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Comparative Perspectives on Racial Discrimination in Hiring: The Rise of Field Experiments

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Abstract

This article reviews studies of hiring discrimination against racial and ethnic minority groups in cross-national perspective. We focus on field experimental studies of hiring discrimination: studies that use fictitious applications from members of different racial and ethnic groups to apply for actual jobs. There are more than 140 field experimental studies of hiring discrimination against ethno-racial minority groups in 30 countries. We outline seventeen empirical findings from this body of studies. We also discuss individual and contextual theories of hiring discrimination, the relative strengths and weaknesses of field experiments to assess discrimination, and the history of such field experiments. The comparative scope of this body of research helps to move beyond micromodels of employer decision-making to better understand the roles of history, social context, institutional rules, and racist ideologies in producing discrimination. These studies show that racial and ethnic discrimination is a pervasive international phenomenon that has hardly declined over time, although levels vary significantly over countries. Evidence indicates that institutional rules regarding race and ethnicity in hiring can have an important influence on levels of discrimination. Suggestions for future research on discrimination are discussed.

INTRODUCTION

In 1966, a commission on race relations set up by the UK government commissioned a study on racial discrimination in England. The study was initially designed by the research team, led by W.W. Daniel, to include surveys with immigrants about the discrimination they experienced and interviews with gatekeepers such as employers. But Daniel and his team became concerned that reports of discrimination from immigrants would not be convincing to people who did not already believe discrimination was a problem. To provide a more definitive set of evidence on the state of discrimination in England, Daniel hired actors to play job applicants (testers) to apply in person for jobs, housing, and insurance at firms their interviewees had identified as discriminating (Daniel 1968, Gaddis 2018).

Daniel's results confirmed their interviewees' reports of discrimination. In employment applications, out of 40 tests, 15 White testers received positive replies, compared with only one non-White tester. The report had a strong influence on subsequent UK parliamentary discussion, where it contributed significantly to the passage of the 1968 Race Relations Act that first outlawed employment and housing discrimination in the United Kingdom (Smith 2015).

Jowell & Prescott-Clarke (1970) soon adapted Daniel's method to be used in by-mail applications with ethnicity signaled by name. Over the next 10 years, field experimental studies of racial and ethnic discrimination in hiring were also conducted in the United States (Jolson 1974, Newman 1978), France (Raveau et al. 1976), and the Netherlands (Bovenkerk et al. 1979). Subsequently, field experiments have expanded to become a basic method in the social science approach to understanding discrimination based on race and ethnicity, with, to date, more than 140 studies across 30 countries focusing on hiring discrimination alone.

In this review, we describe facts established by this body of studies and their theoretical implications. Existing studies establish that racial and ethnic discrimination is a worldwide phenomenon found in all countries that have conducted field experiments. The magnitude of this discrimination, however, varies significantly over countries and minority groups (Quillian et al. 2019). Discrimination theories have been dominated by microtheories of employer motives, including taste discrimination, statistical discrimination, and implicit bias. In cross-national comparison, field experiments provide a perspective that is distinctly social, helping to open the door on understanding the roles of history, social context, institutional rules, and racist ideologies in producing discrimination.

RACE AND DISCRIMINATION

Our discussion focuses on discrimination based on race and ethnicity. Race refers to putative biological ancestry groupings signaled by phenotypical characteristics believed to be associated with ancestry groups. Ethnicity, by contrast, refers to putative ancestry groups associated with cultural characteristics and usually less-distinct phenotypical characteristics. We follow Brubaker et al. (2004) in viewing race and ethnic groups as essentially the same because they are based on social categorization as members of racial or ethnic groups rather than differences with a real basis (see also Omi & Winant 2014). For brevity, we use the term "racial discrimination" instead of "racial and ethnic discrimination" below.

In its basic form, which we call direct discrimination, racial discrimination involves differential treatment of individuals or groups on the basis of race (Natl. Res. Counc. 2004). A second form of discrimination involves treatment on the basis of inadequately justified factors other than race that disadvantages a racial group (called "disparate impact discrimination" in the United States and "indirect discrimination" in European Union antidiscrimination laws). For instance, the use

of informal referrals by current employees to screen employment applicants may disadvantage minority applicants who are less likely to have contacts at supervisory levels in organizations (Royster 2005), even if referral advantages are not ostensibly racial. In this review, we focus primarily on direct discrimination because this is the form of discrimination assessed by field experiments.

Discrimination is a behavior, distinct from prejudicial attitudes, stereotypical beliefs, and racial ideologies or racisms—all of which may motivate discrimination. We note that discriminatory behavior can result from individual decisions or formal rules, such as a law forbidding a Black family from buying a house in a White neighborhood (for more on institutional and indirect forms of discrimination, see Small & Pager 2020).

Importantly, discrimination is driven by perceived race or racial cues in the context in which discrimination occurs. This may be distinct from race based on self-categorization. An individual who self-identifies as a member of a minority group but whose appearance is not consistent with that group may tend to be subject to relatively little discrimination. Majors (2020), for instance, describes himself as a Black man with White privilege, because he identifies as Black but looks White.

Corresponding to the basis of discrimination in perception, some racial discrimination is motivated by discrimination against identities correlated with race rather than race itself. We refer to these identities as shadow identities. Some shadow identities are social class, criminal record, immigration status, or religion. For instance, members of a minority group may be the target of discrimination because they are perceived as likely to be immigrants because many people in their group are immigrants. This is a common complaint of native-born Asian Americans and of descendants of migrants in Europe. Likewise, an employer who does not want to hire Muslim applicants might discriminate against an Arab applicant because he thinks they are probably Muslim. We characterize discrimination based on shadow identities as racial discrimination because it is driven by racial cues (perceived race) and results in differential treatment on the basis of race. In other words, shadow identities reflect a racial stereotype that links race to another stigmatized social identity.

Discrimination is both harmful and unjust. An empirical literature documents harms resulting from discrimination, such as harming mental and physical health among victims (e.g., Lewis et al. 2015). Because discrimination involves judging individuals based on their social categorization into racial groups rather than based on their individual qualities, the principle of equality of opportunity is violated. Discrimination is particularly problematic when it violates equality of opportunity in a way that further disadvantages members of disadvantaged groups (Hellman 2008).

THEORIES OF HIRING DISCRIMINATION

A vast literature has engaged in identifying the causes of discrimination, specifying influences and mechanisms at several levels of analysis. Building on discussions in Pager & Shepherd (2008) and Quillian et al. (2019), we distinguish between individual-level and contextual theories of discrimination.

Individual-Level Theories

Individual-level theories focus on employers' motives to discriminate grounded in individual motivations or psychological biases. A range of theories from sociology, economics, and social psychology can be grouped under this label, and we briefly discuss the most widely used theories here.

Taste and statistical discrimination. In economics, taste and statistical discrimination represent two different motivations to discriminate on the part of employers. Hiring discrimination is seen either as the product of employers' racial prejudice—what Becker (1957) called a "taste for discrimination"—or employers' uncertainty with regard to the productivity of underrepresented groups, called statistical discrimination (Arrow 1973, Phelps 1972). In taste discrimination, dislike or animus against a group drives discrimination. In statistical discrimination, employers are trying to select the best employee for the job, broadly referred to as the most productive by economists. Employers statistically discriminate by using racial averages to help select the likely best employee in the face of uncertainty about future employee performance.

In addition to instrumental behavior by employers, statistical discrimination theory includes the idea of rational expectations: Employers' beliefs about the quality of potential employees from different racial and ethnic groups are assumed to be, on average, accurate (see Spence 1973). While this rational-information assumption may seem clearly unrealistic to sociologists, it is perhaps less unrealistic if we think employers use information about past employees (especially for employers with many past employees) as a basis of information to draw conclusions about potential new hires. When employers' expectations are rational, statistical discrimination becomes economically profit-maximizing for firms and economically efficient.

Because of this, some discussions of statistical discrimination imply that statistical discrimination is not objectionable. Bertrand & Duflo (2016, p. 3), for instance, claim that "statistical discrimination is theoretically efficient and hence more easily defendable in ethical terms under the utilitarian argument . . . Moreover, statistical discrimination can also be argued to be 'fair' in that it treats identical people with the same expected productivity (even if not with the same actual productivity) and is not motivated by animus." Although we acknowledge the importance of clarifying the rationale for discriminatory behavior, we disagree with the argument that statistical discrimination based on race is less objectionable than taste discrimination. In statistical discrimination, individuals are still unfairly disadvantaged by race regardless of their individual qualities. Statistical discrimination is no less harmful to victims than a motivation in animus. Furthermore, statistical discrimination creates the possibility for vicious cycles in which discrimination contributes to racial inequalities that then become the basis for further discrimination (e.g., Loury 2002). Finally, taste and statistical discrimination are equally illegal in antidiscrimination law—it is the differential treatment based on race that is illegal, regardless of motivation.

Biased stereotypes. In this perspective, employers may care most about maximizing productivity (hiring the best employees), but their decisions are guided by stereotypes that are exaggerated or even entirely incorrect. This perspective is suggested by Allport's (1979) classic definition of stereotypes as "based on a faulty or inflexible generalization" and much subsequent work in social psychology (see Fiske 1998, Macrae & Bodenhausen 2000). Similar perspectives arise from status-based theories in sociology (e.g., Correll & Benard 2006, Ridgeway 2001), in which employers view members of higher-status groups (e.g. Whites) as more competent in a way that is resistant to contrary information. In both of these perspectives, biased stereotypes are "sticky" and contrary information is often ignored (Bielby & Baron 1986, Pager & Karafin 2009, Tomaskovic-Devey & Skaggs 1999). Important qualitative work demonstrates that employers use race and ethnic background as proxies of productivity, but that their views of minority applicants often are based on crude stereotypes rather than an accurate depiction of group productivity (Kirschenman & Neckerman 1991, Midtbøen 2014, Moss & Tilly 2001, Shih 2002, Waldinger & Lichter 2003).

Like statistical discrimination, as individual information about applicants increases, biased stereotype theory suggests that discrimination (reliance on the stereotype) should be reduced because the stereotype is invoked in the presence of uncertainty. Unlike statistical discrimination, however, when stereotypes are biased discrimination is not profit-maximizing for employers.

Homophily and cultural matching. A distinct approach emphasizes homophily, or the tendency of individuals to feel more comfortable with persons like themselves. While homophily is traditionally discussed in studies of social association (e.g., friendship; see McPherson et al. 2001), Rivera (2012) has proposed a theory of homophily in hiring emphasizing cultural matching between employers and employees. Cultural matching may be a basis for racial or ethnic discrimination since race is a strong basis for identity and similarity. Cultural matching theory emphasizes that employers may want employers who fit in to employee teams and with whom they feel socially comfortable, which may contribute to racial discrimination in hiring.

Implicit attitudes. Finally, a line of work from psychology suggests the potential importance of negative attitudes and beliefs toward minority groups without full awareness of these biases (Bertrand et al. 2005; Quillian 2006, 2008; Reskin 2008). Often assessed by the Implicit Association Test (Greenwald et al. 1998), implicit attitudes most strongly affect judgments made quickly, but they may also affect slower, deliberative judgments. Rooth (2010) finds a relationship between negative implicit attitudes and discrimination in hiring in a field experiment in Sweden, but the evidence on the significance of implicit discrimination is still debated (Carlsson & Agerström 2016, Oswald et al. 2013).

Contextual Theories

A comparative perspective on discrimination brings to the fore theories of how social contexts affect discrimination. Contextual theories shift the emphasis from the individual to the group. We discuss these theories in three categories: historical, situational, and institutional (see also Quillian et al. 2019).

Historical theories. Historical theories view discrimination in the present as a direct result of historical legacies of racial or ethnic oppression. Such theories emphasize the conditions of initial group contact—the policies, practices, and attitudes developed in an earlier era—that lay a foundation for contemporary group relations. Several studies attempt to look directly at how the racial past (e.g., level of involvement with colonialism or the international slave trade) seems to determine differences in outcomes in the present, including modern levels of discrimination or contemporary racial inequality (e.g., O'Connell 2012). These theories propose a direct correspondence between these historical events and modern-day levels of discrimination.

Situational theories. Situational theories emphasize present-day social and political factors. In these theories, in-group identities and the associated attitudes toward out-groups may be the result of historical processes, but current levels of discrimination will depend heavily on contemporary social forces and events such as current political events and recent economic and demographic conditions. For example, terrorist events carried out by Islamic terrorist groups generated surges in anti-Muslim and anti-immigrant attitudes and discrimination (Hopkins 2010, Jungkunz et al. 2019). Politically, the rise of far-right parties in Europe—and, in the United States, Donald Trump's presidency—may exacerbate anti-immigration and racist sentiment, producing more discrimination. Demographically, a well-known situational theory is group threat theory, which proposes that an increase in foreign and non-White populations can trigger feelings of threat among natives and Whites. In turn, this feeling of threat may lead to support for immigration restrictions and spill over into negative views of immigrants and racial minorities (Blalock 1967, Blumer 1958, Quillian 1995, Taylor 1998), support for conservative policy positions (Craig et al. 2018), and increased discrimination.

Institutional theories. Institutional theories emphasize organizational, administrative, and legal practices that influence discrimination. This includes rules governing how race and ethnic differences are formalized and rules governing employment practices and worker protections. These studies bring organizations back into analyses of discrimination. A notable line of research by Dobbin, Kelly, Kalev, and coauthors explores different measures adopted by firms and their effects on the number of female and minority managers (e.g., Kalev et al. 2006; Dobbin et al. 2011, 2015; see also Tomaskovic-Devey et al. 2006). They find that certain reforms increase diversity—including those oriented around engaging managers in increasing diversity, those that increase transparency in hiring, and those that increase monitoring (see Dobbin et al. 2015). Likewise, Castilla (2015) found that providing information to managers about how other managers set pay and levels of disparities had the effect of reducing pay disparities by gender, race, and ethnicity. By contrast, reforms that attempted to reduce discretion through linking promotions to rating and performance systems and diversity training failed to increase diversity, perhaps because managers tend to rebel against initiatives that reduce their control (see Dobbin et al. 2015).

Most countries in the world have laws against discrimination based on race or ethnicity; however, enforcement varies widely (Heath et al. 2013). In the United States, most antidiscrimination enforcement works through lawsuits. Antidiscrimination agencies such as the Equal Opportunity Employment Commission (EEOC) can issue penalties for discrimination, but research suggests the more effective enforcement mechanism is for the EEOC to file lawsuits in collaboration with victims (see Hirsh 2009, Hirsh & Cha 2018). In the United States, the desire to protect against discrimination lawsuits and affirmative action requirements for federal contractors has led to the institutionalization of practices in large firms to increase corporate diversity (Dobbin 2011). While some of these efforts are lip service, evidence suggests that some of these practices have worked to increase diversity in hiring and promotion (Dobbin et al. 2015, Holzer & Neumark 2006, Leonard 1990).

In Western Europe, racial discrimination has been illegal in most countries from the 1970s. In 2000, the European Union adopted a racial equality directive that required all European Union states to require equal treatment and ban racial discrimination (see FRA 2008) and also required some changes in detailed policies and enforcement. Affirmative action is significantly more limited in Europe than the United States, and large European companies have done less to institutionalize diversity efforts than large US companies have. Still, a variety of plans and programs in Europe have incorporated some affirmative action ideas (for good discussions, see Heath et al. 2013, pp. 212–19, and Sabbagh 2011).

Racism and Discrimination

Theories of racism and of discrimination have largely been separate in the literature. Some prominent theories of new or modern racism have been developed in the United States to reconcile the fact that racial disadvantage persists even though attitudes toward minorities seem to have changed in positive ways during the past decades (Quillian 2006, Pager 2007).

In these perspectives, the dominant racial ideology in Western nations earlier in the century was traditional or old-fashioned racism, grounded in beliefs in non-White biological inferiority and the belief that Whites had racial rights that gave them priority (Schuman et al. 1997). New racism theories suggest an increasing subtlety of racism, so that apparent change is less than actual change. The core of modern racist beliefs is no longer biological racism; instead, non-Whites are viewed as inferior because they are viewed as having dysfunctional cultures or violating moral tenets. There are a number of somewhat different new racism theories, including laissez-faire racism (Bobo et al. 1997), color-blind racism (Bonilla-Silva 2006), symbolic racism (McConahay

1983), aversive racism (Gaertner & Dovidio 1986), and racial resentment (Kinder & Sears 1981). Some work extends these perspectives to European contexts (e.g., Beaman & Petts 2020).

Connections with behavioral measures of discrimination are an important lacuna in the new racism literature. New racism theories imply these beliefs are major causes of contemporary discrimination, but empirical data on new racism have focused on attitudes, expressed beliefs, and discourse—in short, on what people say, not what they do. Yet studies on racial matters, especially discrimination, show that there is no straightforward relationship between people's actions and attitudes (Pager & Quillian 2005, Wulff & Villadsen 2020), suggesting the need for careful examinations of how, when, and where racist attitudes and beliefs translate into discriminatory behavior.

ASSESSING DISCRIMINATION: STRENGHS AND WEAKNESSES OF FIELD EXPERIMENTS

Comparison of discrimination requires rigorous measurement. Several methods have been used in social science to measure discrimination, including field experiments, statistical analysis of racial gaps, reports of discrimination from targets, interviews with gatekeepers, and analysis of official reports of discrimination or discrimination lawsuits (Natl. Res. Counc. 2004, Pager & Shepherd 2008).

Our focus in this review is the field experimental literature. In field experiments, fictitious applicants from different racial or ethnic groups apply for jobs. Often field experiments use pairs of applicants, with one majority and one minority applicant applying for the same position. Some studies hire people to play applicants for jobs (in-person audit studies); others use resumes with clues, often a name, to suggest race (resume audits or correspondence studies). In both variants, applicants are given resumes that make them similar in job-relevant characteristics so that race and/or ethnicity is the only systematic difference between the native-born White and minority applicants. As a result, field experiments can confidently determine that it is perceived race rather than other factors that drives the racial gaps in outcomes. The simple persuasiveness of the field experimental method at demonstrating discrimination—in the face of pervasive skepticism by White majorities that discrimination exists and high standards of proof among many social scientists—is a major strength that primarily accounts for its rise in popularity among researchers.

Other methods of assessing discrimination are less definitive but have other strengths. Statistical analysis of observational data has the advantage that it estimates how much of a disparity can be accounted for by discrimination, but because it requires all nonracial causes to have been accounted for, it is typically debatable whether the remaining residual is only discrimination (Natl. Res. Counc. 2004). In a cross-national context, an additional problem is that data on important outcomes, like income or employment status, that include race and ethnicity data are often unavailable (see Simon 2012).

Self-reports of discrimination from potential targets, gathered through surveys or interviews, is another popular method. Self-reports of discrimination provide important information on subjective evaluations. However, self-reports may underestimate discrimination because targets may sometimes not be aware of discrimination that occurs, or they may overestimate discrimination because targets may interpret poor treatment as discriminatory when it has another basis. Surveys or in-depth interviews with employers provide insights into employer thinking but have obvious limitations as measures of discrimination because of strong social desirability bias. Finally, some studies use the frequency of formal complaints or lawsuits alleging discrimination (e.g., Roscigno 2007), but this method only captures discrimination that victims are aware of and is strongly influenced by institutional procedures that vary highly across contexts (Natl. Res. Counc. 2004).

Of course, field experiments have limitations too. First, field experiments are usually not feasible for detecting discrimination in decisions that involve extensive and detailed knowledge or a history of contact with the target, such as internal promotions. Second, issues of external validity are difficult to evaluate for field experiments. Most studies draw a sample of all jobs in one or a few newspapers or job banks that fit criteria set by the study (e.g., all entry-level jobs that do not require specialized experience). It is hard to judge the representativeness relative to a universe of all jobs or all vacancies in a market (even defining the population is not simple). However, a recent study by Auspurg et al. (2020) compares results of field experiments of racial discrimination in housing drawn from different sources and finds results change little, showing that, at least in this case, field experimental knowledge is not sensitive to sampling method.

Third, field experiments usually focus only on proximate outcomes rather than the final outcomes. In the case of hiring, a large majority of field experiments use the receipt of an invitation for an interview or a request for further information as their main outcome, often called a callback. Quillian et al. (2020b) examine the effects of this omission on levels of discrimination in hiring by analyzing data from 12 field experimental studies in eight countries that followed applicants all the way to the job offer outcome. These results show that racial discrimination in hiring in field experiments without callback outcomes tends to be significantly underestimated because post-callback discrimination is omitted. Quillian et al. find roughly as much discrimination after the callback as up to the callback, so that discrimination in hiring from callback outcomes is approximately underestimated by a factor of two. Additionally, even equal treatment at the callback level may conceal subtler differences in treatment, as shown by Zschirnt (2019).

A fourth critique, proposed by Heckman & Siegelman (1993), is that field experiments finding discrimination could reflect employers wanting employees with expected productivity above a high threshold and knowing that one racial group has greater variability than the other in productivity (assuming group means in productivity are equal). In that case, the estimated probability a group member is above the threshold is higher for the group with greater variability. This can be viewed as a type of statistical discrimination based on group variances in productivity rather than group means. Neumark (2012) shows that, with some assumptions, there are ways to test for the Heckman/Siegelman scenario from field experimental results. However, because we view this scenario as a form of statistical discrimination and we think statistical discrimination is no less odious or harmful than other forms of discrimination, in our view this critique largely misses the point.

A fifth critique, specific to resume audits, is that the names most often used to signal race vary in clarity as race signals and may connote other attributes like class or immigration status (see Gaddis 2017a,b). A method to cope with this problem is to perform a survey test before the audit asking for connotations of names to be used to make sure they clearly indicate race and to balance names used across race in other respects. Gaddis (2017a) finds, however, that only 17.5% of resume audits employ name pretests.

A final limitation of field experiments is that there is no established way to use the results to understand the extent to which discrimination creates racial disparities. For instance, there is no way to know how much of the racial gap in employment results from discrimination in hiring identified by audit studies. This is because disparities in employment depend not only on discrimination in hiring, but on a variety of other factors, including how applicants search for jobs, how applicants respond to discrimination, and racial disparities in quits and firings.

Despite these limitations, field experiments are superior to other approaches in providing the clearest and most convincing assessments of direct discrimination in hiring. In the remainder of this review, we focus on the results of the large body of field experiments that have examined racial discrimination in hiring.

THE RISE OF FIELD EXPERIMENTS

Some of the earliest field experiments of discrimination were conducted in the United States by scholars in collaboration with activists and community groups during the 1940s and 1950s. These studies focused on discrimination in housing and in commercial service (Biondi 2003, chapter 4; Cherry & Bendick 2018). The first large-scale field experimental studies of discrimination in hiring that we know of is the Daniel (1968) study in England. Important later milestones were the 1977 Housing Discrimination Study carried out by the US Department of Housing and Urban Development in the 1970s, which covered discrimination in sales and rental of housing in several cities (Wienk et al. 1979); a series of face-to-face audit studies of employment conducted by the Urban Institute in the early 1990s (Cross et al. 1990, Turner et al. 1991); and a series of employment audit studies commissioned by the International Labor Organization in Europe and conducted by teams of national researchers from 1995 to 2010 using a design developed by Bovenkerk et al. (1995) (see, e.g., Zegers de Beijl 1999). Also notable was Pager's (2003) study combining criminal record background with race, an early field experiment to examine how racial discrimination may be moderated by other status markers.

In the United States, the use of resume studies was slow to develop because US researchers had problems signaling race in a naturalistic way on a resume. The study by Bertrand & Mullainathan (2004) pioneered the technique of using distinctive Black names to conduct employment tests via mail, which has become a standard method in later research. Recently, field experiments have increased in prevalence because of the ease of performing them online. Several computer programs are now available to automate parts of the process of field experimentation for online job applications (Lahey & Beasley 2009).

Recently, a series of partially harmonized resume field experiments was conducted as part of the GEMM (Growth, Equal Opportunities, Migration and Markets) study funded by the European Union. The GEMM study is the most comprehensive field experimental investigation of racial and ethnic discrimination to date, as it contains 53 ethnic minority groups and is carried out in six countries: Germany, Norway, Spain, the Netherlands, the United Kingdom, and the United States (Lancee 2019).

To provide a systematic review of all field experiments that focus on racial or ethnic discrimination in hiring, we reviewed all studies in languages such as English, French, German, Dutch, Spanish, Portuguese, Swedish, and Norwegian that appeared through the main academic search engines. We examined references in these studies to find additional studies. Finally, we conducted an email survey of experts in 2016 asking for references to nonpublished field experiments. In total, we have to date located 147 distinct studies of racial or ethnic discrimination in hiring conducted in a total of 30 countries.[1]

Counts of field experiments of racial discrimination in hiring by year are shown in **Table 1**. The table shows a steady pattern of increase since the 2001–2005 period, with the most studies in the period 2010–2015. The apparent reduction after 2015 might reflect studies that have been conducted but not yet written up.

[1]A bibliographic list of these studies is at **https://sites.northwestern.edu/dmap**. Details of the study search are in the supplemental material of Quillian et al. (2019). Not included in our analysis are a handful of experiments in Europe in which, in a variation on classic field experiments on discrimination, employers hire based on resumes anonymized to avoid disclosing the race of the applicant. Results of these studies on minority hiring are highly mixed, with some studies finding decreases in minority hiring with blinded resumes (Åslund & Skans 2012, Behaghel et al. 2014). Evidence suggests that some of the results finding decreased minority hiring with blind hiring, however, result from self-selection of employers with high concern about diversity into these experiments (Bertrand & Duflo 2016).

Table 1 Number of field experiments of discrimination in hiring by year

Year range	Number of studies
Before 1975	4
1975 to 1980	7
1981 to 1985	5
1986 to 1990	6
1991 to 1995	8
1996 to 2000	3
2001 to 2005	12
2006 to 2010	37
2011 to 2015	46
2015 to 2020	19
Total	147

Year is based on median or modal year of fieldwork, not year of publication.

Table 2 shows the countries in which field experiments have been conducted and the number of studies. The large majority of studies have been in North America, Western Europe, and Australia. The few studies outside of these locations include studies of discrimination against Uighurs in China, Chinese in Malaysia, and indigenous people in Peru.

SEVENTEEN CONCLUSIONS FROM THE CROSS-NATIONAL FIELD EXPERIMENTAL LITERATURE

The field experimental literature provides a rich data source to understand discrimination across a multitude of contexts. Analyses by Zschirnt & Ruedin (2016) and Quillian et al. (2019) have compared many field experiments using formalized methods from the statistical meta-analysis literature—a set of statistical procedures to combine experimental results (see Borenstein et al. 2009). We also discuss recent results from the cross-national GEMM project and a number of individual field experiments.

A problem in comparing field experiments is that the studies are not completely uniform in design. Field experiments vary in the exact occupations they cover, in the details of their fictitious applicants, in the target group they focus on, and so on. However, methods are available to manage this problem. First, we can directly investigate if study characteristics seem to matter for the discrimination levels the studies find by controlling factors in design in meta-regression, a procedure used by Quillian et al. (2019). Second, standard errors can be calculated by building in an extra component of uncertainty because of study-level factors, a procedure used by Quillian et al. (2019) and Zschirnt & Ruedin (2016).

Before discussing conclusions from the literature, we draw on our database of results from field experiments to illustrate the prevalence of discrimination. We used counts from each study to compute discrimination ratios, or the ratio of callbacks (or positive responses) received by White natives in each study relative to similar minority applicants (the results expand on those shown in figure 1 of Quillian et al. 2019). Higher numbers indicate more discrimination. A ratio of 1.5 indicates that native Whites receive 50% more callbacks than the minority group. The ratio 1.0 indicates no discrimination—that White natives and minority applicants received equal callbacks—while ratios below one indicate reverse discrimination against the White majority.

Table 2 Number of field experiments of discrimination in hiring by country

Country	Number of studies
Australia	3
Austria	1
Belgium	4
Canada	7
China	1
Czech Republic	2
Denmark	2
Finland	2
France	24
Georgia	1
Germany	6
Great Britain	12
Greece	2
Hungary	1
Ireland	1
Israel	2
Italy	2
Malaysia	1
Mexico	1
Netherlands	15
Norway	5
Peru	1
Poland	1
Russia	1
Singapore	1
Spain	3
Sweden	8
Switzerland	3
Turkey	1
United States	33
Total	147

For multi-country studies, the study is counted in each country in which a field experiment was conducted. Studies of caste in India are not included.

Table 3 shows discrimination ratios for country and target group combinations with at least two studies.[2] The number indicates the weighted average discrimination ratio over studies. However, as the table shows, there is substantial variation in discrimination levels, ranging from 1.0 (parity with the White majority for European immigrants in the Netherlands) to 3.07 (Middle Eastern and North African groups in Israel), the latter indicating that Jewish Israelis receive more than three times as many callbacks compared with Arab Israelis. Results for a subset of these

[2]The results are based on a random-effects meta-regression model with dummy moderators predicting group by country and no other covariates (see Borenstein et al. 2009, chapter 20).

Table 3 Estimated discrimination ratios, all country by race categories with two or more studies

Country	Race category	Detailed groups (study term)	Studies	Discrimination ratio	95% CI	
Australia	European/White	Greek, Italian	2	1.10	0.84	1.44
Australia	Asian	Chinese, Vietnamese	3	1.64	1.30	2.06
Belgium	MENA	Moroccan, Turkish	4	1.39	1.13	1.72
Canada	African/Black	African, Black, West Indian	4	1.63	1.24	2.14
Canada	European/White	Greek, White immigrant	4	1.31	1.01	1.68
Canada	MENA	Arab, Middle Eastern	2	1.22	0.92	1.62
Canada	Asian	Chinese, Indian, Indo-Pakistani, Pakistani	4	1.42	1.19	1.69
Czech Rep.	European/White	Bulgarian, Roma	2	2.17	1.11	4.25
Denmark	MENA	Middle Eastern, Turkish	2	1.44	1.08	1.93
Finland	European/White	English, Russian	2	1.69	1.35	2.12
France	African/Black	African, French Antillean, Senegalese, Sub-Saharan African	7	1.90	1.61	2.24
France	MENA	Moroccan, North African	20	1.70	1.54	1.88
France	Asian	Asian, Vietnamese	2	1.45	1.06	1.98
Germany	MENA	Middle Eastern, Turkish	6	1.23	1.04	1.44
Great Britain	African/Black	Black African, Black Caribbean, Sub-Saharan African, West Indian	9	1.51	1.32	1.73
Great Britain	European/White	Australian, Cypriot, Eastern European, French, Greek, Italian	5	1.16	0.99	1.35
Great Britain	Asian	Asian, Chinese, Indian, Pakistani	12	1.63	1.45	1.82
Greece	European/White	Albanian	2	1.62	1.24	2.12
Israel	MENA	Arab Israeli, Mizrahi Israeli	2	3.07	1.26	7.44
Italy	MENA	Moroccan	2	1.71	1.29	2.27
Netherlands	African/Black	Antillean	6	1.17	1.00	1.37
Netherlands	European/White	Eastern European, Spanish	2	1.00	0.75	1.32
Netherlands	MENA	Arab, MENA, Moroccan, Turkish	13	1.40	1.23	1.59
Netherlands	Asian	Hindustani, South and Southeast Asian	2	1.41	1.03	1.93
Norway	Asian	Pakistani, South and Southeast Asian	5	1.4	1.16	1.68
Spain	MENA	MENA, Moroccan	2	1.12	0.83	1.52
Sweden	MENA	Arab, North African, Middle Eastern	8	1.66	1.46	1.89
Switzerland	European/White	French/German, Kosovar Albanian, Portuguese, Yugoslavian	3	1.29	1.06	1.56
Switzerland	MENA	Turkish	2	1.28	0.97	1.68
United States	African/Black	African American, Black, Somali American	24	1.38	1.26	1.51
United States	Latin American/ Hispanic	Hispanic, Latino	11	1.23	1.06	1.41
Average	Combined	Combined	129	1.45	1.39	1.52

Discrimination ratios—the ratio of callbacks (or positive responses) received by White natives in each study relative to similar members of a minority group—are estimated by random-effects meta-regression with dummies for country by race category. Confidence intervals are calculated accounting for clustering by study. Combined study count is less than sum of country-by-group counts because some studies include multiple minority groups.
Abbreviations: CI, confidence interval; MENA, Middle Eastern and North African.

studies have been analyzed in more detail through bivariate tabulations in Zschirnt & Ruedin (2016) and through multivariate statistical models by Quillian et al. (2019).

A range of striking results emerges from this body of studies. In what follows, we summarize seventeen key conclusions from the cross-national literature of field experiments on racial discrimination in hiring:

1. Discrimination against non-Whites is ubiquitous. Quillian et al. (2019) find statistically significant discrimination against every non-White group in every country in Europe and North America except where statistical power is low due to few studies.[3] Their meta-analysis suggests that the White majority receives between 20% and 80% more callbacks than non-White groups depending on the group and the country. The results in **Table 3** suggest this holds true for Australia as well. Overall, Whites receive about 50% more callbacks than non-Whites on average. None of the meta-analysis discrimination ratios are below one, giving no evidence for reverse discrimination against White natives.
2. White minorities experience less discrimination. Quillian et al. (2019) find evidence of less discrimination against White immigrants and White minority ethnic groups compared with non-White groups in the same country. For White immigrants, discrimination appears to be low in North America, Western Europe, and Australia—this pattern is also apparent in **Table 3**. Results from the GEMM study also show lower discrimination against White minorities (Di Stasio & Larsen 2020). We know of no studies of discrimination against White applicants in majority non-White countries.
3. Countries differ considerably in hiring discrimination levels. Studies comparing countries have focused on Europe and the United States because these are the countries with the largest numbers of field experimental studies. Zschirnt & Ruedin (2016) group countries together and find higher discrimination in hiring in Europe than in North America, and lower discrimination in German-speaking countries than the rest of Europe. Quillian et al. (2019) extend this approach by looking at individual countries (rather than groups of countries), looking at a larger body of field experimental studies, and examining country differences in models including controls for group and study characteristics. They find substantial differences over countries—in some countries Whites receive 80–100% more job offers than non-Whites, but in others they receive only 20–30% more. Country is a stronger predictor than almost any other covariate in their models. The United States has rates of discrimination similar to those of the lower-rate European countries.

   Since these meta-analyses were published, a set of new cross-national field experiments has become available from the GEMM project. There is high consistency between the country levels of discrimination in the Quillian et al. (2019) meta-analysis and the GEMM studies (see Di Stasio et al. 2019 and Di Stasio & Lancee 2020). The one relatively inconsistent country is Norway, which appears to have higher discrimination in the GEMM results than in the Quillian et al. meta-analysis. This may be because the GEMM study included only private sector employers and discrimination is higher in this sector (see point 9), whereas the Norwegian studies in the meta-analysis by Quillian et al. (2019) included both private and public employers.

[3] A potential objection is that consistent discrimination found in field experiments reflects publication bias: Studies that do not find discrimination might be less likely to produce research reports. Tests for publication bias discussed in the supplemental material of Quillian et al. (2017, 2019), however, find either no evidence of publication bias or that its effects on estimates is small.

4. There has been no change in discrimination in the United States or United Kingdom over the past 25 years. By putting field experiments into a time series, it is possible to examine changes over time. Quillian et al. (2017) find that there has been no change over the past 25 years in discrimination against African Americans in the United States. Heath & Di Stasio (2019) perform a similar analysis for the United Kingdom and find little evidence of change in rates of hiring discrimination against minority groups over time. It is fairly common to assume that racial relations are on a trajectory of improvement (Ray & Seamster 2016); these results are a sobering counterpoint to the idea of inevitable declines in discrimination over time.
5. Immigrant generation differences in discrimination are small. Several analyses find that foreign-born and native-born children of immigrants experience fairly similar levels of discrimination. Carlsson (2010), for example, designed a field experiment to compare discrimination against first- and second-generation immigrants in Sweden, finding no difference in discrimination. Similarly, the meta-analyses by Zschirnt & Ruedin (2016) and Quillian et al. (2019) find no statistically significant or substantively large difference in discrimination over immigrant generation groups. By contrast, Veit & Thijsen (2019) find that foreign-born applicants are significantly less likely to receive a callback than domestic-born applicants of the same race/ethnicity using the pooled GEMM data set. However, the difference is small in size, suggesting that minority status is more important than immigrant status in driving hiring discrimination.
6. Studies differ about intersections with gender. Intersectional frameworks (e.g., Crenshaw 1989) suggest gender and race should intersect to create distinct discrimination outcomes. Sidanius & Pratto (2001) argue that minority men are viewed as more threatening to the dominant group and therefore are subject to more discrimination than minority women. In Sweden, Bursell (2014) find no statistically significant difference in discrimination by gender against Arab applicants. In Denmark, Dahl & Krog (2018) find significantly more discrimination against men with Arabic-sounding names contrasted with women. Likewise, Arai et al. (2018) find more discrimination against Arab men than Arab women in Sweden. Finally, GEMM results reported by Di Stasio & Larsen (2020) find evidence of interaction between gender and race in determining hiring after taking into account interactions with minority group and share of females in occupations (see also Bursell 2014).
7. There is mixed evidence on occupation and education. Most studies do not find large occupational differences in racial discrimination. The classic study by Bertrand & Mullainathan (2004) finds little evidence of variation in discrimination over four white-collar occupations or industries, noting the surprising uniformity of discrimination. Oreopoulos (2011, table 6) likewise finds few differences in outcomes across a range of white-collar occupations. However, a study of occupations subject to high demand (bottleneck occupations) in the Netherlands finds less discrimination for the high-demand occupations (Baert et al. 2015). Many individual studies use somewhat uniform sets of occupations—for instance, focusing only on white-collar jobs that require a college degree, or only on service occupations that require a mix of credentials. The meta-analysis by Quillian et al. (2019) finds evidence of somewhat lower racial discrimination on average for studies employing applicants with a college education or more compared with applicants with less education. Some studies also provide evidence on whether aspects of education like prestige of college (Gaddis 2015) or high school grades (Carbonaro & Schwarz 2018) affect racial discrimination in hiring, most often not finding that racial discrimination interacts with these characteristics.
8. Large employers discriminate less. Banerjee et al. (2018) in Canada and Wood et al. (2009) in Great Britain find that larger employers discriminate significantly less against

minority applicants than smaller employers. Likewise, Carlsson & Rooth (2007) find more discrimination by employers at workplaces with fewer than 20 employees in Sweden. This may be because larger employers more often follow formalized hiring procedures including diversity management efforts (e.g., Dobbin et al. 2011).

9. Public sector employers discriminate less. Studies in Great Britain, France, and Norway find considerably higher discrimination by private employers than by public employers (Cahuc et al. 2019, Midtbøen 2016, Wood et al. 2009). This may in part be due to more formalized procedures in the public sector—similar to common explanations of the size result discussed above.
10. Cultural distance increases discrimination. In Europe, evidence from several studies suggests that there may be significantly more discrimination against minority group members who are viewed as less assimilated to the culture of the White majority in the country. For instance, a study by Duguet et al. (2010) finds that native-born applicants (indicated on resume) with French first names and North African last names were subject to significantly less discrimination than those with both North African first and last names. Similarly, Weichselbaumer (2020) finds that ethnically Turkish women applying for jobs in Germany receive much lower callback rates if they wear a headscarf in their photo than if they do not (photos are standard in job applications in Germany). Using a regression procedure, Koopmans et al. (2019) find evidence that some of the discrimination against Turkish immigrants and Muslims may reflect evaluations of cultural differences from German people. In the United States, Kang et al. (2016) find that Asian American and Black applicants who whitewash their resumes (either by changing their first name or by removing experience with minority organizations) receive significantly more callbacks than applicants who do not, although this finding might also reflect the clarity of the race signal or concerns about language proficiency. Overall, these studies provide some support for ideas about cultural homophily in hiring as a basis for racial discrimination.
11. Muslims and ethnic groups from Muslim-majority countries are discrimination targets. Evidence points toward the importance of Islam as a basis of discrimination, especially in Europe. Adida et al. (2010), for example, find evidence of higher discrimination against an immigrant from Senegal with signals of Muslim religion than one with Christian signals. Similarly, Di Stasio et al. (2019) analyze GEMM data from five countries and find that immigrants who disclosed participation in Muslim organizations on their resume experienced additional discrimination, although the effect was weaker than the effect of origins from Islamic-majority countries. Koopmans et al. (2019) include both membership in religious organizations on the resume and race based on appearance in a photo in a correspondence study in Germany. They find that both Muslim organizational participation and Black race were negatively associated with callbacks, but the effects were slightly larger for Black race. In the US context, Gorsuch & Rho (2017) find that Somali Americans, many of whom are Muslim, experience slightly lower hiring discrimination than African Americans. By contrast, Widner & Chicoine (2011) find high discrimination against Arab American applicants in a US resume audit, although because the study had a small sample and low callback rate, the estimate is highly imprecise. Conducting a formal meta-analysis of 26 field and lab experiments assessing discrimination against Muslims (with religion signaled) and Arabs (religion not signaled), Bartkoski et al. (2018) find discrimination against Muslims but more discrimination against Arabs. They also find discrimination against Muslims to be lower in the United States than in Europe. A mostly consistent result emerges from these studies: Signals of Muslim religion reduce chances of a callback, but the effect is weaker than racial origins from Islamic-majority countries.

12. Criminal background is a disadvantage and shows mixed results on interaction with race. Eight studies in the United States examine criminal background effects together with race. They find strong negative effects on callback of felony convictions (Decker et al. 2015, Galgano 2009, Mobasseri 2019, Pager 2003, Pager et al. 2009). Pager (2003), Pager et al. (2009), and Wells (2013) also find an intensifying interaction of race and criminal background: Callback rates among Black respondents with criminal backgrounds were particularly low. However, Galgano (2009), Uggen et al. (2014), and Decker (2015) find no such interaction. We know of only one non-US study combining criminal record and race: In the Netherlands, Van den Berg et al. (2020) find that a criminal record does not appear to have much effect on the likelihood of receiving a callback; instead, ethnic minority applicants face substantial discrimination regardless of criminal record.
13. Evidence on labor market tightness and discrimination is mixed. Many studies of unemployment find that the gap between White and minority unemployment rates tends to close as overall unemployment rates drop. This has led some to suggest that discrimination declines when labor markets are tight. Evidence from field experiments, however, is highly mixed. A meta-analysis by Quillian et al. (2019) finds no association between unemployment rates and measures of discrimination in audit studies. The meta-analysis by Zschirnt & Ruedin (2016), in contrast, finds more discrimination in hiring when country unemployment is very high but little correlation of discrimination and unemployment overall. Vuolo et al. (2017) examine whether discrimination against African Americans changed in a resume audit that was fielded as the United States tipped into recession in 2007, and they find no increase in discrimination. However, Baert et al. (2015) find lower discrimination in high-demand occupations than in low-demand occupations in Belgium. Note that racial unemployment gaps could decrease as labor markets tighten without discrimination changing because employers lack applications from well-qualified Whites, resulting in increased hiring of minorities even if the White preference of employers remains unchanged.
14. Evidence on interactions of race and unemployment scarring is mixed. Some studies use a field experimental approach to examine whether racial minority status increases the negative consequences of unemployment on the chances of getting a job, known as unemployment scarring. In Norway, Birkelund et al. (2016) find such an additive pattern of discrimination; majority applicants without an unemployment gap in their resumes have the highest callback rates, while unemployed applicants with Pakistani names have the lowest. In a US study, Pedulla (2018), by contrast, does not find evidence of additive effects of race and unemployment. This field experiment documents substantial discrimination against African Americans, but the results show that the penalties of unemployment are weaker for Black applicants than for equally qualified White applicants. These contradictory findings suggest that both the specific target group in question and the geographical context in which field experiments are conducted play a role in whether and how race and employment status interact in shaping labor market opportunities.
15. Evidence suggests prejudice plays a role. Results from at least two studies suggest a role for prejudice or other forms of animus in discrimination. First, Carlsson & Rooth (2012) find greater discrimination against Arab applicants in a field experiment in regions of Sweden with more negative attitudes toward immigrants on a population survey. Second, Pager (2016) finds that employers who discriminated in her field experiment were more likely to subsequently go out of business than those that did not, consistent with economic models of taste discrimination. Other evidence suggests that information processes in discrimination (see point 17) are more important. However, it is entirely possible that both

prejudice and stereotypical or statistical discrimination processes operate together in producing hiring discrimination.

16. Housing discrimination and employment discrimination patterns are distinct. There is a parallel body of studies that focus on housing discrimination using field experiments, including at least two international formal meta-analyses of housing discrimination. Patterns are different: housing studies find evidence of declines in discrimination over the past 25–35 years both internationally (Auspurg et al. 2019, Flage 2018) and in the United States (Quillian et al. 2020a), while studies of employment discrimination find little evidence of change over time (see point 4). Likewise, looking across countries, there is little correlation between countries' levels of employment discrimination and countries' level of housing market discrimination. In Germany, for example, the level of employment discrimination is comparatively low while housing discrimination is high (e.g., contrasting country estimates from Quillian et al. 2019 with Auspurg et al. 2019).
17. Increasing information about applicants can reduce discrimination. Employers may rely less on group stereotypes when they have more individual information about employees' characteristics. Several findings from field experiments support this view. First, a US field experiment by Agan & Starr (2018), conducted across a change in policy that prevented employers from checking criminal backgrounds of applicants, finds evidence that when employers cannot ask about past criminal record, racial discrimination increases. This suggests that some employers discount Black applicants because they assume these applicants may have criminal backgrounds in the absence of information from a background check (see also Raphael 2021). Second, the German-speaking countries in Europe are distinct from most other countries for the high level of information provided on initial applications. Germany also has a low level of discrimination in hiring, perhaps because of this distinctive practice (Quillian et al. 2019, Zschirnt & Ruedin 2016). Correspondingly, Kaas & Manger (2012) find no discrimination in a field experimental study in Germany when reference letters for applicants include positive information about the applicants. Third, in the housing literature, studies have coded the amount of information presented in the application and find less discrimination when more nonracial information is solicited up-front from renters (Auspurg et al. 2019). However, Thijssen et al. (2019) randomly assigned resumes to photos, reported a final course grade, and included in the cover letter a self-description as a hard-working person. They find no effect of these application features on hiring discrimination. However, the self-reported nature of the information in the applications in their experiment may indicate that information matters only when it comes from what employers view as reliable external sources, such as official certificates and outside letters of recommendation.

LESSONS FROM COMPARING FIELD EXPERIMENTS

The ubiquity of discrimination against non-White minority groups in Western countries regardless of context suggests an important cross-national role for race in hiring decisions. White ethnic minority groups experience hiring discrimination, but field experiments show they suffer from considerably less discrimination in hiring in White-majority countries than non-Whites do. Non-White race, rather than ethnic differences, most strongly determines hiring discrimination.

Some discrimination based on identities distinct from race, but significantly correlated with it—what we have called shadow identities—plays a role in racial discrimination. Individuals originating from the Middle East are discriminated against partly because they are presumed to be Muslim, for instance. And some discrimination against US Black applicants is driven by stereotypes that tie race and criminal backgrounds. There is also evidence that members of racial and

ethnic groups who present as culturally similar to the White majority experience less discrimination (e.g., for members of immigrant ethnic groups who have a White native first name). These are highly racialized processes, however, because discrimination is usually based on appearance or name without assessing the accuracy of the shadow identity.

The field experimental literature on discrimination suggests that a single level of racism in a country or population does not uniformly drive discrimination. Labor and housing market discrimination, for instance, follow quite different patterns, suggesting that distinct factors influence the levels of each type of discrimination. Discrimination levels appear to be specific to the domain in which the discrimination occurs.

A hopeful conclusion suggested by these results is that hiring discrimination can be reduced significantly by procedural and legal steps. Field experiments in this area suggest following formalized hiring procedures, increasing transparency about the race/ethnicity of hires, and enforcing accountability to goals that aim to increase diversity can make a difference (e.g., Midtbøen 2015). This is consistent with the large organizational literature on inequality and employee diversity (e.g., Dobbin et al. 2015, Hirsh & Tomaskovic-Devey 2020).

A lack of data on employee race or ethnicity at both the organizational and national levels in many European countries, together with a relative lack of attention to diversity in hiring there, may be reasons that the United States has levels of hiring discrimination below those of many European countries (Bartkoski et al. 2018, Quillian et al. 2019). Just as the literature suggests salary transparency is a factor that can help control inequalities in earnings (e.g., Castilla 2015), transparency in the racial composition of employees and managers may be an important tool to help control discrimination in hiring. We believe that more collection of racial data to monitor inequality in European countries where it is currently lacking would be a step in the right direction.[4]

Under the right circumstances, designing recruitment processes to solicit more job-relevant information on applicants at the point of initial application could also be a route to reducing discrimination—in some ways, this would make application procedures and links to education more like those in German-speaking countries. The potential trade-off is that this would damage the job prospects of those whose backgrounds, based on the additional information, are not employment enhancing—with the danger (as may occur to ex-felons) of creating trapped groups who combine multiple forms of identities that have great difficulty gaining employment because of their background. There are then important potential trade-offs that need to be considered in thinking about the overall effects of changes in hiring to require additional job-relevant information.

CONCLUSION

The large body of field experimental studies suggests that racial and ethnic discrimination in hiring is a pervasive international phenomenon. In the United States and United Kingdom, discrimination has hardly diminished over the past 25 years. Field experiments have been important for establishing these facts with greater certainty than other methods, and they also have the advantage that their results are readily understandable by lawmakers and the public.

Field experiments show that countries vary significantly, and often in somewhat surprising ways, in levels of racial discrimination in hiring. The large differences that exist in discrimination levels over countries seem to result in part from a variety of institutional and situational differences,

[4]However, we acknowledge that this is a controversial issue in many countries, for historical or ideological reasons. Clearly, caution is needed given the possibility of racist misuse of this data.

but further research is needed to provide further explanations and to better test these explanations with evidence.

We need better models of the role of discrimination in generating disparities in outcomes between racial groups. In the case of employment, this will require better understanding job searches, the effects of perceived discrimination on job searches, and the effects of discrimination on quits and firings.

There are only a few field experiments of racial discrimination outside of North America, Europe, and Australia. Yet most accounts suggest significant racial and ethnic discrimination outside of the West (e.g., Kowner & Demel 2012). This is a topic that needs more study, especially as increasing international labor migration to Asian countries and the Middle East increases the racial and ethnic diversity of these regions.

Finally, studies of racism and studies of discrimination have been highly separate. More evidence is needed on how racist ideologies—usually assessed as beliefs or statements—correspond to acts of discrimination. Deeper analysis of the connection between racism and discrimination could strengthen our understanding of both discrimination and racism.

Future studies will need to be creative in the design of experiments to address these topics and will need to combine results with survey and qualitative research to continue to make advances in understanding the social processes that produce discrimination and how we can better control it.

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