Empirical evidence on the effects of Ban the Box policies

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Government Reform

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Chairman Gowdy, Ranking Member Cummings, and other members of the Committee: Thank you for inviting me to testify in this hearing about prisoner reentry. My remarks will focus on the empirical evidence on one popular approach to improving reentry outcomes: Ban the Box policies (also called Fair Chance policies). This evidence can be summarized as follows:

- Delaying information about job applicants' criminal histories leads employers to statistically discriminate against groups that are more likely to have a recent conviction. This reduces employment for young, low-skilled, black men.
- 2. This negative effect is driven by a reduction in employment for young, low-skilled, black men who don't have criminal records. When these men can no longer signal their clean record on a job application, employers assume there is a high likelihood that they have a record and do not interview them.

- 3. The best evidence suggests that Ban the Box does not increase employment for people with criminal records, and might even reduce it.
- 4. Effective approaches to this policy problem are likely to be policies that directly address employers' concerns about hiring people with criminal records, such as investing in rehabilitation, providing more information about applicants' work-readiness, and clarifying employers' legal responsibilities.

1 Background on Ban the Box

Two-thirds of people who are released from prison will be arrested again within three years (Cooper, Durose and Snyder, 2014). This high recidivism rate signals our collective failure to help this group successfully reintegrate to civilian life. The question facing policymakers is what we can do to facilitate more successful reintegration and break this cycle of incarceration.

Those who go through the criminal justice system face a wide array of challenges that make this task difficult. These challenges include low education, limited and interrupted work histories, lack of stable housing, and high rates of substance abuse, mental illness, and emotional trauma (see Raphael, 2010, and Doleac, 2016, for more complete discussions; Appendix figures A.1 through A.3 show the most recent statistics on mental health and substance abuse for jail and prison inmates). All of these challenges can be made worse by the experience of incarceration. People with criminal records also have a history of illegal behavior, and to the extent that past behavior predicts future behavior this could be worrisome to potential employers. All of these factors help explain why this population has trouble finding stable employment upon release from prison. A lack of stable employment may be one reason we see such high recidivism rates.

There is surely heterogeneity within this population: some people with records are more work-ready¹ than others. Why don't employers hire at least those who are work-

¹I will use the term "work-ready" to refer to a combination of soft skills and job-specific skills that

ready? Unfortunately, work-readiness is difficult to discern from a job application, so employers are forced to infer it based on the information they can observe, such as education and work history. Many also view a criminal record as valuable information of work-readiness. Anecdotally, some employers are so reluctant to hire people with criminal records that they immediately discard applications from anyone who checks the box on the application saying they've been convicted of a crime. This limits opportunities for people with criminal records who are work-ready, and imposes large costs on society if it contributes to the high recidivism rates mentioned above.

Ban the Box (BTB) aims to increase access to jobs by prohibiting employers from asking job applicants about their criminal histories until late in the hiring process. The hope is that if some people with records can get their foot in the door, those who are a good fit for the job will be able to build rapport with the employer and communicate their work-readiness during an interview, before the employer runs a background check. This gives the employer a chance to decide if the person is qualified before knowing about their record, and this could increase the likelihood that the employer hires the applicant. BTB could also bring more people with records into the labor force, if the question on applications about past convictions had previously discouraged them from applying for jobs. Both effects could lead to an increase in employment for people with criminal records. Because people with records are disproportionately African-American, this could also reduce racial disparities in employment.

Unfortunately, BTB does not do anything to address the many reasons employers might be reluctant to hire someone with a record: the challenges I listed above likely make the average person with a record less work-ready than the average person without a record. On top of concerns about productivity, employers may worry that hiring someone with a criminal record puts them at risk of a negligent hiring lawsuit or negative media make someone a reliable and productive employee.

attention that could put them out of business. EEOC guidance instructs employers to use reasonable judgment in considering whether a prior conviction is relevant given the responsibilities of the job being considered. But if an employee commits a violent offense on the job, any previous conviction could look like a red flag, and the employer could be held liable in a court of law or the court of public opinion; either result could be catastrophic for a business owner. In this context, it makes sense that employers would avoid hiring people with records when they have qualified people without records to choose from.

Since employers still don't want to hire people with criminal records – especially those with recent convictions – they may try to guess who has a record when they aren't allowed to ask. In the United States, observable characteristics such as race, age, gender, and education level are highly correlated with the likelihood of having a recent criminal conviction. Young black men who don't have a college degree are much more likely than others to have a recent conviction that might worry an employer, and so employers who want to avoid interviewing people with recent convictions may avoid interviewing applicants from this group.² As a result, we might see BTB hurt this group more than it helps them.

The direction and magnitude of the effects of BTB are empirical questions, and a number of recent studies shed light on what these effects have been.³ Overall, they

²Discrimination based on race is, of course, illegal in the United States. If one could prove that a particular applicant was not hired for a particular job because of his race, that would be grounds for a lawsuit. Unfortunately, such a thing is difficult to prove. Because of this, our anti-discrimination laws are difficult to enforce in practice. Reasonable people can differ in their belief about how much we might be able to reduce racial discrimination if we increased enforcement efforts. Given this, readers should think of the results I will present as the effects of BTB and other policy interventions in the context of the level of anti-discrimination enforcement in effect during the past decade.

³It is important to distinguish between BTB the policy and BTB the social movement. "Ban the Box" has become the slogan of a social movement in favor of second chances and against stigmatizing those with a criminal past. The social movement has humanized the formerly incarcerated, and led to a cultural change and greater political will to improve reentry outcomes. These are, without a doubt, positive developments. The issue I will address in my testimony is not the effects of BTB the social movement, but the effects of BTB the policy, which delays when employers are allowed to ask about an applicant's criminal record. Disentangling these effects is difficult but has been the goal of economists

provide strong evidence that BTB has not helped people with criminal records, and has harmed young, low-skilled black men without records, who already struggle in the labor market for a variety of reasons. Based on this evidence, I urge this Committee to reject the Fair Chance Act and focus on other policy options that are likely to be more successful.

2 The Effects of Ban the Box on employment

2.1 The research challenge

Measuring the effect of BTB policies on employment is not a straightforward exercise. To measure the effect of BTB in a particular place, we need to know what would have happened if that place had not adopted BTB. That is, what is the counterfactual? The problem, of course, is that we do not simultaneously observe both events – either a place adopts the policy or not. So, when considering the impact of BTB in particular places, we need to find a good control group that can serve as the counterfactual.

Ban the Box policies are not implemented at random, so places that adopt them are likely to be different from places that do not. Indeed, they tend to be more urban, and have larger black populations (Doleac and Hansen, 2016). Such differences are easily observed, but others are not. For instance, places that adopt Ban the Box are likely to be those where residents are more motivated to help people with criminal records, and to reduce racial disparities in employment. A simple pre-post comparison of employment for people with criminal records, or even a basic comparison of employment trends in places that do and do not adopt the policy, could therefore be misleading.

For instance, a frequently cited report on BTB in Durham, NC, shows that the share of people hired by the city government who had criminal records increased after BTB was implemented in 2011 (Atkinson and Lockwood, 2014). What the report does not say is that the unemployment rate fell dramatically in Durham during that period (2011-2014), which coincided with a national economic recovery. Employment of people with criminal

studying this topic in recent years.

records surely would have increased even if BTB had not been implemented, because the tighter labor market meant employers had to dig deeper into their applicant pools to fill open positions. Without a control group – people who would be subject to the same employment trends as those with criminal records, but who wouldn't be affected by BTB – we can't tell whether BTB had any effect on employment in Durham.

Another challenge in studying policies aimed at helping people with criminal records is that high-quality data on this group do not exist at the national level. There is no national dataset that links administrative data on criminal histories with employment outcomes. Our major national surveys, such as the American Community Survey and the Current Population Survey (CPS), do not ask about criminal records.⁴

The studies I'll describe below are thus forced to take other approaches to measuring the effects of BTB laws. Agan and Starr (2016) conduct a field experiment that generates new data. Doleac and Hansen (2016) use the CPS to study the effects of BTB on demographic groups likely to have a recent conviction, to consider net effects indicative of statistical discrimination, but we cannot separate effects on people with and without criminal records. Rose (2017) and Jackson and Zhao (2017) both link administrative data on criminal histories and employment at the state level, to measure the effect of BTB on people with criminal records. The lack of similar administrative data at the national level means that these state-level analyses are the best available for understanding policy effects on people with criminal records.

⁴The National Longitudinal Survey of Youth (NLSY) is often used to study the relationship between criminal history and outcomes like employment, but there are two important drawbacks to using this dataset: (1) it's a relatively small sample, so statistical power to detect effects is limited, and (2) criminal history information is self-reported. Researchers have shown that such self-reports are often wildly inaccurate, and that inaccuracy may vary with race (Kirk and Wakefield, 2018). The accuracy of reporting might also change as the perception of stigma changes – for instance, after BTB policies are passed, respondents might be less hesitant to admit their criminal records to interviewers. This makes the NLSY problematic for studying the effects of BTB.

2.2 Recent research: Overview

The following four papers represent the best evidence so far on the employment impacts of BTB. Two consider the unintended consequences of BTB for young black men without records. Both find evidence of statistical discrimination that is consistent with economic theory and with other work on the role of information in labor markets. Two other papers measure the effect of BTB on people with criminal records. Table 1 summarizes the findings of these four BTB studies.

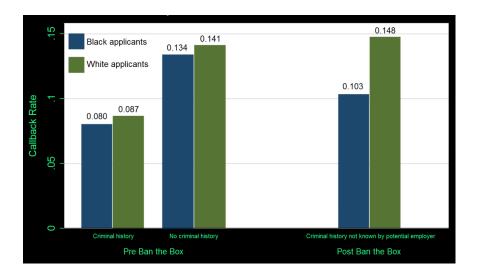
Since places that adopt BTB are probably more motivated to help people with criminal records than places that do not, all of the estimates below are likely biased toward finding a beneficial effect of the policy. The fact that all find negative or zero results suggests the actual effects are even more negative than the estimates I will present.

The studies described below represent the most rigorous evidence available on BTB. Other studies exist, and some find beneficial effects of BTB, but they do not meet the rigorous standards of the literature. More specifically, in their current form they do not credibly control for other factors that might affect employment outcomes, and so do not isolate the effect of BTB on employment. (All are currently working papers and so may change in response to suggestions from colleagues and peer reviewers.) Since the evidence specific to BTB is relatively new, and not all of the studies have been peer-reviewed, it will be helpful to consider the findings in the context of other work on statistical discrimination in labor markets. Together, this literature tells a consistent story.

2.3 Recent research: Unintended consequences of BTB

Agan and Starr (2016) ran a field experiment where they sent thousands of job applications from fake applicants, all of whom were young men without college degrees. They randomized whether the applicant was black or white, and whether or not they had a non-violent felony conviction. They submitted these applications before and after Ban the Box laws targeting private employers went into effect in New York City and New Jersey, and then observed which applicants received a call for an interview (a "callback"). Before Ban the Box, individuals with records were called back at lower rates than those without records. The racial gap was small: white applicants were only 7% more likely than black applicants to receive a callback. After BTB, that racial gap widened to 43%. (See figure 1.) While white applicants were called back at nearly the same rate as before, black applicants were called back at a rate in between the rates at which those with and without records were called before BTB. This may help black men with records, but it hurts black men without records; this tradeoff is consistent with the hypothesis that in the absence of information about a criminal record, employers statistically discriminate based on race and are less likely to interview applicants from groups that include lots of people with recent convictions.





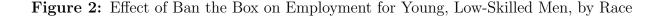
Notes: Figure source: Agan and Doleac (2017), based on results from Agan and Starr (2016).

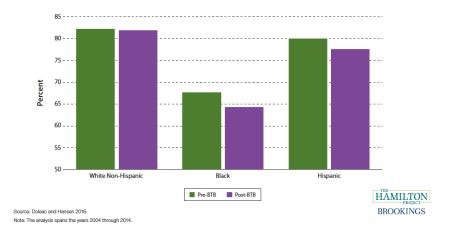
The advantage of this randomized experiment is that Agan and Starr were able to isolate the effects of race and criminal history from other factors that might affect callbacks for real applicants. The disadvantage is that they don't see who actually gets a job. That is especially important in this context, as some (perhaps many) applicants with criminal records who are now getting callbacks might ultimately be rejected when their criminal history is revealed.

My own work with Benjamin Hansen (Doleac and Hansen, 2016) uses a different approach. We use data from the CPS and the the timing of BTB policies across the country as a natural experiment to measure the effects of BTB on actual employment.⁵ This is a less clean experiment than the Agan and Starr study, as the timing of these policies is not random, but the advantage is that we are able to see actual employment outcomes (instead of just callbacks). We show that, after controlling for observable differences between places, as well as regional employment shocks such as the Great Recession, places with and without BTB exhibit "parallel trends" in employment outcomes – that is, the pre-policy trends in employment look very similar. This is the empirical standard for arguing that the places without the policy are a good counterfactual for the treatment group: since employment trends were similar across the two groups before the policy change, we can reasonably assume that the trends would have continued to be similar if the policy change had not occurred.

Having established a good control group, we then measure the effect of BTB on employment for young men without college degrees – the group most likely to be helped by the policy if it helps people with recent convictions get jobs, or hurt by the policy if it leads employers to statistically discriminate. We find that BTB *reduces* employment by 5% for black men in this group. (See figure 2.) This estimate is robust to a large number of additional checks: for instance, restricting the sample to only cities, or to places that eventually adopt BTB. We even find the same effect after controlling for monthly unemployment rates at the local level – evidence that our results are not driven by local employment shocks that our controls might have missed.

⁵The CPS does not include information about respondents' criminal records, so we cannot separately measure effects on those with and without records.





Notes: Figure source: Doleac (2016), based on results from Doleac and Hansen (2016).

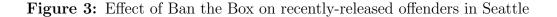
During the period we studied, 2004-2014, the majority of BTB policies were targeted at the public sector. However, since human capital is mobile across sectors, it is not obvious where we would expect to see effects on employment. People who might have found jobs in the private sector and now spend their time searching (unproductively) for government jobs might now remain unemployed; that would result in a drop in private sector employment. We test the effects of the policy by sector and find that about half of the negative result for young black men is driven by a loss of private sector jobs, and the other half is driven by a loss of public sector jobs. This is evidence against the hypothesis posed by some that the government is somehow different and immune to discrimination concerns.

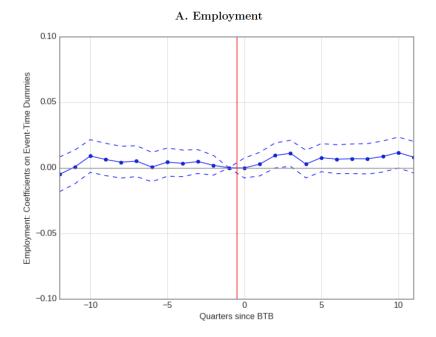
Who do employers hire instead when they do not hire young black men without college degrees? If they want to avoid hiring someone with a recent conviction who is at risk for future criminal activity, they may statistically discriminate in favor of white applicants, older applicants, and/or women. It appears that when BTB targets public employers, those employers shift from hiring young black men to older black men. When BTB targets private employers, they shift from hiring young black men to young white men (consistent with Agan and Starr, 2016, who found that white men were helped by the private BTB laws in NYC and NJ). We cannot tell from our data whether the older black men and young white men who are now being hired at higher rates have criminal records themselves, or if they are simply individuals without records who are less qualified than the young black men without records who are no longer being hired.

2.4 Recent research: Effects on people with criminal records

Some might be willing to tolerate large negative effects for people without records if we see benefits for at least some people with records. But the two best studies on this topic find no such benefits. Both studies link criminal history records with employment data – the ideal administrative data for this exercise. One study, Rose (2017), compares individuals with criminal records in Seattle, where BTB was implemented, with similar people in other parts of the state. The pre-period trends for these two groups are nearly identical, so it seems like the people from outside Seattle are a good control group in this context. When Rose compares employment trends after BTB went into effect in Seattle, he finds the policy had no effect on employment for people with records. (See figure 3.)

Another study, Jackson and Zhao (2017), compares people with criminal records in Massachusetts at the time BTB was implemented (the treatment group) with people who did not have records yet but would be convicted later (the control group). The motivation for this strategy is that both groups should be similar in terms of education, behavior, and other disadvantages that might result in a criminal conviction, but only the treatment group is immediately affected by BTB. Because these different populations have different age profiles – those with records are older than those without – they weight individuals in each group so that the pre-BTB trends look similar. They then measure changes in employment for the treatment group relative to the control group. They find that BTB *reduced* employment for people with criminal records in Massachusetts, by about

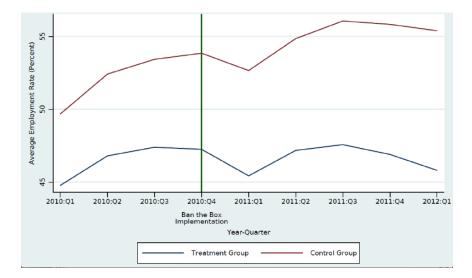




Notes: Figure source: Rose (2017). Figure plots the estimated coefficients on the interaction of event time and treatment indicators and 95% confidence intervals. See source for more information.

5%. (See figure 4.) This is consistent with qualitative work showing that people with criminal records become discouraged when interviewing for jobs that they eventually do not get because of their records – sometimes even after working for a probationary period (Augustine, 2017). Removing or delaying information that employers find valuable makes it harder to identify good matches early, and so risks wasting everyone's time and giving job applicants false hope. This is costly to job-seekers as well as to employers.

Figure 4: Effect of Ban the Box on people with criminal records in Massachusetts



Notes: Figure source: Jackson and Zhao (2017).

	Employers covered (public/private)	Empirical strategy	Sample	Outcome measure	Main result
Agan and Starr (2016)	Private	Audit study	NYC and NJ, young men without a college degree	Callbacks	BTB increased the racial gap in callbacks (favoring white ap- plicants) from 7% to 43%
Doleac and Hansen (2016)	Both	Difference-in- difference	National, young men without a college de- gree	Employment	BTB reduced employment by 5% for young, low-skilled black men
Jackson and Zhao (2017)	Both	Difference-in- difference	People with criminal records in MA	Employment	BTB reduced employment for people with criminal records by 5%
Rose (2017)	Both	Difference-in- difference	People with criminal records in WA	Employment	Seattle's BTB policy had no ef- fect on employment for people with criminal records

	Table 1:	Summary of	f main	results	from	studies	on	Ban the Bo	ЭX
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3 Other evidence on statistical discrimination in labor markets

(This section is drawn heavily from the text of Doleac and Hansen, 2016.)

Ban the box policies seek to limit employers' access to criminal histories. This access itself is relatively new. Before the internet and inexpensive computer storage became available in the 1990s, it was not easy to check job applicants' criminal histories. A number of studies consider how employment outcomes changed as criminal records became more widely available during the 1990s and early 2000s, and their findings foreshadow those described above: when information on criminal records is easily available, firms are more likely to hire low-skilled black men (Bushway, 2004; Holzer, Raphael and Stoll, 2006; Finlay, 2009; Stoll, 2009). In fact, many of those studies explicitly predicted that limiting information on criminal records, via BTB or similar policies, would negatively affect lowskilled black men as a group. For example:

[S]ome advocates seek to suppress the information to which employers have access regarding criminal records. But it is possible that the provision of more information to these firms will increase their general willingness to hire young black men, as we show here and since we have previously found evidence that employers who do not have such information often engage in statistical discrimination against this demographic group. (Holzer, Raphael and Stoll, 2004)

Employers have imperfect information about the criminal records of applicants, so rational employers may use observable correlates of criminality as proxies for criminality and statistically discriminate against groups with high rates of criminal activity or incarceration. (Finlay, 2009)

[Ban the box] may in fact have limited positive impacts on the employment of ex-offenders....More worrisome is the likelihood that these bans will have large negative impacts on the employment of those whom we should also be concerned about in the labor market, namely minority – especially black – men without criminal records, whose employment prospects are already poor for a variety of other reasons. (Stoll, 2009)

There is also evidence from other contexts that statistical discrimination increases when information about employees is less precise. Autor and Scarborough (2008) measure the effects of personality testing by employers on hiring outcomes. Conditioning hiring on good performance on personality tests (such as popular Myers-Briggs tests) was generally viewed as disadvantaging minority job candidates because minorities tend to score worse on these tests. However, the authors note that this will only happen if employers' assumptions about applicants in the absence of information about test scores are more positive than the information that test scores provide. If, in contrast, minorities score better on these tests than employers would have thought, adding accurate information about a job applicant's abilities will help minority applicants. They find that in a national firm that was rolling out personality testing, the use of these tests had no effect on the racial composition of employees, though they did allow the firm to choose employees who were more productive.

Wozniak (2015) found that when employers required drug tests for employees, black employment rates increased by 7-30%, with the largest effects on low-skilled black men. As in the personality test context, the popular assumption was that if black men are more likely to fail a drug test, then employers' use of drug tests when making hiring decisions would disproportionately hurt this group. It turned out that a drug test requirement allowed non-using black men to prove their status when employers would otherwise have used race as a proxy for drug use.

In another related paper, Bartik and Nelson (2016) hypothesize that banning employers from checking job applicants' credit histories will negatively affect employment outcomes for groups that have lower credit scores on average (particularly black individuals). The reasoning is as above: in the absence of information about credit histories, employers will use race as a proxy for credit scores. They find that, consistent with statistical discrimination, credit check bans reduce job-finding rates by 7-16% for black job-seekers. As with BTB policies, one goal of banning credit checks was to reduce racial disparities in employment, so this policy was counterproductive.

The recent studies on BTB therefore contribute to a growing literature showing that well-intentioned policies that remove information about racially-imbalanced characteristics from job applications can do more harm than good for minority job-seekers. Advocates for these policies seem to think that in the absence of information, employers will assume the best about all job applicants. This is often not the case. In the above examples, providing information about characteristics that are less favorable, on average, among black job-seekers – criminal records, drug tests, and credit histories – actually helped black men and black women find jobs. These outcomes are what we would expect from standard statistical discrimination models. More information helps the best job candidates avoid discrimination.

This growing literature has important implications for anti-discrimination policy in the United States: When we discover that employers' use of particular information has a disparate impact on a protected group, we often tell them they can't use that information anymore. But it turns out that in all of these settings, removing that information simply leads employers to statistically discriminate instead. (Indeed, the statistical correlation that causes the disparate impact makes statistical discrimination more effective.) That is, rather than reducing discrimination, this approach effectively broadens the discrimination to the entire group.

4 Alternatives to Ban the Box

There are other policy options that are likely to have larger benefits for people with records, without unintentionally harming young black men without records. The key is figuring out what employers are worried about, and then finding a way to directly address those concerns.

Most employers simply want to find applicants who will show up on time every day and do a good job. They appear to view a criminal record as a negative signal about that, and in the absence of better information they screen those applicants out. If we could give them better information, or address the problems that make this population less work-ready, employers will care less about the criminal record.

Effective policies will likely do one or more of the following⁶:

- 1. Improve the average work-readiness of people with criminal records.
- 2. Provide more information to employers about the work-readiness of job applicants with criminal records.
- 3. Clarify employers' legal responsibilities in hiring to make clear which applicants do and which do not pose an undue risk.

Improving the average work readiness of people with criminal records: This strategy could involve investment on several fronts, including education, job training, mental health treatment, and substance abuse treatment. Recent work by Wen, Hockenberry and Cummings (2017) shows that increasing access to substance abuse treatment through expansions of Medicaid reduced both violent and property crime rates. While this does not speak directly to the effects of substance abuse treatment on employment, it suggests that access to treatment has a meaningful effect on a driver of criminal behavior, which is also likely to affect work-readiness.

Providing more information about work-readiness: Fully rehabilitating everyone who goes through the criminal justice system will take time. In the meantime, providing more information about applicants' work-readiness will help employers identify

⁶See Doleac (2016) for a longer discussion of principles to guide policy in this area.

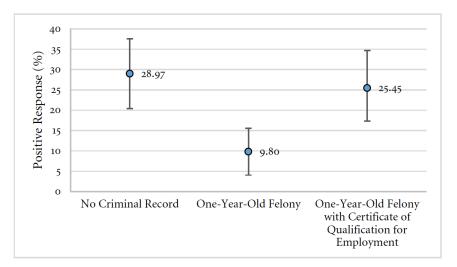
those applicants who would make good employees despite their criminal record. One type of information that many employers find valuable is successful completion of a challenging rehabilitation or job training program, or even active participation in such a program. See Piehl (2009) for a description of a reentry program that employers trust to send them work-ready employees.

Court-issued certificates of qualification for employment (also called employability or rehabilitation certificates) provide another example of how to provide valuable information to employers. In a growing number of jurisdictions, individuals with criminal records can go before a judge and present evidence of their rehabilitation and work-readiness. If the judge is convinced, he or she can issue a certificate of qualification. The recipient can then show that certificate to employers when applying for jobs. To the extent that employers view the judge as a credible evaluator of work-readiness, this could outweigh the effect of a criminal record.

Clarify employers' legal responsibilities: Certificates of qualification could address liability concerns as well. For employers who worry about the legal liability or negative press associated with hiring someone with a record, finding a way to shift the risk involved from the employer to someone else can address this concern. Employers likely view certificates of qualification as insurance against negligent hiring lawsuits and negative press. If someone with a certificate of qualification later commits a crime on the job, the employer can credibly argue that there's no way they could have predicted such an event and deflect any blame to the court system. After all, a judge certified the applicant as being work-ready.

There is empirical evidence that certificates of qualification are effective. Leasure and Andersen (2016) ran an audit study to test the effect of these certificates on callbacks for a job. They randomized whether a job applicant had a felony conviction, a felony conviction and a certificate of qualification, or no conviction at all. They found that applicants with a certificate were called back just as often as those with no conviction at all, suggesting that this type of intervention provides valuable information to employers that allays concerns about an applicant's criminal record. (See figure 5.) Since this intervention provides more information about the applicant, rather than taking information away, there is no reason to expect unintended consequences of the sort caused by BTB – it should lead to less guessing about applicants' work-readiness, not more.





Notes: Figure source: Leasure and Andersen (2016). Overall Likelihood Ratio $\chi^2 = 14.114$, p < 0.001. No criminal record vs. One-year-old felony Likelihood Ratio $\chi^2 = 12.691$, p < 0.001. One-year-old felony vs. Certificate of Qualification for Employment Likelihood Ratio $\chi^2 = 9.151$, p < 0.01. No criminal record vs. CQE Likelihood Ratio $\chi^2 = 0.339$, n.s. "Positive response" refers to interview invitations or job offers. Circles indicate point estimates of percentages. Error bars indicate 95% confidence interval.

Given the growing evidence that BTB is not having the benefits we'd hoped for people with criminal records, and is actually harming disadvantaged groups without records, it would be helpful to shift our policy focus to creative solutions like these that take employers' concerns seriously and find ways to address them.

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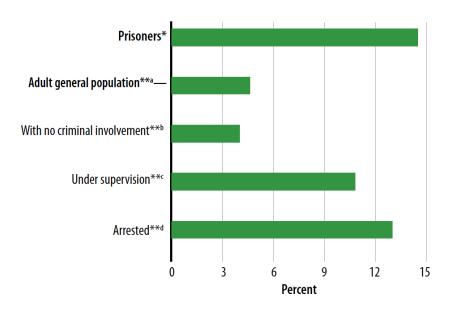
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A Appendix

Figure A.1: Prisoners and adult general population who met the threshold for serious psychological distress, 2009–2012



Notes: Figure source: Bronson and Berzofsky (2017). Includes persons with a score of 13 or more on the K6 scale. (See source for definitions.)

* Comparison group.

** Difference with the comparison group is significant at the 95% confidence level.

 a General population estimates were standardized to the prison population based on sex, race, Hispanic origin, and age.

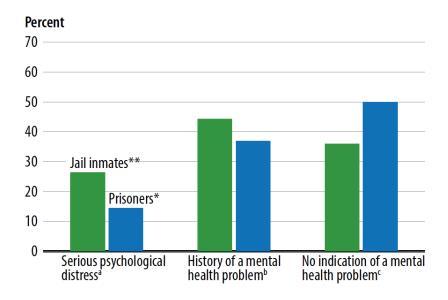
 b Includes respondents from the 2009–2012 NSDUH who indicated they had not been arrested or on probation or parole in the past 12 months.

 $^c\mathrm{Includes}$ respondents from the 2009–2012 NSDUH who indicated they had been on probation or parole in the past 12 months.

 d Includes respondents from the 2009–2012 NSDUH who indicated they had been arrested in the past 12 months.

Data source: Bureau of Justice Statistics, National Inmate Survey, 20112012; and Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health (NSDUH), 2009–2012.

Figure A.2: Mental health status of prisoners and jail inmates, by type of mental health indicator, 2011–2012



Notes: Figure source: Bronson and Berzofsky (2017).

* Comparison group.

** Difference with the comparison group is significant at the 95% confidence level.

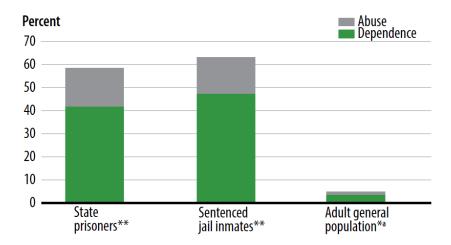
^aIncludes persons with a score of 13 or more on the K6 scale. (See source for definitions.)

 b Includes inmates who reported they had ever been told by a mental health professional they had a mental disorder.

 c Includes inmates with a score of 7 or less on the K6 and who had never been told by a mental health professional they had a mental disorder.

Data source: Bureau of Justice Statistics, National Inmate Survey, 2011–2012.

Figure A.3: Inmates and adult general population who met the criteria for drug dependence or abuse, 2007–2009



Notes: Figure source: Bronson et al. (2017). (See source for definition of dependence and abuse based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.) * Comparison group

 ** Difference with the comparison group is significant at the 95% confidence level.

^aGeneral population estimates have been standardized to the state prisoner population by sex, race, Hispanic origin, and age.

Data source: Bureau of Justice Statistics, National Inmate Surveys, 2007 and 2008–09; and Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, 2007–2009.

^{*} Comparison group.