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Reintegrating the Ex-Offender Population in the U.S. Labor Market: Lessons from the CORI Reform in Massachusetts

By Osborne Jackson, Riley Sullivan, and Bo Zhao

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Staff

Kevin Behan Andrew Bruckner Nick Chiumenti Osborne Jackson Calvin Kuo Darcy Saas Riley Sullivan Robert Triest Bo Zhao

The views expressed in this report are those of the authors and do not necessarily represent positions of the Federal Reserve Bank of Boston or the Federal Reserve System.

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Reintegrating the Ex-Offender Population in the U.S. Labor Market: Lessons from the CORI Reform in Massachusetts

I. Introduction

How to reintegrate large numbers of ex-offenders into civil society is one of the most important and challenging public policy questions facing the United States. The ways that we choose to address this issue will, over the coming decades, have significant consequences for many individuals and our nation. While estimates differ across sources, according to a 2006 report from the United States Department of Justice, more than 30 percent of the U.S. adult population has a criminal record, and there are even higher percentages for some minority populations (U.S. Department of Justice 2006). In 2014, there were 5.3 million individuals in criminal record databases for the six New England states, accounting for 44 percent of the region's population that is 16 years of age and older. These people represent roughly 5 percent of the 107 million individuals appearing in such databases nationwide (Bureau of Justice Statistics 2015).¹ Someone gains a criminal record when charged with committing a misdemeanor or a felony, even if the person is eventually acquitted.

Having a criminal record can impose many direct and indirect costs upon the individuals charged with an offense, as well as impose additional indirect costs that are borne by their immediate families.

Focusing on those who are convicted, sentences can include fines, probation, and incarceration in jail or prison. Paying a fine, which may seem like a fairly light sentence, can pose a significant hardship for low-income offenders. Incarceration can impose additional hardships on families who already may be economically disadvantaged. Having a criminal conviction means the loss of eligibility for certain public safety net programs, including access to public housing, food stamps, and temporary welfare assistance. Those who commit drug-related offenses can (at least temporarily) lose their eligibility to receive or keep federal student loans. The United States has one of the world's highest rates of incarceration (Walmsley

In 2014, 44 percent of New Englanders over the age of 16 had a criminal record.

2016), and over half of all U.S. prisoners are parents.² Parental incarceration can affect children in a variety of ways, including behavioral and health problems that can adversely affect their educational outcomes and intergenerational economic mobility (Council of Economic Advisers 2016; Pew 2010).

The current U.S. criminal justice system imposes many direct and indirect economic and social costs that are borne by the nation as a whole. The United States incarcerates a large portion of its criminal population, but imprisonment has been shown to be a costly method of punishment and one that does not generally result in deterring future criminal activity (Council of Economic Advisers 2016). Half of all

¹ The national count of approximately 107 million records includes 470,300 records in the District of Columbia, and 1.37 million records in Wisconsin from 2012, as 2014 data were unavailable from that state when the report was written. The number of distinct persons in the U.S. with criminal records may be less than 107 million, however, since some individuals could appear in more than one state database.

² Only Seychelles ranks higher than the United States in terms of its incarceration rate (Walmsley 2016).

federal prisoners are serving sentences for nonviolent drug-related crimes (Council of Economic Advisers 2016). There is a growing movement to reconsider whether these offenses should be treated in the criminal justice system or treated as health-related substance abuse problems (Human Rights Watch 2016). Inmates do not contribute to the nation's productivity while in prison, and face problems entering the labor market after release, resulting in lost GDP. As the United States confronts the economic and social challenges it faces over the next century, one could argue that more resources would be better spent on increasing the nation's collective human capital. Reconsidering how our country deals with ex-offenders is an important, if often unrecognized, component of this larger policy consideration. Enabling more of our citizens to lead more productive lives and have a better foothold in our society should confer sub-stantial individual and collective benefits that will strengthen the nation's social fabric.

Legal employment is one of the best ways for ex-offenders to gain a better life. Even if someone has a criminal record that did not end in conviction, potential employers often inquire about and check a job applicant's criminal history when making interviewing and hiring decisions, thus placing anyone with a criminal record at a potential disadvantage to obtaining a job. Confronted with the difficulty of overcoming such employment barriers, many ex-offenders revert to criminal activity as a source of income (Council of Economic Advisers 2016). The daunting barriers that many individuals with a criminal record encounter while searching for a job may help to explain the high percentage of ex-offenders who recidivate, meaning that they commit a new crime after being convicted for a previous crime.³ Recidivism rates therefore serve as a way to partially evaluate how effectively ex-offenders are reintegrated into civil society.

Given the large number of people living in the United States who have criminal histories that can adversely affect their chances for employment, reforming state policies overseeing employer access to criminal background records has the potential to affect labor market outcomes and recidivism rates for a large segment of the U.S. population. Reform proponents argue that fostering stable employment outcomes for individuals with criminal records is not only an important issue related to social justice and public safety concerns, but that such policy reform also is an economic and workforce development issue. In order to help reintegrate ex-offenders, restricting employer access to a job applicant's criminal history is one policy measure that has been increasingly enacted in some cities and states across the country. With such restrictions in place, an ex-offender's criminal past effectively becomes partially or completely inaccessible to employers, resulting in a greater similarity between ex-offenders and nonoffenders when hiring decisions are being made. One such policy initiative, commonly known as "ban the box," eliminates an employer's ability to ask job candidates about their criminal history when filling out an initial employment application (for more background on the rationale behind the ban the box movement, see Atkinson and Lockwood 2014).

This report examines the impact of a policy change involving access to criminal record information by studying the effects of the 2010–2012 Massachusetts Criminal Offender Record Information (CORI) Reform, widely regarded in the United States as landmark legislation governing access to a person's criminal history. This reform thus creates a unique opportunity to examine the effect of altering employer access to an applicant's criminal record on ex-offenders' labor market outcomes and recidivism rates.

We find that, contrary to anticipations, the CORI Reform caused a small reduction in average employment for ex-offenders.⁴ In theory, this reduced employment rate could have resulted from

³ A 2014 report from the U.S. Bureau of Justice Statistics notes that 67.8 percent of prisoners released from state prisons in 2005 were arrested for a new crime within three years, and 76.6 percent were re-arrested within five years (Durose, Cooper, and Snyder 2014).

⁴ Some recent studies have found evidence of such declines in employer hiring due to ban the box policies, with a disproportionate negative impact on minority populations (Agan and Starr 2016; Doleac and Hansen 2016).

either ex-offenders opting to spend more time searching for better jobs, or employers decreasing the rate at which they hire ex-offender applicants. However, our data limitations prevent us from determining which of these theories drives the results. Another finding of the report is that the reform also caused a small reduction in ex-offender recidivism, seemingly indicating a modest increase in exoffender reintegration.

As will be detailed in the following sections, it is clear from this study and other related analyses that more work needs to be done to amend the provisions in the CORI Reform. It is also clear that other policy measures and programs are needed to better support the reintegration of ex-offenders into civil society.

II. Background on the Massachusetts CORI Reform

The Criminal Record Offender Information (CORI) repository was authorized by the Massachusetts State Legislature in 1972. Creating a computerized database increased the efficiency of record-keeping within the criminal justice system, which previously had tracked criminal history through paper records. Prior to the creation of the CORI system, there was limited oversight regarding who had access to these records. The new computerized system protected the privacy of anyone with a criminal record by tracking who was viewing the information and established guidelines regarding who could request these records. Individuals get CORI records once a Massachusetts court formally charges (arraigns) them with committing a crime. Their records remain in the CORI database regard-less of the outcome of the case (Kaplan 2005).

As originally intended, the CORI data were meant to be used solely by the state's criminal justice system, but an increase in the number of CORI requests sparked interest in reforming how the

information was governed and disseminated. Between 1998 and 2004, the number of CORI requests tripled, yet there was minimal investment in the infrastructure to support this growth. More employers and other groups like landlords and volunteer organizations were accessing these data, but many of those outside of the criminal justice system lacked training in how to interpret the raw data that were reported. In 2006 The Boston Foundation, a strong proponent of enacting CORI Reform, convened a task force of academic, business, and nonprofit leaders from across Massachusetts to discuss ways to improve the system. The task force reaffirmed the value of the CORI repository, but also made recommendations on how the information could be used more fairly. The recommendations for revising the CORI system called for increasing the accuracy of the reports, improving the timeliness of

Massachusetts' 2010–2012 CORI reform significantly changed employer access to applicants' criminal histories.

sending these reports to interested parties, revising hiring guidelines in the health and human services sector, and better educating users outside the criminal justice system about how to interpret the records (Kaplan and Engel 2007).

Over the next few years, Massachusetts lawmakers worked to eliminate what reform proponents came to view as unnecessary burdens placed upon those with a CORI record. Opponents of reforming the system argued that public safety required the level of access to CORI records that was already in place. Despite the opposing viewpoints, the two sides made many compromises and in 2010 the Massachusetts legislature passed the CORI Reform, which was expected to increase the employment rate for people with a criminal record and to reduce recidivism among ex-offenders. Aiming to achieve these goals, the CORI Reform significantly changed the way that employers can access job applicants' criminal histories, a policy shift implemented in two phases over the 2010–2012 period.

The first phase of the CORI Reform took effect on November 4, 2010 and implemented the ban the box provision which, as mentioned above, is a widespread policy measure used in many parts of the United States. In Massachusetts, ban the box prohibits both public and private employers from making inquiries about criminal histories on initial job applications, unless federal or state law requires them to do so. The CORI Reform still allows employers to ask about applicants' criminal histories, but forces them to wait until later in the employment screening process.

The idea behind this reform is that without the ban the box protection, many ex-offenders will automatically be disqualified for jobs at the initial application stage if employers use a strict "no ex-offenders" screening policy. Therefore, the ban the box policy is expected to help ex-offenders to pass the initial résumé screening more easily and receive more job interviews. The CORI Reform does permit employers to ask about an applicant's criminal background at a later stage in the hiring process, but reform proponents hope that employers will get to know someone with a criminal record as the person he or she is now, rather than prejudge an individual based on having been charged with a crime and found not guilty or having committed a crime (most often a fairly minor misdemeanor) in the past, perhaps when the person was a teenager or young adult and still maturing. The hope behind the ban the box provision is that the job applicant will get a chance to explain the details that resulted in their having a criminal history and ultimately gain a job, not return to criminal activity because securing employment is too burdensome. Proponents of the CORI Reform pointed to the stagnation of the size of the Massachusetts workforce as a hindrance to the state's economic growth, and argued that reforms could increase the available labor supply and spur economic development (Kaplan and Engel 2007).

In 2012, The Boston Foundation released a report evaluating the first phase of the CORI Reform. The analysis found that after the ban the box policy was enacted, job applicants with criminal records received a significantly greater number of callback interviews (Priest, Finn, and Engel 2012). Achieving this outcome was one of the reform's key goals: allowing applicants a fair chance to make a first impression, not be automatically eliminated from consideration due to having a criminal record. However, there was no evidence that implementing the ban the box provision led to an increase in job offers. In addition, the report found that a significant number of employers had not complied with the requirement to eliminate the question asking about criminal history from their job application forms. Many national firms, which use the same application form in every state, often failed to comply with the new Massachusetts regulation. Many small businesses also failed to update their application forms to reflect the ban the box provision. Even postings for some state government jobs that should have removed the question from the application forms did not comply with the new requirement. These findings pushed reform advocates to continue calling for further education about the CORI Reform as the next phase was implemented (Priest, Finn, and Engel 2012).

Effective on May 4, 2012, the second phase of the CORI Reform enacted changes in (1) who can access the state's CORI database and (2) what CORI information is accessible to requestors. (In the interest of brevity, we call this second phase the "record-access reform.") First, this reform enabled all employers to use the state's CORI database. Before the reform, only statutorily required or certified employers (those which often work with vulnerable populations like children and senior adults) had access to the CORI database. Most employers were forced to rely on consumer reporting agencies to check a job applicant's criminal background, and there were significant concerns that the information obtained from these sources might be unduly detrimental to an applicant's employment prospects.

While enabling all employers to access the state's CORI database, depending on the requestor, the record-access reform limits the type of information released. The majority of landlords and employers that do not serve vulnerable populations (like a child day care center or a nursing home) have what is called standard access, which does not report CORI records for non-convictions and non-incarcerable

offenses. Standard CORI access also does not disclose the CORI records of individuals whose most recent misdemeanor conviction is beyond a five-year limit and whose most recent felony conviction is beyond a ten-year limit. There are no time limits for disclosing information about pending cases for any criminal charges, or about convictions for manslaughter, murder, and sex offenses. The five- and ten-year limits were compromises made by proponents who strongly felt that three-year and five-year limits were more appropriate standards for reporting misdemeanor and most felony convictions, respectively (Priest, Finn, and Engel 2012). Consumer reporting agencies and other firms that provide background checks do not impose such time restrictions on the criminal history information they provide. By essentially imposing term limits on the information provided on ex-offenders' CORI records, reform proponents argued that these individuals would find it easier to pass criminal background checks. The hope was that they would have more job opportunities and therefore be less likely to commit new crimes (recidivate).

Expanding access to the CORI database addressed concerns that background reports produced by consumer reporting agencies may include inaccurate and sometimes illegal information that can hurt job prospects for the majority of ex-offenders. Compared to these sources, the CORI database is presumed to be more accurate and more reliable. Therefore, reform proponents expected that if more employers made use of the state's CORI database, individuals would be less likely to be harmed by inaccurate information appearing on privately produced criminal background checks and therefore would benefit from having better job opportunities.

The record-access reform provides employers with a strong legal incentive as encouragement to use the CORI database instead of information provided by private consumer reporting agencies. After enacting the second phase of the reform, employers would not be held liable for negligent or discriminatory hiring practices if their hiring decisions are made within 90 days of obtaining CORI records from the state. Such legal protection does not exist for employers using information obtained from consumer reporting agencies to conduct criminal background checks.

Advocates of criminal justice reform have argued that while the implemented changes to the CORI law were critical steps in improving the system, there are still more policy changes needed. For example, in Massachusetts the "Jobs Not Jails Coalition" has continued to push for shortening the CORI look-back periods from the current ten-year limit for convicted felonies to five years, and from the current five-year limit for convicted misdemeanors to three years. Reform proponents have also recommended that the state should expunge CORI records for juveniles and young adults to diminish the lifelong impediments that having a criminal record currently imposes.

III. The Ex-Offender Population in Massachusetts and the Research Approach

Before proceeding with the main analysis, it is important to give a snapshot of the ex-offender population in Massachusetts, the portion of the individuals most affected by having a CORI record. This section will both better describe the groups that stand to benefit the most from the state's CORI reform, as well as give a sense of the larger national issues at stake in reforming how criminal background information is used.

Entry into the U.S. criminal justice system begins with an arrest. Compared to the United States as a whole, Massachusetts has a low arrest rate, with just over two arrests annually per 100 people in 2014, compared to the national rate of 3.6 arrests per 100 people (Clifford and Sullivan 2017). The state's arrest data show that young men and minorities, particularly black men, experience disproportionately higher arrest rates per capita than other groups, although at a slightly lower rate than the national average (Criminal Justice Information Services Division 2015). This pattern aligns with other literature identifying young black men as those most disproportionately affected by the U.S. criminal justice system (Alexander 2010).

Once individuals in Massachusetts are convicted of a misdemeanor or felony, they are usually sentenced to a penalty that involves no formal supervision, are placed on probation, or are incarcerated. For detention sentences of less than a year, a person typically is sent to a county jail, while longer sentences are typically served in a state or federal prison, depending on the crime. After being released, some formerly incarcerated individuals remain under supervision, either on probation or parole. In 2013, about 1.4 out of every 100 people in Massachusetts was under some form of supervision overseen by the criminal justice system. The majority of these individuals are on probation, which is typically the lowest level of formal supervision, usually imposed for misdemeanors and some minor felonies. Since those on probation are already living in their communities, obtaining employment is a crucial step in their ability to better their lives and long-term outcomes. Despite the majority of the individuals with a criminal record in Massachusetts being sentenced to probation, there is a dearth of detailed information about their post-conviction outcomes. More detailed background on the criminal population in New England and the policy challenges posed by a lack of coordinated data on the majority of ex-offenders is found in the companion policy report by Clifford and Sullivan (2017).

Throughout the U.S criminal justice system, the greatest amount of information regarding exoffenders pertains to incarcerated persons, although these individuals are not representative of the entire population with a criminal record. While nationally there has been dramatic growth in the incarcerated population over the last two decades, this group has stayed fairly constant in Massachusetts, which houses approximately 11,000 inmates per year. Additionally, women represent just over 7 percent of the Massachusetts Department of Correction population in 2014 (Massachusetts Department of Correction 2015).

To examine the state's ex-offender population more broadly and determine the CORI Reform's effect on ex-offender employment and recidivism, we utilize CORI records from the Massachusetts Department of Criminal Justice Information Services (DCJIS). The CORI data represent individual criminal histories and reflect the universe of unsealed records available through 2015:Q3. Each record contains information on the individual, such as name, date of birth, social security number (SSN), gender, and an address, as well as information on the offense, such as the arraignment date, indication of a misdemeanor or felony charge, and a description of the crime.⁵

After making a few initial and necessary sample restrictions, we observe 780,059 individuals in the CORI database.⁶ The average person in the database has six records. However, this figure is partially driven by a minority of individuals who have long criminal histories, as the median person (that is, in the middle of the range of values) has just three records, and 30 percent of the individuals in the CORI database only have one record. Compared to the overall demographic profile of the Massachusetts population in 2015, Table 1 shows that individuals in the CORI database are

⁵ Missing values are nonexistent for some variables such as the arraignment date, but are prevalent for others such as the incarceration release date of applicable ex-offenders.

⁶ We drop some individuals in order to reduce uncertainty about how the DCJIS governs records and focus on those persons likely to reside in Massachusetts labor markets. Specifically, we dropped people if they had one or more of the following issues: a) an invalid SSN; b) the same SSN with different names, dates of birth, genders, or races/ethnicities; c) the same name (own and parental) and the same date of birth with different SSNs; d) the county of residence could not be uniquely identified; e) a non-Massachusetts home address; f) missing entries in home address, race/ ethnicity, gender, date of birth, offense type, disposition type, or arraignment date; g) a deportation from the United States; h) disposition type is "civil" indicating a civil infraction; i) the arraignment date occurred before age 7 (the minimum age at which someone can be charged with a juvenile offense in Massachusetts, known as the age of criminal responsibility), after September 2015, or after the disposition date (the date on which the outcome of the relevant case occurred); j) the disposition date occurred after the incarceration release date. Additionally, for the employment analysis, we also dropped people if: k) they have addresses in different counties over time; l) they are under 13 years of age or over 67 years of age in the 2010:Q1 to 2015:Q3 estimation period; m) an individual was in jail or prison for at least part of the 2010:Q1 to 2015:Q3 estimation period; or n) a person does not belong to any treatment or control group.

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CORI Demographics Compared to Massachusetts Population All Numbers Reported as Percentages

Demographic Category	Demographic Subcategory	CORI Database, 2015:Q3	Massachusetts Population, 2015 American Community Survey
Gender	Women	30.0	51.5
Gender	Men	70.0	48.5
	Asian	2.4	6.6
	Black	9.5	8.4
Race/Ethnicity	Hispanic	12.2	11.2
	Native-American	0.1	0.5
	White	75.9	73.3

Source: Authors' calculations. Numbers within a demographic category may not sum exactly to 100 percent due to rounding. Asian, Black, Native-American, and White subcategories of Race/Ethnicity exclude Hispanics.

much more likely to be men, who also account for the majority of the state's correction population.⁷ Additionally, persons with CORI records are somewhat more likely to be black, Hispanic, or white compared to how these racial categories are represented in the state's population, and less likely to be Asian or Native American.

For our analysis on recidivism, we rely solely on the CORI database, examining records from 1982:Q1 to 2015:Q3 because the data quality is the highest for this period.⁸ For our analysis of employment, we combine the CORI data with Massachusetts unemployment insurance (UI) wage records from the Executive Office of Labor and Workforce Development (EOLWD) and the Department of Unemployment Assistance (DUA). The UI wage data capture individuals' labor market outcomes and reflect employer-provided quarterly earnings records of employees covered by the Federal Unemployment Tax Act of 1939. The data we obtain from the EOLWD/DUA for analysis are merged with criminal history information averages to form cells representing multiple individuals (20–39 people in each cell) to preserve anonymity, with each cell depicting people who are comparable in terms of age, location, and treatment assignment (see the feature, "What is 'Difference-in-Differences' Analysis?" for further information about the technical aspects informing the research approach).⁹ However, individuals within a cell may still differ along other dimensions like race/ethnicity or gender. The merged data cover the period from 2010:Q1 to 2015:Q3.

⁷ As noted above, women represented just over 7 percent of the Massachusetts Department of Correction population in 2014, so men accounted for just under 93 percent of that population (Massachusetts Department of Correction 2015).

⁸ The DCJIS data we accessed terminate in 2015:Q3, while records prior to 1982:Q1 are handwritten and on microfilm, so the data quality is less certain. This January 1, 1982 through September 30, 2015 date range is consistent with examining ex-offender birth cohorts from 1965 to 1998 since, in our primary analyses, we also focus on individuals who were 17 years of age or older when they committed their first crime.

⁹ There are 97 to 99 percent of cells with exactly 20 people. For further details on how the dataset was created, see Jackson and Zhao (2016a and 2016b).

What is "Difference-in-Differences" Analysis?

For many research questions in the social sciences, it is not feasible to conduct a true "experiment," where some entities randomly receive a "treatment" (for example, a drug being tested for trial) and a random "control" group receives no treatment, in order to study the treatment's impact on some outcome (for example, how effective taking a new drug is in improving patient health). For social science research questions where it is not possible to randomly assign individuals to treatment and control groups, investigators often use alternative analytical methods that try to address this issue. These methods, when properly implemented, allow researchers to achieve the goals of a well-designed true experiment and isolate whether the treatment *causes* an outcome, rather than being merely *associated* with that outcome.

One such method of analysis is known as "difference-in-differences." Without random assignment, comparing some outcome across the treatment and control groups *after* the treatment has occurred (that is, during the "post-period") may lead researchers to incorrectly assess the impact of the treatment. For instance, patients voluntarily taking a sleep aid medication might sleep two hours more per day, on average, than patients not taking such medication. However, it would be incorrect to conclude that taking these drugs increases the average patient's sleep time by two hours per day. Such misinterpretation of the data can result from the presence of other potential differences across groups pertaining to the outcome of interest that are not due to the treatment's true effect but arise solely due to nonrandom group assignment.

Difference-in-differences analysis addresses this problem by permitting researchers to compare the outcome of interest across the treatment and control groups *before* the treatment has occurred (that is, during the "pre-period"). For instance, researchers can compare the sleep time of patients using sleeping aids with the sleep time of patients not using such aids, before any sleep aid medication is actually taken by the treatment group. Upon doing so, one might observe that even before taking the sleeping aid, patients using that drug sleep 100 minutes more on average than patients who do not use sleep medication. Under the assumption that such pre-period outcome differences across groups are constant over time, examining the difference in pre-period and post-period comparisons allows a researcher to determine and isolate the true impact of the treatment. Figure 1 visually depicts the fundamentals of the difference-in-differences approach. Using this method and absent any other relevant factors, we would thus conclude that taking sleep aids increases the average patient's sleep time by 20 minutes per day (the "True treatment effect of policy change" in Figure 1) rather than two hours (the "Incorrect treatment effect of policy change" in Figure 1).

In this report, we use difference-in-differences analysis to determine the impact of the 2010–2012 Massachusetts CORI Reform on ex-offender employment using data that span the period before and after the reform was enacted. Such data allow us to identify and remove any pre-period employment disparity between our treatment group (those affected by the CORI Reform) and control group (those unaffected by the CORI Reform), so that the post-period employment difference between these two groups can credibly be interpreted as reflecting the true treatment effect resulting from the CORI Reform. For a full discussion of the approach and results, consult Jackson and Zhao 2016a and 2016b.

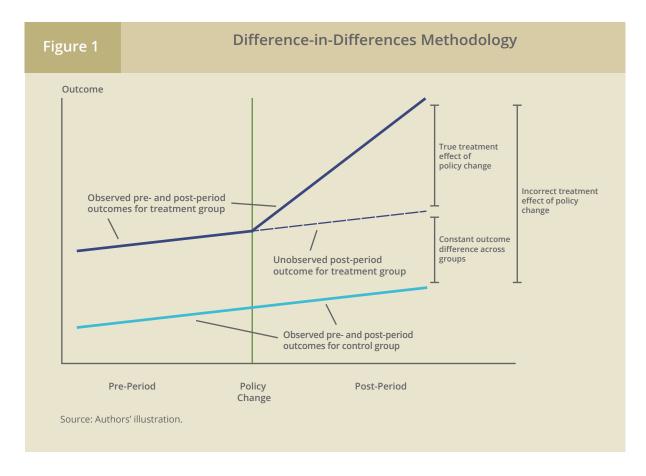
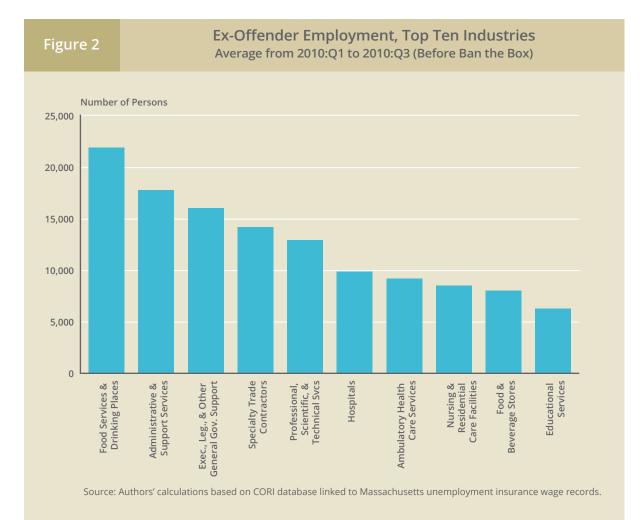


Figure 2 shows the top ten industries that employed ex-offenders in the first three quarters of 2010 before ban the box, the first phase of the CORI Reform, was enacted in November 2010. Ex-offenders are most represented in "Food Services and Drinking Places" with over 22,000 persons employed, followed by "Administrative and Support Services" and "Executive, Legislative, and Other General Government Support." Health care sectors such as "Hospitals," "Ambulatory Health Care Services," and "Nursing and Residential Care Facilities" are also among the industries that employ the highest number of ex-offenders. The industry patterns in the figure may be due to the sectors in which ex-offenders tend to apply, the sectors in which employers tend to hire ex-offenders, and/or the size of the sectors in Massachusetts.

IV. The Impact of the CORI Reform on Ex-Offender Employment Rates

Our main result is that the CORI Reform had the opposite effect on ex-offender employment rates from what the legislation anticipated would occur. After the ban the box policy was implemented, individuals with CORI records experienced a small reduction in employment compared to individuals without CORI records. Similarly, the employment rate of ex-offenders directly affected by the recordaccess reform slightly declined relative to the employment rate of ex-offenders unaffected by the record-access reform.

There are at least two possible explanations for the reduced employment rate of ex-offenders affected by the CORI Reform. First, it could be related to a change in how ex-offenders view their employment and wage prospects. If they expect lower employment barriers and more job opportunities after the CORI Reform, some ex-offenders might not apply for jobs with low pay and poor work



conditions or not accept a job offer that they might have taken before the reform. Alternatively, the reduced employment rate of ex-offenders affected by the CORI Reform could be related to a change in employers' hiring criteria. For example, employers might increase requirements for the educational

After the ban the box and the record-access reforms, individuals with CORI records experienced small reductions in employment.

attainment or work experience of applicants. Due to our data limitations, we cannot pinpoint which of these explanations drives the results.

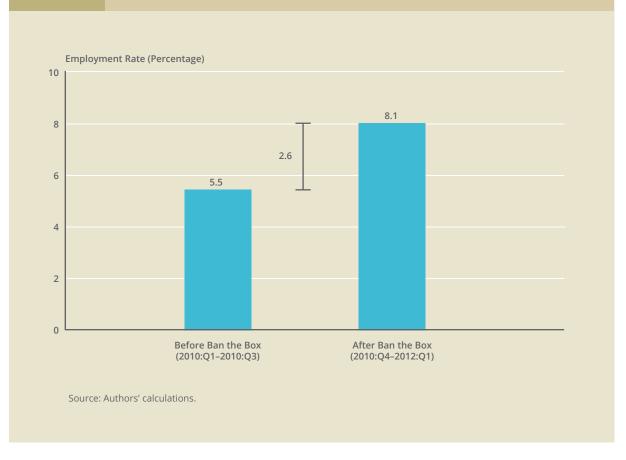
The Impact of Ban the Box on Ex-Offender Employment Rates

To study the impact of the ban the box policy on ex-offenders' employment outcomes, we compare the difference in the average employment rates of the control group (no CORI record) and the treatment group (has a CORI record) before Massachusetts implemented the ban the box measure, with the difference between the two groups after the ban the box policy went into effect in November 2010. Based on the available data we obtained from the state, we define the treatment group as individuals who had at least one CORI record before 2010 and therefore were affected by the ban the

box policy. The control group includes individuals who did not have any CORI records up to 2012:Q1 and therefore were not directly affected during this period by the ban the box policy. If the effect of the new law had worked according to reform proponents' expectations, then after ban the box was enacted, individuals with CORI records would have experienced a greater rate of increase in employment than individuals without CORI records would have experienced. In other words, the difference



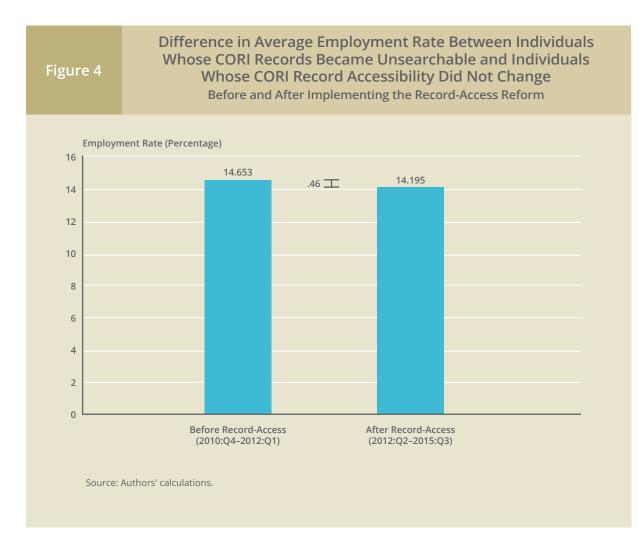
Difference in Average Employment Rate Between Individuals Without CORI Records and Individuals With CORI Records Before and After Implementing the Ban the Box Reform



in the employment rate between the two groups was expected to shrink after the ban the box policy was enacted.

Figure 3 shows that the difference between the control and treatment groups is positive both in the periods before and after the ban the box policy was implemented. This result confirms a general perception that individuals without CORI records are more likely to be employed than individuals with CORI records. This finding is at least partly explained because having a criminal record poses a significant barrier to finding a job.

However, the difference in the employment rate between the two groups became greater after the ban the box policy went into effect. Before ban the box, the average employment rate of individuals without CORI records was 5.5 percentage points higher than the average employment rate of individuals with CORI records. Contrary to what reform proponents expected, the difference in the employment rates between the control and treatment groups grew to 8.1 percentage points after ban the box was implemented. Stated differently, after Massachusetts enacted its ban the box policy, the average employment rate of individuals with CORI records declined by 2.6 percentage points when compared to the average employment rate of individuals without CORI records. Even after we account for other factors that affect individual employment outcomes, such as age, gender, race and ethnicity, as well as local labor market conditions, the change in the employment rate experienced by individuals with CORI records. Clearly, the ban the box provision has not resulted in the policy outcome anticipated. How did the second phase of the CORI Reform affect employment for ex-offenders?



The Impact of Record-Access Reform on Ex-Offender Employment Rates

We now turn to how ex-offender employment was impacted by the CORI Reform's record-access component. Similar to the goals driving the ban the box reform, passage of the record-access reform was partly motivated by an intention to improve labor market outcomes for ex-offenders. As discussed earlier, this reform incentivized all employers in the state to obtain criminal background records from the CORI database but affected the scope of information contained in those records, and in particular imposed limits on how long a past misdemeanor or felony conviction would be reported on a background check.

Because our approach uses difference-in-differences analysis (see the feature, "What is 'Difference-in-Differences' Analysis?"), we must first redefine our treatment and control groups, as well as our pre- and post-periods, all of which differ from the definitions used to evaluate the impact of the CORI Reform's ban the box component. Since the record-access reform was enacted in May 2012, our post-period starts in 2012:Q2 and goes through 2015:Q3, when our data end. The pre-period begins in 2010:Q4 when the ban the box reform was enacted in early November and runs through 2012:Q1. Meanwhile, the treatment group contains ex-offenders whose records are searchable in the pre-period and unsearchable (under DCJIS rules for the level of criminal record information disclosed to employers under standard access) in the post-period.¹⁰ Finally, for this analysis, the control

¹⁰ Some individuals in the treatment group are unsearchable in the post-period due to the timing of their offense(s) and the record(s) no longer being sufficiently recent to be accessible, while other individuals in the treatment group are unsearchable due to the type of crime(s) they committed and such crimes not being accessible via the state depository following the CORI Reform.

group represents ex-offenders whose records are either searchable in both the pre-period and the post-period (for example, those committing manslaughter, murder, and sexual offenses), or whose records are unsearchable in both the pre-period and the post-period (for example, those individuals who committed offenses when juveniles).

Figure 4 displays the findings analyzing the impact of the record-access reform on employment outcomes for ex-offenders. In both the pre-period before record-access implementation and the post-period afterwards, ex-offenders in the treatment group—those whose records became unsearchable after the reform went into effect—experience higher average employment rates than ex-offenders in the control group whose records are either always searchable or always unsearchable. In part, this pattern is determined by the treatment group including individuals with non-convictions and non-incarcerable offenses whose records are searchable in the pre-period and unsearchable in the post-period. This group of individuals tends to have a high employment rate in both periods. The observed pattern is also due to the control group including individuals with manslaughter, murder, and sexual offenses whose records are searchable in both periods. Having such serious felony convictions helps explain why this group tends to have a low employment rate.

On average, ex-offenders in the treatment group exhibit an employment rate approaching 45 percent before the record-access reform was enacted and then experience a slight decline in employment rates following the reform. Meanwhile, the control group of ex-offenders has an average employment rate close to 30 percent that remains stable before and after the record-access reform. Thus, as Figure 4 illustrates, in the period after the record-access reform went into effect, the employment rate of ex-offenders whose criminal records become less accessible shrinks by 0.46 percentage points relative to the employment rate of ex-offenders whose reported criminal records do not change. Given the employment rate of ex-offenders in the treatment group before the reform, this result represents a small 1 percent decline in their employment rate due to the policy change. Once our analysis also takes into account additional factors to help explain the employment rate differences over time between the treatment and control groups (for example, age, gender, race/ethnicity, county of residence), the main result remains largely the same: after the record-access reform, treated ex-offenders experience a slightly smaller employment decline of 0.43 percentage points. Thus, similar to the ban the box reform, we find that the recordaccess reform reduces the employment rate for those ex-offenders affected by the policy change, although the size of this employment reduction is even smaller than the one associated with the ban the box policy change.¹¹

The observed reductions in the average employment rates for ex-offenders could result from different mechanisms influencing the effects of the ban the box and the record-access reforms. For instance, employers could respond to the ban the box reform by changing their hiring criteria and attempting to use (illegally, in some instances) other observable information regarding applicants, such as their gender and/or race/ethnicity, to continue trying to screen out ex-offenders.¹² Alternatively, the observed employment reductions from the reforms could be driven by a change in ex-offender behavior. Compared to the pre-CORI Reform period, ex-offenders might be less willing to be employed in certain industries and instead try searching for better alternatives given a potential increase in employment opportunities. We do not have ideal data to conduct any definitive

See Jackson and Zhao (2016b) for further details.

¹¹ We also examine wage effects and find them to be positive for the record-access reform. However, interpretation of these results is complicated by not having individual-level data. For additional details on the wage results, as well as dynamics and industry heterogeneity for the employment results, see Jackson and Zhao (2016b).

¹² For further discussion of such employer responses to ban the box, see studies by Agan and Starr (2016), Doleac and Hansen (2016), and Shoag and Veuger (2016), as well as a critique of these studies by Emsellem and Avery (2016).

tests to determine precisely the mechanism for the lower average employment rates experienced by those ex-offenders who were expected to be positively impacted by the CORI Reform.

V. Can Changing Access to Criminal Histories Reduce Ex-Offenders' Recidivism Rates?

The CORI Reform aims not only to boost ex-offender employment, but also to reduce recidivism. The theory driving the ban the box provision and the record-access reform was that these policy changes would increase the employment opportunities among ex-offenders, and that gaining a meaningful place in the labor market would discourage recidivism. We generally find that the CORI Reform did help to lower recidivism rates.¹³

In Massachusetts, the officially published recidivism rate is measured as the percentage of individuals who exit incarceration, but return to jail or prison within three years of their release. For the 2011 cohort released from incarceration, the recidivism rate was 35 percent.¹⁴ Some of these individuals did

The CORI reform helped lower recidivism rates in Massachusetts. not receive a new criminal conviction, but rather returned to jail or prison due to technical violations against the terms of their probation and parole. When such technical violations are excluded, the official recidivism rate falls to 30 percent. Recidivism rates vary by age, gender, race, and ethnicity.¹⁵ For example, the 18–24 year-old age group has the highest recidivism rate of 42 percent. Among the 2011 cohort, black men had a 40 percent recidivism rate, the highest recidivism rate of any gender and race combination (Papagiorgakis 2015). However, this official recidivism measure does not accurately depict the entire population of ex-offenders, since many individuals who commit crimes in any given year are

not sentenced to incarceration. The analysis in this report seeks to offer a broader picture of recidivism by covering all ex-offenders rather than just those released from incarceration. This analysis will give a truer measure of recidivism, since the majority of convictions are for misdemeanors and minor felonies, which generally do not carry jail or prison sentences.¹⁶

To examine the CORI Reform's effect on ex-offenders' recidivism rates, we utilize the Massachusetts CORI records from 1982:Q1 to 2015:Q3. This period spans the ban the box and the record-access reforms that became effective in 2010:Q4 and 2012:Q2, respectively. We restrict our consideration to conviction records only. We infer the effect of the ban the box reform on ex-offenders' recidivism rates by comparing the probability, before and after the policy was enacted, that ex-offenders will incur a new conviction. We determine the impact of the record-access reform on ex-offenders' recidivism by comparing the probability of reconviction between ex-offenders unaffected by the policy and ex-offenders affected by the policy.

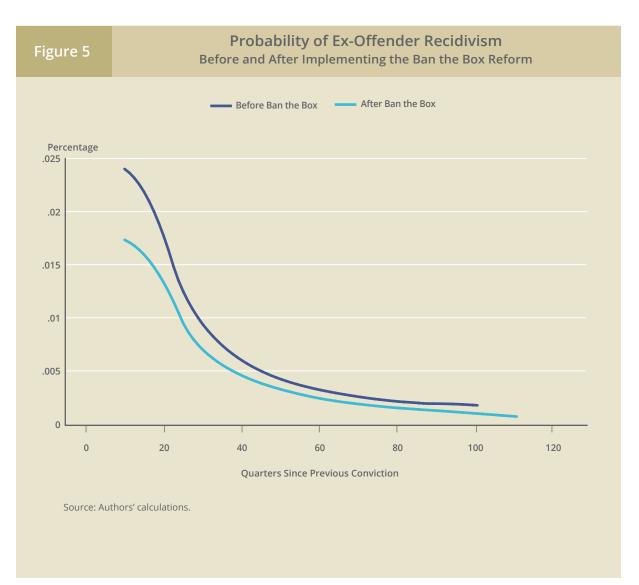
Figures 5 and 6 present a visual assessment of the impact that the CORI Reform may have had on recidivism. Figure 5 shows the average probability that an ex-offender will be convicted for another crime in each quarter since the previous conviction before and after the ban the box policy was implemented, respectively. In both periods, the probability of recidivism declines over time. This result is consistent with a commonly held perception that the longer an ex-offender remains without committing a new crime, the less likely he or she will recidivate in the next period.

¹³ This result may seem at odds with the findings that the CORI Reform did not help to raise employment among ex-offenders. However, this apparent contradiction could be explained by the possibility that the CORI Reform might encourage ex-offenders to seek better work conditions and higher wages and not to return to criminal activities.

¹⁴ While cross-state comparisons are usually discouraged due to differences in how recidivism rates are calculated in each state, Massachusetts typically has the lowest published recidivism rate in the New England region for each cohort in a particular year. For example, the three-year recidivism rates for the 2009 cohort released from incarceration ranged from 41.0 percent in Massachusetts to 56.1 percent in Maine (Papagiorgakis 2015; Rubin 2013).

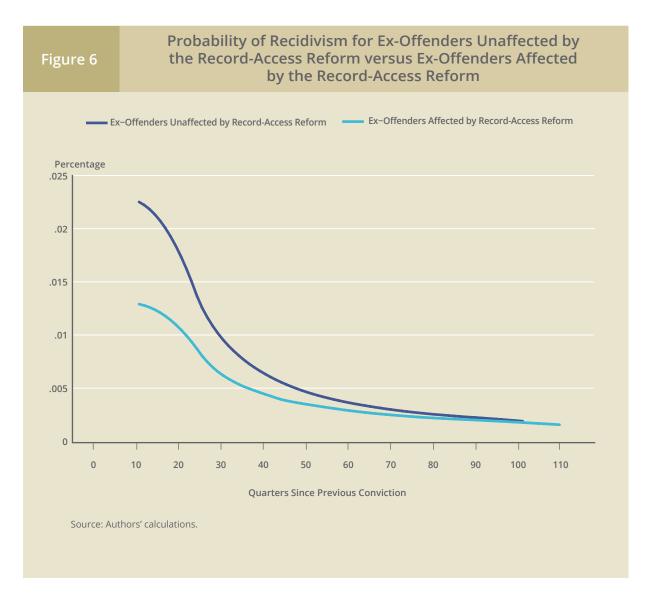
¹⁵ Women had a slightly lower recidivism rate at 34 percent compared to the male rate of 36 percent (Papagiorgakis 2015).

¹⁶ See Clifford and Sullivan (2017) for details of the composition of convictions in the New England region.



More importantly, Figure 5 shows that the probability of recidivism shifted slightly downward after the ban the box reform was enacted. This finding suggests that ban the box likely helps to reduce recidivism. Indeed, we find that the ban the box reform led to a decrease of about 11 percent in the probability of recidivism, even after we account for other factors that may affect recidivism, such as an ex-offender's age, gender, race and ethnicity, as well as local labor market conditions. This decline translates into ban the box accounting for approximately an 8 percent reduction in the three-year reconviction rate.

Using the Massachusetts CORI database, Figure 6 shows the average probability of reconviction in each quarter since the previous conviction for ex-offenders who were directly affected by the record-access reform and for ex-offenders who were not directly affected by the record-access reform, respectively. The probability of recidivism for ex-offenders affected by the record-access reform appears slightly lower than the probability of recidivism for ex-offenders who were not affected by this reform. This result suggest that the record-access reform has had a positive impact on reducing recidivism in Massachusetts. We find that the record-access reform resulted in a decline of close to 10 percent in the probability of recidivism, even after we take into account other influencing factors. This decline translates into an approximately 7 percent reduction in the three-year reconviction rate. Additionally, the size of the effects on recidivism from both components of the CORI Reform are very comparable to other work.



For example, in line with our finding that *decreasing* access to criminal histories *lowers* the probability of recidivism by 10 to 11 percent, Lee (2011) finds that *increasing* access to criminal histories from the introduction of state-maintained online criminal databases *raises* the probability of recidivism by 11 percent.

VI. Conclusion

Our overall analysis of the effects that the CORI Reform in Massachusetts has had on labor market outcomes and recidivism rates for ex-offenders suggests that more changes are needed in order to better support the reintegration of ex-offenders into civil society. For instance, policies that actively encourage employers to hire ex-offenders may be needed, not limited to but including: issuing certificates of employability to ex-offenders to provide a positive signal to employers, supplying more information to employers on ex-offender productivity to try to change employer beliefs about how ex-offenders may perform if hired, providing in-prison job training to increase ex-offender productivity, and/or providing subsidies for hiring ex-offenders to reduce the cost to employers. However, further research is needed on such policies in order to better understand their effectiveness and determine which one(s) might be preferable to implement. More broadly, policies could aim to promote a better understanding among the general public that a criminal conviction, often incurred during youth or young adulthood, should not impose a lifelong stigma that adversely affects an individual's economic prospects, living conditions, retirement security, and health. Moreover, promoting criminal history reforms aimed at improving labor market outcomes could have positive macroeconomic consequences.

This report highlights the impact of changing employer access to criminal background records on ex-offender employment and recidivism rates. While the focus concentrates on the landmark 2010–2012 Massachusetts CORI Reform, the results from this reform have important lessons for the rest of

the United States. Our findings show that the ban the box and record-access reforms caused a small reduction in average employment rates among exoffenders, a result counter to the expected outcomes of this legislation. We also find that the reform caused a small reduction in ex-offender recidivism, suggesting a slight rise in ex-offenders being reintegrated into mainstream society. However, better data and more research are needed to understand the underlying channel(s) explaining these findings.

Furthermore, given the specific context of this analysis, policymakers may wish to carefully examine the larger economic and social environment when considering implementing policy changes similar to the CORI Reform. For instance, the effects of these policies could differ depending on macroeconomic conditions, and therefore would have to be considered in the context of

the time and location in which the legislation would be enacted. Additionally, with sufficient data that differentiate the extent of criminal history information made available to employers, further research could determine how ex-offender outcomes are affected by changing the amount of criminal history that is disclosed to employers (for example, the number of years that a criminal conviction appears on a record).

Additional policy measures and programs are needed to better support the reintegration of ex-offenders in civil society.

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About the Authors



Osborne Jackson is a senior economist with the New England Public Policy Center. Jackson's research focuses on labor economics and urban and regional economics, with particular interest in immigration, discrimination, education, and housing. His work has covered topics such as the impact of immigration on native college enrollment and how the availability of subsidized housing affects homelessness. Jackson has also given presentations at various academic

meetings, including annual conferences of the American Economic Association and the Society of Labor Economists. Prior to joining the Federal Reserve Bank of Boston in 2015, he was an assistant professor of economics at Northeastern University. Jackson earned his A.B. in economics from Harvard University and his Ph.D. and M.A. in economics from the University of Michigan.



Riley Sullivan is a policy analyst with the New England Public Policy Center. Sullivan's research interests include education policy, income inequality, and urban and regional economics. Riley is also the editor of the Federal Reserve Bank of Boston's regional data resource, *New England Economic Indicators*. Originally from Fall River, Riley earned his master's degree in public policy from Georgetown University and his BA in history from Boston College.



Bo Zhao is a senior economist with the New England Public Policy Center. Zhao specializes in public finance and urban and regional economics. His work has recently focused on state fiscal issues including municipal aid reform, rainy day fund adequacy, and pension funding. Zhao has also given presentations at various academic meetings and to public audiences in the region. His articles have appeared in the *Journal of Urban Economics*, the *National Tax Journal*, the

Journal of Policy Analysis and Management, and *Public Finance Review*, among other journals. He served on the Municipal Aid Subcommittee of the Massachusetts Municipal Finance Task Force between 2006 and 2007. Zhao earned his Ph.D. in economics and M.S. in applied statistics from Syracuse University.

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New England Public Policy Center Federal Reserve Bank of Boston 600 Atlantic Avenue Boston, MA 02210



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