Past literature suggests that those with a criminal record often encounter bias when seeking employment due to their stigmatized status. However, this bias may be contingent upon company-wide policies or personal sentiments surrounding the hire of ex-offenders. This paper utilizes Ordinary Least Squares methods to investigate whether exposure to employees with a criminal record impacts hiring decisions for similar applicants in the future. Using employer survey data, I find that there is a statistically significant positive association between having hired an ex-offender in the past and the likelihood of doing so in the future. The association is more pronounced for white applicants than for black applicants.

CRIMINAL BIAS IN EMPLOYMENT

Company Exposure to Ex-Offenders as a Factor in Hiring Decisions

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I. Introduction

As an institution, the American Justice System serves to protect the nation's citizens from crime and rehabilitate those members of society who have committed delinquency in their past. However, the efficacy of the rehabilitation function is called into question when a legacy of stigma is attached to former convicts attempting to once again become a part of society (Sawyer & Wagner, 2020). Not only is the effect of the label "criminal" apparent in personal biases that may exist surrounding those who have had brushes with the law, but also through statistical evidence that a criminal record interferes with ex-offenders' ability to successfully re-enter society (Bernburg, Krohn, & Rivera, 2006; Weiman, Stoll, & Shawn 2007; Pager & Western, 2009).

One major area in which former convicts are disproportionately affected following their incarceration is participation in the economy. Couloute & Kopf (2018) provided the first estimate of unemployment rates within the population of ex-offenders: 27%. They note that the only period in which the unemployment rate for the entire American population was comparable to this estimate was during the peak of the Great Depression, when American unemployment rates reached 25% (Couloute & Kopf, 2018). At the time of Couloute & Kopf's study, the unemployment rate in the United States was around one-sixth of the unemployment rate for ex-criminals, at 4.0% (Bureau of Labor Statistics, 2018). With over 650,000 individuals released from American prisons every year (U.S. Department of Justice, n.d.), the discrepancies in unemployment between these populations is unviable.

Criminal history and negative employment outcomes are undeniably linked, illustrated not only by these statistics, but also by the vast amount of research that has been dedicated to the topic over decades (Mueller-Smith, 2015; Pager, 2003; Agan & Starr, 2017). Bias that lasts past time in jail or prison interrupts the goal of rehabilitation that is inherent to the criminal justice system. As

a result, policy initiatives such as "Ban the Box," which calls for an elimination of disclosure of criminal history early on in job application processes, or proposals to eradicate background checks for job applicants have been suggested to help reduce barriers to re-entry. Additionally, existing programs such as the Work Opportunity Tax Credit (WOTC) offer tax credits to firms that employ individuals from marginalized groups, such as the formerly incarcerated, to incentivize their hire. Still, for these initiatives to operate in the way that they are intended, it is essential that the existence of bias surrounding the stigma of a criminal label can be proven.

Informed by existing literature and adding to the debate, this paper intends to quantify the existence of cultural and personal bias that occurs in company hiring practices relating to ex-offenders. This is accomplished by investigating the differential rates of willingness to hire an applicant with a criminal record between companies who have and have not hired an employee with a criminal history before. The idea behind this research is that exposure to a worker who bears the label of "ex-offender" will help to break down preconceived notions about those who have been incarcerated, and their ability to be reliable members of a business operation. If this concept exists in practice, companies who have hired former criminals in the past should be more willing to hire similar workers in the future, compared to companies who have never hired ex-offenders. A unique approach combining social and economic theory will inform a model to illustrate the weight of bias in criminal hiring decisions.

This research is organized into four parts. The following section will conduct a comprehensive review of existing literature that informs the debate about the effect of criminal status on labor market outcomes, such as income and employment. Section III describes the data and model specification used to conduct an empirical analysis on patterns of criminal hire with regards to company exposure to formerly-incarcerated employees. Results from the model are

presented and discussed in Section IV. Lastly, recommendations for moving forward with policy and further research are discussed in the conclusion, Section V.

II. Literature Review

There exists a wide array of research pertaining to the effect of a criminal record on labor market outcomes, primarily income and employment. While many of these studies aim to answer similar questions, they often lead to different conclusions. One of the primary difficulties in attempting to compose a comprehensive study on the topic is a lack of data. A common tactic used to overcome the absence of accessible, wide-ranging data for ex-offenders is to merge records of former state inmates with Unemployment Insurance (UI) data, using Social Security Numbers as a common identifier (Grogger, 1995; Kling, 2006; Jung, 2011; Mueller-Smith, 2015).

Many studies' data-gathering techniques are similar, but there remain discrepancies in the findings of economic papers attempting to isolate the effect of criminal status on labor market outcomes. In one of the earliest articles of its kind, Grogger (1995) looks at the effect of arrests — regardless of conviction — on employment and earnings of young men using a distributed lag model. Grogger (1995) finds that there is neither a substantial nor lasting effect of arrest on the specified outcomes. Building on Grogger's (1995) findings, Kling (2006) delves into the varying effects of incarceration lengths on employment and earnings, finding no considerable negative effect of longer incarceration on the outcomes in the medium term, and even a positive association with longer incarceration and employment and earnings within one to two years of release. Further, Jung (2011) actually finds a positive effect of incarceration length on employment and outcomes, which are especially influential for those who committed less-violent crimes. Yet, Mueller-Smith (2015) contradicts the previous findings of either a null or positive effect of a criminal record on

employment or earnings, concluding that there exists a substantial negative association between incarceration length and the specified outcomes, for both felony and misdemeanor charges.

Considering the diversity in data used to complete these studies — which draw from different states, come from different years, and generate inclusion criteria based on varying degrees of criminality — it is not surprising that there is no general consensus on the true impact of a criminal record in the labor market. In addition to the challenge of inconsistent data, the complexities of criminal status in the labor market can leave models susceptible to confounding or other factors that can bias the results, making it difficult to isolate the effect of criminal status. For example, Jung (2011) discusses underlying variables such as participation in prison work programs that may lead to a positive association between incarceration length and labor market outcomes.

Additionally, while many of the economic articles suggest that social stigma may be to blame for any negative labor market effects from criminality, there tends to be a disconnect between sociological theory and economic modeling. As an interdisciplinary issue, much social research has gone into the topic as well. These articles tend to be more theoretical, focusing on the effect that stigmatized social status might have on employment prospects. In an experimental study, Pager (2003) aimed to isolate the causal effect of a stigmatized criminal status on employment, as well as the interaction of criminal status and race. Pager (2003) conducted an audit of entry-level jobs in the Milwaukee, WI area using two pairs of applicant "testers." The teams varied by race – one team black, the other white; within the team, one tester was assigned a criminal status, whereas the other was not. In addition to demonstrating the effect of race on the probability of receiving a job callback or offer, the results of the study showed that the likelihood of getting a callback was far less for those with criminal records across races, and even worse for those who were black and given criminal status. A contemporary study by Agan & Starr (2017) replicated

this experiment in New York City and New Jersey, sending online applications with randomized applicant traits — including criminal status — to 2,655 entry-level job postings. Among other conclusions, they corroborate the negative causal impact of criminal status on job callbacks, finding that employers call back applicants without felony convictions at a rate of sixty percent more than their criminal counterparts. Pager & Western (2009) also conducted employer surveys in New York to further study concerns surrounding the label of "criminal" amongst job applicants. Their data reveals that the type of offense carries different weights in employment, that employers who have hired ex-offenders tend to have fewer concerns about ex-offenders' trustworthiness, and other employer attitudes pointing to the conclusion that the stigma of a criminal record indeed acts as a barrier to participation in the labor market.

Clearly, the conversation surrounding the impact of criminal records on labor market outcomes is both vast and unsettled, despite serious policy implications that existing research serves to inform. I believe one of the key focuses in continuing research on the topic must be an integration of both economic and sociological approaches to modeling this complex issue. Additionally, the literature would benefit from a greater focus on studying employer perspectives on this stigmatized status; after all, employers are the ones who determine the outcomes of earnings and employment. Thus, this paper adds to the literature by creating an economic model focusing on the impact of employers' views of criminal status on the likelihood to hire. Using employer survey data from a questionnaire that accompanied Pager's (2003) experiment, this paper investigates the weight of stigma of criminal status in employment by looking at the relationship between a company's previous experience hiring ex-offenders and their likelihood to do so again. This research builds on Pager & Western's (2009) study, which took a more qualitative and exploratory approach to investigating these trends, focusing on summary statistics from a similar

set of employer survey data. Their research lays a strong foundation for developing quantitative equations to model the relationship of interest in this paper. This quantitative study will examine how personal exposure to those with the stigmatized status may be associated with a hiring manager's probability of hiring another ex-criminal.

III. Empirical Analysis

i. Data

The data used to conduct the empirical analysis in this paper comes from a survey accompanying Pager's (2003) audit of businesses in the Milwaukee, WI area. In the original study, one hundred and seventy-seven businesses with entry-level positions were audited by black and white applicant teams, who varied in assigned criminal status within the teams. The survey data, collected in 2002, acts as the basis for this research; it comes from phone interviews conducted with the audited employers regarding the demographics and culture of their businesses. The data contains employers' responses to a variety of qualitative and quantitative questions targeting employer attitudes and hiring practices, as well as likelihood to hire fictional males in theoretical situations (e.g. the probability of hiring a black man with a drug offense). Due to the nature of the original experiment, Pager (2003) asked some of the surveyed employers about theoretically hiring a white man with varying criminal status, and others about hiring a black man with varying criminal status. That is, employers asked about a candidate of one race were not asked about a candidate of the other race.

ii. Model Specification

The models developed in this paper aim to combine economic and sociological theory to quantify the weight of stigma of a criminal record in seeking employment, using Ordinary Least Squares regression (OLS). The models utilize the aforementioned theoretical hiring "outcomes"

as the dependent variable. Remember that interviewed employers were not asked about candidates of both races. Thus, to create a fuller picture, I will be exploring two models, identical in all aspects aside from the race of the theoretical job candidate. Additionally, because existing literature has shown that the nature of the offense bears weight in likelihood of employment (Pager & Western, 2009), the outcome for each model will be likelihood of employment for a criminal with a drug offense only. Limiting analysis to drug offenses is appropriate both because they are lower-level, non-violent crimes, and because they are quite common offenses. One in five people incarcerated were convicted because of a drug offense (Sawyer & Wagner, 2020).

Remember that unlike much of the existing work, these models work from the employer perspective. Primarily, they aim to quantify the relationship between having hired a criminal in the past, and hiring another one in the future. In doing so, the models have the potential to shed light on whether or not exposure to ex-offender employees is at all positively or negatively correlated to future hiring decisions regarding ex-offenders. That is, whether the stigmatized status bears different weight in employment for companies who have versus have not hired ex-offenders in the past. Also incorporating important covariates mentioned in existing research, the models are as follows:

$$(1) \ Y_1 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon_1$$

$$(2) \ Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon_2$$

Equations (1) and (2) differ only in outcome, where Y_1 in (1) refers to the outcome of hiring a black candidate with a drug offense, and Y_2 in (2) refers to the outcome of hiring a white candidate with a drug offense. The responses to the outcomes originally had four levels each in the data: "Very likely," "Somewhat likely," "Somewhat unlikely," and "Very unlikely." To create a binary outcome to be analyzed, the responses were recoded to "Skew Likely" (1), capturing the first two

responses, and "Skew Unlikely" (0), capturing the last two responses. The rationale behind the selected independent variables will be explained further below.

The variable X_1 is a binary response to whether the hiring manager is aware of the company having hired a male ex-offender within the past year. The levels are "Yes" (1) and "No" (0). The primary coefficient of interest is β_1, which will quantify the correlation between a business' previous hiring decisions for ex-offenders and the likelihood to hire another ex-offender. The goal of the model is to determine the direction and magnitude of this coefficient, as well as whether it is statistically different from zero for either or both races of ex-offenders.

The covariates in the model are included to reduce biased estimates of the probability of hiring either race of ex-offender. They have been selected based on prior research regarding factors affecting employment of former criminals. Pager & Western (2009) note that personal contact with applicants who have a criminal record can affect hiring outcomes — employers may have increased sympathy upon interaction with a criminal. Thus, a business' tendency to interview applicants in person may affect hiring decisions of former criminals, either past or future. The binary variable X_2 captures whether or not personal interviews are required for applicants, with levels "Always" (1) or "Sometimes" (0).

Moreover, education undoubtedly affects hiring decisions. This influence is accounted for in the model with two separate variables. The binary variable X_3 captures the impact of a high school diploma on hiring decisions, coded from the question to employers regarding how necessary a high school diploma is for the vacant position. Original responses "Absolutely Necessary" and "Strongly Preferred" were grouped together, as were "Mildly Preferred" and "Doesn't Matter." The levels are "Absolutely Necessary / Strongly Preferred" (1) and "Mildly Preferred / Doesn't Matter" (0). Additionally, because the data comes from entry-level positions,

certain tests may be required for applicants in lieu of or in addition to typical indicators of educational attainment. The variable X_4 is a binary response to whether or not the hiring company requires any tests for candidates. The levels are "Yes" (1) and "No" (0).

Similar to education, previous work experience is known to affect hiring decisions. The binary variable X_5 accounts for this influence, coded from the question to employers regarding how necessary recent work experience is for the vacant position. Original responses "Absolutely Necessary" and "Strongly Preferred" were grouped together, as were "Mildly Preferred" and "Doesn't Matter." The levels are "Absolutely Necessary / Strongly Preferred" (1) and "Mildly Preferred / Doesn't Matter" (0).

While there is debate in existing literature over whether accessibility to background checks helps or hurts criminal applicants (Bushway, 2004), it is clear that it has some effect on hiring decisions. Thus, whether or not the hiring company checks criminal background is accounted for in the model with the variable X_6. Originally with three response levels, "Yes," "Sometimes," or "No," this variable was recoded to encapsulate whether the company *ever* checks criminal background to create two distinct levels. The levels are "Yes" (1) and "No" (0).

Similar to the debate surrounding accessibility to criminal records, policy debate also exists regarding whether there should be a question about criminal history on job applications (Agan & Starr, 2017). For this reason, it can be assumed that knowledge of criminal history impacts hiring decisions. The final binary variable, X_7, accounts for whether applications within the past year have inquired about criminal history. The levels are "Yes" (1) and "No" (0).

These models incorporate more sociological theory to the typical economic research on criminal history and employment outcomes. Specifically, the models are built with the hopes of accurately estimating the coefficient β_1, to test whether the relationship of the variable of interest,

X₁, to the outcomes, *Y₁* and *Y₂*, is statistically different from zero. That is, for Equations (1) and (2), I will test the following hypotheses:

$$H_0: \beta_1 = 0$$

$$H_A: \beta_1 \neq 0$$

The direction and magnitude of the relationship for each model is also of interest, should the null hypothesis be rejected.

It is also important to note that serious limitations exist within this model. The model draws on previous research to identify large factors of influence on hiring decisions for criminals to include as appropriate covariates (education, tendency to check background, etc.). However, while careful selection of the model has been done in hopes of minimizing inflation or deflation of the estimate of β_1, there are a number of potential sources of bias that may not be accounted for in the model. Unobservable variables, such as the hiring mangers' personal preference, may have a large influence on the outcome. Undoubtedly, observable variables that have not been recorded in the data or included in the model could also pose a threat to obtaining reliable estimates of the coefficients(s). Yet, over-specification could also unnecessarily complicate the model. Given the availability of data and the already-identified factors of influence on hiring decisions for criminals from previous research, this model produces an earnest attempt at identifying the relationship between a company's previous hiring of ex-offenders and the likelihood to do so in the future. Additionally, it must be emphasized that due to the nonexperimental nature of the data, and the fact that unconfoundedness is too large an assumption to make in this case, this model is equipped only to potentially identify the sign and magnitude of a correlation between the variable of interest and the outcome, not necessarily a causal relationship.

IV. Results

Before delving into the results obtained using the models in Equations (1) and (2), primary analysis on the data should be considered. Figure 1 shows discrepancies in the mean proportions of positive responses to theoretical hiring situations (the outcomes) by race of the applicant and by company exposure to employees who are ex-offenders.

Figure 1: Mean Hiring Rates by Applicant Race & Company Exposure to Ex-Offender Employees

Preliminary investigation suggests a positive correlation between having hired an ex-offender in the past and willingness to do so again for both races, though the effect of exposure seems to be more pronounced for white applicants than black applicants. This suggests that exposure to criminal hires may significantly contribute to positive hiring decisions for ex-offenders in the future.

To quantify the relationship between the variable of interest and the outcomes, as well as to investigate the significance of the relationship, the specified models must be estimated. Equations (1) and (2) described in the empirical analysis section provide the basis for regression

using Ordinary Least Squares (OLS) in this paper. The outcomes Y_1 and Y_2 are regressed on the seven specified variables in the previous section. Summary statistics for the data used to produce the regressions are available in Table 1 and Table 2 in the Appendix.

Recall that the nature of the data merits separate analyses of the relationship of interest by race. Table 3 provides the results of the regression for Equation (1), which analyzes the relationship between former hire of ex-offenders and future hiring decisions for applicants who are black ex-offenders.

Table 3: Relationship Between Former Hire of Ex-Offenders and Likelihood of Hiring Black Ex-Offender

	Dependent Variable: Probability of Hiring Black Candidate with Drug Offense			
	Coefficient	**Standard Error**	**P-Value**	**95% Confidence Interval**
Former Criminal Hire	.259	.101	0.012**	(0.057, 0.460)
Personal Interview	-.063	.113	0.578	(-0.288, 0.162)
High School Diploma Importance	-.225	.109	0.043**	(-0.443, -0.007)
Required Tests	.079	.111	0.475	(-0.141, 0.299)
Work Experience Importance	-.087	.107	0.420	(-0.300, 0.126)
Background Check	-.294	.109	0.009***	(-0.511, -0.076)
Question Criminal History	.146	.122	0.234	(-0.0967, 0.389)
Constant	.788	.192	0.000***	(0.406, 1.171)

Notes: *p<0.1, **p<0.05, ***p<0.01

The table provides the estimate of 0.259 for the coefficient of interest β_1, which is statistically different from zero at the 5% significance level. The coefficient indicates that holding the values of the other variables in the model constant, if a company has hired an ex-offender in the past, they are, on average, 25.9 percentage points more likely to hire a black ex-offender than a company who has not hired an ex-offender in the past. Thus, we can assume that company exposure to ex-offenders is positively associated with the likelihood of hiring a black ex-offender in the future.

Table 4 shows the results of the regression specified in Equation (2), where the outcome is instead probability of hiring a white ex-offender, but the independent variables remain the same.

Table 4: Relationship Between Former Hire of Ex-Offenders and Likelihood of Hiring White Ex-Offender

| | *Dependent Variable: Probability of Hiring White Candidate with Drug Offense* | | | |
	Coefficient	Standard Error	P-Value	95% Confidence Interval
Former Criminal Hire	.397	.119	0.002***	(0.158, 0.635)
Personal Interview	-.091	.136	0.505	(-0.364, 0.181)
High School Diploma Importance	-.299	.138	0.036**	(-0.577, -0.021)
Required Tests	-.276	.143	0.060*	(-0.564, 0.012)
Work Experience Importance	.050	.142	0.725	(-0.236, 0.336)
Background Check	-.120	.126	0.346	(-0.373, 0.133)
High School Diploma Importance	-.299	.138	0.036**	(-0.577, -0.021)
Question Criminal History	-.166	.152	0.279	(-0.471, 0.139)
Constant	.920	.187	0.000***	(0.544, 1.296)

Notes: *p<0.1, **p<0.05, ***p<0.01

Table 4 provides the estimate of 0.397 for the coefficient of interest β_1, which is statistically different from zero at the 1% significance level. Following a similar interpretation of the coefficient produced in Table 3, the coefficient indicates that if a company has hired an ex-offender in the past, they are, on average, 39.7 percentage points more likely to hire a white ex-offender than a company who has not hired an ex-offender in the past. Again, we see a positive association between former exposure to ex-offender employees and likelihood to employ another ex-offender. Notably, the relationship between having hired an ex-offender in the past and likelihood of hiring another in the future is more pronounced for white ex-offenders than for black ex-offenders. Though this analysis does not test for a statistical difference between the values of β_1 for the two equations, a differential outcome does seem to exist. This falls in line with Pager's (2003) conclusion that the effect of a criminal record on employment prospects is less detrimental for white job applicants than for black job applicants.

Importantly, note that the outcomes are based on theoretical hiring situations posed in a survey, meaning that there is a possibility that the decisions may not be upheld in an actual hiring situation. Regardless, the findings carry weight in exposing potential influences of personal and company bias that exist with regards to criminal hires. From a socioeconomic perspective, these results seem to suggest that the weight of bias in ex-offender hiring decisions may be reduced once criminal hires are actually incorporated into a business. That is, exposure to criminals in the workplace may eliminate prejudiced attitudes in making hiring decisions regarding former convicts.

V. Conclusion

Due to the nature of the available data and limitations of the models employed, the findings in this paper do not necessarily point to causal effects. Nonetheless, this research suggests a positive association between company exposure to ex-offenders in the past and willingness to hire an ex-offender in the future. The suggestion that bias operates as a component in hiring those with a criminal record may call for review of policies that increase employment accessibility for those who carry the title of "ex-offender."

As mentioned in the beginning of this paper, Ban the Box and background check initiatives aim to eliminate at least one barrier that the formerly-incarcerated face in re-entering society. The idea behind these proposals is that employers will not be unduly swayed in hiring decisions of those with a criminal history based on biased views of criminals. Ban the Box proposals are less extreme than elimination of background checks because they only prohibit employer inquiry of criminal history within the first few rounds of the application process. The intent is to allow applicants to build personal rapport with hiring managers before divulging information about a criminal record (Doleac & Hansen, 2016).

However, existing research suggests that such initiatives may, in fact, work to create different barriers for those who have criminal records through a phenomenon called "statistical discrimination." In a study investigating the effects of Ban the Box initiatives on employment for former criminal offenders, Doleac & Hansen (2016) find that without a concrete indicator of criminal history, employers may rely on other demographic factors such as race or education to make assumptions about an applicant's criminal history. This finding upheld existing theories regarding statistical discrimination, which also applies to initiatives that reduce employer access to background checks (Bushway, 2004). Considering Pager's (2003) finding about the interaction between race and criminal status, as well as the findings achieved in this paper, it is essential that policy surrounding employment opportunities for ex-offenders is cognizant of the differential impacts by race.

Due to this concern surrounding public policy, it is difficult to say at the moment whether proposed initiatives would be effective in reducing biased hiring practices, despite their intent. Research on the topic of ex-offender employment still remains relatively limited and divided. Therefore, moving forward, it is essential that certain action items are prioritized. For one, research that quantifies and proves bias in hiring practices should be done on a wider scale with more reliable modeling methods. While bias surrounding the hire of ex-offenders cannot be "randomly assigned" to businesses, experimental methods that reflect the sentiment may be viable, as might difference-in-difference methods. Dependably quantifying a bias against ex-offenders that appears to exist in the American corporate world may demand that businesses look inward at their own hiring practices. As diversity and inclusion becomes more relevant in today's workplace, this issue could carry significant weight.

This research has concluded the existence of a positive association between company exposure to employees with a criminal record and the likelihood of hiring another ex-offender, with the effect appearing to be more pronounced for white males than for black males in the sample. Taken at face value, this suggests an inverse relationship between bias surrounding criminal status and exposure to such employees. To truly honor the tenet of rehabilitation that exists within the criminal justice system, it is crucial that potential bias against former criminals in hiring practices is further studied and actively dismantled in society.

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Appendix

Table 1: Summary Statistics of Model Data for Equation (1)

Variable	Definition	Mean	Std. Dev.
HBC	Equal to one if surveyed employer would hire black candidate with drug offense.	0.617	0.489
Former Criminal Hire	Equal to one if surveyed employer is aware of the company hiring a male ex-offender in the past year.	0.5	0.502
Personal Interview	Equal to one if personal interviews are always conducted for applicants.	0.681	0.469
High School Diploma Importance	Equal to one if high school diploma is either absolutely necessary or strongly preferred for candidates.	0.660	0.476
Required Tests	Equal to one if tests are required for applicants.	0.319	0.469
Work Experience Importance	Equal to one if recent work experience is either absolutely necessary or strongly preferred for candidates.	0.649	0.480
Background Check	Equal to one if company ever conducts background checks for employees.	0.670	0.473
Question Criminal History	Equal to one if company applications ask about criminal history.	0.787	0.411

Table 2: Summary Statistics of Model Data for Equation (2)

Variable	Definition	Mean	Std. Dev.
HWC	Equal to one if surveyed employer would hire white candidate with drug offense.	0.619	0.490
Former Criminal Hire	Equal to one if surveyed employer is aware of the company hiring a male ex-offender in the past year.	0.458	0.502
Personal Interview	Equal to one if personal interviews are always conducted for applicants.	0.730	0.447
High School Diploma Importance	Equal to one if high school diploma is either absolutely necessary or strongly preferred for candidates.	0.667	0.475
Required Tests	Equal to one if tests are required for applicants.	0.206	0.447
Work Experience Importance	Equal to one if recent work experience is either absolutely necessary or strongly preferred for candidates.	0.667	0.475
Background Check	Equal to one if company ever conducts background checks for employees.	0.557	0.501
Question Criminal History	Equal to one if company applications ask about criminal history.	0.806	0.475