($p < .001$).

Table 9. Negative Binomial Regression of CS-related Services Received for those with CS obligations at 3 Months (n=185)

CS Services	IRR	Std. Err.
Age	1.011	0.021
SVORI treatment group	2.787***	0.597
Child support at baseline	1.591†	0.430
African American	1.420	0.304
Hispanic	1.252	0.565
High school/GED	2.453**	0.648
Index offense – property	0.498*	0.142
Age at first arrest	0.975	0.022
Days incarcerated	1.000	0.000
Pre-prison employment	1.003	0.197
Physical health problems	0.846†	0.081

†p < .10, *p < .05, **p < .01, ***p <.001
Analyses are propensity-score adjusted.

The effect of having a high school education or GED raised the IRR by 145% ($p < .01$). Being convicted of a property offense, as opposed to a different offense category, resulted in a 50% decrease in the incidence rate for service receipt. In the subsample of fathers reporting child support debt at baseline, the effect of reporting child support obligations at wave 2 resulted in a marginally significant 59% increase in the incidence rate for service receipt ($p < .10$).

Table 10 details the results of a similar count regression model, but the model uses the entire sample of male respondents, not just those with child support obligations. The model

Table 10. Fixed Effects Negative Binomial Regression of CS-related Services Received, Entire Male Sample at 3 Months (n=980)

CS-related Services	IRR	Std. Err.
Age	0.997	0.008
SVORI treatment group	1.699***	0.172
Child support	1.077	0.113
African American	1.458**	0.159
Hispanic	1.160	0.190
High school education	1.120	0.122
Index offense- property	1.017	0.130
Days incarcerated	1.000**	0.000
Physical health problems	0.991	0.048
Iowa	1.382	0.334
Indiana	1.182	0.294
Kansas	1.208	0.362
Maryland	0.694	0.190
Maine	0.840	0.295
Pennsylvania	0.758	0.213
South Carolina	0.769	0.175
Washington	1.152	0.392
Oklahoma	0.769	0.236
Missouri	1.044	0.243
Nevada	1.303	0.294

†p < .10, *p < .05, **p < .01, ***p <.001
Note: Ohio is reference category for all states in model.
Analyses are propensity-score adjusted.

assesses predictors with regard to the number of child support-related services former prisoners received by the three-month interview (n=980). Similar to the above model, this analysis was weighted to reflect any differences found between the treatment and control group. State controls are included in the model to account for any state-level variation in service receipt, which in turn fixes the effects of the other predictors in the model to the individual level (note we did not add state controls to the earlier model given the small subsample size of n=185).

Being a SVORI participant (compared to a non-SVORI participant) resulted in a 70% increase in the incidence rate for receiving one additional child support-related service ($p < .001$). The effect of being African American (compared with White and Hispanic) resulted in a 46% increase in the incidence rate. Notably, reporting having child support obligations (either at the baseline or three-month interview) did not significantly predict receiving child support-related services at the three-month follow-up.

To answer the research question about differences in service receipt for SVORI clients versus the comparison group, from these analyses we can conclude that those respondents in the SVORI treatment group were more likely to receive a higher number of child support-related services or related financial or legal services than those respondents who did not receive the SVORI treatment. When examining services provided in prison, it is not surprising that a significantly higher mean percentage of males who received child-related services/skills had a child support obligation. What is interesting is that in the full regression model (Table 10), we found that having child support obligations was *not* significantly associated with receiving more services related to having child support orders or related debt. Perhaps this is so because it was only through SVORI participation that males receive detailed needs assessments and/or case management that made it possible to have services tailored to the needs of the individual.

Chapter 5. Longitudinal Associations among Child Support, Employment and Recidivism

Conceptual Model and Analysis of Longitudinal Data

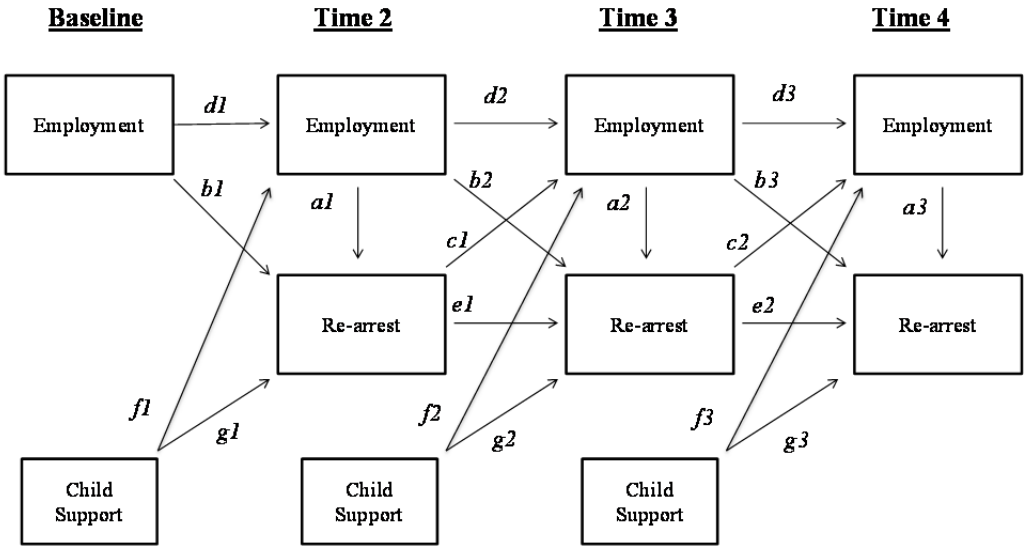
To address the remaining research questions we created and tested a longitudinal model using a structural equation framework. The remaining questions include: (1) Does having legal child support obligations decrease the likelihood of employment in later waves, net of key demographic and criminal justice history factors? (2) How does employment influence the relationship between child support debt and recidivism? And (3) is family instrumental support a significant predictor of reduced recidivism in models assessing the relationship between child support obligations, employment and recidivism?

The panel nature (i.e., repeated observations of the same people over time) of these data is leveraged for two related reasons. First, items for child support debt, employment, rearrest, family support, and other key variables are time-variant, thus we can more accurately capture how levels of our key variables influence the outcomes variables over time in the reentry process. Second, panel data analysis allows for previous levels of key variables to be incorporated in the analyses. In this way, relationships examined no longer reflect the effect of X on Y, but rather *changes* in X on later *changes* in Y. While it is impossible to preclude the fact that some third, unidentified, time-varying variable Z is causing both changes in X and Y, this method marks a strong improvement over traditional cross-sectional methods that suffer potential endogeneity and time-ordering issues (Berrington, Smith, & Sturgis, 2006; Wooldridge, 2010).

In the current analyses, employment and recidivism outcomes are treated as endogenous, and therefore affect each other over time. The core model indicating the hypothesized paths for

the two key outcomes (without the covariates) and the main predictor (child support obligations) is shown in Figure 2. Following Wilson's (1997) deindustrialization model by which unemployment leads to changes in routine activities and increased future criminal behavior, we assess the impact that unemployment has on recidivism (job → rearrest). Within each wave, the cross-sectional impact of being employed is assessed on the likelihood of re-arrest (paths a1, a2, and a3) for each of the waves post-baseline. Longitudinally, the impact of being employed at one time point is assessed on changes in re-arrest at later point (paths b1, b2, and b3). Conversely, the impact of being re-arrested on the likelihood of later changes in employment status is analyzed (paths c1, c2, and c3).

Figure 2. Conceptual Model for Longitudinal Assessment of Child Support, Employment and Recidivism



Baseline interviews conducted approximately 30 days prior to institutional release. Time 2, Time 3, and Time 4 interviews conducted at 3-, 9-, and 15-months, respectively.

These hypothesized paths are motivated by theoretical and empirical work emphasizing the powerful and stigmatizing forces behind official arrest, and its social consequences, such as the impact on one's likelihood of securing legitimate employment (Maruna & Immarigeon, 2004; Uggen, Manza, & Thompson, 2006). Our preliminary analyses (not shown here) showed that child support having lagged impacts on re-arrest and employment fit the data much better than models with child support affecting outcomes in the same wave (BIC difference = 15). As such paths f1 through f3 and paths g1 through g3 in Figure 2 illustrate the hypothesized associations between child support obligations and employment and rearrest, respectively. The models also included paths for the association between each outcome and itself across waves (paths d1 through d3 and e1 and e2). Models with the strongest fit in terms of BIC were models with employment and re-arrest having lagged impacts on each other, child support lagged on both outcomes, and employment affecting re-arrest in the same wave. It is important to note, that with regard to employment and re-incarceration, the SVORI protocol carefully asks respondents who were re-incarcerated (at each interview): *"After you were released but before you were re-incarcerated, how did you support yourself?"* This phrasing helps establish whether a respondent held any job in that post-instant incarceration period but before he was reincarcerated for a violation or a new offense.

Employment and recidivism outcomes are measured across multiple interview time points: both are recorded at 3, 9, and 15 months post release. The independent variables, including child support, family support, marital status, supervision status, job services, physical health problems, and re-incarcerated status, are time-varying; type of offense, SVORI-group assignment, and all demographics are time-invariant. Because the key outcomes of interest are dichotomous (employment and rearrest), generalized structural equation modeling (GSEM) in

Stata 13 was used to estimate the paths. Each outcome was regressed on child support, instrumental family support, marital status and other covariates.

Missing data were dealt with in the analyses in two complementary ways. First, the Heckman probit correction (-heckprobit-) (StataCorp, 2013) was used to address sample selection bias due to attrition at follow-up waves (3, 9, and 15 months). Unlike the two-step Heckman correction that models the selection equation using probit regression, obtains the inverse mills ratio (IMR) for each case, and includes the IMR in an OLS model, the Heckman probit correction in GSEM uses latent variables and probit regression only (StataCorp, 2013). In this way, it is able to model dichotomous outcomes, unlike the two-step Heckman correction (Bushway, Johnson, & Slocum, 2007). In the GSEM approach, a variable indicating whether the respondent selected (selected) into the sample at that interview was used. A latent variable (L) with a variance constrained to 1 affects the outcome of interest (L→JOB), in addition to affecting the selected variable (L→selected), with the latter path's coefficient constrained to 1. Paths from independent variables are drawn toward both the outcome of interest and the selected variable.

Since the selected variable should use information from some variables that are not affecting the outcome of interest (StataCorp, 2013), the variable AGE was used to predict selection but not employment. This variable was chosen because it was removed from the primary equation because of collinearity issues with the variable instrumental family support.

As discussed in the measures section, the outcome variable for recidivism (based on official re-arrest records) was complete data at every time point. Therefore, the Heckman correction was not applicable for these paths. Paths predicting rearrest at 3, 9, and 15 months use

a logit link function, while the paths toward employment use a probit link. Results from both are exponentiated into odds ratios.

The second method of addressing missing data is through GSEM's maximum likelihood estimation in Stata 13. This approach uses equation-wise deletion rather than listwise deletion, which does not automatically drop cases that have some missing data. Instead, it uses all of the data available it when estimating parameters (StataCorp, 2013). For example, a respondent who was interviewed at baseline and nine months only would be included in the analyses relevant for those time points, and dropped from the equations where there were missing values. Other longitudinal estimating techniques, such as the repeated measures ANOVA, would drop this respondent entirely. Using this method, GSEM was able to use at least some data from all but one of the respondents in our sample (n=1,010). While the Heckman correction and the benefits of GSEM address the problem of attrition, it remains a limitation in the current work.

In addition to the variables found in the main model in Figure 2 (i.e., employment, rearrest, and child support), the cross-lagged panel model included a set of covariates theoretically and empirically grounded in the desistance and reentry literature. These variables, described in more detail in Chapter 3, included: high school education/GED; having children under 18; age at first arrest; on probation/parole supervision; Married/partner; family instrumental support; property offense for instant incarceration; SVORI participation; received job services in prison; physical health problems; reincarcerated; and race. Age at release was used in the Heckman correction models and as a result does not appear in the results tables. To create a final path model that was as parsimonious as possible, some variables were only used to predict one outcome. We modeled physical health problems and job services in prison as having

paths to employment but not rearrest; on supervision and age at first arrest were modeled as predictors of rearrest but not employment.

Results

Table 11 (which can be found at the end of this chapter) provides the descriptive statistics for the key variables. Employment outcomes varied over time, with more people reporting legitimate employment at Time 3 and Time 4 than Time 2. Sixteen percent of the sample were arrested between release and Time 2, and 32% were arrested between Time 2 and Time 3, and Time 3 and Time 4, respectively. Percentages of respondents reporting having child support were similar over time, and correlations for the child support variables were strong across waves (See Appendix for the full correlation matrix).

Propensity score matching techniques (PSM) in Stata 13 (teffects psmatch) were used to control for observable differences between those with and without child support obligations. Following the literature on matching techniques, we first focused on choosing variables that occurred before the key variable of interest occurred (i.e., having a child support order) (Dehejia & Wahba, 2002). The following variables were chosen; age, race, education, marital status, age at first arrest, and type of instant offense. We also included the indicator of "ready for change" (a turning point scale) because we believe that this variable may represent general motivation, which is applicable to paying down debt and obtaining a job. PSM's nearest neighbor function was implemented in Stata and it returned a minimum of three matches per one case with a child support obligation. The maximum matches per one case was five. Covariates on which the groups were matched showed reasonable overlap. Results (see Table 12) show that, after matching on these covariates, the average treatment effect (ATE) of having a child support obligation on rearrest at Wave 2 is -0.043 ($p < .10$, two-tailed). In other words, those with the

obligation were slightly less likely to be rearrested at Wave 2 than those without it—the coefficient was marginally significant. Conditional predicted probability scores of being in the treated (CS) group versus not were then estimated to create propensity scores so they could be included in the final path analysis.

Results from the propensity score adjusted cross-lagged panel model are shown in Table 13 and 14 for re-arrest and employment outcomes, respectively. Findings show that the effect of having child support before incarceration was associated with a marginally significant 43% reduction in the odds of re-arrest at the three-month interview ($p < .10$, two-tailed). The following two waves showed no significant effects. Child support obligations at the three-month interview reduced the odds of an official arrest between the three and nine month interview by 32% ($p = .17$). For the last time period, the reporting having child support at the nine-month interview was associated with a 17% reduction in the odds of being arrested between the nine- and 15-month interview ($p = .49$).

Employment significantly reduced the odds of re-arrest for two out of three cross-sectional paths examined. The path was not significant ($p = .19$) for employment at 9 months on arrest at 9 months, although it was in the same direction as the other waves. Longitudinal analyses showed that employment at an earlier time point did not exert significant impacts on recidivism at a later time point. However, for one path, re-arrest significantly predicted changes in employment at the next wave. The effect of being arrested between release and the three-month interview was associated with a 41% reduction in the likelihood of reporting employment between the three- and nine-month interviews ($p < .01$). This effect was not significant at the next wave (15 months), although the direction of the association was the same (OR = .89).

Marital status, which was time-varying, did not show significant effects on rearrest in the reentry process. At Time 2 and Time 3, the effect of being married or having a serious partner was associated with a reduced likelihood of rearrest, but neither effects reached conventional alpha levels. With respect to employment, reporting being married at baseline and at Time 4 was associated with increases in the likelihood of reporting being employed in the same wave ($p < .05$). Instrumental family support only showed a small and marginally significant impact on one outcome. A one-unit increase in instrumental support at the 15-month interview was associated with 4% decrease in odds of reporting employment in the same wave ($p < .10$). Other models tested if instrumental support had lagged impacts on either outcome; no significant effects were found.

There were a few covariates that were significant in predicting rearrest. At Time 2 these were education (negative) and reincarcerated status (positive). At Time 3, significant covariates were education (negative; $p < .05$), and being under supervision (negative; $p < .05$). Both prior rearrest and reincarcerated were significant (both strongly positive). By Time 4 results showed that property offenders (compared to all other offenders) had a higher likelihood of rearrest ($p < .05$), in addition to prior rearrest and reincarcerated status. Regarding employment at Time 2, the effects of having a high school education or GED significantly and positively predicted employment ($p < .05$). Race (African American status) ($p < .01$) and having more physical health problems ($p < .001$) decreased the likelihood of reporting legal employment. Coefficients for education, race, and physical health problems more or less showed the same effects through Time 3 and Time 4. At Time 4, SVORI participation was significantly associated with reporting legal employment (OR = .33, $p < .05$). This last result mirrors findings from the 2004 evaluation

of the SVORI (Lattimore & Visher, 2009). Lattimore and Visher found that SVORI participation increased receipt of employment-related services and was linked to better employment outcomes.

Bayesian information criterion (BIC) and Akaike information criterion (AIC) analyses were used to assess relative model fit. This is the preferred approach when assessing goodness of fit for models using GSEM, as traditional methods of model fit in structural equation modeling (RMSEA, CFI, etc.) cannot be computed in GSEM.[10] Generally, lower AICs and BICs indicate superior relative model fit (Long, 1997). Model BICs that are lower by 6 or more are considered to be "very strongly" better (Raftery, 1995). AIC and BIC analyses showed the strongest model fit for the following paths: child support having lagged impacts on re-arrest and employment, employment and re-arrest having lagged impacts on each other, and employment affecting re-arrest in the same wave. The path configurations in this model yielded a BIC 15 points lower than any other models.

State Context and Panel Models

Attempting to model state-level variation in a longitudinal model of this size is difficult. Adding dummy controls for each state in the SVORI would create an "overparameterized" model with 77 new paths--11 states x 7 outcomes (one state would be the reference category; Tanaka, 1987). Current Stata software cannot estimate such a model. Still, the question of whether any of the impacts of child support obligations seen varies by state context remains an interesting question worth investigating. Indeed, it would seem plausible that the effects of having a legal child support obligation would be different from state to state given that each state has their own office of child support enforcement with a varying set of policies and procedures. To address possible state variation, we estimated a model where the outcome variable is state mean-centered. Mean-centering a variable can be interpreted, for example, as giving respondents a

"score" for rearrest, which is represented by their deviation from their state's mean rearrest score. For example, if the respondent was rearrested (score of "1") and the average rearrest in his state was 50%, then his rearrest score for this state mean-centered outcome would be 1 - .50 or .50. Conversely, if a person from the same state was not rearrested (score of "0"), their score would be 0 - .50, or -.50. As such, the outcome is converted into a continuous variable that is conceptually different from a dichotomous rearrest variable, but takes into account state context by removing all interstate variation from the model. The interpretation of this approach (in a structural equation model where the outcome is now continuous) is the effect of X on the b-unit deviation from the state's average score on rearrest.

Table 15 shows the results of this state mean-centered structural equation model. We only modeled the outcomes at Time 2 because we had found a marginally significant effect of child support on rearrest at Time 2. While findings show that significant impacts of current employment and education persist, the effect of having a child support obligation, though in the same direction of the coefficient from our key model without state variables, is not significant, even at the marginal level of $p < .10$. Specifically, the effect of having child support is associated with a -.016 deviation from the state's average rearrest score. This finding indicates that the effects of legal child support obligations are different in different states. In other words, it is less that a child support obligation matters per se at the individual level with respect to rearrest, but that having child support in *certain places* can have an impact on rearrest but not in others. This finding has strong theoretical implications and opens up new lines of inquiry for research in this area.

Discussion of Key Findings

In the context of unprecedented levels of criminal justice and child support debt, many

former prisoners face once they are released from prison (Bannon et al., 2010; Beckett & Harris, 2011; Patterson, 2008), the analyses presented in the current chapter sought to assess whether child support obligations in particular affect employment and rearrest. In terms of recidivism, the literature supports both the possibility that child support debt could be protective and, conversely, that debt may lead to criminal activity, and which, in turn, leads to a higher likelihood of rearrest. We found tentative support in the direction of child support being a protective factor. Those who had child support obligations were *less* likely to be rearrested compared to those who did not report having this obligation, controlling for a number of important covariates—the relationship was marginally significant. Although we did not formally test the strength of the relationship between the father and the family, from a life course perspective, it could be that having a formal child support obligation can strengthen the returning prisoner's bond to his family. This increased social tie might then act as a protective factor for future criminality. Alternatively, from a desistance framework, one could argue that having child support obligations or debt helps to foster or bring out a change in attitude or identity. This change, in turn, might reduce criminal participation (CS→prosocial identity/attitude→desistance). In other words, future work, in line with Maruna's research on identity and desistance as a process, should assess if increased prosocial attitudes or positive identity change mediates the effect of child support on reoffending. Future research should also more closely examine familial relationships when assessing the relationship among child support obligations and reentry. Regardless of the mechanism at play here, our findings show that the protective effect of having this legal obligation fades into non-significance during the remaining twelve months of observation. This pattern resonates with the reentry literature's focus on the critical time period immediately after release (Petersilia, 2003). Once a former prisoner is back

into the community for an extended time, other criminogenic dynamics can begin to set in, and the protective efforts of earlier reentry interventions may disappear.

Goffman's (2009) study of men "on the run" in Philadelphia could provide an alternative interpretation for these results. She argued that the primary concern among former prisoners was to not return to custody. As such, they would "cultivate unpredictability" as a strategy to avoid being detected by police or other authorities for other crimes or technical violations (Goffman, 2009). Since many jurisdictions have adopted stringent child support policies, this could be another reason or incentive for former prisoners with child support obligations to be on the run. Because our measure of recidivism was official rearrests, perhaps the former inmates with child support obligations were more adept in avoiding police confrontations, perhaps avoiding police arrests altogether.

Our final statistical models, however, showed that the effect of having a legal child support obligation disappears once state context is accounted for. These results are instructive for theory. They suggest that theorizing on the impacts of legal financial burdens on former prisoners needs to move beyond a simple individual-level model whereby X causes Y among former prisoners nationwide. Instead, the implications for theory are that these obligations matter for some individuals in *some places*. Theorizing and empirically testing state-level factors that shape or condition this effect is a direction that this area of research should pursue. For example, we know that states have wide discretion in crafting their child support policies and enforcement strategies (Cammett, 2010), and some states have much stricter rules vis-à-vis implementation and compliance. In these states, it is conceivable that child support enforcement employees work more closely with probation and parole to connect former prisoners with their families and ensure timely payment. The "what works" literature on reentry also shows that some states are

beginning to address debt through coordinated reentry planning. For example, some states, such as Ohio, have Child Support Enforcement agency staff that directly link returning prisoners with child support obligations to a coordinated reentry program. Future research could unpack state-level dynamics with multilevel modeling techniques (which were not possible using the SVORI data given the number of states in the study).

Taking both the results from the state-controlled and non-state-controlled models into account, one finding is clear: having a child support obligation was not associated with more reoffending. Much conjecture and anecdotal evidence have suggested that having a debt burden imposed by the courts puts a strain on former prisoners once back into the community. These returning prisoners can be threatened with reincarceration and other punitive measures for non-payment. As such, they may be more likely to explore illegal means of revenue, such as drug sales or theft, in order to manage their debt burdens. Although it is possible that child support obligations could have adverse impacts on other important areas of life, our results suggest that, on average, the obligation itself is not fostering new criminal activity after an individual is released from prison. We are not suggesting that judges and other criminal justice system stakeholders turn their attention away from sentenced prisoners with child support orders. The findings from Chapter 4 on the service needs and service receipt for those who have child support orders suggest that there is a vast unfulfilled need for services to assist released and soon-to-be released prisoners with child support obligations. Given the amount of unmet need—for example, our findings showed that of prisoners who stated they needed assistance with child support payments, only 3% received support in the three months after release—our findings have implications for reentry planning. More specifically, prisoner case plans and reentry plans should include an assessment of debt and particular needs related to debt so that linkages to services

could be made upon release. For policymakers, we call attention to the need for more legislative oversight.

Turning to the domain of employment, having a child support obligation did not appear to have any significant effects on this outcome. Perhaps there is no association between the two, or maybe there was not sufficient time in the model for any effect to appear. For example, if having child support affects certain structural barriers in reentry such as being unable to clean up a criminal record history, this could then have an impact on employment, but the effect could be lagged more than what was modeled in our data. Regardless, our results indicate that there is no support for the popular hypothesis that men with child support debt are disillusioned with their criminal justice and economic situation and as a result, turn away from legitimate employment.

As expected, and in support of Wilson's (1997) deindustrialization thesis, employment and rearrest from the same waves were strongly negatively associated. However, since these cross-sectional paths are subject to questions of causal directionality (employment affects rearrest but rearrest also affects employment), we examined the lagged effects of both on each other while controlling for prior employment and rearrest. Testing the longitudinal version of the Wilson (1997) thesis that lack of employment increases criminal behavior, we found no significant relationship between employment at an earlier time period and changes in later arrests.

However, we did find support for the reverse: arrests can decrease the likelihood of being employed later in time (while controlling for reincarceration). An arrest by the three-month interview was significantly and strongly associated with a change in employment (a drop in employment) at the nine-month interview. We couched this pathway using a stigma and labeling framework (Uggen et al., 2006); former inmates who recidivate are not attractive targets for hire.

Alternatively, what we may have uncovered is a process where arrests caused employers to terminate those employees. However, if the latter is the case, one would expect that termination to occur immediately and the effect we found was lagged, lending a bit more credence to the stigma and labeling argument.

Reflecting on life course theory, although we did find a marginally significant effect of having child support obligations on recidivism at three months out, we did not find strong support for other key turning point variables such as employment and marriage (both time-varying measures in our models). In the data, the effects of having a steady partner or being married on arrest was negative at two of three waves, but neither were significant. This could be reflective of the SVORI sample being one that consists mainly of violent and serious offenders. Sampson and Laub's work has shown that violent offenders tend to desist later than property offenders (Sampson & Laub, 2003). In their study, the average age for desistance for violent offenders was 31.3; and for property offenders it was 26.2. The average age at release for the current SVORI sample was 29.2. The lack of a strong and consistent relationship for employment and marriage could also be a measurement issue—our measures did not capture the quality of the job or marriage, and as Sampson and Laub (1993) have shown, desistance is more likely when attachment to a job or marriage is high.

Regardless of the theories at work here, future research should seek to understand how particular formal (i.e., child support orders) and informal obligations of fatherhood interact with factors related to the quality of parent-child relationship in the overall desistance process. Our models did not include measures of the quality of parent-child relationships or the actual parental responsibility held by the respondent (or attitudes toward parental responsibility), nor were they designed to discern differences in relationships or obligations across children for respondents

who had more than one child.

Furthermore, the analyses presented in this report did not examine whether there are mechanisms where child support obligations and heavy debt influences several other critically important and not-often examined health outcomes such as stress, depression, overall health, and substance abuse. The results of the difference in means testing Chapter 4 (Table 6) suggests that there might be differences in depression worth exploring that are associated with having child support obligations. One past study that involved surveys with incarcerated fathers in a maximum security prison found that those males who reported poor relationships with their children were more likely to suffer from depression (Lanier, 1993).

Limitations

As in all studies, our findings need to be qualified by limitations. First, our recidivism dependent variable (i.e., official data on rearrest) is not a perfect measure of recidivism, as some reoffending certainly was not captured in this variable. However, its strength, relative to the self-report measures of recidivism in these data, is the lack of missing information in these data. However, another limitation is that we did not examine other measures of recidivism, such as reconviction and reincarceration. While we acknowledge that recidivism research often contains multiple outcomes measures, we relied on the official rearrest data because of its completeness in comparison with the other recidivism measures—given the extent of missing data in the SVORI data, we believe this strength outweighs any limitations. Further, official arrest dependent variables tend to be preferred in reentry research (Lattimore et al., 2012).

We also acknowledge limitations with our child support measure. We operationalized child support as a dichotomous indicator and, as such, it does not capture information related to how much was owed, how often one paid, how often family or friends helped pay the obligation,

etc. For the most part, the SVORI protocol did not include refined measures on payment information. For the questions related to amount of debt, the incidence of missing data was high and the ranges of the response categories in these variables were large enough (e.g., over $10,000 or more in back due support) that they were not deemed useful to a rigorous examination of the research questions. A further examination of existing qualitative studies also revealed that individuals cannot often quantify the amount of debt they have. One strength of our chosen variable is that it could be theoretically appropriate from a life course, "turning points" perspective. If it is true that having a child support obligation strengthens social bonds and that this leads to lower recidivism, then the important construct theoretically is having the legal obligation in place per se. Still, future work should pursue different operationalizations of child support debt, including how much was owed, and whether payments were made.

Second, with respect to missing data, the SVORI data contain a non-trivial amount of attrition. We addressed potential bias that might arise from this issue in two different ways: GSEM and the Heckman correction. Unlike longitudinal repeated measures analysis that requires complete data at every time point, GSEM can use cases that have some missing data at some waves. This "equationwise deletion" method retains more information than listwise deletion methods that drop entire cases that have missing data. Two, the Heckman correction employed adjusts for sample non-representativeness after the baseline interview. We compared results from Heckman vs. non-Heckman models and found them to be very similar, boosting confidence in the patterns uncovered. While these methods represent new and innovative ways to address missing data, we realize that these methods are not a complete solution to the problem of potential bias introduced by attrition.

Third, the majority of measures used in this study relied on self-report data. With the

exception of measures for rearrest and reincarceration, key variables such as our child support measure derived from self-report data collection techniques. This could present an issue if prisoners and former in this sample did not want to be forthcoming about having this legal financial obligation. We checked the few existing state-level studies of child support among the incarcerated populations and found that the percentages reporting having this obligation were very similar to the percentage among the SVORI respondents (Griswold, Pearson, & Davis, 2001; Ovwigho, Saunders, & Born, 2005). Thus, we have increased confidence that the child support measure in the SVORI data has validity.

Fourth, the way in which SVORI survey questions were asked and the time periods involved can sometimes obfuscate a real understanding of the timing of events in a respondent's life. And any study involving reincarceration has some limitations related to censoring. As we stated earlier, with regard to employment, the SVORI interval protocol asks whether the respondent, if reincarcerated, held any job before his reincarceration—which helps support our choice of modeling whether employment influenced rearrest in the cross-section. It is possible, however, that a respondent simply may have had less opportunity to be employed given their incarceration, particularly if it was a lengthy one. We examined a variety of models here, and used the best fitting model as described in Figure 2.

Conclusions

The financial obligations that encumber criminal justice populations have risen markedly in recent years, yet how the burden of debt impacts released prisoners is not known. We began to address this empirical gap through the examination of a large, multistate, longitudinal reentry data set and examined the impact that child support obligations have on recidivism and employment. While no evidence was found that the legal obligation to pay child support hinders

or facilitates employment, we did find that those with child support obligations were slightly less likely to be arrested during their initial release from incarceration.

With regard to policy implications, there are a number of important points worth making. One, arranging for more former prisoners to have child support debt is not an implication of this work for obvious reasons. Instead, this empirical finding is of practical use if having child support and paying the support acts as a "signal" to help identify those who are most likely to have begun the desistance process (Bushway & Apel, 2012). Whether this signal holds any value in foreshadowing long-term desistance is an empirical investigation worth pursuing.

Two, and perhaps more important, future reentry research might want to determine whether any protective effect of having a child support obligation is due to an increase in informal social control. If so, the relevant policy implication would be that reentry practitioners should capitalize on the finding that child support obligations and perhaps related debt seem to bind males to improving their life outcomes—whether it is in regard to improving their role as a father, overall family life, or general responsibility to be a productive, it is important for practitioners to provide services that support the needs of these men with children and debt burdens. As reentry research has grown exponentially in the last decade, a number of researchers have strongly advocated for family-centric reintegration strategies and counseling programs (diZerega & Shapiro, 2007; Haney, 2003). In addition, the public must be made aware that much could be gained by supporting soon-to-be released fathers in their efforts to pay child support. If, as found in the Maryland study of child support and incarceration, that in all states a quarter of all child support arrears owed to custodial parents are owed by individuals who are incarcerated or previously incarcerated (Ovwigho, Saunders & Borne, 2005), policymakers might think differently about how to prioritize supports for returning prisoners.

Table 11. Summary Statistics				
Variables	**N**	***M***	***SD***	**Range**
Dependent Variables				
T2Rearrest	1011	0.164	0.371	0-1
T3Rearrest	1011	0.323	0.468	0-1
T4Rearrest	1011	0.315	0.465	0-1
Employment (1=yes, 0=no)				
T2Employment	602	0.651	0.477	0-1
T3Employment	588	0.702	0.458	0-1
T4Employment	560	0.677	0.468	0-1
Time-varying Covariates				
Child Support (CS) (1=yes, 0=no)				
Baseline CS	1009	0.309	0.462	0-1
T2CS	603	0.365	0.482	0-1
T3CS	616	0.369	0.483	0-1
T4CS	671	0.399	0.490	0-1
Instrumental Family Support				
T2FamilySupport	591	11.604	2.857	0-15
T3FamilySupport	572	11.173	3.004	0-15
T4FamilySupport	550	11.200	2.961	0-15
Marital Status/Steady Partner (1=yes, 0=no)				
BaselineMarried	1008	0.476	0.500	0-1
T2Married	602	0.630	0.483	0-1
T3Married	616	0.692	0.462	0-1
T4Married	672	0.609	0.488	0-1
Job Services (1=yes, 0=no)				
T2JobServices	603	0.401	0.491	0-1
T3JobServices	616	0.344	0.475	0-1
T4JobServices	672	0.210	0.407	0-1
Physical Health Problems (0-4)				
T2PhysicalHealth	601	0.521	1.103	0-4
T3PhysicalHealth	616	0.584	1.123	0-4
T4PhysicalHealth	672	0.583	1.106	0-4
On Supervision (1=yes, 0=no)				
T2Supervised	602	0.826	0.380	0-1
T3Supervised	670	0.516	0.500	0-1
T4Supervised	613	0.687	0.464	0-1
Reincarcerated (1=yes, 0=no)				
T2Reincarcerated	1011	0.041	0.197	0-1
T3Reincarcerated	1011	0.162	0.369	0-1
T4Reincarcerated	1011	0.229	0.421	0-1
Time Invariant Covariates				
Age at release	1011	29.675	6.441	18-73
African American	1011	0.591	0.492	0-1
Hispanic/Other	1011	0.111	0.314	0-1
White	1011	0.298	0.457	0-1
HS education (1=yes, 0=no)	1011	0.590	0.492	0-1
SVORI participation (1=yes, 0=no)	1011	0.502	0.500	0-1
Employed at baseline (1=yes, 0=no)	1009	0.634	0.482	0-1
Index offense- property (1=yes, 0=no)	1011	0.168	0.374	0-1
Age at first Arrest	1003	16.011	4.839	6-48

Baseline= 30 days prior to release; T2= 3 months post release; T3= 9 months post release; T4= 15 months post release.

Table 12. Treatment Effects Estimation (Propensity-score Matching) of Child Support on Rearrest at Wave 2

Rearrest W2	Coef.	AI Robust S.E.	*p*	95% C.I.
ATE (avg. txt effect) of Baseline Child Support	-.043	.026	.094	-.09three-.007

ATE = Average Treatment Effect; Estimator: propensity-score matching; Outcome model: matching; Treatment model: logit; 938 observations; nearest neighbor (3); min: 3, max: 4. Covariates matched on: age, race, type of offense, education, martial status, age at first arrest, ready for change (turning point scale).

Table 13. Re-arrest Outcomes Estimated via GSEM, n=1010

	Wave 2 (3 mos.)		Wave 3 (9 mos.)		Wave 4 (15 mos.)	
Re-arrest	**OR**	***SE***	**OR**	***SE***	**OR**	***SE***
Prior employment	.744	.204	1.171	.337	1.298	.401
Current employment	.323***	.089	.681	.164	.432**	.132
Child support at prior wave	.568†	.142	.677	.192	.833	.225
HS education/GED (time invariant)	.389**	.502	.583*	.159	1.043	.288
Age at 1st arrest	.995	.033	.996	.028	1.007	.025
African American (time invariant)	1.369	.431	1.306	.373	1.442	.413
SVORI participant (time invariant)	1.069	.290	1.006	.265	1.297	.344
On supervision	.932	.314	.524*	.141	1.265	.337
Married/partner	.665	.184	.656	.192	1.283	.380
Family instrumental support	.981	.047	.942	.040	1.014	.045
Property offense (time invariant)	.840	.339	1.454	.510	1.228*	.438
Prior re-arrest			1.870†	.650	4.110***	1.200
Reincarcerated	15.681***	6.893	8.201***	2.423	10.853***	3.530

†p < .10, *p < .05, **p < .01, ***p <.001, two-tailed tests

Model Log-likelihood	*df*	AIC	BIC
-4000.69	101	8203	8700

Table 14. Heckman-adjusted Employment Outcomes Estimated via GSEM, n=1010

	Baseline		Wave 2 (3 mos.)		Wave 3 (9 mos.)		Wave 4 (15 mos.)	
Employment	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**
Prior re-arrest					.592**	.113	.898	.152
Prior employment			1.468**	.171	2.122***	.299	2.820***	.113
Child support at prior wave			1.013	.123	1.068	.156	.797	.114
HS education/GED at baseline	1.062	.147	1.322*	.152	1.253*	.178	1.209*	.178
Received job services (each wave)			.960	.111	1.080	.157	1.122	.184
African American (time invariant)	.593***	.109	.747*	.090	.710*	.115	.872	.131
SVORI participant			1.193	.137	1.050	.146	1.330*	.190
Physical health probs (time invariant)	1.029	.056	.794***	.039	.807***	.045	.870*	.054
Married/partner	1.387*	.186	1.109	.129	1.040	.164	1.442*	.113
Family instrumental support			.984	.020	1.020	.024	.957†	.024
Property offense	1.373†	.262	.826	.129	.893	.173	1.172	.237
Reincarcerated			1.111	.249	1.296	.237	1.079	.213

†p < .10, *p < .05, **p < .01, ***p<.001, two-tailed tests

Model Log-likelihood	*df*	AIC	BIC
-4000.69	101	8203	8700

Table 15. State Mean-centered SEM Model—Wave 2 Rearrest n=1,011

Rearrest	Coef.	S.E.	p-value
Current employment	-.126***	.032	0.000
Prior employment	.001	.024	0.962
Married/partner	-.013	.032	0.685
Baseline Child Support	-.016	.024	0.497
Property offense	.030	.030	0.323
HS Education	-.040†	.023	0.081
Age at 1st Arrest	-.000	.002	0.977
SVORI participant	-.017	.023	0.463
On supervision	-.009	.040	0.830
African American	.003	.024	0.915
Instrumental Family Support	-.001	.005	0.892
Reincarcerated	.520***	.055	0.000

†p < .10, *p < .05, **p < .01, ***p<.001

Rearrest dependent variable represents the respondent's deviation from the average rearrest score of his state. This procedure controls for state-level context effects. Model estimated uses Stata's 13's SEM maximum likelihood with missing values (mlmv) function.

Model Log-likelihood	*df*	AIC	BIC
-9515.28	104	19238	19750

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Appendix

Table A-1 Correlation Matrix

Bold font indicates correlation coefficients that are significant at $p < .05$

Table A-1	Age	African American	White	Hispanic	Index offense-property	Days Incarcerated	Age at 1st Arrest	Job-Baseline	Job-3 mos.	Job-9 mos.
Age	1.000									
African American	**0.090**	1.000								
White	-0.031	**-0.783**	1.000							
Hispanic/other race	**-0.095**	**-0.424**	**-0.229**	1.000						
Index offense-property	-0.036	**-0.218**	**0.239**	-0.007	1.000					
Days Incarcerated	-0.018	**0.145**	**-0.107**	**-0.070**	**-0.068**	1.000				
Age at 1st Arrest	**0.379**	0.014	-0.003	-0.017	-0.052	**-0.093**	1.000			
Job-Baseline	**0.081**	**-0.132**	**0.120**	0.032	**0.077**	**-0.133**	**0.117**	1.000		
Job-3 mos.	-0.054	**-0.126**	**0.089**	0.068	0.001	0.072	0.037	**0.155**	1.000	
Job-9 mos.	**-0.101**	**-0.130**	**0.130**	0.011	0.020	**0.110**	0.062	**0.135**	**0.333**	1.000
Job 15 mos.	-0.062	**-0.159**	**0.102**	**0.100**	**0.084**	0.050	0.066	**0.139**	**0.344**	**0.394**
Child Support-Baseline	**0.095**	**-0.081**	**0.094**	-0.011	**0.023**	**-0.083**	0.062	**0.069**	0.018	0.016
Child Support-3 mos.	-0.010	**-0.113**	**0.151**	-0.044	**0.112**	**-0.101**	-0.034	0.015	-0.011	0.027
Child Support-9 mos.	-0.003	-0.032	0.049	-0.022	-0.002	-0.028	-0.029	0.040	0.041	0.043
Child Support-15 mos.	0.019	-0.034	0.059	-0.035	0.053	-0.054	-0.000	0.037	0.029	0.000
Rearrest-3 mos.	0.005	**0.069**	**-0.084**	0.0137	-0.006	**-0.077**	-0.026	-0.057	-0.172	-0.163
Rearrest-9 mos.	0.002	**0.060**	-0.024	**-0.068**	0.017	**-0.077**	**-0.079**	**-0.085**	-0.076	-0.145
Rearrest-15 mos.	-0.040	**0.068**	-0.054	-0.028	**0.065**	**-0.102**	-0.053	-0.007	-0.085	-0.050
Family Support-3 mos.	-0.041	0.040	-0.042	-0.001	-0.026	**0.156**	0.041	0.070	-0.012	-0.014
Family Support-9 mos.	-0.012	0.005	-0.004	-0.002	-0.063	**0.110**	0.040	0.045	0.040	**0.092**
Family Support-15 mos.	-0.015	0.072	-0.054	-0.035	-0.022	0.045	0.104	0.051	0.027	0.083
SVORI participant	-0.015	**0.114**	**-0.087**	-0.052	-0.023	**0.125**	0.041	-0.039	0.039	-0.006
Married-Baseline	-0.013	0.041	-0.049	0.007	-0.015	**-0.113**	0.037	**0.070**	**0.083**	**0.083**
Married-3 mos.	**-0.080**	0.027	-0.053	0.037	-0.069	0.046	-0.010	**0.084**	0.053	0.007
Married-9 mos.	-0.039	-0.024	0.004	0.033	0.001	0.024	0.023	0.064	0.049	**0.098**
Married-15 mos.	0.020	-.031	-0.005	0.060	0.011	**0.108**	0.040	0.051	0.079	0.064
Health Problems-3 mos.	**0.165**	0.023	-0.015	-0.013	**-0.093**	-0.025	0.100	-0.039	**-0.206**	**-0.201**
Health Problems-9 mos.	**0.211**	0.027	-0.058	0.042	-0.078	-0.049	0.071	-0.010	**-0.187**	**-0.215**
Health Problems-15 mos.	**0.190**	0.007	-0.046	0.061	-0.062	-0.075	0.066	0.009	**-0.117**	**-0.163**
Reincarcerated-3 mos.	-0.037	-0.002	-0.024	0.039	0.001	0.015	-0.031	-0.041	0.031	-0.070
Reincarcerated-9 mos.	**-0.091**	0.010	0.012	-0.035	0.024	-0.022	-0.074	0.033	-0.009	-0.002
Reincarcerated-15 mos.	**-0.103**	-0.039	**0.066**	-0.035	**0.088**	0.002	-0.056	0.004	0.039	0.024
Supervised-3 mos.	**-0.113**	-0.060	0.056	0.011	-0.038	**0.143**	-0.016	-0.009	0.079	**0.090**
Supervised-9 mos.	-0.070	-0.053	0.050	0.008	-0.030	**0.192**	0.005	-0.020	0.085	0.051
Supervised-15 mos.	-0.025	0.020	-0.021	-0.000	-0.098	**0.232**	-0.002	-0.049	0.060	**0.103**
Job Services-3 mos.	**-0.040**	**0.067**	**-0.069**	-0.003	-0.051	**0.143**	0.004	0.063	0.003	0.054
Job Services-9 mos.	-0.085	0.088	-0.098	0.006	-0.071	**0.103**	-0.065	-0.021	-0.051	0.029
Job Services-15 mos.	-0.016	0.041	-0.016	-0.041	-0.013	0.019	-0.025	0.063	0.013	-0.059

	Job 15 mos.	Child Support-Baseline	Child Support-3 mos.	Child Support-9 mos.	Child Support-15 mos.	Rearrest-3 mos.	Rearrest-9 mos.	Rearrest-15 mos.	Family Support-3 mos.	Family Support-9 mos.	Family Support-15 mos.
Age											
African American											
White											
Hispanic/other race											
Index offense-property											
Days Incarcerated											
Age at 1st Arrest											
Job-Baseline											
Job-3 mos.											
Job-9 mos.											
Job 15 mos.	1.000										
Child Support-Baseline	0.009	1.000									
Child Support-3 mos.	**-0.056**	**0.585**	1.000								
Child Support-9 mos.	**-0.027**	**0.532**	**0.663**	1.000							
Child Support-15 mos.	**0.024**	**0.473**	**0.619**	**0.706**	1.000						
Rearrest-3 mos.	**-0.145**	-0.042	-0.027	-0.062	-0.023	1.000					
Rearrest-9 mos.	**-0.138**	-0.031	-0.060	-0.060	-0.088	**0.127**	1.000				
Rearrest-15 mos.	**-0.086**	-0.021	-0.066	-0.071	-0.035	**0.073**	**0.210**	1.000			
Family Support-3 mos.	0.032	-0.008	0.006	0.019	-0.009	-0.041	**-0.121**	-0.043	1.000		
Family Support-9 mos.	-0.018	0.008	-0.038	0.012	-0.025	**-0.095**	**-0.141**	-0.073	**0.478**	1.000	
Family Support-15 mos.	0.006	0.022	-0.021	0.021	-0.033	-0.038	-0.032	-0.064	**0.489**	**0.617**	1.000
SVORI participant	**0.105**	-0.016	-0.019	-0.032	-0.040	-0.028	**-0.064**	-0.028	**0.174**	**0.115**	0.026
Married-Baseline	0.066	-0.001	-0.052	-0.040	-0.034	0.015	-0.009	-0.027	0.069	0.063	**0.125**
Married-3 mos.	0.025	-0.001	-0.034	-0.042	-0.042	-0.025	-0.048	-0.049	**0.123**	**0.142**	0.022
Married-9 mos.	0.077	0.054	0.018	0.014	-0.033	-0.077	-0.033	-0.003	**0.141**	**0.096**	0.087
Married-15 mos.	**0.146**	0.010	-0.008	0.041	-0.020	-0.073	**-0.208**	0.013	0.054	**0.098**	0.044
Health Problems-3 mos.	**-0.184**	-0.000	0.020	-0.021	-0.007	-0.012	0.049	-0.000	-0.031	-0.066	**-0.115**
Health Problems-9 mos.	**-0.208**	-0.023	-0.018	-0.062	-0.055	-0.021	-0.013	-0.002	0.026	-0.039	**-0.094**
Health Problems-15 mos.	**-0.188**	0.006	-0.024	-0.032	0.014	-0.007	0.058	0.009	**-0.113**	**-0.154**	**-0.151**
Reincarcerated-3 mos.	-0.068	0.025	-0.013	-0.01	-0.043	**0.260**	-0.045	0.011	-0.049	0.005	0.020
Reincarcerated-9 mos.	-0.019	0.030	0.048	0.011	0.016	**0.145**	**0.246**	-0.014	-0.013	**-0.113**	0.013
Reincarcerated-15 mos.	-0.002	0.023	-0.006	-0.021	-0.061	**0.120**	**0.231**	**0.223**	0.003	-0.072	**-0.116**
Supervised-3 mos.	**0.070**	-0.016	0.030	0.024	0.026	-0.030	**-0.082**	-0.024	0.046	0.029	0.016
Supervised-9 mos.	**0.095**	-0.017	-0.018	-0.065	0.014	**-0.084**	-0.061	-0.024	-0.054	0.017	0.037
Supervised-15 mos.	0.130	0.008	-0.005	0.013	-0.007	**-0.105**	**-0.173**	-0.028	**0.094**	**0.093**	0.058
Job Services-3 mos.	-0.047	-0.080	-0.030	0.000	-0.002	-0.067	-0.044	-0.036	0.117	0.147	0.054
Job Services-9 mos.	0.016	-0.053	-0.054	-0.008	0.001	-0.078	**0.046**	0.058	**0.043**	0.049	0.090
Job Services-15 mos.	0.049	0.051	-0.026	0.011	0.064	-0.016	**-0.113**	0.012	**0.098**	0.065	0.000

	SVORI participant	Married-Baseline	Married-3 mos.	Married-9 mos.	Married-15 mos.	Health Problems-3 mos.	Health Problems-9 mos.	Health Problems-15 mos.	Reincarcerated-3 mos.	Reincarcerated-9 mos.	Reincarcerated-15 mos.
Age											
African American											
White											
Hispanic/other race											
Index offense-property											
Days Incarcerated											
Age at 1st Arrest											
Job-Baseline											
Job-3 mos.											
Job-9 mos.											
Job 15 mos.											
Child Support-Baseline											
Child Support-3 mos.											
Child Support-9 mos.											
Child Support-15 mos.											
Rearrest-3 mos.											
Rearrest-9 mos.											
Rearrest-15 mos.											
Family Support-3 mos.											
Family Support-9 mos.											
Family Support-15 mos.											
SVORI participant	1.000										
Married-Baseline	0.018	1.000									
Married-3 mos.	0.029	**0.350**	1.000								
Married-9 mos.	0.039	**0.242**	**0.363**	1.000							
Married-15 mos.	0.042	**0.188**	**0.304**	**0.332**	1.000						
Health Problems-3 mos.	0.014	**-0.117**	-0.025	0.008	-0.039	1.000					
Health Problems-9 mos.	**0.083**	**-0.120**	**-0.105**	0.012	0.004	**0.601**	1.000				
Health Problems-15 mos.	0.014	**-0.134**	**-0.153**	-0.030	-0.070	0.465	**0.534**	**1.000**			
Reincarcerated-3 mos.	-0.006	0.055	0.070	**-0.109**	-0.062	-0.050	-0.040	-0.061	1.000		
Reincarcerated-9 mos.	0.019	**-0.081**	-0.033	**-0.082**	**-0.342**	0.007	-0.071	-0.067	**0.249**	1.000	
Reincarcerated-15 mos.	-0.007	**-0.087**	-0.062	-0.004	**-0.296**	-0.033	-0.062	-0.037	**0.090**	**0.429**	1.000
Supervised-3 mos.	-0.024	-0.035	0.040	**0.096**	0.021	-0.021	-0.070	-0.046	-0.018	**0.086**	**0.125**
Supervised-9 mos.	-0.003	0.045	**0.091**	0.022	**0.154**	0.015	-0.005	-0.065	0.036	-0.075	**-0.246**
Supervised-15 mos.	**0.105**	0.010	**0.102**	0.061	**0.149**	0.038	0.049	-0.043	-0.030	**-0.196**	**-0.100**
Job Services-3 mos.	**0.192**	-0.029	-0.044	-0.016	-0.062	-0.030	0.062	0.075	-0.059	-0.013	-0.004
Job Services-9 mos.	**0.105**	-0.057	0.000	**0.084**	0.033	0.038	0.024	0.001	**-0.089**	0.012	-0.023
Job Services-15 mos.	**0.111**	-0.035	-0.022	0.022	**0.128**	0.006	0.078	0.025	-0.040	**-0.095**	**-0.112**

	Supervised-3 mos.	Supervised-9 mos.	Supervised-15 mos.	Job Services-3 mos.	Job Services-9 mos.	Job Services-15 mos.					
Age											
African American											
White											
Hispanic/other race											
Index offense-property											
Days Incarcerated											
Age at 1st Arrest											
Job-Baseline											
Job-3 mos.											
Job-9 mos.											
Job 15 mos.											
Child Support-Baseline											
Child Support-3 mos.											
Child Support-9 mos.											
Child Support-15 mos.											
Rearrest-3 mos.											
Rearrest-9 mos.											
Rearrest-15 mos.											
Family Support-3 mos.											
Family Support-9 mos.											
Family Support-15 mos.											
SVORI participant											
Married-Baseline											
Married-3 mos.											
Married-9 mos.											
Married-15 mos.											
Health Problems-3 mos.											
Health Problems-9 mos.											
Health Problems-15 mos.											
Reincarcerated-3 mos.											
Reincarcerated-9 mos.											
Reincarcerated-15 mos.											
Supervised-3 mos.	1.000										
Supervised-9 mos.	**0.268**	1.000									
Supervised-15 mos.	**0.471**	**0.463**	1.000								
Job Services-3 mos.	0.036	-0.021	0.089	1.000							
Job Services-9 mos.	0.032	**0.055**	**0.139**	**0.310**	1.000						
Job Services-15 mos.	-0.031	**0.078**	**0.095**	**0.188**	**0.350**	1.000					

Notes

[1] It is unclear what type of debt this was and whether child support debt was included.

[2] Our investigation is centered on the impacts that having a child a child support obligation might have on recidivism and employment in reentry. As such, we are interested in how having a child support order affects both participants in the SVORI and non-SVORI groups. To address any differences that arise from analyzing the two groups together, we control for SVORI participation.

[3] These NCIC data were collected from records spanning the entire United States, and not from the twelve states in the study individually. As such, rearrests were captured for the respondents even if he was arrested outside of his home state.

[4] We recognize the strengths and weaknesses of this strategy. While respondents who were reincarcerated were almost certainly rearrested, there could exist respondents who were rearrested but not reincarcerated. As such, we ran all analyses two ways: filling in re-incarcerated as a proxy and without. The model results were almost identical; and hence we report on models using re-incarceration to signify re-arrest in cases missing re-arrest information.

[5] Of the 312 male respondents who had a child support order at baseline, 89% indicated they owed back support; 4% did not answer the question on back support.

[6] Correlations between rearrest and reincarcerated status across the three follow-ups were r=.33, r=.30, and r=.22, respectively. Many rearrested subjects were reincarcerated, and some subjects were rearrested and not reincarcerated. Others were not rearrested but were reincarcerated due to technical violations.

[7] Note the question is asked somewhat differently—BJS asks about primary *financial* responsibility.

[8] A modification of an order means that a judge has signed off on a request from one or both parents to change the order. If one parent initiates the request, the other parent must approve it. The order is not officially modified until a judge has signed the modification request. Not all states allow for child support orders to be modified due to incarceration. And for the states that allow this process, some states initiate the process before incarceration (e.g., in related court hearings) and some states allow for the modification process to take place after the father is sentenced.

[9] Note: a few needs related to interpersonal services (e.g., domestic violence support, etc.) were not included in this list. This change in ranking for child support debt modification—moving up to become the third ranked need of all top 2 needs three months after release—suggests that men with child support obligations are struggling to make their payments and are very cognizant of their obligation and associated needs.

[10] The model chi-squared statistic is based on the covariance matrix of observed variables that is implied by the model. In the case of the model chi-squared statistic, this covariance matrix is compared to the observed covariance matrix (the one implied by the saturated model).

To compute these statistics, we need to estimate variances and covariances involving observed exogenous variables in the model. When we fit a model using SEM, the variances and covariances of the observed exogenous variables are estimated along with the rest of the model. The likelihood that is being maximized is based on multivariate normality of all variables in the model, including the observed exogenous variables. Therefore, after fitting the model, we can obtain an estimate of a joint covariance matrix that includes both endogenous and exogenous variables.

The estimation performed by GSEM here, however, is different. Maximum likelihood estimation is used, but the likelihood is not based on a multivariate normal distribution that includes the exogenous variables. Instead, the likelihood is formed conditional on the exogenous variables. GSEM does not estimate the variance and covariances of exogenous variables along with the other parameters in the model, meaning there is no joint model-implied covariance matrix that can be compared to an observed covariance matrix. Because this estimation performed by GSEM is different, it is not possible to estimate a model chi-squared tests or statistics such as RMSEA and CFI that can be estimated using traditional SEM techniques.