

Criminal justice involvement and employment outcomes among women

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ABSTRACT

This paper investigates the potentially cumulative effects of being arrested, convicted, and incarcerated on labor market outcomes among women, as well as whether decreased employment levels are due to *labor market exclusion* or *detachment*. Using data from the National Longitudinal Survey of Youth 1997, I find that arrested women have reduced levels of employment, due to both labor market exclusion (unemployment) and labor market detachment (not in the labor force). Once the effect of being arrested is taken into account, women who are convicted or incarcerated do not face any additional negative employment consequences. These results demonstrate that policymakers must look beyond incarceration to reduce the impact of criminal justice involvement on women.

Introduction

Engagement in the paid labor market is an important determinant of social advantage and disadvantage (Dean, 2016). Employment has been linked with multiple positive life outcomes, including increased income, access to broader social networks, better mental health outcomes, improved family functioning, as well as higher self-esteem (Van der Noordt et al. 2014; Newman 2000; Edin & Lein 1997). Among people who have become involved in the criminal justice system, employment has become a central policy focus; indeed, finding employment is one of the standard requirements for people on probation or parole after a period of incarceration (National Research Council, 2008). Multiple studies have suggested the importance of employment in discouraging people from committing crimes in the first place, as well as reducing the likelihood that they will continue to commit crime or be re-incarcerated (Laub & Sampson 2003; Uggen 2000).

Despite the documented importance of employment, criminal justice involvement, especially a period of incarceration, has been linked with poor employment outcomes. Specifically, multiple studies have found that, although those involved in the criminal justice systems have characteristics that limit their employment prospects to begin with (such as low educational attainment and limited work experience), being incarcerated acts to reinforce this disadvantage (Apel & Sweeten, 2010; Pager, Western & Bonikowski, 2009; Stoll & Bushway, 2008). There are at least three mechanisms that explain the poor labor market outcomes of people who have been involved in the criminal justice system. First, people engaged in crime may suffer from a lack of human capital and skills depreciation because of the time they spend out of the labor market. Second, due to employer reluctance to hire people with criminal records, as well as legal restrictions on the types of jobs they can acquire, people with criminal records

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searching for work may be unable to find it. I refer to this mechanism as *labor market exclusion*.

Third, under the mechanism of *labor market detachment*, people with criminal justice involvement stop searching for work altogether. Labor market detachment may occur when people drop out of the labor market in anticipation of poor labor market prospects or seek to avoid institutions that maintain the link between them and the penal system.

While important, I argue that the mechanisms linking criminal justice involvement and employment may be different or more complex than those outlined by the current research literature. This is due to the fact that most of this research examining has primarily focused on incarcerated men.

As noted by several decades of work by feminist criminologists, focusing exclusively on the male experience of the criminal justice system and its consequences is to lose sight of the entire picture, as the experiences of men do not necessarily generalize to women (Daly & Chesney-Lind, 1988; Kruttschnitt, 2013). Researchers have found that, compared to men, women entering the criminal justice system have distinct pathways into crime (Belknap, 2007) and are charged and convicted of different kinds of offenses (Bloom, Owen & Covington, 2004). In terms of employment, before becoming incarcerated, these women already have sporadic work histories marked by low pay and instability (Kruttschnitt 2010; Bloom et al., 2004). However, there is also some evidence that incarceration reduces women's employment prospects even further (La Vigne, Brooks & Shollengberger, 2009; Western, Braga, Davis & Sirois, 2015; Maidment, 2006).

The generalizability of current research is also limited by its traditional focus on employment outcomes among people who have been incarcerated. This is because people who have been incarcerated only account for a small proportion of those who have been involved in

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the criminal justice system. Indeed, incarcerated individuals account for less than one-third of those being currently supervised by the criminal justice system, which also includes those currently being monitored in the community under the probation and parole system (Kaeble & Cowhig, 2018). Among women, the difference is even more dramatic; incarcerated women account for only 16 percent of those being currently under criminal justice system supervision (Kajstura, 2017). If one considers people who have never been incarcerated or convicted, the potential influence of the criminal justice system becomes even more far reaching. For example, there is evidence that 30 percent of the youth born between 1980 and 1985 will have been arrested by the age of 23 (Brame, Turner, Paternoster & Bushway, 2012), which includes 24 percent of women (Brame, Bushway, Paternoster & Turner, 2014). Given the wide reach of the criminal justice system, a focus on incarceration may either underestimate or simply mask the potentially complex relationship between impact of criminal justice involvement and employment.

Building on current research, in this article, I investigate two research questions: 1) Does criminal justice system involvement reduce employment among women? If so, to what extent can the reduced likelihood of employment be explained by *labor market exclusion* or by *labor market detachment*? 2) What are the effects of different levels of criminal justice involvement (i.e. arrest, conviction, incarceration) on the employment outcomes of women (i.e. employed, unemployed, or not in labor force)? Under the second question, I specifically explore whether the negative employment consequences of criminal justice contact increases along with the level of involvement.

This paper adds to the current literature on the consequences of criminal justice involvement on employment in three main ways. First, I adopt an analytical strategy that seeks to

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examine the distinct, and potentially cumulative, nature of criminal justice involvement. Existing studies either only include respondents that have been incarcerated or, if these studies examine levels of involvement, they create marker variables of respondents' highest level of criminal justice involvement (i.e. no interaction, arrest, conviction, and incarceration) and then assess the effects of these on outcomes on employment (see Western, Kling & Weiman, 2001 for a review). However, as seen above, not everyone who is arrested will be incarcerated. Additionally, those who have been incarcerated have also been arrested and convicted. Thus, prior studies focusing on incarceration cannot distinguish whether or not the effect of incarceration was due to the incarceration itself, or to the arrest and conviction that came with it.

Secondly, the article extends the scope of previous studies by analyzing multiple employment outcomes after criminal justice contact, including finding employment, unsuccessfully searching for work due to exclusion from the labor market (i.e. unemployment), or experiencing labor market detachment whereby women drop out of the labor market altogether (i.e. not in the labor force). Third, by focusing on women, taking a more nuanced approach to examining the effects of levels of criminal justice involvement, and looking across different employment outcomes, I extend existing research on the consequences of criminal justice contact and its potential to marginalize already disadvantaged women by limiting their labor market participation.

Background

Labor market Exclusion and Criminal Justice Involvement

People who have been involved in the criminal justice system may not be able to find work due to both legal restrictions against people with criminal records, as well as employer reluctance to hire them. According to Bushway and Sweeten (2007), since the early 1990s, states

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have increasingly enacted legislation that either prohibits hiring or granting licenses to people with felony convictions. Importantly, the use of these restrictions is not solely aimed only at those with the most serious forms of criminal activity (Bushway & Sweeten, 2007). In 38 states, arrest histories are considered in state licensing board decisions (Legal Action Center, 2009).

Along with licensing restrictions, employer reluctance to hire people with criminal records can lead to labor market exclusion. There is evidence that the use of criminal record enquiries and formal criminal background checks among employers is widespread; a recent survey found that 73% of U.S. employers conduct criminal background checks on all applicants (Society for Human Resource Management, 2018). As stated by Uggen and colleagues (2014, p. 628), given the fact that these background checks include information on arrests, as well as convictions, “even people never changed with a crime may bear the mark of a criminal record.” Researchers using audit studies of employers have found that histories of incarceration work as a “negative credential” on job applications reducing the likelihood of being called back for a job interview, especially for African American men (Pager et al., 2009; Pager, 2003). Along with incarceration serving as a negative credential on job applications, there is also some evidence that employers are also less willing to hire people who have been convicted of a crime (Leasure, 2018), as well as simply arrested (Uggen, Vuolo, Lageson, Ruhland & Whitham, 2014; Decker, Spohn, Ortiz & Hedberg, 2014).

The studies above have almost exclusively focused on labor market exclusion among men. Research seeking to understand the same mechanism related to women is more mixed. For example, Decker and colleagues (2014) conducted a survey of employers in which they were asked how likely they were to hire applicants with different characteristics; whereas 57.1% of male job applicants with a prison record would have been called for a job interview, the same

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was true of only 30% of women with the same prison record. Using survey data from the U.K. to examine the relationship between gender, having a criminal conviction and employment, Sculli (2013) found that having a criminal conviction did not increase unemployment among men, but did lead to increases in unemployment among women. In contrast, an audit study of employers in Chicago (Galgano, 2009), as well as a study using administrative data of formerly incarcerated women in Chicago (Lalonde & Cho, 2008), did not show that being incarcerated limited the employment prospects of women.

Labor Market Detachment

Labor market detachment may occur among people with criminal justice involvement for at least two reasons. First, people with histories of criminal justice involvement may drop out of the labor market because they do not believe they will be able to find employment. As noted by Smith and Broege (2012), searching for work takes time and effort. Given employer reticence to hire people with criminal records, as well as the occupational restrictions outlined above, people who have been involved in the criminal justice system will have to engage in more extensive searches and apply for more jobs than people without a criminal record (Pager, 2003). Indeed, a study of women exiting incarceration in Texas highlighted that close to one-third of women indicated they felt that finding employment would be one of the largest obstacles they would face upon release (La Vigne et al., 2009). As stated by Apel and Sweeten (2010, pp. 470), “Incarcerated offenders may be acutely aware that their chances of procuring gainful employment are limited and they thus do not waste their time looking for work when they return to the community.” Indeed, in her qualitative study of formerly incarcerated women, Opsal (2012) documents that while women were initially hopeful that employment would provide both

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economic resources, as well as act as a base for a more ‘pro-social self,’ their hopes diminished over time, based on the poor quality of the employment that they could obtain.

Another reason that people may drop out of the labor market after contact with the criminal justice system is *system avoidance*, which is when people avoid institutions that keep them under the surveillance of the criminal justice system (Goffman, 2009; Brayne, 2014). Using data on a nationally representative sample of youth over time, Brayne (2014) found that youth with any form of criminal justice contact (arrest, conviction, or incarceration) engage in system avoidance. Specifically, individuals who had been arrested, convicted, or incarcerated had higher odds of neither working or being in school than did respondents who did not have contact with the criminal justice system (Brayne, 2014). While formerly incarcerated youth were the most likely to be out of the labor market, being arrested or convicted also led to poor employment outcomes; indeed, in Brayne’s (2014) study being arrested had as large of an effect as being convicted.

While system avoidance is possible among young men who have some contact with the criminal justice system, this option may not be available to women, especially those with children. As stated by Gurusami (2018, 5), poor women, especially African American women, are susceptible to multiple forms of “state surveillance, including: intake interviews for nutritional assistance, policing in schools, the ubiquity of law enforcement in poor communities of color, and probation and parole officers’ surveillance of women with criminal records.” Indeed, in order to get custody of their children back after a period of incarceration, women must keep themselves under the surveillance of the child protection system (Roberts 2011a). Although studies show that formerly incarcerated women with children are less likely to be employed than women without children (Lalonde & Cho, 2008; Curcio, Pattavina & Fisher, 2018), women who

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are trying to regain custody of their children from the child welfare system, show significant improvements in employment rates over time (Jung & LaLonde, 2017).

The ability to detach from the labor market is contingent upon the ability to draw on other sources of financial support. While some have found that formerly incarcerated individuals are able to draw on government and family financial support after they are released (Visher, Kachnowski, La Vigne, & Travis, 2004; Richie, 2001), these forms of support might not be readily accessible to women. Over time, social assistance for poor women in the U.S. has become more limited, especially for women with drug-related convictions (Morash, Kashy, Bohmert, Cobina & Smith, 2017). Indeed, there is increasing evidence of poor women, regardless of criminal justice involvement who are disconnected from both employment and government support (Edin & Shaefer, 2015). Research has also found that while formerly incarcerated women often do rely on family for financial and other forms of support (Western et al., 2015), family relationships can be difficult to manage (La Vigne, Wolf, & Janetta, 2004) and, contrary to the effect of relationships among men, may actually not help women desist from further criminal activity (Radcliffe & Hunter, 2016). It is also possible that while women detach from the formal labor market, they turn to generating income through illegal activities (Berg & Cobina, 2017; LaVigne et al., 2009).

Methods

Data

Data for the current study are from the 1997 National Longitudinal Survey of Youth (NLSY97).ⁱ NLSY97 is an ongoing study that is designed to follow the experiences of young people as they transition from school into the workforce (Bureau of Labor Statistics, 2015). NLSY97 is comprised of a nationally representative sample of 8,984 youth born between 1980

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and 1984 in the United States, of which 4,385 were women. The initial survey was conducted in 1997 and has been followed up with yearly interviews until 2011, after which interviews have been conducted bi-annually. Overall, this equates to 16 waves of data that covers the period from early adulthood until respondents are in their early 30s. Due to the age of this sample, study results can only apply to women early in their labor market career.

As with all longitudinal surveys, there is concern that some members of the sample may drop out over time, which will influence study results if attrition is not random across survey respondents. NLSY97 avoids some of problems related to attrition as attempts are made to interview respondents even if they have moved to another state or if they are incarcerated. Additionally, there is continuous effort to find respondents from NLSY97 who have dropped out of the sample and collect information from the waves of data collection that they missed, which means that attrition is less of a problem in NLSY97 than in other longitudinal surveys (Olsen, 2018). Between the first and last round of data collection considered in this study, the retention rate of women in the sample was 82 percent.ⁱⁱ

In the analysis below, I limit the sample to women aged 18 and over. This means that the first round of data collection is not included as all respondents were less than 18 years old at the time.

Analytic Approach

One of the reasons that it is difficult to estimate the causal effect of criminal justice contact on employment outcomes is due to fact that those involved in the criminal justice system may have characteristics that would hurt their labor market prospects even if they did not come into contact with the criminal justice system (Newburn, 2016). As an example, women with drug addictions will more likely to engage in crime and may also not be able to engage in the paid

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labor market. In a typical regression framework, if one includes level of criminal involvement in a regression model predicting employment, but not a measure of substance abuse, then the measured effect of criminal involvement may be due to a spurious correlation. To the extent possible, researchers seek to control for the effects of these confounder variables, by including them in the regression equation. To control for unobserved variables that are stable over time, including substance abuse, mental illness, and juvenile delinquency, I exploit the panel structure of the data to compute fixed effects models. Fixed effect models in essence use women as their own control groups by examining changes in their outcomes before and after they become involved in the criminal justice system. In other words, comparisons are made within-individuals rather than between-individuals (Allison, 2009).ⁱⁱⁱ

Although fixed effects models have many important advantages that make them an ideal analytical approach for this research project, it is important to recognize that there are also limitations. First, while fixed effects models control for unmeasured characteristics that are stable over time, they will not eliminate bias relating to characteristics that may change, such as the strain caused with children after a period of incarceration. Thus, I do not make claims that the analysis shows a true causal effect. Second, since only variables that change over time can be included in these models, this means that important stable characteristics associated with criminal justice contact, including race/ethnicity and family background variables, cannot be directly estimated.^{iv}

In the analysis, I examine whether the respondent spent any time employed, unemployed or not in the labor force during the past year. Although these outcomes are binary, I use linear probability estimates to ease interpretation and to give a sense of effect size.^v Prior research has

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shown that linear probability models give the same estimates of change as marginal effects for binary outcomes (Longhi & Nandi, 2015; Green, 2012).

In order to more accurately estimate the contribution of each level of criminal justice involvement, I construct several samples for analysis. First, to compare my results to those of prior research, I construct a sample that includes all adult women in the sample, regardless of their involvement in the criminal justice system. Second, in order to tease out the unique, and potentially cumulative, contribution of each level of criminal involvement, I adopt a similar approach to that used by Apel and Sweeten (2010) in their study examining the relationship between incarceration and job outcomes among men. In their study, they limited their sample to respondents who already had a prior criminal conviction, but later became incarcerated. In this way, they could look at the unique contribution of incarceration by examining the extra effect of incarceration on a sample that had already experienced the effects of being convicted. Following this method, I construct three distinct samples of women based on their highest level of criminal involvement throughout the study: to examine the effects of being arrested, I limit my sample to women who moved from having no involvement with the criminal justice system to being arrested, but were not convicted or incarcerated; to examine the effect of convictions, I construct a sample of women with a prior arrest who were convicted, but did not experience a period of incarceration; last, for incarceration, a sample of women with an existing conviction who become incarcerated is used.

Variables

To assess level of criminal justice involvement, at each wave I coded respondents' contact with the criminal justice system into four mutually exclusive categories: no contact, arrested, convicted, and incarcerated. Individuals are put into categories based on their highest

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level of criminal justice involvement during that wave.^{vi} Since a woman could not participate in the labor market while incarcerated, she is assigned a positive value on the incarceration variable in the round after she was released. Additionally, all time periods when women are incarcerated are dropped from the analysis. Given differences in adult and juvenile sentencing, I only include arrests, convictions, and periods of incarceration that occurred when women were over the age of 18 years old.^{vii}

The analysis includes three measures of employment status in order to capture different employment outcomes after criminal justice contact. I code women as *employed* if they reported working any week in the formal labor market since the prior interview and not employed if they did not report any weeks of employment. In order to capture labor market exclusion, I assess whether women report any weeks of *unemployment* during the period. To assess labor market detachment, women are coded as *not in the labor force* if they report either being out of the labor force or not actively searching for employment during any week since the last interview. It is important to note a woman may be unemployed or not in the labor force for reasons other than labor market exclusion or avoidance. For example, she may give birth to a child or move in with a partner or relative and not work; so, caution must be used when interpreting the meaning of these different measures of employment status.

Last, I also include measures of time-varying controls that may influence both the likelihood of becoming involved in the criminal justice system, as well as employment outcomes. Specifically, all models include measures of respondent sociodemographic characteristics, including age and whether the respondent graduated from high school or obtained a Graduate Equivalence Diploma (GED). To allow for non-linear effects between age and

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employment status, I create a categorical variable with the following categories: 18-20 years old, 21-23 years old, 24-26 years old, 27-29 years old, and 30-33 years old.

Given the fact that a woman could experience an arrest, conviction, or period of incarceration at any time during the study period, models include year fixed effects to account for time-specific effects, such as an economic recession. All models also include robust standard errors.

Results

In this section, I present the results of the analysis. I first present descriptive results to both give an overview of sample characteristics, as well as look at employment outcomes among women with different levels of criminal involvement. Second, to serve as a baseline, I replicate the analysis done in prior work where I examine the relationship between arrest, conviction, and incarceration on employment outcomes without taking prior level of involvement into account. Third, to assess the potentially cumulative effects of increasing levels of criminal justice system involvement, I limit the samples as discussed above.

Descriptive Results

Table 1 displays descriptive characteristics for 3,518 women in the last wave of data collection when they were aged between 27-33 years old. This table is organized to show differences in the characteristics of women with different levels of criminal justice system involvement. Overall, the descriptive results show that around 18 percent of women in the sample reported some level of criminal justice involvement, that employment outcomes are poorer among women with higher levels of criminal justice involvement, and that the likelihood of having characteristics that limit engagement in the formal labor market are higher among women who have been arrested, convicted, or incarcerated.

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<< Insert Table 1 around here >>

As seen at the bottom of Table 1, most women in the sample did not have any involvement with the criminal justice system during the study period and only a few women experienced incarceration. Specifically, while 82 percent of women did not have any criminal justice system involvement, 7 percent had arrests as their highest level of criminal justice system involvement, 6 percent had convictions, and around 4 percent had incarceration. It is important to note that these categories are additive, showing approximately 18 percent of women in the sample had some level of criminal justice system involvement. This proportion is roughly similar to Brame and colleagues' (2014) estimate of national arrest prevalence.

Turning to other measures of criminal justice involvement, we see that, for the most part, the women in this sample are not persistent offenders. On average, even women who have been incarcerated have only had two arrests and between one and two convictions. The mean length of incarceration is just over 5 months, which is a comparatively short duration (Apel & Sweeten, 2010).^{viii}

Additionally, there appears to be a relationship between all levels of criminal involvement and employment outcomes, with employment outcomes getting worse as the level of criminal involvement increases. For example, while 84 percent of women with no criminal involvement reported being employed in the last year, 77 percent of arrested women and 76 percent of women with criminal convictions were employed. Only 60 percent of incarcerated women reported being employed. Looking at unemployment, the proportion of women who are unemployed increases along with criminal involvement; while less than 10 percent of women without any criminal justice system involvement report being unemployed, over one-third of women who have been incarcerated are unemployed. Last, lending support to prior research

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about labor market detachment, the proportion of women who are not in the labor force also increases along with criminal involvement.

The descriptive results also show that women who are involved in the criminal justice system have low levels of human capital, which may also limit their employment opportunities. While 95 percent of women without any criminal justice contact had a high school diploma, the same was true for only 76 percent of incarcerated women. Women in the criminal justice system are also less likely to report being married. However, it is important to note that around 60 percent of women report having a child living with them, regardless of the level of criminal justice involvement. This supports the findings of prior research showing that the majority women offenders are single mothers (Bloom et al., 2005).

Initial Fixed Effect Models

As an initial test of the relationship between level of criminal involvement and employment outcomes, I follow the analytical strategy of other researchers and estimate a fixed effects model that does not limit the sample based on prior level of involvement (Smith & Broege, 2012; Brayne, 2014). Figure 1 displays how each level of criminal involvement is related to predicted changes in the probability of experiencing each employment outcome.^{ix} Results show that being arrested is associated with negative employment outcomes. In terms of employment, being arrested leads to around a 6 percentage point decrease in the likelihood of being employed. Being arrested also translates into significantly higher rates of unemployment. Specifically, women who have been arrested experience a 4.2 percentage point increase in the probability of being unemployed. Supporting research on labor market detachment, being arrested is associated with an almost 9.4 percentage point increase in the probability of having a period out of the labor force. Turning to the group of women who have been arrested and

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convicted, but not incarcerated, I find they are also significantly more likely to have poorer labor market outcomes than women without criminal convictions. Indeed, women with criminal convictions are less likely to be employed than women without convictions, and more likely to be unemployed and spend time outside the labor market. As seen in Figure 1, being convicted is associated with around a 7.4 percentage point decrease in the probability of being employed, a 4.6 percentage point increase unemployment, and an 11.9 percentage point increase in the probability of not being in the labor force.

<< Insert Figure 1 around here >>

Turning to incarceration, the likelihood of employment decreases by 8.3 percentage points after women have a period of incarceration. Interestingly, being incarcerated is not related to being unemployed. However, incarceration increases the probability of not being in the labor force by 17.3 percentage points.

Looking more closely at Figure 1, it does not seem as though more serious involvement with the criminal justice system leads to poorer employment outcomes, with the notable exception of dropping out of the labor force. If interaction with the criminal justice system was cumulative, one would expect that labor market outcomes would become worse as the level of criminal justice involvement increases. However, results show that being arrested or convicted is associated with around a 5-6 percentage point decrease in the probability of employment, while incarceration leads to a 8.3 percent decrease. In terms of unemployment, being arrested or convicted are both associated with approximately a 5 percentage point increase in unemployment, while incarceration does not significantly increase the likelihood of being unemployed. However, increasing levels of criminal justice system involvement does seem to lead to increasing likelihoods of dropping out of the labor market: being arrested, convicted and

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incarcerated is associated with a 9.4 percentage point, 11.9 percentage point, and 17.3 percentage point increase respectively.

Fixed Effects Models with Limited Control Groups

The estimation strategy used above does not adequately show the potentially cumulative contribution of each level of criminal justice contact. In order to do so, in the next set of analyses I examine the association between each level of criminal justice contact and employment outcomes, conditional on prior criminal justice contact. Results are presented in Figure 2. In order to make it easier to compare coefficients across modeling strategies, Figure 2 includes both estimates from the current models, as well as estimates from models where there were no sample restrictions (i.e. those from Figure 1).^x

<< Insert Figure 2 about here >>

The black circles in this figure represent the predicted change in employment outcomes among women who moved from having no contact with the criminal justice system to being arrested. Being arrested is still associated with poorer labor market outcomes among women. Results show that being arrested reduces the probability of employment by just over 6 percent points. This lack of employment seems to be related to both labor market exclusion, as well as detachment. While arrests increase the probability of unemployment by 3 percentage points, the probability of dropping out of the labor market increases by almost 7 percentage points.

Once the effect of being arrested is taken into account, being convicted or incarcerated is not associated with changes in employment, unemployment, or labor force participation. Labor market outcomes do not significantly change when women with arrest histories become convicted, as seen by the fact that the confidence intervals around the black diamonds overlap with 0. Equally, as shown by the estimates represented by the black squares, employment

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prospects do not change among women with criminal convictions who then become incarcerated. Overall then, it seems that the most dramatic changes in employment occur when women are arrested.

Discussion and Conclusion

This study investigated the relationship between criminal justice involvement and employment among women in the U.S. While prior studies primarily focused on incarcerated women, I looked across different levels of criminal justice involvement and modeled the unique contribution of each contact type (arrest, conviction, and incarceration) to overall employment, labor market exclusion and labor market detachment. I find that criminal justice contact starts influencing the employment outcomes of women when at the lowest level of contact measured in this study – when women are arrested. By explicitly modeling the fact that interactions with the criminal justice system are conditional upon lower levels of contact, I show that adding a conviction to being arrested, or a period of incarceration on top of a conviction, does not significantly reduce employment levels of criminal justice involved women. This finding thus adds to the burgeoning literature about the importance of lower levels of criminal justice contact in determining life outcomes (Apel & Sweeten, 2010; Roberts, 2011b; Natapoff, 2015; Brayne, 2014).

These findings broaden our understanding about criminal justice involved women, especially women with lower levels of criminal justice involvement. Numerous studies of incarcerated women have demonstrated that women follow distinctive pathways into the criminal justice system than men, are convicted and incarcerated for different sorts of crimes, and have unique post-incarceration needs (Swavola, Riley & Subramanian, 2016; Huebner, DeJong & Cobbina, 2010; Kruttschnitt & Gartner, 2003). Indeed, some scholars have called for gender-

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responsive services that should be provided to women both while they are incarcerated, as well as when they reenter the community (Covington & Bloom, 2007; Morash, 2010).

Findings from this study show that these services are needed well-before women experience confinement. Indeed, there is something about coming under the surveillance of the criminal justice system from the time of arrest that leads to negative employment outcomes, including decreased levels of employment, as well as increased levels of unemployment and dropping out of the labor force. The documented link between criminal justice system involvement and unemployment thus yields some support that women are experiencing labor market exclusion – even women who have simply been arrested. Given the fact that licensing boards can consider arrest histories in their decisions (Legal Action Center, 2009), and since employers can and do easily access the arrest histories of applicants (Uggen et al., 2014), it is possible that being arrested adds an additional mark against women seeking employment. Further research about employer attitudes towards women with lower levels of criminal justice involvement would shed light on the reasons underlying the labor market exclusion of arrested women documented in this study.

Study results also strongly support the idea that being arrested leads to labor market detachment. Indeed, being arrested was associated with a 9 percentage point increase in the probability of dropping out of the labor market. Adding convictions to an existing arrest, or a period of incarceration to a conviction, further added to the likelihood of dropping out of the labor market, although these differences were not statistically significant. Prior research has suggested that labor market detachment could occur due to women accessing financial supports from other sources (La Vigne et al., 2009), not searching for work in anticipation of poor labor market prospects (Smith & Broege, 2012), or due to system avoidance (Goffman, 2009; Brayne,

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2014). Given current literature showing the extensive surveillance of women by multiple systems (Gurusami, 2018), it does not seem likely that being arrested would lead to women dropping out of the labor market in an effort to engage in system avoidance. Additionally, regardless of their engagement with the criminal justice system, economically disadvantaged women's ability to rely on government support has declined over time (Edin & Shaefer, 2015). Therefore, the most plausible explanation is that women with criminal records know that their labor market prospects will be limited and thus give up searching for work. This idea is supported by research showing that, among women, the relationship between employment and desistance is rather mixed (Roderman, Kruttschnitt, Sloopboom, & Bijleveld, 2016). Unfortunately, it is not clear whether women feel like their labor market prospects are limited even by an arrest. Qualitative research with women with arrest histories is needed in this area.

Two important issues could not be addressed in the current study. Due to the limited sample size, as well as the analytical strategy used, it was not possible to examine variation in the relationship between criminal justice system involvement and employment *among* women. This is unfortunate given the substantial literature on both men and women showing the importance of ethnicity in shaping the outcomes of people involved in the criminal justice system (Western, 2002; Pager, 2003; Britton, 2001), as well as the finding of feminist scholars that intersections of gender, ethnicity, and other personal characteristics are important (Kruttschnitt, 2013). Second, my measures of labor market exclusion and detachment are broad and could be picking up other factors shaping employment outcomes. For example, women may experience periods of unemployment due to other reasons than experiencing occupational restrictions or employer reticence to hire women with criminal records. For example, if the conviction occurred

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during the Great Recession, woman's likelihood of experiencing a period of unemployment would have increased, regardless of her conviction.

Scholars interested in inequality and stratification have increasingly recognized the important role that prison takes in reproducing and reinforcing social, economic, and political inequality (National Research Council, 2014). As stated by Wakefield and Uggen (2010, pp. 388), the prison both “reflects and creates inequality by differentially conferring access and opportunity across social groups.” While recent statistics showing stable or decreasing incarceration rates should therefore bring hope to those seeking to reduce stratification and inequality (Phelps & Pager, 2015), findings from the present study suggest that the reach of the criminal justice system extends far beyond incarceration.

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TABLE 1: Characteristics of adult women in the sample, by highest level of criminal involvement [% or Mean (SD)]

	No involvement	Arrest	Conviction	Incarceration
<u>Employment outcomes</u>				
Employment status				
Employed	83.92	76.95	75.6	59.57
Unemployed	9.66	19.52	26.13	34.33
Not in labor force	33.49	49.31	46.64	65.68
<u>Criminal history^a</u>				
Number of arrests	--	1.16 (0.03)	1.47 (0.47)	2.17 (0.13)
Number of convictions	--	--	1.18 (0.04)	1.72 (0.09)
Number of incarcerations	--	--	--	1.31 (0.05)
Total months incarcerated	--	--	--	5.07 (0.64)
<u>Sociodemographic characteristics</u>				
Black	15.22	20.75	12.36	14.45
White	71.33	65.42	76.51	71.37
Hispanic	12.52	11.39	9.32	10.89
High school graduate	95.06	88.67	85.52	75.57
<u>Household characteristics</u>				
Married	53.27	40.03	29.66	17.25
Mother	64.40	66.54	65.60	58.69
Weighted proportion of sample	82.28	7.43	6.38	3.90
Unweighted sample size	2,907	277	203	131

Source: Author's analysis of NLSY97 data.

Notes: Data from Round 16 when respondents were between 27-33 years old. Estimates are weighted to account for complex sampling design and attrition.

^a These values are calculated by compiling data across Rounds 2-16. Round 1 data are dropped since no respondents are over the age of 18 years old.

Criminal justice involvement and employment outcomes among women

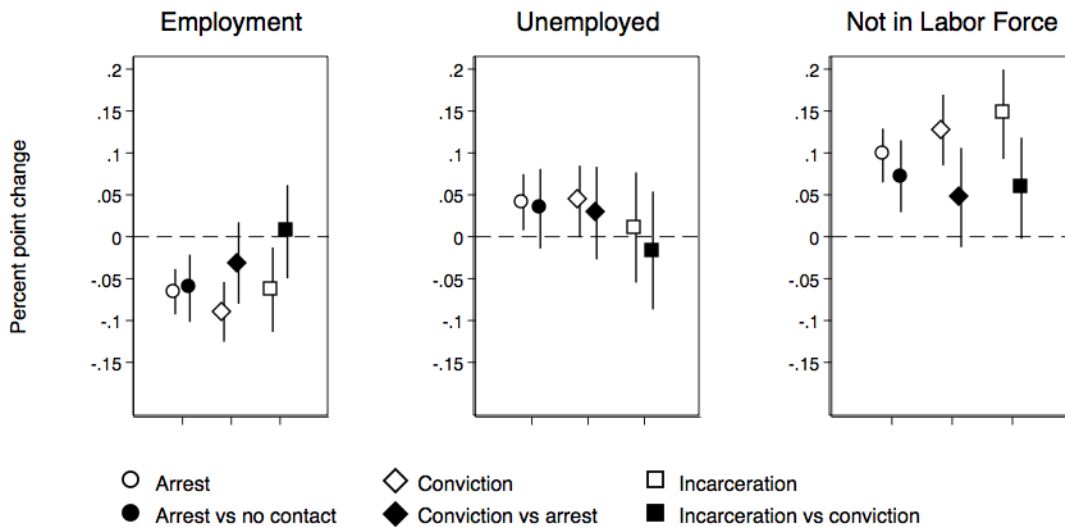
Figure 1: Change in the probability of employment status, by level of criminal involvement



Source: Author's analysis of NLSY97 data.

Note: Results from fixed effects analysis. Sociodemographic controls include respondent age and whether completed high school. Models include year fixed effects. N=4,292.

Figure 2: Predicted change in probability of employment status, by level of criminal involvement and comparison group



Source: Author's analysis of NLSY97 data.

Note: Results from fixed effects models. Sociodemographic controls include respondent age and whether completed high school. Models include year fixed effects.

Table A1: Full results of fixed effects arrest models with no comparison group

	Employed logit	Employed LPM	Unemployed logit	Unemployed LPM	Not in labor force logit	Not in labor force LPM
Arrest	0.610*** (0.0797)	-0.059*** (0.014)	1.420*** (0.126)	0.042* (0.017)	1.524*** (0.151)	0.094*** (0.017)
Age categories						
21-23 yo	1.214* (0.109)	0.015* (0.007)	0.949 (0.054)	-0.018 (0.010)	0.819*** (0.047)	-0.039*** (0.011)
24-26 yo	1.149 (0.157)	0.011 (0.010)	0.922 (0.085)	-0.025 (0.015)	0.831* (0.073)	-0.039* (0.016)
27-29 yo	1.057 (0.176)	0.004 (0.013)	0.918 (0.114)	-0.025 (0.020)	1.073 (0.121)	0.007 (0.021)
30-33 yo	0.780 (0.162)	-0.024 (0.017)	1.027 (0.164)	-0.004 (0.025)	1.405* (0.202)	0.057* (0.027)
High school graduate	1.503*** (0.152)	0.037*** (0.010)	0.974 (0.064)	-0.020 (0.013)	0.927 (0.067)	-0.006 (0.012)
N	4,292	4,292	4,292	4,292	4,292	4,292

Source: Author's analysis of NLSY97 data.

Note: Coefficients for logit models are expressed as odds ratios. LPM are estimates from fixed effects regression analysis estimated using a linear probability model. Robust standard errors in parentheses. Reference group for age is 18-20 years old.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Criminal justice involvement and employment outcomes among women

Table A2: Full results of fixed effect conviction models with no comparison group

	Employed logit	Employed LPM	Unemployed logit	Unemployed LPM	Not in labor force logit	Not in labor force LPM
Conviction	0.548*** (0.0912)	-0.074*** (0.0183)	1.461*** (0.162)	0.046* (0.0221)	1.749*** (0.236)	0.119*** (0.023)
Age categories						
21-23 yo	1.217* (0.109)	0.015* (0.00688)	0.949 (0.054)	-0.018 (0.0100)	0.818*** (0.047)	-0.039*** (0.011)
24-26 yo	1.148 (0.157)	0.010 (0.0104)	0.923 (0.085)	-0.025 (0.0153)	0.832* (0.073)	-0.039* (0.016)
27-29 yo	1.049 (0.175)	0.004 (0.013)	0.921 (0.114)	-0.025 (0.0199)	1.075 (0.121)	0.008 (0.021)
30-33 yo	0.776 (0.162)	-0.024 (0.017)	1.027 (0.164)	-0.004 (0.025)	1.406* (0.202)	0.057* (0.027)
High school graduate	1.499*** (0.152)	0.037*** (0.010)	0.978 (0.064)	-0.019 (0.013)	0.931 (0.067)	-0.005 (0.012)
N	4,292	4,292	4,292	4,292	4,292	4,292

Source: Author's analysis of NLSY97 data.

Note: Coefficients for logit models are expressed as odds ratios. LPM are estimates from fixed effects regression analysis estimated using a linear probability model. Robust standard errors in parentheses. Reference group for age is 18-20 years old.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Criminal justice involvement and employment outcomes among women

Table A3: Full results of fixed effect incarceration models with no comparison group

	Employed logit	Employed LPM	Unemployed logit	Unemployed LPM	Not in labor force logit	Not in labor force LPM
Incarceration	0.588* (0.133)	-0.083** (0.029)	1.291 (0.235)	0.014 (0.037)	2.298*** (0.565)	0.173** (0.029)
Age categories						
21-23 yo	1.213* (0.108)	0.015* (0.007)	0.950 (0.054)	-0.018 (0.010)	0.820*** (0.0472)	0.015* (0.007)
24-26 yo	1.146 (0.157)	0.0100 (0.010)	0.924 (0.085)	-0.025 (0.015)	0.834* (0.073)	0.010 (0.010)
27-29 yo	1.049 (0.175)	0.003 (0.013)	0.920 (0.114)	-0.025 (0.020)	1.076 (0.121)	0.003 (0.013)
30-33 yo	0.781 (0.162)	-0.023 (0.017)	1.023 (0.163)	-0.005 (0.025)	1.400* (0.201)	-0.023 (0.017)
High school graduate	1.500*** (0.152)	0.036*** (0.010)	0.979 (0.065)	-0.019 (0.013)	0.930 (0.067)	0.036*** (0.010)
N	4,292	4,292	4,292	4,292	4,292	4,292

Source: Author's analysis of NLSY97 data.

Note: Coefficients for logit models are expressed as odds ratios. LPM are estimates from fixed effects regression analysis estimated using a linear probability model. Robust standard errors in parentheses. Reference group for age is 18-20 years old.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Criminal justice involvement and employment outcomes among women

Table A4: Full results of fixed effects arrest models, conditional on no prior involvement

	Employed logit	Employed LPM	Unemployed logit	Unemployed LPM	Not in labor force logit	Not in labor force LPM
Arrest versus no contact	0.586** (0.115)	-0.062** (0.021)	1.363* (0.174)	0.034 (0.024)	1.374* (0.179)	0.072*** (0.022)
Age categories						
21-23 yo	1.237* (0.118)	0.016* (0.007)	0.933 (0.056)	-0.022* (0.011)	0.781*** (0.047)	-0.049*** (0.011)
24-26 yo	1.183 (0.173)	0.013 (0.011)	0.915 (0.090)	-0.027 (0.016)	0.788** (0.072)	-0.050** (0.017)
27-29 yo	1.064 (0.191)	0.005 (0.013)	0.917 (0.121)	-0.026 (0.021)	1.028 (0.121)	-0.001 (0.022)
30-33 yo	0.761 (0.170)	-0.025 (0.017)	1.009 (0.172)	-0.008 (0.026)	1.349* (0.202)	0.0484 (0.028)
High school graduate	1.543*** (0.169)	0.041*** (0.011)	0.979 (0.068)	-0.019 (0.013)	0.877 (0.066)	-0.015 (0.013)
N	1,782	3,913	3,226	3,913	3,400	3,913

Source: Author's analysis of NLSY97 data.

Note: Coefficients for logit models are expressed as odds ratios. LPM are estimates from fixed effects regression analysis estimated using a linear probability model. Robust standard errors in parentheses. Reference group for age is 18-20 years old.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Criminal justice involvement and employment outcomes among women

Table A5: Full results of fixed effect conviction models, conditional on prior arrest

	Employed logit	Employed LPM	Unemployed logit	Unemployed LPM	Not in labor force logit	Not in labor force LPM
Conviction versus arrest	0.741 (0.190)	-0.031 (0.025)	1.179 (0.167)	0.028 (0.028)	1.336 (0.217)	0.047 (0.030)
Age categories						
21-23 yo	0.931 (0.220)	-0.004 (0.021)	1.094 (0.154)	0.014 (0.028)	0.988 (0.164)	0.004 (0.029)
24-26 yo	0.752 (0.258)	-0.022 (0.031)	1.194 (0.270)	0.031 (0.043)	1.360 (0.325)	0.061 (0.043)
27-29 yo	0.704 (0.298)	-0.029 (0.039)	1.180 (0.343)	0.030 (0.054)	1.735 (0.518)	0.103 (0.054)
30-33 yo	0.501 (0.268)	-0.070 (0.052)	1.617 (0.605)	0.091 (0.070)	2.208* (0.846)	0.143* (0.069)
High school graduate	1.482 (0.371)	0.027 (0.027)	1.057 (0.169)	0.006 (0.032)	0.853 (0.159)	-0.026 (0.030)
N	329	552	500	552	486	552

Source: Author's analysis of NLSY97 data.

Note: Coefficients for logit models are expressed as odds ratios. LPM are estimates from fixed effects regression analysis estimated using a linear probability model. Robust standard errors in parentheses. Reference group for age is 18-20 years old.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Criminal justice involvement and employment outcomes among women

Table A6: Full results of fixed effect incarceration models, conditional on prior conviction

	Employed logit	Employed LPM	Unemployed logit	Unemployed LPM	Not in labor force logit	Not in labor force LPM
Incarceration versus conviction	1.054 (0.283)	-0.019 (0.032)	0.957 (0.190)	-0.020 (0.041)	1.513 (0.386)	0.090* (0.038)
Age categories						
21-23 yo	1.094 (0.274)	0.004 (0.025)	1.138 (0.192)	0.023 (0.034)	1.429 (0.304)	0.058 (0.0360)
24-26 yo	1.000 (0.394)	-0.010 (0.040)	0.997 (0.273)	-0.003 (0.054)	1.525 (0.477)	0.069 (0.054)
27-29 yo	1.074 (0.500)	0.000 (0.047)	0.928 (0.330)	-0.016 (0.069)	1.752 (0.700)	0.092 (0.069)
30-33 yo	1.059 (0.638)	0.005 (0.063)	1.148 (0.525)	0.026 (0.088)	2.166 (1.120)	0.129 (0.089)
High school graduate	1.428 (0.378)	0.018 (0.032)	0.925 (0.185)	-0.025 (0.042)	1.363 (0.292)	0.051 (0.035)
N	245	379	356	379	323	379

Source: Author's analysis of NLSY97 data.

Note: Coefficients for logit models are expressed as odds ratios. LPM are estimates from fixed effects regression analysis estimated using a linear probability model. Robust standard errors in parentheses. Reference group for age is 18-20 years old.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ⁱ The NLSY97 survey is sponsored and directed by the U.S. Bureau of Labor Statistics and conducted by the National Opinion Research Center at the University of Chicago, with assistance from the Center for Human Resource Research at The Ohio State University.

ⁱⁱ <https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/retention-reasons-non-interview>

ⁱⁱⁱ As a robustness check, I also conducted the analysis using random-effects models, which exploit the between-individual variation as well. Results were largely unchanged.

^{iv} Although it is possible to run separate analyses on each group, given the small sample size of criminal justice involved women in the current study, this approach was not feasible. Given the importance of documented racial/ethnic disparities in the relationship between criminal justice contact and employment outcomes among men (Pager, 2003), future research should focus on this important topic.

^v Full results of models, including logistic regression fixed effects, as well as linear probability models are included in the Appendix.

^{vi} In the NLSY97, among adults, incarceration is defined as being confined in a jail or prison.

^{vii} Given the small sample sizes in this analysis, it was not possible to remove the 92 women who were convicted as juveniles from the analysis. To the extent that the effects of juvenile convictions stay constant over time, fixed effects modeling will control for the influence of juvenile convictions on employment outcomes.

^{viii} Unfortunately, it was not possible to examine the types of convictions that women obtained during the sample due to the fact that nearly one-third of convictions were listed as “other.”

^{ix} Complete results are presented in Tables A1, A2, and A3 in the Appendix.

^x Complete analyses are shown in Tables A4, A5, and A6 in the Appendix.