

**a.**

(i) The unit of observation in the dataset are fictitious young, male applicants who send job applications to employers in New Jersey and New York City before and after the adoption of BTB policies. In the following questions, we would be exploring the relationship between the applicants and their callback rates with the effect of BTB.

(ii) There are 14,637 observations.

(iii) The variables are “posresponse” and “interview” respectively.

(iv) 928 of 1,715 (54.11%) of interviews receiving a positive response also received an interview request.

(v) The variables are “crime”, “white”, “empgap” and “ged” respectively.

(vi) The variable is “pre”.

(vii) The variable is “box”.

**b.**

Means of Applicant Characteristics and Results by period

	Pre-BTB	Post-BTB
Characteristics		
White	0.5024155	0.4967532
Crime	0.4970324	0.5128517
GED	0.4977226	0.5021645
Employment gap	0.4923395	0.5041937
Application has box	0.3664596	0.035579
Results		
Callback rate	0.1094548	0.1247294
Interview req.	0.0597654	0.0669643

### Pre-BTB

. summarize white crime ged empgap box posresponse interview if post==0

Variable	Obs	Mean	Std. Dev.	Min	Max
white	7,245	.5024155	.5000287	0	1
crime	7,245	.4970324	.5000257	0	1
ged	7,245	.4977226	.5000293	0	1
empgap	7,245	.4923395	.4999758	0	1
box	7,245	.3664596	.4818703	0	1
posresponse	7,245	.1094548	.3122305	0	1
interview	7,245	.0597654	.237068	0	1

### Post-BTB

. summarize white crime ged empgap box posresponse interview if post==1

Variable	Obs	Mean	Std. Dev.	Min	Max
white	7,392	.4967532	.5000233	0	1
crime	7,392	.5128517	.4998686	0	1
ged	7,392	.5021645	.5000291	0	1
empgap	7,392	.5041937	.5000162	0	1
box	7,392	.035579	.1852506	0	1
posresponse	7,392	.1247294	.3304342	0	1
interview	7,392	.0669643	.249977	0	1

### c.

By performing statistical analyses, we determine the t-statistics for the regression of Post-BTB (post) on characteristics such as race (white), crime (crime), diploma status (ged), employment gap (empgap) and box (box). For the variables white, crime, ged and empgap, we determined the absolute value of the t-statistic to be lower than 1.96. Hence, there is a difference in the sample for these variables, but not sufficient to conclude of a difference at the population level as we cannot rule out that this is due sampling variability.

This is the case since the authors conducted the experiment through an experimental approach, allowing them to randomly vary whether the applicant had a felony conviction as well as their characteristics. Therefore, this is important as it would satisfy the backdoor criterion and thus, the conditional independence assumption, preventing any potential confounders affecting their results. This would allow the authors to infer a causal estimate of “box” on the callback rates in the main part of the author’s experiment.

On the other hand, for the regression of Post-BTB (post) on whether if the application had the criminal-record “box” (box), we determined t-statistic of the box’s coefficient to be -74.45 which

has an absolute value that is larger than 1.96. Thus, we would expect that applications in the post-BTB period to have 0.52 lesser boxes on average. This would make sense as since the BTB policy would have been implemented and “boxes are banned” which indicates the decrease in boxes in the post-BTB period. This is important since it shows that the policy has been implemented and that indeed, box removal has decreased due to it.

**d.**

Table III illustrates the effects of applicant characteristics such as race, conviction, diploma status (GED) and employment gap on callback rates. Column (1) specifically provides results for the full sample. On the other hand, column (2) provides results limited to employers with the box. Both columns 1 and 2 include chain and center fixed effects.

Columns 1 and 2 of Table III reobtained from STATA are as follows:

Effects of Applicant Characteristics on Callback Rates		
	(1) Sample: All	(2) Sample: Box
Applicant is White	0.0242*** (4.30)	-0.000868 (-0.09)
Applicant has Criminal Record	-0.0129* (-2.36)	-0.0520*** (-4.23)
Applicant has GED	-0.00519 (-1.03)	0.0105 (0.78)
Applicant has Employment Gap	0.00125 (0.27)	0.0103 (1.02)
=1 if pre-BTB period, =0 if post-BTB period	-0.0151 (-1.48)	
N	14637	2918

*t* statistics in parentheses

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

e.

Effects of Applicant Characteristics on Interview Request

	(1) Sample: All	(2) Sample Box
Applicant is White	0.0135** (2.87)	-0.00740 (-1.17)
Applicant has Criminal Record	-0.00931* (-2.03)	-0.0353*** (-5.64)
Applicant has GED	-0.00239 (-0.71)	-0.0000279 (-0.00)
Applicant has Employment Gap	-0.00305 (-1.06)	0.00662 (0.92)
=1 if pre-BTB period, =0 if post-BTB period	-0.00715 (-0.78)	
N	14637	2918

*t* statistics in parentheses

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

f.

The main estimation of the paper is to conduct a difference-in-differences analyses which determines the effect of criminal record information on racial discrimination in callbacks. Therefore, in order to employ this identification strategy, it must fulfil its requirements being that it must be panel data where same entities are observed at different periods in time as well as ensuring that the common trend assumption holds.

However, if the composition of stores between periods varies, it would violate the panel data requirement as well as the common trend assumption. Since different stores are used in the analysis, there would be different fixed effects between the stores that would affect the callback rates such as the personalities of the employers.

Thus, confounding variables would be present which violates the conditional independence assumption, leading to bias in the results for the callback rates. Additionally, it violates the common trend assumption as the absence of the BTB policy between the control and treatment group could vary between the time periods due to this change in stores.

**g.**

The variable is “balanced”. Applications were sent to such stores using a complete set of four applications, with one white/black pair in both the pre-BTB and post-BTB periods.

**h.**

	(1) Cross-section	(2) Temporal	(3) Temporal	(4) None
interact	-0.0302* (-1.98)	-0.0364* (-2.62)	-0.0327* (-2.37)	
Applicant is White	0.0315** (2.63)	0.0442*** (3.51)	0.0401** (3.42)	0.0221* (2.51)
Application has Box	0.0150 (0.61)	0.00317 (0.21)	-0.00175 (-0.13)	
interact_5				0.00203 (0.15)
=1 if pre-BTB period, =0 if post-BTB period				-0.0159 (-0.91)
N	7245	3712	4794	7476

*t* statistics in parentheses

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

i.

	(1) Cross-section	(2) Temporal	(3) Temporal	(4) None
interact	-0.0262** (-2.60)	-0.0409* (-2.51)	-0.0360** (-2.72)	
Applicant is White	0.0169* (2.41)	0.0399* (2.20)	0.0323* (2.24)	0.0158* (2.33)
Application has Box	0.0226 (1.46)	0.0108 (1.19)	0.00563 (0.68)	
interact_5				-0.00237 (-0.27)
=1 if pre-BTB period, =0 if post-BTB period				-0.00580 (-0.37)
N	7245	3712	4794	7476

*t* statistics in parentheses

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

j.

Given my results in questions e. and i., I can indeed conclude that the paper's conclusions are similar for interview requests. By looking at the table in question e., we can observe that at box employers, race makes little difference to the interview requests since the coefficient of whether the applicant is white (-0.00740) is statistically insignificant.

Furthermore, in question i. the "interact" coefficient is -4.1 percentage points in the balanced sample (question i., column (2)). This implies that when these employers had the box, the race gap was 3.6 percentage points smaller than after it was removed by inferring the data of interview requests.

Additionally, if we were to compare our results from questions e. and i. to their corresponding tables that were focusing on callback rates (questions d. and h.), we would observe that the statistical significance of the datasets to be extremely similar.

**k.**

The results in column (5) represent a comparison point where there is no box variation. This would represent employers who never had the box and thus have unchanged applications after the BTB policy. This is conducted on a sample of box-remover stores that are able to send a complete set of four applications, known as a box-remover balanced sample.

The estimate of interest refers to the size of the interaction term between not having the box (pre) and race (white/black). If this estimate were to be negative and statistically significant, it would imply that the race gap is significantly smaller on average, controlling for GED and employment gap, within the time period of pre and post BTB policy for these employers of the stores mentioned above who do not have the box.

However, this implies that the estimates determined could potentially be confounded by trends unrelated to BTB. For instance, if implementing the BTB policy indicates a motivation to address racial discrimination in employment, which could lead to affecting disparity trends in other ways. Therefore, the conditional independence assumption would be violated, and bias would be present in the experiment.

Thus, the data in the other columns would be unable to determine a causal relationship that concealing information about criminal records encourage racial discrimination as employers makes assumptions about criminality based on the applicant's race.