



## Employment opportunities for ex-offenders A field experiment on how type of crime and applicants' ethnic background affect employment opportunities for low-educated men in the Netherlands

C.J.W. van den Berg (Chantal)<sup>a,\*</sup>, L. Blommaert (Lieselotte)<sup>b</sup>, C.C.J.H. Bijleveld (Catrien)<sup>a,c</sup>, S. Ruiter (Stijn)<sup>c,d</sup>

<sup>a</sup> VU University Amsterdam, the Netherlands

<sup>b</sup> Department of Sociology, Radboud University Nijmegen, the Netherlands

<sup>c</sup> Netherlands Institute for the Study of Crime and Law Enforcement, the Netherlands

<sup>d</sup> Utrecht University, the Netherlands

### ARTICLE INFO

#### Keywords:

Field experiment

Employment

Labor market discrimination

Criminal record

Ethnic background

### ABSTRACT

Previous research shows mixed results for the effect of having a criminal record on applicants' chances in the job market. We argue that, to make sense of this mixed pattern of results and better understand the impact of having a criminal record, research should examine *under which conditions* the effect of having a criminal record on job seekers' chances is smaller or larger. The current study uses an experimental design to examine the potential role of different offense types and applicants' ethnic background. Specifically, we ask how applicants' chances of success are influenced by prior convictions for a violent offense, a property offense or a sexual offense and by their ethnic background. Data were collected using a field experiment in the Netherlands. Applications for 520 applicants were sent out in response to job vacancies published on the internet. The results provide little evidence that a prior conviction or the type of offense affects applicants' chances of success. By contrast, we find a strong effect of applicants' ethnic background. In fact, ethnic minority applicants without a criminal record are found to be less likely to receive a positive reaction than majority applicants with a conviction for a violent offense.

### 1. Introduction

For people with a criminal record, holding a job is highly important for the prevention of future offending. Various studies have shown that ex-offenders who find a job are indeed less likely to reoffend (Crutchfield & Pitchford, 1997; Mesters, Van der Geest, & Bijleveld, 2015; Sampson & Laub, 1993; Uggen, 2000; Van der Geest, Bijleveld, & Blokland, 2011; Wadsworth, 2006). Hence, if ex-offenders encounter problems while trying to find a job this can hinder their successful reintegration into society.

Prior research based on survey data has indicated that ex-offenders are less successful in the labor market than people without a criminal record (Bushway, Stoll, & Weiman, 2007). However, based on this research it remains unclear to what extent these findings are driven by spurious relationships or selection effects (c.f., Pager, 2003). Ex-

offenders more often have a lower socio-economic status and lower educational level (Freeman, 1999; Lochner, 2004) and are less likely to possess a useful diploma, knowledge or skills (Uggen, 1999; Uggen, Wakefield, & Western, 2005) in comparison to non-offenders. Moreover, ethnic minorities have a higher risk of appearing in criminal justice statistics, although this is largely explained their lower average socio-economic status (Decker, Ortiz, Spohn, & Hedberg, 2015). Given that people with lower educational levels or socio-economic status and ethnic minorities have less favorable labor market prospects, it is possible that these features drive both their higher risk of involvement in crime *and* their lower chances in the labor market, rather than the latter two being causally linked (Pager, 2003).

The most suitable way to rule out selection effects and identify the causal effect of having<sup>1</sup> a criminal record on one's chances in the job market is to use a field experiment methodology (Pager, 2003). Field

\* Corresponding author at: Department of Criminal Law and Criminology, VU University Amsterdam, De Boelelaan 1077 (Initium), 1081 HV Amsterdam, the Netherlands.

E-mail address: [c.j.w.vanden.berg@vu.nl](mailto:c.j.w.vanden.berg@vu.nl) (C.J.W. van den Berg).

<sup>1</sup> We use the phrase 'having a criminal record', in correspondence with previous literature, although most experimental studies in fact focus on the disclosure of a criminal record during the application procedure.

experiments regarding effects of having a criminal record on employment opportunities remain relatively scarce, but a number of prior studies have been conducted. In these experiments, fictitious job seekers with and without a criminal past applied for actual job openings, and employers' responses to these applications were recorded. The vast majority of this research was conducted in the US (Agan & Starr, 2018; Decker et al., 2015; Galgano, 2009; Leasure & Stevens Andersen, 2017; Leasure, 2019; Mobasseri, 2019; Pager, 2003, 2007; Pager, Western, & Bonikowski, 2009; Pager, Western, & Sugie, 2009; Uggen, Vuolo, Lageson, Ruhland, & Whitham, 2014; Schwartz & Skolnick, 1962). Only a few field experiments were conducted outside of the US, namely in Belgium (Baert & Verhofstadt, 2015; Deliens, 1983), the Netherlands (Buikhuisen & Dijksterhuis, 1969; Dirkzwager, Blokland, Nannes, & Vroonland, 2015), Sweden (Ahmed & Lång, 2017) and New Zealand (Boshier & Johnson, 1974).

The results of these prior field experiments are remarkably mixed. The effect of having a criminal record on an applicant's employment chances varies greatly between studies; some studies found a strong effect of having a criminal record (e.g., Decker et al., 2015; Deliens, 1983; Pager, 2003, 2007) whereas in other cases the observed effect was small (e.g., Baert & Verhofstadt, 2015; Boshier & Johnson, 1974; Galgano, 2009; Uggen et al., 2014) or statistically non-significant (e.g., Dirkzwager et al., 2015<sup>2</sup>). Moreover, findings regarding the impact of having a criminal record vary considerably *within* prior field experiments; in several studies, an effect was found under some conditions whilst it was weaker or absent under other conditions (e.g., Ahmed & Lång, 2017; Baert & Verhofstadt, 2015; Boshier & Johnson, 1974; Decker et al., 2015; Galgano, 2009).

We argue that, to make sense of this mixed pattern of results and to better understand the impact of having a criminal record on people's chances in the job market, research needs to move beyond the question *whether* having a criminal record has an effect and focus on uncovering *under which conditions* this effect is larger or smaller (or not observed at all). The present study forms a step in this direction. It builds on prior experiments in this field by examining the role of two factors that may influence the strength of the effect that a criminal record has on applicants' chances of success: (1) the type of offense that applicants committed and (2) applicants' ethnic backgrounds.

More specifically, this study contributes to existing insights in two important ways. First, there is a lack of experiments that derive and test hypotheses on how different types of offenses may have a different impact on job seekers' chances in the labor market, even though some scholars in the field have pointed out that various types of offenses could affect job prospects in different ways (e.g., Uggen et al., 2014). Our study addresses this research gap by formulating and testing hypotheses about the influence of convictions for different offenses. Specifically, the first key contribution of the present study is that it distinguishes between three distinct types of offenses that were carefully chosen to this end. Second, more recent experiments in the US mostly included both ethnic or racial majority and minority job seekers with or without a criminal record. Several of these studies found that the negative impact of a having criminal record was stronger for minority than for majority job seekers (e.g. Pager, Western & Sugie, 2009). Yet, experiments conducted outside of the US focused virtually exclusively on majority job seekers. Hence, it is unclear whether these patterns are similar in non-US settings, and if variations in findings on the impact of a criminal record between prior studies in the US and those conducted elsewhere are driven partly by the racial or ethnic groups they cover. Against this background, a second key contribution of this study is that it incorporates both ethnic majority and minority job seekers with and

without a criminal record to examine how having a criminal record and job applicants' ethnic background shape their chances in the Dutch context.

In short, this study aims to improve our understanding of the conditions under which the effect of having a criminal record on job seekers' chances in the labor market is smaller or larger, by addressing the following research questions:

*How are job applicants' chances of success in the Dutch labor market influenced by (1) prior convictions for different types of offenses – a violent offense, a property offense or a sexual offense – and (2) their ethnic background?*

## 2. Previous research, theory and hypotheses

### 2.1. The role of different types of offenses

The vast majority of prior experiments in this field study the impact of having a criminal record using fictitious job seekers who did or did not commit one specific type of offense or who received one specific sentence or not. Which offense job seekers reported varies across studies. Therefore, this body of research combined covers a variety of offenses and sentences. Most experiments conducted in the US involved applicants reporting a conviction for drug possession (Decker et al., 2015; Leasure, 2019; Leasure & Stevens Andersen, 2017; Pager, 2003, 2007; Mobasseri, 2019; Pager, Western & Bonikowski, 2009; Pager, Western & Sugie, 2009). An older experiment in the US (Schwartz & Skolnick, 1962) and a recent one in Sweden (Ahmed & Lång, 2017) focused on assault. Earlier experiments in Belgium, the Netherlands and New Zealand focused on theft (Deliens, 1983) or on either theft or driving under influence (Boshier & Johnson, 1974; Buikhuisen & Dijksterhuis, 1969). Experiments also vary with regard to the type or duration of sentences. In most cases, having a criminal record was signaled by mentioning a detention period (although some vary only whether or not a sentence was reported and provide no information on the type of offense). The duration of the detention period reported in these studies varies widely, ranging from a month (Deliens, 1983) or a few months (Dirkzwager et al., 2015; Galgano, 2009), via a year (Baert & Verhofstadt, 2015) or a year and a half (Pager, 2003, 2007, Mobasseri, 2019; Pager, Western & Bonikowski, 2009; Pager, Western & Sugie, 2009) to three years (Decker et al., 2015).

The findings regarding the impact of a criminal record reported in these experiments vary too. Such variations in findings across studies can be suggestive of the role of the type or severity of offenses, but provide no conclusive evidence in this regards because it remains unclear whether the differences in results are attributable to the fact that they considered different types of offenses or sentences, or to one of the many other ways in which these experiments differ. Likewise, prior experiments that incorporated more than one offense do not allow us to draw definitive conclusions about the role of the type or severity of offenses, as these studies were not set up to test the influence of the type or severity of the offense (or sentence). That is, they did not derive and test predictions about a set of different offenses or sentences that were deliberately chosen for this purpose and thus differ in a predetermined, theoretically meaningful way. To our knowledge, there are three exceptions. First, Schwartz and Skolnick's study in the US (1962) distinguished between arrests and convictions. Second, a recent study by Leasure (2019), also conducted in the US, set out to test if different types of convictions have a different impact. The results show no statistically significant variations in the likelihood of receiving a callback between applicants with a *misdemeanor* drug conviction or a *felony* drug conviction. Third, Agan and Starr (2018) examined whether a felony conviction affected job seekers' chances of success, comparing periods before and after the introduction of 'ban the box' laws in New York and New Jersey. This study found no evidence of differences in callback rates between job seekers convicted for *drug* crimes and those convicted

<sup>2</sup>Dirkzwager et al. (2015) found no statistically significant effects of prior detention on chances of receiving positive responses from employers; they did find effects of detention on the likelihood of receiving a positive response when looking for a home to rent.

for property crimes.

Studies theorizing the impact of a criminal record on people's labor market opportunities have drawn on different theories to argue that employers are less likely to respond positively (e.g. extend an invitation for an interview) to applicants with a criminal past. A distinction that is often made is that between taste-based discrimination theories and statistical discrimination theories (see for example: [Agan & Starr, 2018](#); [Uggen et al., 2014](#); [Zschirnt & Ruedin, 2016](#)). Statistical discrimination theories argue that employers discriminate against members of a specific group because their information on individual applicants is limited and they therefore rely on group generalizations, assessing individual applicants based on information or beliefs they have about the average qualifications or reliability of the group to which the applicant belongs (see e.g., [Bertrand & Duflo, 2017](#); [Zschirnt & Ruedin, 2016](#)). Taste-based discrimination theories focus on employers' preferences ("a general dislike" or "distaste" of a certain group, e.g., [Gaddis, 2018](#): 17; [Bertrand & Duflo, 2017](#): 310) and hold that employers' behavior is not affected by (other) available information about applicants. Such preference have been described in the literature as being based on, for instance, prejudice, negative stereotypes, beliefs, or attitudes regarding groups and their members (see e.g. [Agan & Starr, 2018](#); [Ewens, Tomlin, & Wang, 2014](#); [Quillian, 2006](#); [Rich, 2014](#); [Thijssen, Lancee, Veit, & Yemane, 2019](#); [Uggen et al., 2014](#); [Zschirnt & Ruedin, 2016](#)). Comparable arguments can be found in other theoretical approaches, for example on signaling ([Uggen et al., 2014](#)) or social dominance (e.g. [Zschirnt & Ruedin, 2016](#)). In sum, these theories predict that applicants with stigmatizing features – like a criminal record or belonging to a racial or ethnic minority group – face barriers in the labor market because employers rely on information or beliefs about groups.<sup>3</sup> Based on this, prior experiments departed from the expectation that having a criminal record would negatively affect job applicants' chances of success.

In this study, we argue that the impact of having a criminal record may vary for different offenses, because of different prevailing prejudiced or negative attitudes or assumptions, beliefs or stereotypes<sup>4</sup> regarding various types of offenders. In general, employers may view ex-offenders as less reliable and productive employees, for example because of the higher rates of addiction, trauma and mental illness among this group ([Uggen et al., 2014](#)). We include three carefully chosen types of offenses: violent offenses, property offenses and sexual offenses. In addition to general beliefs or stereotypes regarding offenders, these particular offenses can be considered to be associated with specific assumptions or stereotypical images. [Agan and Starr \(2018\)](#) argue that employers might be expected to be particularly concerned about potential employee theft. Based on this logic we can expect the effect of a conviction for a property offense to be stronger than the effect of a violent offense. Sexual offenders are often viewed as the 'worst' type of offenders in the sense that they are believed to be mentally ill and incapable of repentance ([Jenkins, 1998](#); [Pickett, Mancini, & Mears, 2013](#)). In general, the public's attitude towards sex offenders is more negative than their attitude towards other types of offenders ([Willis, Levenson, & Ward, 2010](#)). Based on this, our first hypothesis is: *The effect of a prior conviction on job applicants' chances of success is larger for applicants convicted for a property offense than for those convicted of a violent offense and largest for those convicted of a sexual offense (Hypothesis 1).*

<sup>3</sup> For more elaborate discussions of theoretical approaches on discrimination in different fields and how they relate to each other see for example: [Bertrand & Duflo, 2017](#); [Quillian, 2006](#); [Zschirnt & Ruedin, 2016](#).

<sup>4</sup> In this study, we are not able to draw definitive conclusions about which mechanisms drive employers' decisions; generalizations based on group information in conditions of limited information as statistical discrimination theories argue, or dislike or stereotypical images about groups, as – for example – taste-based discrimination theories predict.

## 2.2. The role of applicants' ethnic background

Whilst many older experiments on the impact of criminal records on opportunities in the job market focused exclusively on white or ethnic majority applicants, recent experiments in the US included both white and black (and sometimes Hispanic) applicants with or without a criminal record ([Agan & Starr, 2018](#); [Decker et al., 2015](#); [Galgano, 2009](#); [Leasure, 2019](#); [Mobasseri, 2019](#); [Pager, 2003, 2007](#); [Pager, Western & Bonikowski, 2009](#); [Pager, Western & Sugie, 2009](#); [Uggen et al., 2014](#)). These studies demonstrated that chances of success are lower for black and Hispanic job seekers than for white job seekers (but see [Leasure, 2019](#)), which is in line with findings from the extensive body of field experiment research focusing on racial or ethnic discrimination in hiring ([Bertrand & Duflo, 2017](#); [Neumark, 2018](#); [Quillian, Pager, Hexel, & Midtbøen, 2017, 2019](#); [Rich, 2014](#); [Zschirnt & Ruedin, 2016](#)). In addition, most of these studies found that the negative impact of having a criminal record was stronger for minority than for majority job seekers. In fact, white applicants with a criminal record were sometimes found to be more likely to receive positive responses than black or Hispanic applicants without a record (e.g., [Pager, 2007](#); [Pager, Western & Bonikowski, 2009](#); [Pager, Western & Sugie, 2009](#)). These findings make it all the more striking that the limited number of experiments conducted outside of the US, focused almost exclusively on ethnic majority job seekers (but see [Dirkzwager et al., 2015](#)). As such, it is unclear whether variations in findings regarding the effect of having a criminal record across prior experiments – with those set in the US more often finding larger effects – are driven (partly) by the fact that experiments outside the US were restricted to majority job seekers. Moreover, whether conclusions from prior research in the US on how having a criminal record and having a minority background shape labor market outcomes also hold true outside the US is a question that remains wide open.

To shed more light on these matters, this study incorporates both ethnic majority and ethnic minority job seekers<sup>5</sup> to examine how having a criminal record shapes job seekers' chances in the Dutch labor market. In addition, we examine potential interaction effects between having a criminal record and ethnic background. There are different reasons for why we may expect that the role of these factors could be different in the Netherlands than in the US. Incarceration rates are much lower in the Netherlands (61 prisoners per 100,000 individuals) than in the US (655 prisoners per 100,000 individuals) ([Walmsley, 2018](#)). Hence, crime is likely to be a less prominent concern in the Dutch context, which may mean that having a criminal record forms less of a barrier for job seekers in the Netherlands. In other words, the negative effect of having a criminal record on individuals' chances in the job market might be smaller in the Netherlands compared to the US. Furthermore, the association between crime and ethnic or racial minority group membership appears to be less strong in the Netherlands than in the US.<sup>6</sup> In 2017, 45% of the Dutch prison population belonged to a non-western minority group, and 55% belong to the majority (or western minority groups; [Statistics Netherlands, 2019](#)). Although a direct comparison to the US is difficult to make<sup>5</sup>, if we distinguish between whites and non-whites (Afro-American and Latin-American), we see that in 2017 35% of the US prison population was white, whereas 65% was non-white ([Bronson & Carson, 2019](#)). As such, prevailing stereotypes regarding ethnic minority group members in the Netherlands may be less linked to crime than is the case in the US, which

<sup>5</sup> The US literature often differentiates between whites (Caucasian), Afro-Americans, Latin-Americans and Asians. This differs from the standard distinction in the Netherlands between native-born and foreign, where the country of birth is the main indicator.

<sup>6</sup> Some research reports that crime rates are relatively high for ethnic minority groups in the Netherlands ([Bovenkerk & Fokkema, 2016](#)), but the mechanisms leading to this over-representation are disputed ([Unnever, 2019](#)).

means that in some respects employers may hold less stereotypical views of minority job seekers in the Netherlands. That, in turn, might mean that the impact of having an ethnic minority background on job seekers' chances could be weaker in the Netherlands than in the US. On the other hand, there are some indications that the average rate of racial or ethnic discrimination in hiring is lower in the US than in many European countries (Quillian et al., 2019; Zschirnt & Ruedin, 2016). This implies that the influence of having an ethnic minority background on job seekers' chances could be comparatively strong in the Netherlands.

In sum, different predictions are possible about how having a criminal record and ethnic background may affect job seekers' chances of success. Based on results from prior studies conducted in the US, we formulate the following hypothesis: *The effect of a prior conviction on job applicants' chances of success is larger for ethnic minority applicants than for ethnic majority applicants (Hypothesis 2).*

### 3. Methods

#### 3.1. Data collection

To test our hypotheses, we use data from an experiment in which fictitious individuals applied for job openings in the Dutch labor market. The type of offense committed and the ethnic background of the applicant were randomly varied across applications. The manipulation of the offense covered four conditions: the fictitious applicant could have committed a violent offense, a property offense, a sexual offense, or none at all. The applicant could also have an ethnic majority (native Dutch) background or a non-Western ethnic minority background. This resulted in a  $4 \times 2$  between-subjects design.

In total, 535 applications were sent out over two periods<sup>7</sup>. In the first period from 7 May, 2013 to 5 June, 2013, 295 applications were sent out. In the second period from 29 September, 2013 to 11 December, 2013, 240 applications were sent out. Applications were sent in response to job openings advertised on well-known employment websites in the Netherlands. The vacancies were for jobs requiring a low educational level, such as carpenter, electrician, order picker and driver. We focused on jobs at low educational levels for several reasons. First, the decision was based on theoretical considerations: research has shown that stereotyping might play a bigger role in low educated jobs (Lochner, 2004; Pager, Western & Bonikowski, 2009). Second, most offenders in the Netherlands as in other countries have low educational levels, which means that for many offenders these jobs would form a likely pool to select from. In other words, this makes the experiment a realistic and therefore externally valid representation of the situation in which many offenders in the Netherlands find themselves, which is crucial in field experiments (Lahey & Beasley, 2018). Finally, this is in line with many prior experiments in the field, which likewise focused on jobs requiring lower levels of education and "in the low-wage labor market" (Pager, Western & Bonikowski, 2009). Of the 535 applications, 15 were removed because of errors in their sent résumé or motivational letter. The total number of applications included in the analysis was thus 520. These involved one application for one job opening by one fictitious individual (with or without a particular type of offense and with or without ethnic minority status). This choice was made so as not to arouse any suspicion from potential employers, which might well have been the case if a potential employer had received multiple similar resumes or multiple letters reporting the existence of a criminal record. According to experts from employment agencies that we consulted, this is not common.

A great deal of effort went into the creation of an appropriate

<sup>7</sup> This was for practical reasons: at the end of the first period, very few job openings were available. At the end of September, there were enough openings to justify resuming the data collection.

applicant for the various jobs. The applicant was designed to be good enough to be considered for the job. Thus, it becomes more plausible that, if an applicant receives a positive or a negative response, this could be ascribed to the manipulation and not to the résumé or the motivational letter. To make the résumé and the motivational letter as realistic as possible, we consulted previous research such as Dirkzwager et al. (2015) and consulted in advance employees of various employment agencies. Based on this information, general résumés and motivational letters tailored to the different employment sectors were drawn up. Each of these could be modified so that the applicant met the specific job requirements. The experts from the employment agencies we consulted critically examined the résumés and motivational letters, and agreed that our application letters and resumes were realistic examples. The jobs they applied to in each case did not preclude receiving a certificate of conduct if required by law (we come back to this in the discussion section).

The résumés and motivational letters concerned a fictitious male applicant aged 20. All fictitious applicants had the same work experience and their education was of an equal level. All applicants were born in the Netherlands, and all had received Dutch-language education. The only differences among the résumés and motivational letters thus concerned the manipulations and the specific job being applied to.

The information on any sort of conviction was given in the motivational letter. The fictitious applicant began the motivational letter by declaring his interest in the job. He then mentioned that he had previously been convicted of a crime (manipulation of the type of offense). In the motivational letter, the offenses were worded in such a way that the violent offense was portrayed as a fight and the property offense was portrayed as a theft. After consultation with the employment agency experts, it was decided to describe the sexual offense simply with those words, as they found a more specific description unrealistic. The following sentence was included in the motivational letter as a reason for mentioning the criminal record. *The last time I applied for a job I got into trouble because I only told the truth about my criminal record later on. That is why I want to be honest about it from the start.* In consultation with experts from the employment agency, this was found to be a plausible reason for mentioning the criminal record. Normally, applicants are not legally bound to do this, and they are often advised not to report a criminal record unless it has consequences for their performance of the job. The applicant who had committed an offense always stated that he had performed community service, thus giving a signal that the offense was relatively minor. Because a community service had been imposed, the severity of the offenses had been made more or less equal, so that any differences in the chance of a positive response would be more attributable to the nature of the offense than to its severity.

Two conditions were used to investigate the condition of ethnic background. We used one typically 'Dutch' name and name that could clearly be identified as belonging to a non-Western ethnic minority group. Nowadays, employers often use social media to get a first impression of their applicants. For this reason, we chose two names that appeared frequently on social media which, even though the applicant was fictitious, would not be connected to one specific real person.

All fictitious applicants had a personal e-mail address and telephone number. The telephone was never answered but was put through to the voice mail service of the provider. This meant that the employer heard a computer voice announcing the number, after which he could leave a message. The voice mail and e-mail boxes were used to record the employers' responses. In the event of a positive response, the researchers sent a standard reply as quickly as possible, stating that the applicant was no longer interested because he had already found another job.

An experiment like this one is subject to a number of ethical issues. The employers in this study were not aware that the letter was fictitious and part of a scientific research project. This is not customary in science: generally speaking, participants in scientific research are asked to consent to taking part before a study begins. There are some possible exceptions to this standard scenario. For instance, for studies in which natural behavior



has to be examined, and an explicit request for consent would make this goal impossible (KNAW - Royal Netherlands Academy of Arts and Sciences, 2013). For this reason, the study and the procedure were submitted to the Ethics Committee for Legal and Criminological Research (CERCO) of VU University Amsterdam. It was emphasized that the results would be dealt with confidentially and that findings would be presented anonymous, untraceable and unrecognizable. The employers who were contacted as part of the study had to perform the task of assessing the job application. To minimize this burden, we replied as quickly as possible to the employers' responses, so that it would soon become clear to them that there was no need to devote any more attention to the application in question. The ethical committee gave a positive assessment of the research design and procedure.

### 3.2. Variables

The dependent variable in this study was the response of the employer to the application. The employers' responses to the applications were divided into two categories: positive responses and rejections. Positive responses were defined as an invitation for a job interview, a request for further information about the applicant or a request to contact the employer. A rejection entailed a negative response or no response at all.

The independent variables in this study were the manipulations: type of offense and ethnic background. The offense was mentioned in the motivational letter, in which the type of offense was explicitly stated. Four offense types were tested, 150 (28.8%) letters were sent disclosing a sexual offense, 148 (28.5%) fictitious applicants mentioned a violent offense, 149 (28.7%) applicants disclosed a property offense and 73 (14.0%) applicants did not disclose an offense.

Ethnic background was revealed by the applicant's name. For the non-Western ethnic minority group we chose an Eastern-sounding family name and an Islamic first name, so that it would clearly be recognized as belonging to a non-Western ethnic minority group (Blommaert, Coenders, & van Tubergen, 2014). For the ethnic majority group we chose a typical 'Dutch' first and family name. In 261 (50.2%) letters the applicant had a typical Dutch name and in 259 (49.8%) letters the applicant was given a name belonging to a non-Western ethnic minority group.

The randomization probabilities for ethnicity and type of crime reflected the overall percentages given above. Applicants of the non-Western ethnic minority group 'disclosed' a sexual offense in 28.6% of the letters, a violent offense was mentioned in 28.0% of the letters, in 28.6% of the applications a property offense was disclosed and in 13.9% no offense was mentioned in the motivation letter. The percentages were similar for the applicants of the ethnic majority group, with a 29.1% disclosure of sexual offending, 28% for violent offending, 28.7% for property offending and 14.2% of letters in which an offense was not mentioned.

### 3.3. Statistical analysis

To investigate the influence of a criminal record on an applicants' employment chances, we analyzed percentages of positive responses were plotted in graphs, which also indicate the 90% confidence intervals. In addition, we conducted logistic regression analyses to determine the statistical significance of the differences between the various conditions. Because the conditions were varied independently throughout all the letters, it was possible to analyze the effects of the conditions individually as well as in combination with one another.

It is important to point out that the disaggregation of the conditions results in a decrease in the number of individuals within each cell. Additionally, the number of positive responses, certainly in the first time period, were lower than we had initially expected. The accuracy of our estimates of the conditional effects is therefore somewhat lower. We will come back to this in the discussion.

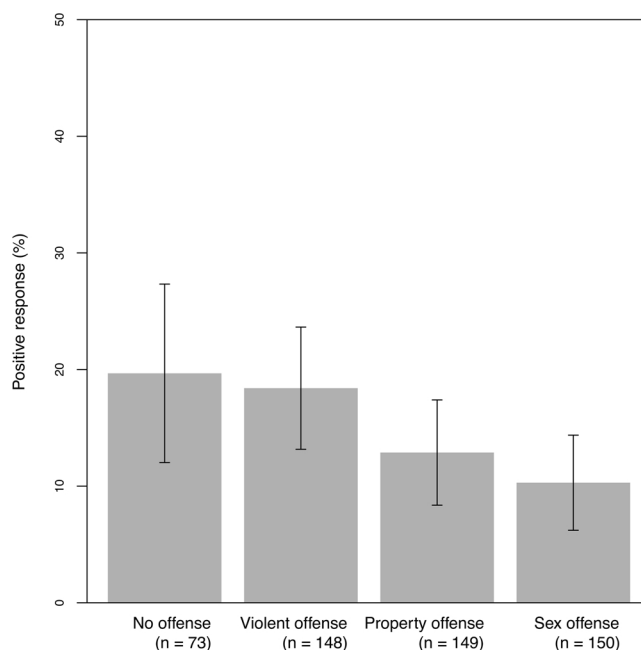


Fig. 1. Percentages of positive responses per type of offense.

## 4. Results

### 4.1. Type of offense

Applicants who reported no crime in their motivational letter received a positive response in nearly 20% of all cases ( $CI = 12.0\text{--}27.3$ ). Applicants that did report a crime received a positive response in about 14% of the cases ( $CI = 11.1\text{--}16.4$ ). This appears to provide some evidence in support of the notion that job applicants' with a criminal past have lower chances of success than those without a criminal record. However, results of logistic regressions show that the difference is not statistically significant ( $p = .302$ ).

Looking at the results for the different types of offenses (Fig. 1), we see that applicants disclosing a violent offense received a positive response to their application in 18.4% of all cases ( $CI = 13.1\text{--}23.6$ ). Of those who had admitted to a conviction for a property offense comparatively fewer – almost 13% – received a positive response ( $CI = 8.4\text{--}17.4$ ). Sexual offenders received the fewest positive responses – in 10.3% of all cases ( $CI = 6.2\text{--}14.4$ ). Hence, the pattern is in line with our expectation about a gradient decline in positive responses between violent offenses, property offenses and sexual offenses. However, logistic regressions show no significant differences in the chance of a positive response for the different types of offenses (see Appendix C, Table C1 for p-values).

### 4.2. Ethnic background

Fig. 2 shows that ethnic majority job applicants were more than 3 times as likely to receive positive responses as applicants with a non-Western ethnic minority background. About 23% of the applicants from the ethnic majority group received a positive response ( $CI = 18.8\text{--}27.4$ ). For the non-Western ethnic minority group only 7% received a positive response ( $CI = 4.4\text{--}9.6$ ). The results of logistic regressions show that this difference is statistically significant ( $p < .000$ ).

These findings apply to all applicants with or without a criminal record. If we disaggregate these results even further by looking at if the applicant holds a criminal record we see how striking the differences are. Minority applicants who *did not disclose* a criminal record were less likely to receive a positive response than majority applicants who *did disclose* a criminal record (Fig. 3). Of the non-Western ethnic minority

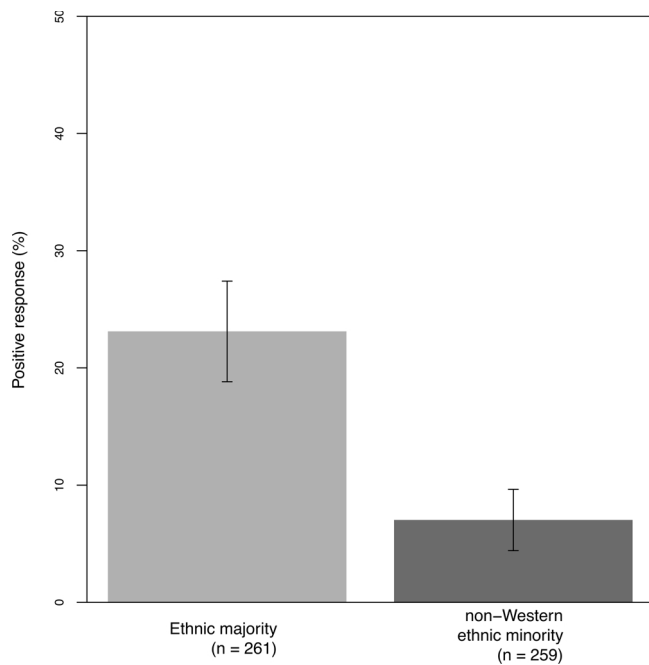


Fig. 2. Percentage of positive responses disaggregated to ethnic background.

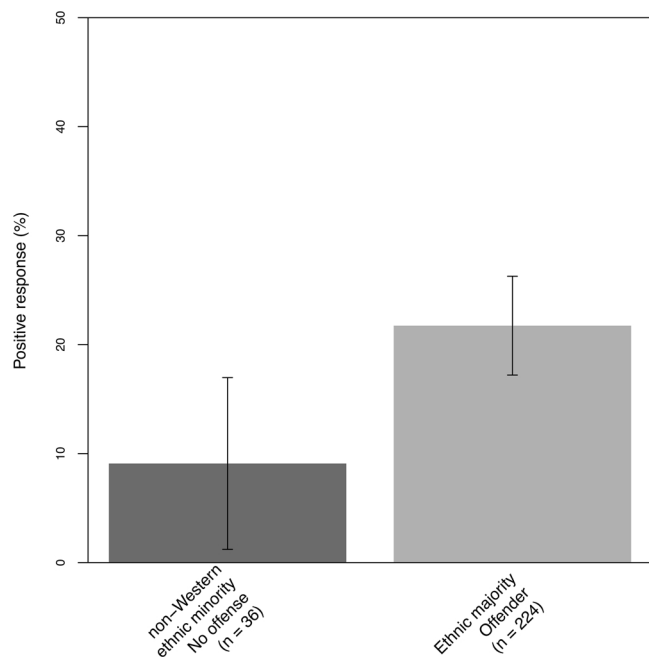


Fig. 3. Percentage of positive responses disaggregated to ethnic background and criminal record.

applicants without a criminal record only 9% received a positive response to their application ( $CI = 1.2-16.9$ ), whereas about 21% of the ethnic majority applicants with a criminal record received a positive response ( $CI = 17.2-26.3$ ). Again, the difference between these two groups is statistically significant ( $p < .000$ ).

#### 4.3. Type of offense and ethnic background

Fig. 4 illustrates the degree to which the effects per type of offense are affected by ethnic background (see Appendix C, Table C2 for corresponding p-values). These results provide some suggestive evidence that the gradient we saw in Fig. 1 – with job seekers with convictions

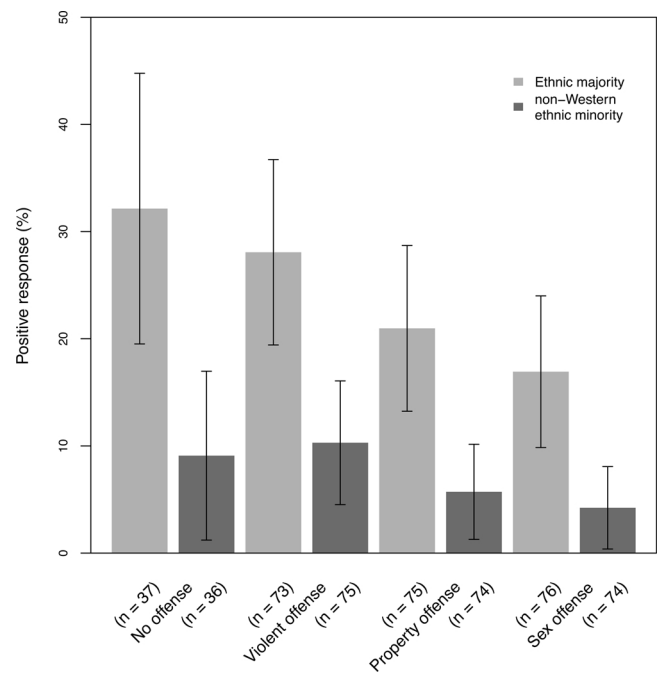


Fig. 4. Percentage of positive responses per type of offense disaggregated to ethnic background.

for violent offenses receiving more reactions than those convicted for property offenses and those convicted for sexual offenses receiving least responses – applies for majority applicants, whilst for minority applicants smaller differences were found between the offense types.

This figure confirms that the percentage of positive responses for majority applicants is higher than that for minority applicants for all types of offense. The percentage of positive responses for minority applicants without a criminal record was only 9.1% ( $CI = 1.2-17.0$ ), while for majority applicants without a criminal record is 32.1% ( $CI = 19.5-44.8$ ); over 3.5 times as many positive responses. Results of the logistic regression analyses showed that this difference is not statistically significant ( $p = .077$ ). However, this lack of statistical significance may be (partly) attributable to the low number of observations.

Roughly the same ratios were found for the other types of offense. For violent offenses, majority applicants received nearly three times as many positive responses (28.1%,  $CI = 19.4-36.7$  for majority applicants and 10.3%,  $CI = 4.5-16.1$  for minority applicants). This difference was found to be statistically significant ( $p = .040$ ). The difference was even greater for property offenses. Here, majority applicants received significantly more positive responses, 21% ( $CI = 13.2-28.7$ ), than the minority applicants (5.7%,  $CI = 1.3-10.2$ ); roughly fourfold ( $p = .030$ ). Similarly, majority applicants disclosing a sexual offense received four times as many positive responses as minority applicants who disclosed the same offense, a significant difference ( $p = .039$ ). Thus, minority applicants, regardless of whether they disclosed a criminal record or not or what type of offense they admitted to, always seem to receive fewer positive responses. Importantly, these results provide support for hypothesis 2, which held that the effect of a prior offense is larger for ethnic minority applicants.

#### 5. Conclusion and discussion

Having a job is one of the most important protective factors against delinquent behavior (e.g. Sampson & Laub, 1993). However, previous studies have shown that people with a criminal record often encounter difficulties when seeking work. In this study, a field experiment was performed to investigate whether the effect of a prior conviction on job applicants' chances to receive a positive response to his application would

vary depending on the type of offense and the applicant's ethnic background. We found some evidence in support our prediction that the effect of a prior conviction on for job applicants' chances may vary by type of offense, with the negative impact being largest for applicants convicted for a sexual offense, followed by those convicted of a property offense and a violent offense. However, the differences in the likelihood of receiving positive reactions between the different offender types were not statistically significant, possibly due to the relatively small number of individuals in the different offender groups. In fact, we found no statistically significant differences in the chances of success between job seekers with a criminal record (for any offense type) and those without a criminal record.

The finding that the chances of applicants with a criminal record are not significantly lower than those of applicants with no criminal past is in disagreement with the results of many previous experiments, most of which were conducted in the US. Earlier Dutch research by [Dirkzwager et al. \(2015\)](#) also found no evidence that ex-offenders receive a significantly lower number of responses than persons who had no criminal past. This strengthens the assumption that there are differences between countries in hiring applicants with a criminal record.

One explanation for this may be that the offenses reported by the applicants in this study can be interpreted as relatively minor. In our experiment, those with a criminal record reported that they were convicted to community service. The combined results of prior field experiments seem to suggest that a lighter sentence may be associated with a weaker effect of prior conviction on applicants' employment opportunities. Studies in which applicants reported heavier sentences generally reported a stronger effect (e.g., [Decker et al., 2015](#); [Pager, 2003](#)). Yet, the experiment by [Dirkzwager et al. \(2015\)](#) in the Netherlands focused on applicants who had been detained, which in this country is a relatively rare outcome after conviction and therefore signals more serious crimes. Even under these conditions, no evidence of a significant impact of having a criminal record was found, whereas research in the US did find such evidence, even for those convicted of less serious offenses, signaled for example by misdemeanor convictions ([Leasure, 2019](#); see also [Uggen et al., 2014](#)). Hence, while future studies that derive and test hypotheses on sentences of different types or durations are needed, our results indicate that there are (also) other factors that drive observed variations in results between studies conducted in different countries.

Another possible explanation for the fact that no significant effect of having a criminal record was found for the Netherlands, whereas such effects are commonly found in other settings, notably the US, could be that in the latter context hiring a person with a criminal record is more risky. In the US, employers are responsible for crimes committed by employees during worktime ([Bushway, 2004](#)). This is not the case in the Netherlands. Moreover, in the Netherlands, employers may be less inclined to reject someone with a criminal record if the prior offense is no obstacle to practicing a particular profession. This is because Dutch law states that a certificate of conduct (VOG) is required for carrying out certain jobs (Directive OG-NP-RP 2013). The criteria for issuing such a certificate are directly relevant to the profession. For instance, a person convicted of stealing money may not receive a certificate for a job that involves financial responsibilities. The employer is required to apply for this certificate, and if it is not issued, the potential employee may not be hired for the job in question. Most employers are familiar with this method of operating, and they know that this background check in a sense 'safeguards' them. The fictitious applications in this study had been designed such that it was likely the applicant would be eligible for a VOG.

Furthermore, our results provide suggestive evidence that the observed gradient by offense type applies for ethnic majority job seekers, but not or to a lesser extent for minority job seekers. This might be interpreted as being in line with the notion that employers place more weight on signals from a familiar group than an unfamiliar group as proposed by [Ewens et al. \(2014\)](#), but our results provide little support for the notion that negative signals hurt majority applicants more than minority applicants, as these authors suggest. Nevertheless, future research on effects of adding information about applicants (recent

examples include [Thijssen et al., 2019](#); [Di Stasio, Lancee, Veit, & Yemane, 2019](#)) may benefit from engaging with ideas on the effect of adding different types of information as outlined by [Ewens et al.](#) (i.e., positive/negative signals, or stereotype-consistent/stereotype-inconsistent information) versus not disclosing such information, as discussed in the "ban the box" literature (e.g., [Agan & Starr, 2018](#)).

By far the strongest effect that we observed in this study is that of belonging to an ethnic minority group. We found this effect for all applicants, whether convicted or not, and regardless of the type of offense. This finding is in agreement with the outcomes of the Dutch experiment by [Dirkzwager et al. \(2015\)](#) and with the experiments in the United States that examined the influence of having a criminal record alongside the applicants' ethnic background ([Decker et al., 2015](#); [Galgano 2009](#); [Pager, 2003, 2007](#); [Pager, Western, & Bonikowski, 2009](#); [Pager, Western, & Sugie, 2009](#)). Also, this finding is in line with field experiments that focused on the influence of applicants' ethnic or racial background with no regard for the possibility of a criminal record, both in the Netherlands ([Andriessen, Nievers, Dagevos, & Faulk, 2012](#); [Blommaert et al., 2014](#); [Di Stasio et al., 2019](#); [Ramos, Thijssen, & Coenders, 2019](#); [Thijssen et al., 2019](#)) and in other countries (for reviews and meta-analyses see [Bertrand & Duflo, 2017](#); [Neumark, 2018](#); [Rich, 2014](#); [Quillian et al., 2017, 2019](#); [Zschirnt & Ruedin, 2016](#)). Our results even indicated that minority applicants without a criminal record had less of a chance of receiving a positive response than majority applicants who had been convicted of an offense. This finding confirms our second hypothesis and is in line with previous American experiments ([Pager, 2003, 2007](#); [Pager, Western, & Bonikowski, 2009](#); [Pager, Western, & Sugie, 2009](#)).

Our study has a number of limitations. The most important one are the relatively low cell frequencies in the different experimental conditions, certainly in view of the low number of positive responses in some conditions. For future experiments that study the employment opportunities of convicts and investigate whether the effect of having a criminal record varies under certain conditions, we recommend the use of an even larger sample.

Another limitation of our study concerns the experimental manipulation of the type of offense. In the motivational letter, the fictitious respondent stated that he had encountered problems during a previous application because he had not revealed the offense promptly to the potential employer. Consequently, potential employers in the experiment were primed to think about the fact that this conviction could have an effect on their choice as well. This is seemingly a disadvantage of the experimental design, but our results showed that even despite this priming, no effect was found for the type of offense. We did find a clear effect for ethnic background, even though the manipulation involved no explicit priming. This supports our conclusion that the disclosure of a criminal record for a relatively minor offense appears to be of little or no influence the chances of job applicants in the Netherlands.

Finally, in this study, it was not possible to compare how one potential employer would assess multiple applicants with different criminal records. Because our design varied between three types of offense and none, and across two different types of ethnicities, it was impossible to present a single employer with multiple varieties. It was our belief that this would raise suspicion. Therefore, a so-called 'non-paired' field experiment design was used. Whilst paired designs were most common in the past and there can be advantages of paired testing, field experiments using non-paired tests have become increasingly popular in recent years. Moreover, experts in the field now argue that in some cases – especially in more complex experimental designs are needed to test predictions – it may be necessary to implement a non-paired test design to reduce suspicion and avoid discovery ([Gaddis, 2018](#); [Vuolo, Uggen, & Lageson, 2018](#)).

Although this study has shed light on various conditional effects, future research should also address other conditional effects such as those mentioned above: the type of sentence or its duration. It would also be interesting to explore whether the effect of having a criminal record is the same for different age categories, different educational

levels or for both men and women. Research of this type is important not only for the development of theory, but also for institutions that guide ex-offenders during their reintegration into society.

#### Declaration of Competing Interest

None.

#### reference

KNAW (2013).

#### Appendix A

##### Résumé

Name: .....

First name: .....

Date of birth: April 1, 1993

Place of birth: Amersfoort

Marital status: Cohabiting

Nationality: Dutch

Driver's license: B

Address: .....

Telephone: .....

E-mail address:.....@hotmail.com

##### Education

1997 - 2005: Primary school Aloysius School, Amersfoort

2005 - 2009: Diploma Preparatory Vocational Secondary Education, Technology; Prisma College Amersfoort 2009 - 2011: Electrician's diplomaROC Amsterdam

##### Work experience

2009-2011: Albert Heijn. Stock clerk: I had to make sure the shelves were full, be friendly to the customers and answer their questions.

2011: Internship... at.... - by.... recognized teaching institution

2011-2013: .... at .....

##### Certificate

##### Skills

I work hard, am good at working in a team, and want to learn

##### Programs:

##### Hobbies

Football, parties, movies, music

#### Appendix B

Motivational letter

May 9, 2013

Dear sir or Madam,

At... I read about the job opening for...

I'm living in Amsterdam right now, but in two weeks I'm moving to... with my girlfriend.

I would like to come and work for you because it sounds like interesting work, I like to work in... and because I have experience in ... and I'm a hard worker.

A year ago I got arrested for a violent crime. I had to do community service for my sentence. So I've done my time, it was the only time and now things are going good with me. The last time I applied for a job I got into trouble because I only told the truth about my criminal record later on. That's why I want to be honest about it from the start.

I think I would be a really good choice for this job, I hope you'll ask me to come for an interview.

Thank you.

Sincerely...

#### Appendix C

Table C1

p-values for the comparison between types of offenses.

	No offense	Violent offense	Property offense	Sexual offense
No offense	–			
Violent offense	.863	–		
Property offense	.299	.299	–	
Sexual offense	.125	.108	.557	–



**Table C2**  
p-values for the comparison between types of offenses and ethnicity.

	Offense type	Ethnic majority				non-Western ethnic minority			
		None	Violent	Property	Sexual	None	Violent	Property	Sexual
Ethnic majority	None	–							
	Violent	.776	–						
	Property	.383	.483	–					
	Sexual	.202	.241	.631	–				
non-Western ethnic minority	None	.077	.091	.216	.365	–			
	Violent	.039	.040	.155	.333	.863	–		
	Property	.007	.007	.030	.074	.558	.365	–	
	Sexual	.004	.004	.016	.039	.364	.210	.699	–

## References

- Agan, A., & Starr, S. (2018). Ban the box, criminal records, and racial discrimination: A field experiment. *The Quarterly Journal of Economics*, 133(1), 191–235. <https://doi.org/10.1093/qje/qjx028>.
- Ahmed, A. M., & Lång, E. (2017). The employability of ex-offenders: A field experiment in the Swedish labor market. *IZA Journal of Labor Policy*, 6, 6–29.
- Andriessen, I., Nievers, E., Dagevos, J., & Faulk, L. (2012). Ethnic discrimination in the Dutch labor market. *Work and Occupations*, 39(3), 237–269.
- Baert, S., & Verhofstadt, E. (2015). Labour market discrimination against former juvenile delinquents: Evidence from a field experiment. *Applied Economics*, 47(11), 1061–1072.
- Bertrand, M., & Duflo, E. (2017). Field experiments on discrimination. In A. V. Banerjee, & E. Duflo (Vol. Eds.), *Handbook of economic field experiments: vol. 1*.
- Blommaert, L., Coenders, M., & Tubergen, F. van (2014). Discrimination of Arabic-named applicants in the Netherlands: An internet-based field experiment examining different phases in online recruitment procedures. *Social Forces*, 92(3), 957–982.
- Boshier, R., & Johnson, D. (1974). Does conviction affect employment opportunities? *The British Journal of Criminology*, 4, 264–268.
- Bovenkerk, F., & Fokkema, T. (2016). Crime among young Moroccan men in the Netherlands: Does their regional origin matter? *European Journal of Criminology*, 13(3), 352–371.
- Bronson, J., & Carson, E. A. (2019). *Prisoners in 2017 (Bulletin NCJ 252156)*. Washington D.C: Bureau of Justice Statistics.
- Buikhuisen, W., & Dijksterhuis, F. P. (1969). Sollicitatiekansen van delinquenten. *Nederlands Tijdschrift voor Criminologie*, 11(1), 50–58.
- Bushway, S. D. (2004). Labor market effects of permitting employer access to criminal history records. *Journal of Contemporary Criminal Justice*, 20, 276–291.
- Bushway, S. D., Stoll, M. A., & Weiman, D. F. (2007). *Barriers to re-entry?: The labor market for released prisoners in post-industrial America*. New York, NY: Russel Sage Foundation.
- Crutchfield, R. D., & Pitchford, S. R. (1997). Work and crime: The effects of labor stratification. *Social Forces*, 76(1), 93–118.
- Dirkzwager, A., Blokland, A., Nannes, K., & Vroonland, M. (2015). Effecten van detentie op het vinden van werk en woning. *Tijdschrift voor Criminologie*, 57(1), 5–30.
- Decker, S. H., Ortiz, N. R., Spohn, C., & Hedberg, E. (2015). Criminal stigma, race, and ethnicity: The consequence of imprisonment for employment. *Journal of Criminal Justice*, 43, 108–121.
- Deliens, L. (1983). Ongelijke sociale distributie van de tewerkstellingskansen van ex-gedetineerden. *Panoopticon*, 4(6), 530–541.
- Di Stasio, V., Lancee, B., Veit, S., & Yemane, R. (2019). Muslim by default or religious discrimination? Results from a cross-national field experiment on hiring discrimination. *Journal of Ethnic and Migration Studies*. <https://doi.org/10.1080/1369183X.2019.1622826>.
- Ewens, M., Tomlin, B., & Wang, L. C. (2014). Statistical discrimination or prejudice? A large sample field experiment. *The Review of Economics and Statistics*, 96, 119–134.
- Freeman, R. (1999). The economics of crime. In O. Aschenfelder, & D. Card (Eds.). *Handbook of labor economics* (pp. 3529–3571). Amsterdam: Elsevier.
- Gaddis, S. M. (2018). An introduction to audit studies in the social sciences. In S. Gaddis (Vol. Ed.), *Audit studies: Behind the scenes with theory, method, and nuance. methodos series (methodological prospects in the social sciences): vol. 14*. Cham: Springer.
- Galgano, S. W. (2009). Barriers to reintegration: An audit study if the impact of race and offender status on employment opportunities for women. *Social Thought and Research*, 30(1), 21–37.
- Jenkins, P. (1998). *Moral panic, changing concepts of the child molester in Modern America*. London: Yale University Press.
- KNAW (2013). *Gedragcode voor gebruik van persoonsgegevens in wetenschappelijk onderzoek. Advies van de Sociaal-Wetenschappelijke Raad*. Amsterdam: Koninklijke Nederlandse Akademie van Wetenschappen.
- Lahey, J., & Beasley, R. (2018). Technical aspects of correspondence studies. In S. Gaddis (Vol. Ed.), *Audit studies: Behind the scenes with theory, method, and nuance. methodos series (methodological prospects in the social sciences): vol. 14*. Springer.
- Leasure, P. (2019). Misdemeanor records and employment outcomes: An experimental study. *Crime and Delinquency*, 65, 1850–1872.
- Leasure, P., & Stevens Andersen, T. (2017). Recognizing redemption: Old criminal records and employment outcomes. *N.Y.U. Review of Law and Social Change, The Harbinger*, 41, 271–286.
- Lochner, L. (2004). Education, work and crime: A human capital approach. *International Economic Review*, 45, 811–843.
- Mesters, G., Van der Geest, V. R., & Bijleveld, C. C. J. H. (2015). Crime, Employment and Social Welfare: An individual-level study on disadvantaged males. *Journal of Quantitative Criminology*, 32(2), 159–190.
- Mobasser, S. (2019). Race, place, and crime: How violent crime events affect employment discrimination. *The American Journal of Sociology*, 125(1), 63–104.
- Neumark, D. (2018). Experimental research on labor market discrimination. *Journal of Economic Literature*, 56, 799–866.
- Pager, D. (2003). The mark of a criminal record. *The American Journal of Sociology*, 108, 937–975.
- Pager, D. (2007). *Marked: Race, crime and finding work in an era of mass incarceration*. Chicago, IL: University of Chicago Press.
- Pager, D., Western, B., & Bonikowski, B. (2009). Discrimination in a low-wage labor market: A field experiment. *American Sociological Review*, 74(5), 777–799.
- Pager, D., Western, B., & Sugie, N. (2009). Sequencing disadvantage: Barriers to employment facing young black and white men with criminal records. *The Annals of the American Academy of Political and Social Science*, 623(1), 195–213.
- Pickett, J. T., Mancini, C., & Mears, D. P. (2013). Vulnerable victims, monstrous offenders, and unmanageable risk: Explaining public opinion on the social control of sex crime. *Criminology*, 51(3), 729–759.
- Quillian, L. (2006). New approaches to understanding racial prejudice and discrimination. *Annual Review of Sociology*, 32, 299–328.
- Quillian, L., Pager, D., Hexel, O., & Midtbøen, A. (2017). Meta-analysis of field experiments shows no change in racial discrimination in hiring over time. *Proceedings of the National Academy of Sciences*, 114(41), 10870–10875.
- Quillian, L., Heath, A., Pager, D., Midtbøen, A. H., Fleischmann, F., & Hexel, O. (2019). Do some countries discriminate more than others? Evidence from 97 field experiments of racial discrimination in hiring. *Sociological Science*, 6, 467–496.
- Ramos, M., Thijssen, L., & Coenders, M. (2019). Labour market discrimination against Moroccan minorities in the Netherlands and Spain: a cross-national and cross-regional comparison. *Journal of Ethnic and Migration Studies*. <https://doi.org/10.1080/1369183X.2019.1622824>.
- Rich, J. (2014). *What do field experiments of discrimination in markets tell us? A Meta analysis of studies conducted since 2000*. Institute for the Study of Labor Discussion Paper 8584.
- Sampson, R. J., & Laub, J. H. (1993). *Crime in the making: Pathways and turning points through life*. Cambridge, MA: Harvard University Press.
- Schwartz, R. D., & Skolnick, J. H. (1962). Two studies of legal stigma. *Social Problems*, 10(2), 133–142.
- Statistics Netherlands (2019). *Gedetineerden; geslacht, leeftijd en migratieachtergrond*. Retrieved on December 19th 2019 via <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/82321NED/table?fromstatweb>.
- Thijssen, L., Lancee, B., Veit, S., & Yemane, R. (2019). Discrimination against Turkish minorities in Germany and the Netherlands: Field experimental evidence on the effect of diagnostic information on labour market outcomes. *Journal of Ethnic and Migration Studies*. <https://doi.org/10.1080/1369183X.2019.1622793>.
- Uggen, C. (1999). Work as turning point in the life course of criminals: A duration model of age, employment, and recidivism. *American Sociological Review*, 67, 529–546.
- Uggen, C. (2000). Work as a turning point in the life course of criminals: A duration model of age, employment, and recidivism. *American Sociological Review*, 65(4), 529–546.
- Uggen, C., Vuolo, M., Lageson, S., Ruhland, E., & Whitham, H. K. (2014). The edge of stigma: An experimental audit of the effects of low-level criminal records on employment. *Criminology*, 52, 627–654. <https://doi.org/10.1111/1745-9125.12051>.
- Uggen, C., Wakefield, S., & Western, B. (2005). Work and family perspectives on reentry. In J. Travis, & C. Visser (Eds.). *Prisoner reentry and crime in America* (pp. 209–243). Cambridge, UK: Cambridge University Press.
- Unnever, J. D. (2019). Ethnicity and crime in the Netherlands. *International Criminal Justice Review*, 29(2), 187–204. <https://doi.org/10.1177/1057567717752218>.
- Van der Geest, V. R., Bijleveld, C. C. J. H., & Blokland, A. A. J. (2011). The effects of employment on longitudinal trajectories of offending: A follow up in high-risk youth from ages 18 to 32. *Criminology*, 49(4), 1195–1234.
- Vuolo, M., Uggen, C., & Lageson, S. (2018). To match or not to match? Statistical and

- substantive considerations in audit design and analysis. In S. Gaddis (Vol. Ed.), *Audit studies: Behind the scenes with theory, method, and nuance. Methodos series (methodological prospects in the social sciences): vol 14*. Cham: Springer.
- Wadsworth, T. (2006). The meaning of work: Conceptualizing the deterrent effect of employment on crime among young adults. *Sociological Perspectives*, 49, 343–368.
- Walmsley, R. (2018). *World prison population list* (12<sup>th</sup> edition). London, UK: Institute for Criminal Policy Research.
- Willis, G. M., Levenson, J. S., & Ward, T. (2010). Desistance and Attitudes Towards Sex Offenders: Facilitation or Hindrance? *Journal of Family Violence*, 25, 545–556.
- Zschirnt, E., & Ruedin, D. (2016). Ethnic discrimination in hiring decisions: A meta-analysis of correspondence tests 1990–2015. *Journal of Ethnic and Migration Studies*, 42(7), 1115–1134.