

Invisible Stripes? A Field Experiment on the Disclosure of a Criminal Record in the British Labour Market and the Potential Effects of Introducing Ban-The-Box Policies

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Labour market discrimination against individuals with criminal records may be unfair, ineffective and counterproductive. This article describes a field experiment designed to indicate whether job applicants disclosing a criminal record in the British labour market have a lower probability of success than equivalent applicants not disclosing criminal records. The research also provides insights into the potential effects of introducing a Ban-The-Box (BTB) policy in the United Kingdom, which would prohibit questions on prior convictions in the first stages of the recruitment process. The results confirm the existence of criminal record discrimination and suggest that introducing a BTB policy would increase job prospects for White applicants with criminal records, but not for members of ethnic minorities.

KEY WORDS: criminal records, ethnicity, discrimination, Ban-The-Box, experiment, United Kingdom

INTRODUCTION

This article focusses on the consequences of having a criminal record for the employment prospects of Black and White individuals in the United Kingdom. Over 12 million individuals hold a criminal record in the United Kingdom (Home Office 2021) of which an estimated 700,000 have an ‘unspent’ criminal record that should be disclosable for any type of job at the employers’ request (Unlock 2022b). Requests for information on prior convictions in the British labour market are not marginal. As will be seen below, British recruiters required almost 3 million criminal records certificates in 2021 for positions on which no law obliges them to do so.

Unjustified and blanket discrimination against individuals with criminal records is likely unfair, ineffective and counterproductive. Unfair, because having your employment prospects restricted implies ‘collateral consequences’ not considered by the judge when calibrating the sentence which

could go far beyond the adverse effects stated within it (Demleitner 1999; Love 2011); ineffective, because this discrimination would undermine societal efforts to support ex-offenders in their re-entry to society (Rovira 2019); and counterproductive, since employment is likely associated with lower rates of reconviction (Uggen and Staff 2001; Denver *et al.* 2017). Nonetheless, people with convictions have, on average, high levels of unemployment. For instance, government figures state that only around a quarter (26.5 per cent) of prisoners in England and Wales entered employment after release (House of Commons 2016: 30). Also, around 60 per cent of those subject to a Community Payback Order in Scotland are unemployed (Weaver and Jardine 2022: 296).

In this context, British charities are calling for the introduction of policies to prohibit the request for criminal record information during the initial stages of the recruitment process (see, among others, Working Chance 2021; Business in the Community 2022; Cairns 2022): policies referred to with the slogan ‘Ban-The-Box’ (henceforth ‘BTB’ policies). Asking for information about criminal records in later stages of recruitment may induce employers to make more individualized assessments that weigh a candidate’s strengths against the content of their criminal history record (Pager *et al.* 2009; Graber and Zitek 2022). However, research on the introduction of BTB policies in the United States demonstrated that the introduction of these policies may have a different impact depending on the candidate’s race—increasing job prospects for White candidates with criminal records but decreasing opportunities for members of ethnic minorities who are prejudicially associated with high criminality, such as Black people (Agan and Starr 2018; Raphael 2021).

In this project, I investigate the causal effect on recruitment success of disclosing a criminal record in the United Kingdom. The study also aims to provide insight into potential outcomes of introducing a BTB policy. Delimiting the causal effect of a criminal record and testing policies to reduce their impact is far from straightforward due to potential omitted variables and selection bias. For instance, many people who have been punished for criminal offending are also undereducated, with low human and social capital levels and weak employment history (Metcalf *et al.* 2001; Hopkins 2012). Accordingly, the usual negative response of employers towards this group might be related to these characteristics and not to the stigma of a criminal record (Pager 2003; Rovira 2019). Furthermore, surveys of employers are plagued by social desirability bias, as employers may frequently overstate their willingness to hire criminal offenders relative to their actual behaviour (Pager and Quillian 2005).

To overcome these potential biases, I conducted an audit field experiment (Pager 2003; Vuolo *et al.* 2016; Gaddis 2019) on stigma against individuals with criminal records. I applied to more than 1,000 job openings with two equivalent fictitious candidates with only one difference: one has a criminal record and the other does not. Then, I used the differences in callback rates from prospective employers between these two groups as a measure of discrimination against people with a criminal record. This experiment enables us to investigate the causal effect of disclosing a criminal record by isolating it from potentially omitted variables and selection bias, and captures the ‘real-world’ behaviour of employers. Next, I compare the differences in callback rates between White and Black applicants for job openings with and without questions about prior convictions to test the assumptions underlying the proposals to introduce BTB policies in the United Kingdom. This is the UK’s first field experiment on criminal record stigma.

BACKGROUND

The mark of a criminal record in the United Kingdom

A spectre is haunting individuals with criminal records in the United Kingdom—the spectre of widespread ‘vetting’ in the labour market (Baldwin 2017). Figure 1 shows the number of criminal records certificates issued in the United Kingdom annually from 2002 to 2021, categorized

as mandatory, so legally required, or conducted at the employer's discretion (non-mandatory). Mandatory requests rose between 2002 and 2007, and since then, more than 4 million mandatory criminal background checks have been conducted every year.

In parallel, non-mandatory criminal background checks for positions where no law requires one to be carried out may also be increasing. UK Recruiters may conduct non-mandatory criminal background checks in two ways: by asking candidates to disclose information about their previous convictions voluntarily or by requesting that applicants agree to apply to a 'Basic' criminal records certificate. No data exist on the evolution of requests for voluntary disclosure. However, [Figure 1](#) shows that the number of 'Basic' criminal records certificates increased from 1,100 requests in 2002 to almost 3 million in 2021. The magnitude of this growth is attested by comparison with the evolution of the number of individuals in employment in the United Kingdom which rose from almost 28 million workers in 2002 to almost 32.5 million in 2021 ([Office of National Statistics 2023](#)).

The effects of this 'vetting epidemic' in the United Kingdom are unclear. What do employers do with this information? Experimental research in the United States showed that the criminal record acts as a negative credential in the initial stage of the recruitment process, a stage in which little information is known about the potential employee ([Pager 2003](#); [Uggen et al. 2014](#)). For instance, [Pager \(2003\)](#) set two pairs of young male candidates (one Black pair, one White pair) to apply to 350 employers. The two candidates in each pair had equivalent skills but for each pair of applications, on a randomly applied basis, one of the candidates disclosed a criminal record while the other candidate did not. Pager found that a mark of a criminal record led to a 50 per cent reduction in the probability of a callback: Whites not disclosing a criminal record were successful in 34 per cent of their applications, while equivalent White candidates disclosing a record got a callback rate of only 17 per cent. The difference for Black candidates was even more staggering, with candidates with criminal records being called back only 5 per cent of the time, compared with 14 per cent for equivalent Black candidates not disclosing a

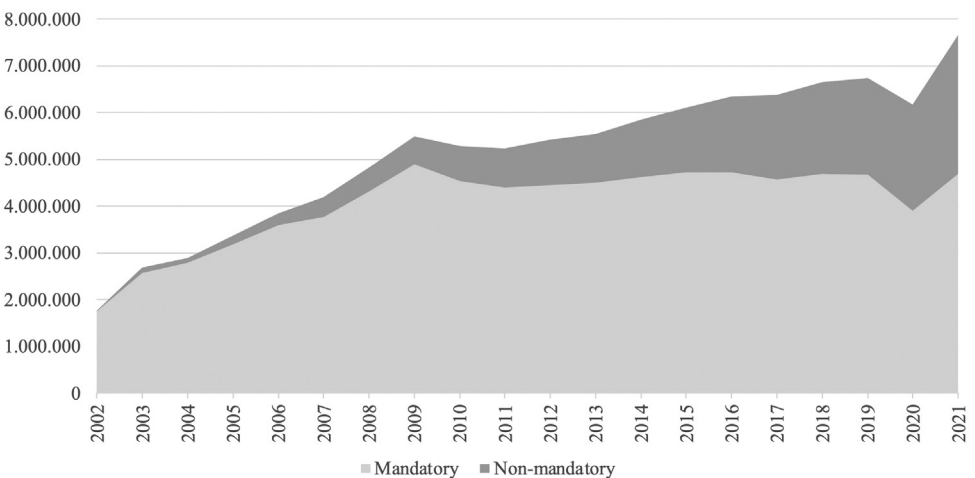


Fig. 1 Number of criminal records certificates dispatched for professional and voluntary activities by type of request. United Kingdom 2002–2021. Source: Freedom of information requests to 'Disclosure and Barring Service' (England and Wales), 'Disclosure Service' (Scotland) and 'AccessNI' (Northern Ireland), and information found in annual reports of these agencies. Data for England and Wales refer to annual years, while data for Scotland and Northern Ireland refer to financial year (April–March). See also [Rovira \(2023\)](#).

record. Experimental research in continental European countries exposed a more complex picture. Researchers in Belgium (Baert and Verhofstadt 2013), Spain (Rovira 2019) and Sweden (Ahmed and Lång 2017) found that employers discriminate against individuals with a criminal record, but no evidence of criminal-records-based discrimination in the first stage of the recruitment process was found in The Netherlands (van den Berg *et al.* 2020).

In the United Kingdom, previous research has indeed preliminarily stated that people with a past criminal conviction are discriminated against in the labour market, drawing attention to the inadequacies of current legislation to remove barriers to employment (Loucks *et al.* 1998; Thomas 2007; Baldwin 2017; Henley 2018; Corda *et al.* 2023). In surveys, British recruiters hold major negative prejudices against former offenders. For instance, a recent survey found that a third of UK employers affirmed that they would not employ ex-offenders (Working Chance 2022). Employers deemed ex-offenders as unskilled and untrustworthy and were concerned that using them could affect the business's public image (YouGov 2016). However, due to a lack of experimental research on this issue in the United Kingdom, it is unclear to what extent the poor employment prospects of former offenders are related to these negative prejudices or whether these poor prospects are due rather to the training and work skill deficits that pervade the population passing through the criminal justice system (Metcalf *et al.* 2001; Ministry of Justice 2013).

Disclosure policies in the United Kingdom

The system of disclosure of criminal records in the United Kingdom is complex. This system is not regulated by a single piece of legislation but has developed through several legislative provisions, policy reports, guidelines and judgements (Thomas 2007; Larrauri 2014; Henley 2018). The disclosure of criminal records in the United Kingdom also occurs through different agencies in different jurisdictions. In England and Wales, the Disclosure and Barring Service (DBS) oversee criminal background checks, whilst in Scotland and Northern Ireland, this responsibility falls, respectively, to agencies called 'Disclosure Scotland' and 'Access NI'. These are governmental agencies with access to the Police National Computer that carry out criminal background checks for employers (Thomas 2007; Larrauri 2014; Unlock 2022a).

Succinctly, across the United Kingdom, recruiters can access information on criminal records from a job applicant for *any* job in two ways. As stated, first, they may ask applicants to voluntarily disclose their convictions. Second, recruiters can request job applicants to agree to a 'Basic' disclosure check (Unlock 2022c). 'Basic' checks only include 'unspent' convictions. Whether and when a conviction becomes 'spent' is determined by the Rehabilitation of Offenders Act 1974, which applies rehabilitation periods to different convictions depending on the sentence severity and whether the individual was aged 18 or under at the time of their conviction (Henley 2018).

Employers are only legally *obliged* to carry out criminal record checks for jobs involving a high level of trustworthiness or close contact with vulnerable populations.¹ For jobs related to national security or positions of public trust, such as police officers, traffic wardens or justice clerks, employers must request a 'Standard' DBS check. Standard checks include information on unspent as well as spent convictions and cautions. For jobs such as taxi drivers or driving instructors, employers must request an 'Enhanced' certificate. 'Enhanced' certificates include information on spent and unspent convictions and cautions, and may also contain non-conviction information supplied by relevant police forces. For jobs involving close contact with children, the elderly, or patients, employers must request an 'Enhanced with barred list' certificate. This type of Enhanced certificate additionally states whether the individual is included in

1 A complete list of jobs may be found in the Rehabilitation of Offenders Act 1974 (Exceptions) Order 1975.

the barred lists of individuals that have been banned from working with children or vulnerable adults due to past behaviour or offences ([Unlock 2022c](#)).

BTB in the United Kingdom

Several recent initiatives have aimed to reduce the obstacles to employment faced by those with a criminal record. For instance, the UK government has introduced legislation reducing the length of time before a caution or conviction becomes spent. In 2014, the rehabilitation period for criminal records for community sentences was reduced from five years after the sentence to one year ([Unlock 2014](#)). From late October 2023, new legislation means that community sentences are spent immediately at the end of the order ([Unlock 2023](#)). Rehabilitation periods for prison sentences have also been reduced. For instance, before 2014, a prison sentence of 12 months would be spent after ten years but from 2014, the period was reduced to four years. From late October 2023 on, this period has been reduced further to six months after completing the sentence ([Unlock 2014, 2023](#)).

British charities supporting people with criminal records have asked the government to take a step forward in their strategy to tackle discrimination against individuals with criminal records and implement a nationwide ‘Ban-The-Box’ (BTB) policy ([Business in the Community 2022; Cairns 2022](#)). BTB policies restrict employers from inquiring about criminal records in the initial stage of the recruitment process, usually by eliminating the checkbox asking about prior convictions in the initial recruitment form ([Raphael 2021](#)). BTB policies do not eliminate the consideration of criminal histories in the hiring process but delay this decision until later stages, when the individual may have the opportunity to provide context about their crime. Asking for information in later stages may induce employers to make more individualized assessments that weigh a candidate’s strengths against the content of their criminal history ([Raphael 2021](#)). Research has indeed provided evidence that contact and rapport with a stigmatized individual—such as that which might occur in an interview—should reduce stereotyping, prejudice and discrimination ([Pager et al. 2009; Graber and Zitek 2022](#)). Applicants who meet face-to-face with recruiters can replace broad generalizations based on group membership with more nuanced information about their individual qualities ([Pager 2007](#)).

However, UK debates on BTB might be flawed as they do not consider evidence about the disparate racial impact of implementing this policy in the United States. In a recent review of research on BTB in the United States, Raphael concludes that introducing these policies in fact decreased the chances of recruitment for Black individuals without criminal records ([Raphael 2021](#)). In a process anticipated by the ‘statistical discrimination’ theory,² in the absence of information on criminal records, recruiters might be using race as a proxy for prior criminality due to assumptions about the higher prevalence of convictions of Black individuals ([Bushway 2004; Raphael 2021](#)). For instance, [Agan and Starr \(2018\)](#) analysed how the implementation of a Ban-The-Box law impacts racial disparities in callback rates following the submission of online applications in the United States. The authors conducted a field experiment whereby fictitious applications from pairs of White or Black jobseekers were submitted to online job openings before and after the implementation of BTB legislation in New York City and New Jersey. They randomly assigned the race of the pair of applicants (Black or White) and which applicant disclosed a criminal history. The authors detected that the callback rate for White applicants in the post-BTB period (14.8 per cent) was similar than the rate for White applicants without a criminal history in the pre-BTB period (14.1 per cent), and significantly higher than the rate for those who checked the criminal

2 Statistical discrimination theories suggest that in the face of imperfect information during the application process, such as the absence of information on criminal records of the applicants, employers may infer the requested information from other characteristics of the applicant, such as race, making based-group inferences, such as assuming that Black individuals have a higher propensity to have a criminal records ([Raphael 2021](#)).

background box in the pre-BTB period (8.3 per cent). In contrast, the overall callback rate for Black applicants in the post-BTB period (10.3 per cent) was close to the callback rate for those with criminal histories in the pre-BTB period (8 per cent) and distinctly lower than the callback rate for Black applicants in the pre-BTB period who did not disclose a criminal record (13.4 per cent). These results are consistent with the proposition that when questions about prior crime are eliminated from the initial stage of the recruitment process, recruiters tend to exclude Black applicants assuming that they have a higher probability of having a criminal past.

The likelihood of a differential racial effect of BTB policies should be seriously considered in the United Kingdom. As in the United States, British minority ethnic groups, and particularly members of the Black community, have disproportionate rates of contact with the criminal justice system and get relatively lengthy sentencing outcomes compared with their White counterparts (Lammy 2017; Phillips and Bowling 2017). Black people make up around 3 per cent of the general population in the United Kingdom but, in 2020, accounted for 18 per cent of stop and searches by the police and 13 per cent of prisoners (Ministry of Justice 2021). Also, the British media predominantly features Black young men in content related to criminality, and it does so to a greater extent than for White young men (Cushion *et al.* 2011). Thus, British recruiters may also 'statistically' link blackness with criminality in a similar way to their US counterparts.

RESEARCH QUESTIONS AND HYPOTHESES

In this research, I first test whether revealing a criminal record in the first stage of the recruitment process hinders the probability of finding a job. As stated, recruiters may be reluctant to hire individuals with prior convictions because of negative prejudices and stereotypes related to unreliability, untrustworthiness and dangerousness (Pager 2003; Jacobs 2015; YouGov 2016). Thus, the first alternative hypothesis H1 is that '*candidates disclosing a prior conviction in their CV are less successful in job recruitment processes relative to otherwise identical subjects not disclosing it*'.

Second, I cast light on the potential consequences of introducing BTB policies in the United Kingdom. Based on US research (Agan and Starr 2018; Raphael 2021), I assume that without initial stage requests to reveal unspent criminal record history, negative prejudices and stereotypes against individuals with criminal records would not be activated to the same extent. Then, I will consider BTB policy effective if I detect more discrimination in job openings with questions about prior convictions than in openings without these questions. Thus, the second alternative hypothesis H2 is '*the extent of the adverse reaction against individuals with a criminal record will be larger in job openings with questions about prior convictions*'.

Third, I engage with the debate on whether there would be a differential impact by racial minority status in the introduction of 'BTB' policies. As described above, stereotypes about negative moral attributes of the candidate may already influence the behaviour of British recruiters towards members of minority ethnic groups with disproportionate contact with the criminal justice system even when there are no questions requiring information on prior criminality and recruiters can only guess it. Therefore, whether or not the recruitment process includes initial questions about prior convictions would make less of a difference to recruitment outcomes for members of such minorities. Thus, the third alternative hypothesis H3 is '*the extent of additional discrimination against individuals with criminal records in job openings with questions on criminal records will be lower for Black candidates*'.

RESEARCH DESIGN

This study uses an experimental method known as an online paired correspondence audit study (Vuolo *et al.* 2016; Gaddis 2019). In such studies, the researcher applies to real job openings

online with two fictitious candidates. The CVs and cover letters of the candidates show equivalent traits, skills and work experience except for one differentiating factor called the 'experimental condition'. The researcher then compiles the responses for each type of candidate and if an average difference is detected between those candidates disclosing the experimental condition and those that do not, causal evidence of discrimination for the experimental condition is established. This method has proven to be an efficient and robust methodology to document evidence of discrimination against different groups with stigmatizing characteristics (Vuolo *et al.* 2016; Gaddis 2019), including criminal records (Ahmed and Lång 2017).

I submitted two fictitious candidate applications to 1,053 online job advertisements. In each pair one application specified or suggested a criminal record (henceforth also referred to as the 'experimental candidate'), and the other (henceforth referred to as 'control candidate'), with equivalent characteristics, skills and job experience, did not.

Signs of criminal records for fictitious candidates

Previous research suggested that candidates might diverge in their responses depending on the severity of the sentence disclosed (Uggen *et al.* 2014). Thus, in half of the applications, the experimental candidate's CV and cover letter were made to suggest or signal that he or she had served a prison sentence, the most severe punishment in the United Kingdom. In the other half of the applications, the experimental candidate's application materials were made to suggest or signal that they had served an alternative sentence, namely, 'community payback', a type of community sentence involving activities such as removing graffiti or clearing wasteland.

The existence of a prior conviction was signalled in up to three ways. First, for all jobs, the 'Education' section of the experimental candidate's CV included an indirect signal of having served a sentence, by including recent completion of an IT training course at a detention centre or probation institution. Second, when the application requested a cover letter (24.4 per cent of the job openings), a paragraph of the letter explained the recent completion of a 12-month conviction and re-entry efforts.³ The paragraph was based on example disclosure statements provided to individuals with criminal records by two UK charities supporting the rehabilitation of individuals with criminal records. Third, for job openings with questions on prior conviction (12.9 per cent of the openings), I ticked 'Yes' on the corresponding box. When more information was requested, I inserted the paragraph mentioned above, explaining the recent completion of a conviction and re-entry efforts.

To ensure comparability, all control candidates' CVs mentioned an equivalent IT course conducted in an educational institution with no reference to the criminal justice system. In the control's cover letter, there was an equivalent paragraph stating the motivation to find a job again after a spell of unemployment, and 'No' was always checked on questions about the applicant's previous criminal record. In both experimental and control CVs, the applicant's last job finished between 12 and 14 months ago. I expected that employers would interpret the gap in employment between the previous job and the current time as time spent serving a sentence for those candidates with a criminal record or an unemployment spell for those candidates without a mark of a criminal record.

Signs on gender and ethnicity of fictitious candidates

For each job opening, the two fictitious applicants shared the same gender and race profiles, assigned randomly. I used four gender and race profiles: Black female, Black male, White female

³ For instance, for those candidates disclosing a community service sentence the statement indicated: 'In the interest of transparency, I would like to tell you that I just finished a 12 month community sentence. However, this period is now a thing of the past. Whilst on probation, I attended a programme to ensure that I would move forward positively with my life. Now, working with you, I truly believe I can get a second chance. I would welcome the opportunity to explain in more detail the circumstances leading up to my conviction'. An adapted statement was also introduced for those candidates disclosing a prison sentence.

and White male. I decided to focus on White British ethnicity since this is, by far, the largest ethnic group in the United Kingdom (81.7 per cent in the 2021 census). To contrast the effect of race, I decided to focus on Black ethnicity since they are the minority group with the highest disproportionate contact with the criminal justice system (Ministry of Justice 2021). Financial and time constraints limited the possibility of introducing other gender and race profiles.

The candidate's race and gender were signalled through the name. I used three different names for each race and gender profile. For White profiles, I used the three most common names for White male inmates in the prison system in England and Wales in December 2019. For Black names, I used the ten most frequent names for babies born in the year 2000 in the United Kingdom from the list of 'Black-sounding' names suggested by Gaddis (2017). I then ran these names in descending order through Google image searches in private mode until I found three names for each gender on which only individuals with Black ethnicity were in the first scroll. I used the same family names for the four gender and race profiles based on the most common surnames for inmates in the prison system in England and Wales in December 2019. A list of the names and surnames can be accessed in [Annexe 1 of the Supplementary Materials](#).

Other characteristics of fictitious applicants

I developed applicant profiles and corresponding CVs and cover letters to ensure similarity across background characteristics, but without exactly duplicating pieces of information or style. For residential addresses, I used real street names but fictitious street numbers in two different Lower Layer Super Output areas located inside three kilometres of the city centre with a high concentration of the Black population and in the first decile of the multiple deprivation index.⁴ Regarding previous job experience, the fictitious applicants had worked for 3.5–4.5 years in different jobs in the retail, construction and catering/hospitality sectors. For ethical reasons, I used names of fictitious companies. To make it more difficult to detect that this was an experiment, I situated these companies in two different UK cities not included in the sample. Both applicants stated they had been awarded a General Certificate of Secondary Education. Individuals had graduated from secondary school in 2016, so employers would infer that the individual was in their early twenties.

Sample

I created a library of functions in Python 3.8.3 to call the job search engine 'reed.co.uk' API.⁵ The code first created a database of job listings that met an inclusion criterion. Specifically, I programmed the inclusion criteria to search for entry-level job openings in retail, catering/hospitality, construction, manufacturing, agriculture/horticulture and logistics sectors. The first five sectors have been identified as priority for training ex-offenders, specifically to cover labour shortages identified in the current 'Education and Employment strategy' of the Ministry of Justice (2018: 30). I also included jobs in the logistics sector since previous research stated that US gig companies in this sector could be exporting offshore background-checking practices (Rovira 2022). The code also limited the search to job openings situated 10 km from the centre of the most populated city in each of the 12 UK 'NUTS 2'⁶ Statistical Areas (Belfast, Birmingham, Bristol, Cardiff, Glasgow, London, Leeds, Manchester, Newcastle, Norwich,

⁴ For London, I used the coordinates for Tottenham. For Cardiff, finding areas with high deprivation close to the city centre was impossible, so I moved the coordinates to the northwest.

⁵ The libraries are openly available at: <https://doi.org/10.5281/zenodo.7590880>, <https://doi.org/10.5281/zenodo.7590842>.

⁶ The acronym NUTS refers to *Nomenclature des Unités territoriales statistiques*, a geographical system, according to which the territory of the European Union is divided into hierarchical levels. NUTS 2 refers to areas usually between 800,000 and 3 million inhabitants. After Brexit, NUTS levels are referred as ITL (International Territorial Level).

Nottingham and Southampton). I only sampled large cities to ensure a sufficiently large number of potential jobs for which to apply and to avoid diluting the job market with fictitious applications. The code excluded job openings with salaries of above £30,000 per annum, corresponding to median hourly earnings for all employees in the United Kingdom in 2019 ([Office for National Statistics 2019](#)); openings in a company branch to which I had already applied in the past, to avoid overburdening recruiters; and positions in a company I had already applied to in the last six months, to avoid detection. From the resulting list, the code then selected a random sample of job openings to apply for daily.⁷

Next, a research assistant and I read the job description for each opening. We excluded those openings that required skills or experience above the ones that the fictitious candidates had (59.4 per cent of the openings). We also excluded jobs unrelated to the sectors above (6.9 per cent), job openings advertised by companies that advertised openings with more than one name (4.3 per cent) and job openings that involved answering specific questions, a psychological test, or applying through a video interview (0.6 per cent). We then applied to the rest of the job openings on behalf of the two fictitious candidates, putting the second candidate's application in the day after the first application. In about 1.5 per cent of the cases, the job opening had already closed, so it was impossible to apply with the second fictitious candidate. Errors were made in applying to about 4 per cent of the openings and these were excluded from the analysis. In total, we applied with two candidates to about a quarter (22.9 per cent) of the job openings from the original randomly selected list.

The study was conducted between March 2021 and March 2022 in three periods, from mid-May 2021 to late July 2021, from mid-December 2021 to late February 2022 and from mid-June 2022 to late July 2022. These periods coincided with the last stages of the measures for social distancing imposed during the COVID-19 lockdown. The unemployment rate ranged from 4.8 per cent at the beginning to 3.6 per cent at the end of the period.

Randomization procedure

As described in the preceding paragraphs, I used randomization across several aspects of my experimental design. To summarize, I randomized: (1) the information placed on the CVs and cover letters, (2) the experimental condition used (i.e. having served a prison or a community sentence) and (3) the demographic profile of the applicants (i.e. Black female, Black male, White female or White male). I also randomized (4) the order of the paired applications (i.e. whether the application from the individual with criminal records was first or second). Specifically, for each month of data collection, I used [Lahey and Beasley's \(2018\) Resume Randomizer](#) software⁸ to create 100 different batches of résumés for each demographic profile of fictitious job applicants and city. For each batch, I created two CVs, one for an individual with criminal records (prison or community sentence) and another without. The information on CVs and cover letters and which experimental condition to include in the batch was assigned randomly by the *Resume Randomizer* software. I then randomly assigned which batch (i.e. from 1 to 100) of the paired résumés to use when applying for a particular opening using the Python random function.

Outcome variable

Each profile for race, gender and type of criminal record had an email account and a unique phone number, which could receive texts and voicemails.⁹ The binary outcome variable

⁷ The Python libraries will be available on the author's website upon the publication of the article. A description of the sample for location and period can be found at [Annexe 2 of the Supplementary Materials](#).

⁸ Resume Randomizer software ([Lahey and Beasley 2018](#)) allows the user to randomly combine text fragments of a CV to conduct audit correspondence studies.

⁹ The code developed to compile emails from different accounts might be found at <https://doi.org/10.5281/zenodo.7590854>.

measured whether the applicant received a response from the employer asking the applicant to call them back, stating that they have contacted the applicant to have a chat about the job or the applicant's background. I did not code as positive responses auto-generated emails acknowledging receipt of the job application or stating that the candidate succeeded in the initial stage of the recruitment process if these did not include a request for an interview. I also excluded responses when a recruiter contacted the candidate for a job different from the one applied for.

Analytical strategy

In the following analysis, I first use McNemar's (1947) test. McNemar's test is a Chi-square test of goodness-of-fit for paired nominal data that can be used to compare the distribution of employer responses expected under the null hypothesis to the actual observed responses (Vuolo *et al.* 2016). A statistically significant Chi-square test would provide evidence to reject the null hypothesis and accept the first alternative hypothesis H1 of discrimination against individuals with criminal records.

For testing hypotheses H2 and H3, I use multilevel random intercept linear regression models. Multilevel models control the potential dependency of observations between candidates applying to the same job openings and between responses to the same company. I used a three-level model, nesting applications to job openings and companies. Logistic models used to be the default strategy for regressions with binary outcomes. However, they have been criticized since the interaction terms are easily misinterpreted because they are conditional on other independent variables in the model and the results are difficult to interpret (Mood 2010; Gomila 2021). In contrast, linear regression models are safe when the model includes interaction terms and indeed the results are very similar to those from logistic regression models (Gomila 2021). The coefficients for the multilevel logistic model analysis are provided in [Annexe 3 of the Supplementary Materials](#).

RESULTS

[Figure 2](#) displays the percentage rate of positive responses from employers for candidates with and without a mark of a criminal record for all types of job openings. Overall, 15.7 per cent of the candidates disclosing a criminal record got an initial positive response from an employer inviting them to a job interview or to have a chat (from now on, 'callback rate'). This percentage is significantly lower than the 18.3 per cent callback rate for equivalent candidates not disclosing a previous conviction ($X^2 = 7.755$, $df = 1$, p -value: 0.01, $N = 1,053$). This initial result allows us to reject the null hypothesis of equal response rate between candidates with and without criminal records and accept the alternative hypothesis H1 of discrimination against individuals with criminal records.

However, as predicted by the theories of statistical discrimination, there is heterogeneity in the extent of discrimination against individuals with a criminal record in the United Kingdom depending on the request for information on criminal records and the perception of the candidate's ethnicity. [Figure 3](#) displays the callback rates for candidates with and without a mark of a criminal record depending on whether the job opening has a criminal background question or not. Among each group, I present results split by whether the candidate has a White- or a Black-sounding name.

In job openings with no criminal background question (no 'box'), the results suggest discrimination against applicants with criminal records for candidates with a 'Black-sounding' name. For this subset, candidates disclosing a criminal record in their application materials got a positive callback from the employer in 13.5 per cent of applications, while equivalent candidates applying to the same jobs but not disclosing a prior conviction had an 17.1 per cent

positive response rate. This difference was significant at the 99 per cent level ($X^2 = 7.314$, $df = 1$, p -value: 0.01, $N = 467$). However, adverse treatment was undetected for candidates with a 'White-sounding' name. For this group, the positive response rate for candidates with and without criminal records was very similar (15.1 vs 14.4 per cent) and non-significant ($X^2 = 0.121$, $df = 1$, p -value: 0.73, $N = 450$), meaning that there is a high probability that this difference was produced by chance.

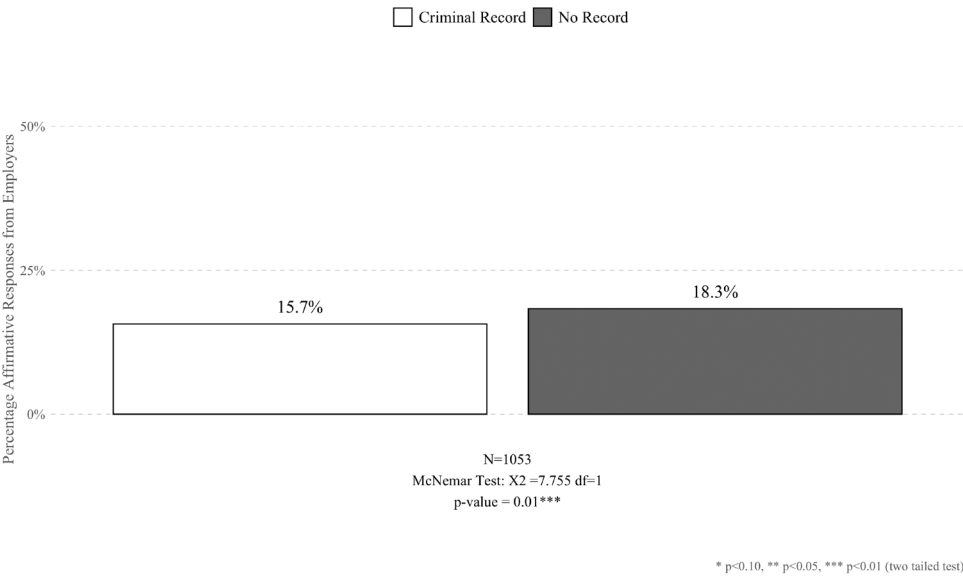


Fig. 2 Percent of affirmative responses to applications by criminal records disclosure.

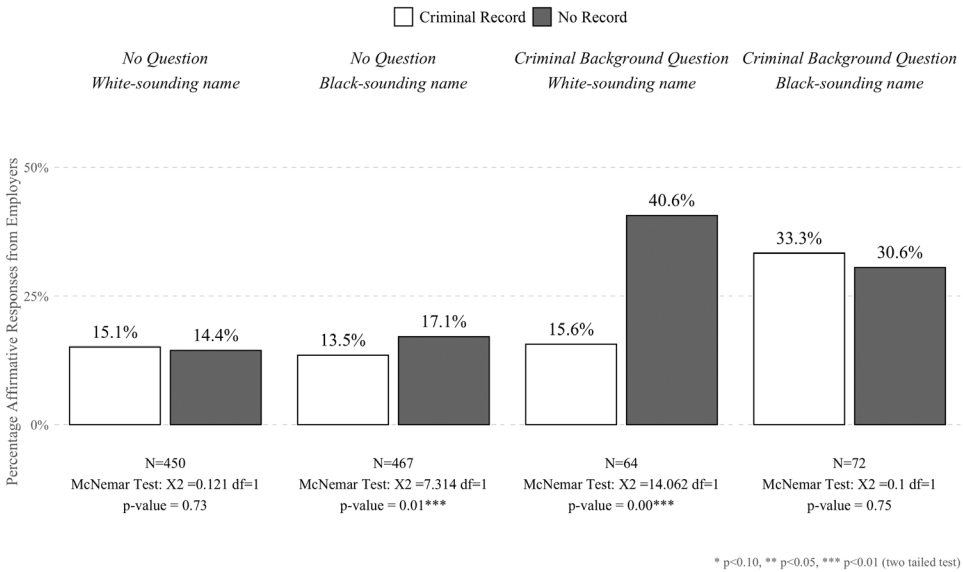


Fig. 3 Percent of affirmative responses to applications by criminal records disclosure and race and the existence of criminal background question.

In contrast, in those openings with a 'box', discrimination against individuals with criminal records was detected for White candidates: 40.6 per cent of candidates with a 'White-sounding' name not disclosing a criminal record got a positive response compared with 15.6 per cent of candidates disclosing a record. This difference is significant at the 99 per cent level ($X^2 = 14.062$, $df = 1$, p -value < 0.00 , $N = 64$). In comparison, no difference in callback rates was found between Black candidates with or without criminal records. Candidates with a 'Black-sounding' name disclosing a criminal record got a 33.3 per cent callback rate compared with a 30.6 per cent response rate for candidates not disclosing it. This difference is not significant ($X^2 = 0.1$, $df = 1$, p -value: 0.75, $N = 75$). Thus, disclosing a criminal record in job openings with a 'box' seems detrimental for White candidates but not for Black candidates.

I formally test hypotheses 2 and 3 using a multivariate linear regression model.¹⁰ Multivariate regression models allow us to consider the effects of all variables simultaneously and observe the interaction effects between them. Using these models, I test the effects of the following variables: (1) disclosure of a criminal record (with 'Not disclosing a criminal record' as a reference category); (2) race of the applicant (with 'White-sounding name' as the reference category); (3) whether the job opening has questions on prior criminality (with 'No question' as the reference category); as well as assessing the effects of interactions between the variables. I test hypothesis H2 using the interaction between candidates disclosing criminal records and whether the job opening has a question about prior criminality. I test hypothesis H3 through the triple interaction between race, disclosing a criminal record, and requests about prior convictions in the job opening.

For each coefficient, the circle at the centre of the line shows the average coefficient calculated for each model. The attached line displays the confidence interval of this coefficient calculated at the 95 per cent confidence level, meaning the potential range of values of the coefficient at this level of confidence. Suppose that the line of the coefficient interval does not cross the vertical threshold set at 0. In that case, we can be confident at the 95 per cent confidence level to reject the null hypothesis of having a null coefficient and accept the alternative hypothesis that a relationship between the two variables exists. The direction of the coefficient also provides information about the nature of the relationship. If the line contains positive numbers then the variable, or the interaction effect between the variables, is associated with a higher chance of callback. In contrast, if the line contains negative numbers, this variable, or the interaction effect, is associated with a lower probability of a callback (Figure 4).

The results confirm that, as expected in hypothesis H2, adverse treatment of individuals with criminal records is greater in those job openings with questions about prior criminality. For White individuals, the effect of disclosing a criminal record is null in those openings with no questions about prior criminality. However, the interaction effect between disclosing a criminal record and applying to a job opening with a question is significant and negative, meaning that, for White candidates, the probability of having a positive response for individuals disclosing criminal records decreases significantly in those openings with questions.

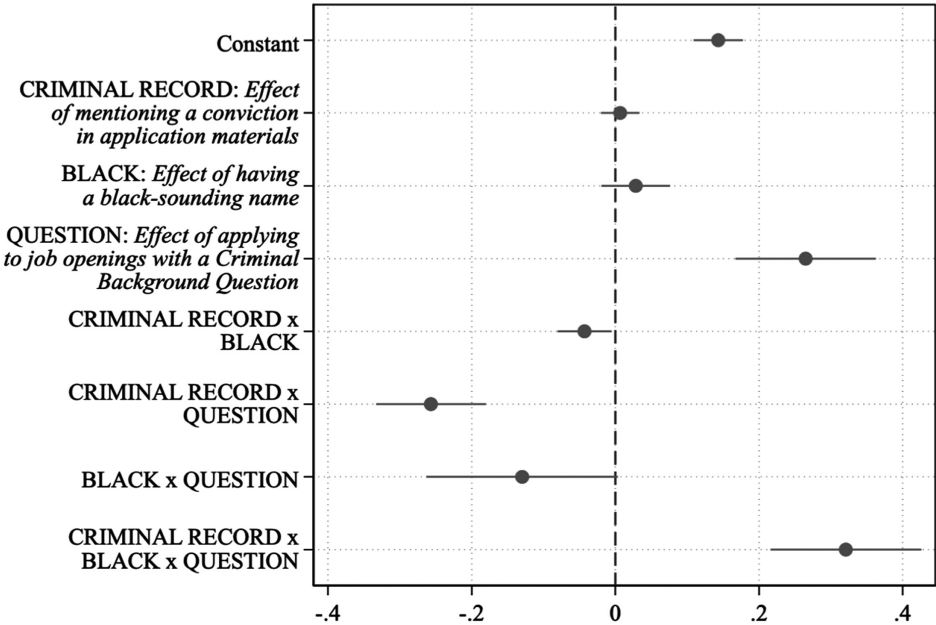
The results also confirm the differential impact of these differences based on the applicant's race, as expected in hypothesis H3. The coefficient of the triple interaction between disclosing a criminal record, applying to an opening with questions on prior criminality, and having a Black-sounding name is positive and significant, indicating that the negative effect of disclosing criminal records in openings with a box is reduced for Black candidates.

10 Coefficients for a multilevel logistic models provided very similar results, as can be seen in [Annexe 3 of the Supplementary Materials](#).

DISCUSSION

The previous analyses allowed us to accept our three main alternative hypotheses. First, the experiment shows that, overall, job applicants with a ‘mark’ of a criminal record in their application materials have a lower chance of success of getting a callback than equivalent candidates without a ‘mark’ applying to the exact same job openings. Second, as stated by advocates of BTB policies, the experiment provides evidence of enhanced adverse reactions against candidates with criminal records for openings containing a specific question about prior criminality, at least for White candidates. Third, as this adverse reaction in positions with questions about prior criminality is lower for Black candidates, this suggests that BTB policies would have a differential effect depending on the applicant’s ethnicity.

This study contributes to the academic literature that casts light on the stigma of a criminal record as one of the obstacles to employment that individuals with lived experience of the criminal justice system must face in their re-entry to society in the United Kingdom (Loucks *et al.* 1998; Thomas 2007; McGuinness *et al.* 2013; Henley 2018; Weaver and Jardine 2022). In this debate, this study provides, for the first time, causal evidence on the discrimination against job applicants with criminal records in Great Britain and Northern Ireland. The experimental design of this research allows isolation of the specific effects of disclosing a criminal record in a job application from issues relating to omitted variables and selection bias (Pager 2003; Rovira 2019). This study’s ‘field’ nature also allows for capturing the ‘real-world’ behaviour of recruiters, removing potential social desirability bias (Pager and Quillian 2005).



N=2,106

Fig. 4 Coefficients for multilevel linear regression probability model of employer positive response to applications by criminal records disclosure, perceived race of the applicant, and the existence of a criminal background question.

The research also casts light on the complex patterns of interaction between the stigmas of ethnic minority status and prior contact with the criminal justice system. First, in job openings without questions on criminal records (the vast majority of openings), I have detected discrimination against Black candidates disclosing a criminal record, but not against White candidates. This difference might indeed come from an amplified discriminatory pattern of the stigma of a criminal record on ethnic minorities, as stated by Pager (2003) for the United States. However, this pattern is, in principle, incongruous with the finding of adverse effects against White candidates in job openings with a 'box'. An alternative plausible explanation is that this difference is a product of 'attention discrimination'. 'Attention discrimination' theory points out that recruiters may take a closer look at the CVs of particular social groups (Bartoš *et al.* 2016). For instance, recruiters may, consciously or unconsciously, take a closer look at the application materials of candidates with a 'Black-sounding' name. Then, it may be easier for recruiters to detect indirect marks of prior criminality, such as a training course conducted in prison or during probation. In contrast, a similar indirect sign may have remained undetected for candidates with a White-sounding name.

Continuing to reflect on the ethnic divergences, in those job openings with a 'box', the results point towards discrimination against candidates with a criminal record for White candidates, but not for Black candidates. In this case, this differential ethnic impact might be related to two factors. First, during the application process I noticed that job openings with a 'box' mostly included diversity and inclusion recruitment statements.¹¹ Diversity and inclusion practices might also encourage recruiters to include members of ethnic minorities in the shortlist of applicants to interview. Then, if not many ethnic minority background applicants apply, recruiters might be more willing to discount the effect of this disclosure for members of this background, whilst not having incentives to be so benevolent for candidates from an ethnic majority background. An alternative explanation might be that the 'redemption narrative' stated when disclosing a criminal record might be effective as a 'desistance signal' (Reich 2023) for Black candidates, perceived as a gesture of honesty and trustworthiness,¹² but not for White applicants. Future research in the United Kingdom should further explore the factors related to ethnic divergent patterns in discrimination against individuals with criminal records.

In policy terms, the results of this research underpin the advocacy efforts by charities on the urgent need to transform the current disclosure system and use of information on prior convictions in the labour market (Stacey 2015; Working Chance 2021; Cairns 2022). Privacy laws in the UK state that the government is the sole keeper of information regarding previous convictions (Article 10 of the General Data Protection Regulation law). Thus, as far as discrimination is a foreseeable consequence after disclosing a criminal record, if the UK government does not restrict the disclosure and use of these records amongst employers, it is indirectly facilitating the unfair, inefficient and counterproductive exclusion of individuals with criminal records from the labour market (Kaufman *et al.* 2018; Levin 2018).

In particular, this research provides support for the introduction of BTB policies in the United Kingdom. These policies may benefit the job prospects of White candidates with criminal records, which represented 79 per cent of the sentenced population in the United Kingdom in 2020 (Ministry of Justice 2021).¹³ As stated, these study results show that in job openings

11 Indeed, 52.2 per cent of job openings with a box included a specific statement about diversity and inclusion in the job opening or questions about sociodemographic characteristics during the application process. This contrasts with 19.6 per cent of job openings without a 'box'. However, this indicator might not be exhaustive of having a diversity and inclusion recruitment policy.

12 I thank reviewer 1 for the thoughts around this potential explanation.

13 This portion of sentenced White population (79 per cent) includes Gypsy/Roma/Traveller people who may be exposed to a distinct high level of discrimination. Future research should consider to what extent BTB policies would impact members of these communities. I would like to thank a reviewer for rising this point.

with questions about prior criminality, White candidates disclosing a criminal record have a lower callback rate than equivalent candidates not disclosing a criminal record. This suggests that discouraging employers from inserting these questions during the first stage of the recruitment process would increase the chance of getting an interview for White individuals with criminal records, probably leading to a higher chance of getting a job. However, caution is advised since these findings should be interpreted as correlational and not causal. Companies that currently request information on criminal records in their job applications are probably different to companies which do not. Hence, their behaviour after a policy change might be different. Ideally, prior to introducing this policy, pilot studies with a pre–post design (see [Agan and Starr 2018](#)) should study whether British companies change their hiring practices with people with criminal records when implementing BTB policies.

In addition, the results of the study also encourage continued investigation of innovative re-entry policies that target candidates with an ethnic minority background. As stated, the results of the experiment suggest that the introduction of a BTB policy would not necessarily have a positive effect on recruitment chances for Black individuals disclosing criminal records. Similarly, experimental research in the United States found that the introduction of ‘certificates of relief’ may also only benefit White candidates and not Black candidates ([Leasure and Andersen 2020](#)). Certificates of relief are documents stating the good behaviour of applicants directed to counteract the negative prejudices of a criminal records certificate. Public campaigns are also not promising for changing public endorsement of the collateral consequences of criminal record ([Novick et al. 2022](#)). Policy alternatives include facilitating contact in forums between recruiters and individuals of a minority background with criminal records to reduce prejudices and stereotypes, or offering specific public subsidies for hiring individuals with criminal records to increase incentives to employ them. However, before implementing these measures, pilot schemes should be carefully designed to avoid unanticipated results.

This research is part of a collective effort to cast light on the effects of criminal records. Future research should further explore the discrimination consequences that individuals with criminal records face in the British labour market. The study’s experimental design allowed us to show whether there is discrimination against people with criminal records, but not the extent of it, or the heterogeneity of its effects regarding different characteristics of individuals serving a sentence in the United Kingdom, or its potential effects in a different economic context. Indeed, the results of this research are only representative of a particular subset of former offenders, young individuals (about 20 years of age) disclosing only one criminal record for a one-year sentence, with secondary education and weak employment history, applying to job openings in the Retail, Hospitality, Construction, Manufacturing, Agriculture and Logistics sectors in large cities in the United Kingdom. Also, in tight labour market conditions such as after the COVID-19 pandemic lockdown measures ended in March 2020, employers may have had exceptionally low incentives to discriminate against candidates (see [Carlsson et al. 2018](#)). In addition, the sample size limited investigation of the relationship between the stigma of a criminal record, the gender and ethnicity of the applicant, and other job market characteristics.

Future research linking sentencing data with employment records should explore the full extent of discrimination against individuals with criminal histories in the United Kingdom and its interaction with applicants’ companies’ and labour markets’ characteristics ([Pager 2003](#)). In addition, field experiments using other ‘marks’ of a criminal records such as tattoos or living in stigmatized neighbourhoods, and ideally with a larger sample size, should replicate the findings to get further conclusive evidence. Finally, as already stated, future research exploring the mechanisms leading the ethnic differences in the impact of the stigma of a criminal record would be particularly fruitful in defining policies directed at tackling discrimination against people with criminal records from ethnic minorities.

CONCLUSION

British policymakers should be concerned about unjustified and blanket labour market discrimination against individuals with criminal records, and its interaction with racial inequalities. In this paper, I have demonstrated, for the first time in the United Kingdom, that discrimination is a probable outcome when disclosing a criminal record during the recruitment process. Moreover, this research has cast light on the complex relationship between the stigma of a criminal records and ethnic stigmas. Overall, this research suggests that whilst BTB policies may reduce discrimination against White candidates with a criminal record, there is a concurrent need for policies aimed at supporting members of minority ethnic groups in overcoming the specific discrimination they face. These findings underpin calls for government action to transform the current system for disclosing and using criminal records in the British labour market.

ACKNOWLEDGEMENTS

I am deeply grateful to Helen Kosci who provided great research assistance. David Kirk, Andrew Henley and Christopher Stacey for their invaluable comments on the design of the research and the interpretation of the results. Nancy Gladstone provided great language edits. I would also like to thank the reviewers for taking the time and effort necessary to review the manuscript and their great suggestions.

FUNDING

This work was supported by the British Academy Postdoctoral Fellowships [PF19\100020]; the European Union-NextGenerationEU, Ministry of Universities and Recovery, Transformation and Resilience Plan, through a call from Pompeu Fabra University [Maria Zambrano Fellowship]; and the Oxford's Sociology Department 'Inspiration Fund 2022'.

PREREGISTRATION

The research design and analyses regarding the first hypothesis were registered before beginning the research (see <https://osf.io/jps6g>). The analysis regarding the second and third hypotheses, including the analysis results shown in Figures 2–4, were not planned. Reproducibility materials can be found at <https://osf.io/szda7/>.

SUPPLEMENTARY MATERIAL

Supplementary material is available at *British Journal of Criminology* online.

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