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INTRODUCTION



# Ethnic discrimination in hiring: comparing groups across contexts. Results from a cross-national field experiment

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**ABSTRACT**

Existing field experimental research unequivocally shows the existence of ethnic discrimination in the labour market. Furthermore, studies have documented considerable variation in discrimination rates across countries. However, while the field of discrimination research is rapidly expanding, there are at present no harmonised comparative studies. This is unfortunate, as we do not know *why* there are cross-national differences in discrimination. In this paper, I present the GEMM study ($N$ = 19,181), a harmonised cross-national field experiment on hiring discrimination. The GEMM study contains 53 ethnic minority groups and is carried out in six countries: Germany, Norway, The Netherlands, Spain, United Kingdom and the United States. Furthermore, I discuss the need and potential for a comparative analysis of discrimination and outline the methodological challenges of carrying out a cross-national field experiment. The special issue presents results for the major ethnic minority groups in six countries and compares discrimination rates across national contexts.

**KEYWORDS**

Ethnic discrimination; employer behaviour; field experiments; correspondence tests; comparative research; labour market

## Introduction

Existing field experimental research unequivocally shows the existence of ethnic discrimination in the labour market (Bertrand and Duflo 2017; Bertrand and Mullainathan 2004; Kaas and Manger 2012; Oreopoulos 2011; Pager, Western, and Bonikowski 2009). Compared to the majority population, ethnic minorities have substantially lower chances to find employment. A recent meta-analysis shows that applicants with foreign-sounding names need to send fifty per cent more applications than equally-qualified applicants from the majority group to be invited to a job interview (Zschirnt and Ruedin 2016).

Zschirnt and Ruedin (2016) also document considerable variation in discrimination rates across countries. Yet, differences in the ethnic groups, occupations and experimental design preclude any direct comparison of discrimination rates across contexts. While the field of (experimental) discrimination research is rapidly expanding, there are, at present, no harmonised comparative studies. The first and only cross-national field-experiment on ethnic discrimination was initiated by the ILO, comparing Germany, Spain, the Netherlands, and Belgium (Zegers de Beijl 2000). However, the ethnic groups and sectors

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differed across countries, making a comparison difficult. This is unfortunate, as we do not know *why* there are cross-national differences in discrimination.

The main contribution of this special issue is to compare discrimination against the same ethnic minority groups across countries. We do so with a cross-national harmonised field experimental study on hiring discrimination in Norway, The Netherlands, United Kingdom, Germany, Spain, and the United States. The data are collected within the project 'Growth, Equal opportunities, Migration and Markets (GEMM); financed through the Horizon 2020 Framework of the European Union.

Our approach is threefold. First, in this introductory paper I discuss the need to study ethnic discrimination using a multi-country and multi-group perspective using a double comparative design. Furthermore, I describe the GEMM research design and discuss the practical and methodological challenges of carrying out a cross-national field experiment.

Second, the subsequent papers in this issue study the hiring chances of major ethnic minority groups in six countries and compare discrimination rates across national contexts. Our harmonised design enables a direct test of whether discrimination is stronger in specific contexts, contributing to our understanding of the role of national institutions in mitigating discrimination. The special issue contains four papers that compare discrimination against a large ethnic minority group in two different national contexts: Larsen and Di Stasio (2021) compare discrimination against Pakistani in the United Kingdom in Norway. Thijssen et al. (2021) compare discrimination against Turkish minorities in the Netherlands and Germany. Furthermore, Yemane and Fernández-Reino (2021) analyse discrimination against Latino's in the United States and Spain, whereas Ramos, Thijssen, and Coenders (2021) analyse discrimination against Moroccans in The Netherlands and Spain.

Third, we study two drivers of discrimination: immigrant generation and religion. While existing studies suggest cross-national differences in labour market participation of first and second generation immigrants (Algan et al. 2010), experimental evidence on discrimination towards first and second generation immigrants is scant and limited to single country studies (Carlsson 2010). To fill this gap, Veit and Thijssen (2021) study how ethnic discrimination varies across generations in five countries. Last, we address the growing body of research on the Muslim penalty in hiring decisions (Adida, Laitin, and Valfort 2010; King and Ahmad 2010; Wright et al. 2013) by analysing if and how discrimination against Muslims varies across five European countries (Di Stasio et al. 2021). The GEMM design allows us to disentangle ethnic discrimination from discrimination on the grounds of religious beliefs, and to test whether a Muslim stigma varies across ethnic groups and countries.

## Studying ethnic discrimination with a cross-national harmonised field experiment

Because ethnic discrimination is very difficult to observe, the scholarly literature increasingly relies on field experimental research. Randomised field experiments (also known as correspondence studies) are appealing, as they provide clear and convincing evidence of differential treatment in real-life (National Research Council 2004; Pager 2007; Pager and Shepherd 2008; Riach and Rich 2002). Virtually all correspondence studies document

hiring discrimination against ethnic minorities (for reviews, see Baert 2018; Bertrand and Duflo 2017; Quillian et al. 2017; Riach and Rich 2002; Zschirnt and Ruedin 2016).

While there is broad scholarly consensus on the existence of ethnic discrimination, studies also document considerable variation (see, for example, Zschirnt and Ruedin 2016). However, existing studies lack a truly comparative design. Thus, while there is convincing evidence that ethnic discrimination is substantial, in order to understand its variation, one needs a harmonised design. In the GEMM study, we compare multiple origins in multiple destinations, a design that is often labelled 'double comparative' (Van Tubergen, Maas, and Flap 2004). A double comparative design has at least two advantages. First, it allows for a better descriptive account of the extent of discrimination. Second, from a theoretical perspective, a double comparative design allows for testing theories that explain the conditions under which ethnic discrimination occurs.

### Comparing groups across contexts

Field experimental studies on discrimination in hiring predominantly compare callback rates of the majority population with one, or a few ethnic minority groups. Typically, the largest or most salient ethnic group is included (Andriessen et al. 2012; Kaas and Manger 2012; Midtbøen 2014; Wood et al. 2009). However, not seldomly, the findings for one group are interpreted as *the* discrimination rate in a country. Including multiple groups provides evidence for discrimination against both large and small groups, and ideally, for the full 'ethnic landscape' in a country. Relatedly, a narrow selection of ethnic groups may matter for conclusions about variation in discrimination. For example, Andriessen et al. (2012) select the four largest non-western ethnic minority groups to study discrimination in the Netherlands. They conclude that employers only differentiate between immigrants and the majority population, with 'no further distinctions between different immigrant groups' (2012, 260). On the other hand, based on variation in migration history, Booth, Leigh, and Varganova (2012) select five ethnic groups in Australia and conclude that 'differences vary systematically across ethnic groups' (2012, 547). While these findings refer to different contexts, the conclusions are partly a consequence of the selection criteria used to include ethnic groups. With 53 ethnic minority groups included, the GEMM study allows for a more fine-grained comparison.

Besides the comparison of ethnic minority groups, within one country, the GEMM design also allows for comparing across five countries of study. In their meta-analysis, Zschirnt and Ruedin (2016) document considerable variation in discrimination across countries. Yet, in a meta-analysis, the reported effect sizes could be an artefact of the specific design adopted, or the groups studied in each single study.

### Testing theories of ethnic discrimination

Besides a descriptive aim, variation in ethnic groups and countries can be used to better understand *why* some minorities face more discrimination. To explain variation in discrimination, one could broadly identify three sets of explanations: cultural/psychological, economic and contextual/institutionalist (for reviews, see Bertrand and Duflo 2017; National Research Council 2004; Neumark 2018).

First, explanations may be cultural. Within this realm, perhaps the most prominent model is that of 'taste-based' discrimination. In the 1950s, economist Gary Becker (1957), famously argued that employers have a 'distaste' for ethnic minority groups. Taste-based discrimination implies that employers select majority candidates based on their (cultural) preferences, resulting in economically inefficient hiring decisions. As such, employers are willing to pay a price for their preferences, for example, in terms of higher wages for majority members. However, in Becker's model, preferences are given; it thus only offers a framework to analyse the *consequences* of taste. To explain where preferences come from, other theoretical approaches are needed.

One could say that 'psychological' approaches explain the origins of taste. As such, the negative evaluation of others is explained by social identity (Tajfel 1974), integrated threat theory (Stephan and Stephan 2013), or homophily (McPherson, Smith-Lovin, and Cook 2001). Becker's tastes may also be explained with what Bogardus (1925) refers to as social distance. The perceived social distance varies across ethnic minority groups, resulting in an 'ethnic hierarchy' (Bessudnov and Shcherbak 2018; Hagendoorn 1995; Hagendoorn and Hraba 1989; Verkuyten, Hagendoorn, and Masson 1996). Somewhat diverging from the cultural root, the stereo type content model argues that group stereotypes are a consequence of two interpersonal impressions: warmth and competence (Fiske, Cuddy, and Glick 2007). Field experimental research indeed shows that signalling warmth and competence matters for the hiring chances of ethnic minorities (Agerström et al. 2012). Another research avenue in the 'phycological' domain is implicit bias; people's attitudes and stereotypes are automatic and less conscious (Greenwald, McGhee, and Schwartz 1998). There is some field experimental evidence that automatic associations indeed induce discriminatory behaviour of employers (Rooth 2010).

The GEMM design makes it possible to study such cultural or psychological explanations of discrimination. For example, to test the hypothesis that ethnic hierarchies explain variation in discrimination, the 53 ethnicities in the GEMM data allow for multilevel analysis. Furthermore, the phenotypical variation in the profile pictures can be used as a test for taste-based discrimination. In this issue, Veit and Thijssen (2021) use the place of birth of the job applicant as a proxy for perceived social and cultural distance to test assumptions of taste-based discrimination. Di Stasio et al. (2021) analyse how ethnic and religious discrimination against Muslims are related. As both warmth and competence are included as treatment variables, the GEMM data also allow for testing the stereotype content model.

Second, discrimination can be economically, or 'rationally' motivated. Statistical discrimination theory postulates that employers act out of economic self-interest: due to incomplete information and the negative group beliefs about the skills of ethnic minorities, employers prefer majority candidates (Arrow 1973; Phelps 1972). Thus, employers use stereotypes about the productivity of ethnic groups to make individual hiring decisions. The GEMM study contains several treatment conditions that allow for testing statistical discrimination theory (see also the section research design). For example, randomly adding information to application materials tests one of the core assumptions of statistical discrimination theory that there is less discrimination when employers have more productivity relevant information about the job applicant (see Thijssen et al. this issue).

A third explanation for variation in discrimination is institutional. The 'new institutionalist' theory emphasises that the behaviour of social actors is shaped by their national

context (Brinton and Nee 1998). The new institutionalist's argument is that employers' recruitment and reward behaviour depends on the institutional context in which they make their decisions (Di Stasio 2014). To understand discriminatory behaviour of employers, it is therefore crucial to account for the context in which employers make their decisions. Thus, research is needed that links discriminatory outcomes to the context of employment (Midtbøen 2015; Reskin 2000).

However, such a link is currently lacking. As Pager (2007, 120) notes: 'Field experiments are typically conducted in one specific context – one region or nation, thus limiting our comparative perspective on discrimination across labour markets'. While discrimination varies across countries (Heath and Cheung 2006; Kogan 2007; Riach and Rich 2002; Zegers de Beijl 2000; Zschirnt and Ruedin 2016), there is virtually no research that studies differential treatment across national institutional settings. In order to understand how discrimination comes about in the workplace, it is thus crucial to account for the national context in which employers make their decisions. For example, based on the difference in the flexibility of the labour market and anti-discrimination legislation, Larsen and Di Stasio 2019), expect differences in discrimination against Pakistani in Norway and the United Kingdom.

These three sets of explanations do not operate in a vacuum. From an economic perspective, adding productivity-relevant information to application materials is a test for statistical discrimination theory. Yet, the stereo type content model can be used to derive hypotheses as to which type of information reduces discrimination. Similarly, the cultural and psychological explanations may be context dependent. For example, Yemane and Ramos (2021) explain variation in discrimination against Latinos in Spain and the US with the different stereotypes of Latinos in both countries. The institutionalist perspective can help generating hypotheses under which conditions discrimination is more severe.

## Research design

The GEMM study consists of a comparative field experiment on discrimination in hiring behaviour in five countries: The United Kingdom[1] (UK), Spain (ES), Germany (DE), Norway (NO), and the Netherlands (NL). Additionally, in the same time period and using the same design, a study in the United States (US) has been carried out. In what follows, the GEMM data is described; for details regarding the US study, see Yemane and Ramos (2021).

In each of the countries, cover letters and CVs were sent out in response to vacancies in ten occupations that were advertised on online platforms. One application was sent out per vacancy (unpaired design). The data collection took place over a time span of two years (30 July 2016 until 1 June 2018). In total, the data contain 19,181 job applications. A detailed description of the data can be found in the GEMM Codebook (Lancee et al. 2019); details on the procedure and the design can be found in the GEMM Technical Report (Lancee et al. 2019).

### *Analysing discrimination with an unpaired design*

When carrying out a field experiment, one can chose a paired (within subject) or an unpaired (between subject) design. In a matched pairs design, two (or more) job

applications are sent to one vacancy, typically one majority and one minority candidate. The applications are different in lay-out, but identical in content. The paired design provides evidence on (un)equal treatment per employer. The unpaired design contains only one application per vacancy. The unpaired design is a between subject design and provides evidence of (un)equal treatment on the market level.

Depending on the distribution of positive and negative employer responses, the statistical efficiency of both designs is different. While a matched design is more efficient with higher concordance (i.e. a larger number of identical employer responses within a pair), an unmatched design is more efficient with lower concordance (for a detailed discussion, see Vuolo, Uggen, and Lageson 2016, 2018). Whereas most earlier studies have used a matched pairs design, following studies such as Ahmed, Andersson, and Hammarstedt (2013) and Weichselbaumer (2015, 2016) in the GEMM study, we make use of an unpaired design.

Given the objectives of the GEMM study, an unpaired design has several advantages. A major advantage is that it can accommodate multiple treatments and many treatment conditions (Vuolo, Uggen, and Lageson 2018). In a paired design, one has to decide what constitutes the pair (i.e. majority versus minority). An unpaired design does not have this restriction and can thus accommodate multiple treatment conditions. This is especially important in the GEMM study, as the aim is to include 53 ethnic minority groups. Additionally, one can compare all ethnic groups, such as, for example, the hiring chances of western European compared to East European minorities. Furthermore, in an unpaired design, the treatment variables are independent of one another, allowing for additional analyses, such as, for example, gender discrimination[2].

Second, the risk of detection is much lower. It is a challenge to construct applications that are identical in content but different in lay-out. With an unpaired design, such risk is absent, as one only has to construct one application and then randomly assigns the treatment conditions. Weichselbaumer (2015, 158) shows that for paired designs detection is indeed a risk: she compares matched and unmatched pairs in Germany and finds that sending multiple applications to one firm can lead to biased results: 'Because personnel managers discover the experimental character of matched applications, they may want to present themselves as particularly minority friendly. As a result, a study with a paired application design may severely underestimate discrimination'.

Third, one can argue that an unpaired design is more realistic. That is, in 'reality' there is no candidate that is identical to oneself (the other half of the pair). As such, an unpaired design might be a better representation of the actual hiring procedure (for a discussion, see Agerström et al. 2012, 361–362).

Fourth, the amount of discrimination observed in a paired design may be sensitive to the job pool. That is, when the total number of applications per vacancy is low, by design, the share of identical competitors rises. This might be problematic not only due to the increased risk of detection: the extend of discrimination likely depends on the composition of the pool and on the number of applications (Midtbøen 2014); the paired design affects both.[3] Thus, especially with few applications per vacancy, in the paired design there might be design effects in the amount of discrimination observed (for a discussion and data simulation, see Larsen 2018).

### Application procedure

Software has been developed with the main goal of automatising and simplifying the job application processes in field experiments concerning ethnic discrimination. The software retrieves vacancies from multiple job search platforms (i.e. 'crawls') at a specified time and date, using standardised search terms for the included occupation[4] and standardised criteria for the job advertised (for example, a minimum number of 16 hours per week, and a minimum contract duration of six months). The software program randomises the treatment variables, generates a CV and a cover letter, assigns the manipulated application to a vacancy and, after a final manual inspection, sends it to the employer. Research assistants manually checked whether all the relevant information is correct and filled out, and whether the application is a good match for the vacancy. Employer's responses were collected by research assistants and inserted in the data section of the software program. We politely declined any invitation to a job interview or request to provide additional information. An example of a CV and cover letter can be found in the appendix.

### Occupations

We included six core occupations: cook, electrician, payroll clerk, receptionist, sales representative, software developer and store assistant. The selection criteria to include occupations were threefold. First the occupations vary with regard to theoretically relevant dimensions: educational requirements, and customer contact, both of which may affect discrimination (Agerström et al. 2012; Pager 2007). A second criterium was cross-national comparability[5]. The third criterium was practical: occupations needed sufficient vacancies in each country. The aim was to have an equal amount of observations for the six occupations. Unfortunately, this was not feasible as there were not sufficient vacancies in some countries. To increase the number of vacancies, four occupations have been added in some countries (hairdresser, plumber, electrician and carpenter). Table 1 presents an overview of the occupations. Table 2 provides the frequencies of the occupations by country of study.

### The applicant

Besides variation in the occupation specific characteristics and the treatment variables, the job applicants have a standard profile. Candidates have obtained the necessary educational qualifications for their occupation and have four years of working experience at two different companies in the same sector of the job vacancy. All cover letters include a job task description of the second job. Although the content is similar, due to labour market particularities, the length of the job task description slightly differs between the countries. Because of differences in the length of the educational trajectories, as well as the duration of the field work, the age of the applicants varies from 22 to 26.[6]

To make sure that the application is realistic, all applicants have the same motivation to apply: The applicant lives in the capital or in a big city, where s/he attended secondary and tertiary education. However, the applicant grew up in the region where the job was advertised[7] and explains in the cover letter that s/he would like to return to the region where s/he grew up. Thus, the applicant's place of residence and education is constant, while

**Table 1.** Occupations included in the field experiment.

| Occupation | ISCO-08 Code (s) | ISCO name | Country-specific remarks |
|---|---|---|---|
| Cook | 512 | Cooks | |
| Electrician | 7412 | Electrical Mechanics and Fitters | Not in DE and ES |
| Payroll Clerk | 3341 | Office Supervisor | |
| | 3343 | Administrative and Executive Secretaries | |
| | 3344 | Medical Secretaries | |
| | 411 | General Office Clerks | |
| | 412 | Secretaries (General) | |
| | 4311 | Accounting and Bookkeeping Clerks | |
| | 4313 | Payroll Clerks | |
| Plumber | 7126 | Plumbers and Pipe Fitters | Not in DE and ES |
| Receptionist | 4224 | Hotel Receptionists | |
| | 4226 | Receptionists (General) | |
| Sales Representative | 2431 | Marketing professionals | |
| | 2433 | Technical and Medical Sales Professionals (excluding ICT) | |
| | 2434 | Information and Communications Technology Sales Professionals | |
| | 3322 | Commercial Sales Representatives | |
| Software Developer | 2512 | Software Developers | |
| | 2513 | Web Developers | |
| | 2514 | Applications Programmers | |
| Store Assistant | 5223 | Shop Sales Assistants | |
| | 5221 | Shopkeepers | |
| | 5222 | Shop Supervisors | |
| | 5230 | Cashiers and Ticket Clerks | |
| Hairdresser | 5141 | Hairdressers | Not in the UK |
| Carpenter | 7115 | Carpenters and Joiners | Not in DE, ES and the UK |

Source: Gemm data.

providing a plausible motivation to apply for a job in a region that may be far away and/or sparsely populated.

### *Treatment variables*

The wording of the treatment differs slightly across countries. The guiding principle to formulate the treatments was suitability of the application for the specific labour market, while keeping the skills constant. Rather than being identical in formulation across

**Table 2.** Number of job applications by occupation and country of study.

| | United Kingdom | Spain | Germany | Norway | Netherlands | Total |
|---|---|---|---|---|---|---|
| Cook | 403 | 1.687 | 496 | 330 | 858 | **3.774** |
| Electrician | 32 | 0 | 0 | 167 | 196 | **395** |
| Payroll Clerk | 923 | 838 | 500 | 394 | 712 | **3.367** |
| Plumber | 17 | 0 | 0 | 119 | 109 | **245** |
| Receptionist | 452 | 542 | 494 | 84 | 466 | **2.038** |
| Sales Representative | 587 | 270 | 496 | 673 | 626 | **2.652** |
| Software Developer | 463 | 247 | 497 | 413 | 637 | **2.257** |
| Store Assistant | 462 | 835 | 500 | 302 | 505 | **2.604** |
| Hairdresser | 0 | 874 | 251 | 147 | 186 | **1.458** |
| Carpenter | 0 | 0 | 0 | 223 | 168 | **391** |
| **Total** | **3.339** | **5.293** | **3.234** | **2.852** | **4.463** | **19.181** |

Source: Gemm data.

countries, applications thus follow the national standard. For example, applications in Germany are more formal than in the UK. Thus, the comparability is not necessarily in the wording, but in its meaning, resulting in a job application that is equally suitable for the vacancy across countries.

*Ethnicity*. In this study, ethnicity refers to the country of origin of the (parents of) the job applicant. For example, an individual with the Swedish ethnicity refers to a person whose family migrated from Sweden to the country of study, while being a member of the majority population in Sweden.

In total, 53 ethnicities are included (see Table 3 for an overview of the ethnic minority groups and its frequencies). All countries used the same 31 ethnicities. Additionally, each country included five ethnic minority groups that were of particular interest. Ethnicities were chosen based on several criteria. First, based on size, we selected the most important minority groups in each country. Second, we considered the distribution of religious groups within the countries; countries with two major religions were preferred over mono-religious countries. Third, as profile pictures were included in German, Spanish and Dutch applications, we selected countries with phenotypical variation. Fourth, to allow for future additional analyses, the availability of country characteristics (e.g. register data, participation in World Values Survey (WVS) and European Values Survey (EVS)) was checked. Finally, the aim was to represent as many regions of the world as possible.

Within the following strata, ethnicity was randomly assigned: 25% majority population, 2×12.5% for minority groups with a special interest; 50% for the remaining ethnicities. The minority groups with a special interest are a large Muslim minority in the destination country, plus a large minority group relevant in the destination country. For example, in the Netherlands, Moroccans and Turks are over sampled; in Spain, Moroccans and Ecuadorians are over sampled. The over sampled groups allow for a point estimate of discrimination that is specific for the minority group.

We signal ethnicity in three ways. First, each ethnicity was assigned a family and first name typical for the majority population of the origin country (see Table 3). Names were chosen that are popular and recognisable as male or female. Furthermore, names that have a religious or class connotation were avoided (see (Gaddis 2017) for a discussion on the selection of names). An overview of the names and the selection procedure can be found in the technical report.

Second, as names are imprecise signals of ethnicity, the country of origin was mentioned explicitly in both the CV and cover letter. In the skills section of the CV, the applicant's country of origin was explicitly signalled by indicating, in addition to the host country language, a second mother tongue, e.g. 'Russian (mother tongue)'[8]. Third, the cover letter contains a statement that the family of the job candidate has migrated from the origin country to the region of the advertised job.

*Phenotype*. In the countries where including a picture in the CV is an acceptable or a required practice, the CV contained a randomly assigned profile picture. This was the case in Germany, the Netherlands and Spain. We constructed eight phenotypes (Central European, North European, South European, North African, East African, West African, East Asian, South Asian), and also include a no photo condition (see Figure 1). To avoid unrealistic country-phenotype combinations, randomisation was restricted to plausible variation by origin country (i.e. an African phenotype is not assigned to a candidate originating from Vietnam). To assess which country-phenotype

**Table 3.** Ethnic groups included in the GEMM study.

A. Ethnicities included in all countries

| Country of origin | Male names | Female names | Surnames | Oversampled | Frequency |
|---|---|---|---|---|---|
| Albania | Arben | Valbona | Marku | | 432 |
| Bulgaria | Zlatan | Nevena | Dimitrov/a | | 447 |
| China | Ho-Yin | Xia | Chan | | 287 |
| Egypt | Karim | Dina | Saleh | | 296 |
| Ethiopia | Habtamu | Abeba | Yerga | | 259 |
| France | Guillaume | Claire | Durand | | 277 |
| Germany | Paul | Lisa | Schneider | | 967 |
| Greece | Giorgos | Konstantina | Papadopoulos/ou | | 278 |
| India | Sanjay | Divya | Kumar | | 284 |
| Indonesia | Dian | Putri | Bintang | | 262 |
| Iran | Farhad | Anisa | Ahmadi | | 302 |
| Iraq | Kathem | Rana | Ahmed | | 328 |
| Italy | Francesco | Valentina | Marino | | 264 |
| Japan | Hiroto | Asuka | Sato | | 280 |
| Lebanon | Fares | Ghada | Khodr | DE | 506 |
| Mexico | Pedro | Guadalupe | Flores Martínez | | 296 |
| Morocco | Mehdi/Said | Karima/Rachida | Idrissi/El Moussaoui | ES, NL | 1.418 |
| Netherlands | Jeroen | Maaike | De Vries | | 1.361 |
| Nigeria | Akintunde | Adeola | Oladejo | UK | 704 |
| Norway | Kristian | Silje | Hansen | | 922 |
| Pakistan | Tariq | Yasmeen | Anwar | NO, UK | 1.025 |
| Poland | Marek | Michalina | Kowalski | | 449 |
| Rumania | Andrei | Dana | Popescu | | 247 |
| Russia | Sergej | Olga | Ivanov/a | | 269 |
| South Korea | Ji-Hun | Su-Min | Lee | | 260 |
| Spain | Alvaro | Alba | Martínez García | | 1.341 |
| Turkey | Enes | Elif | Aydin | DE, NL | 1.042 |
| Uganda | Wemusa | Kisakye | Ndikumana | | 247 |
| United Kingdom | James | Emily | Robinson | | 1.045 |
| USA | Matthew | Ashley | Smith | | 266 |
| Vietnam | Danh | Linh | Nguyen | | 240 |

B. Ethnicities included in selected countries

| Country of origin | Male names | Female names | Surnames | Countries | Frequency |
|---|---|---|---|---|---|
| Bosnia and Herzegovina | Ajdin | Belma | Kovačević | ES, NO | 130 |
| Dominican Republic | Carlos Manuel | Elizabeth | Vasquez Pérez | DE, ES | 113 |
| Macedonia | Dragomir | Vesna | Angelov/a | DE, NL | 98 |
| Malaysia | Chee | Siew | Leong | DE, NL | 117 |
| Trinidad and Tobago | Toriano | Onika | Wilson | UK, DE | 105 |
| Surinam | Ricardo | Sharmila | Pinas | NL | 67 |
| Belgium | Glenn | Lore | De Smet | NL | 68 |
| Antilles | Gregory | Sharine | Martis | NL | 49 |
| Sweden | Erik | Linnéa | Andersson | NO | 34 |
| Denmark | Henrik | Hanne | Nielsen | NO | 47 |
| Lithuania | Ivan | Elena | Mantas | NO | 34 |
| Eritrea | Aman | Segen | Tesfay | NO | 36 |
| Philippines | Reynaldo | Rowena | Reyes-Ilagan | NO, ES | 120 |
| Ukraine | Dmytro | Oksana | Melnyk | ES | 64 |
| Ecuador | Luis Alberto | María Fernanda | Guamán Espinoza | ES | 564 |
| Portugal | Nuno | Catarina | Rodrigues | ES | 59 |
| Jamaica | Lavonne | Delroy | Worrell | UK | 54 |
| Bangladesh | Farzana | Abdul | Uddin | UK | 48 |
| Somalia | Idres | Yassin | Dahir | UK, NO | 382 |
| Ireland | Erin | Brendan | O'Brien | UK | 41 |
| South Africa | Piet | Hilda<br>Ayanda | Van Reeden<br>Nkosi | DE | 57 |
| Catalonia | Jordi | Laia | Puig Solé | ES | 293 |
| **Total** | | | | | **19.181** |

Source: Gemm data.

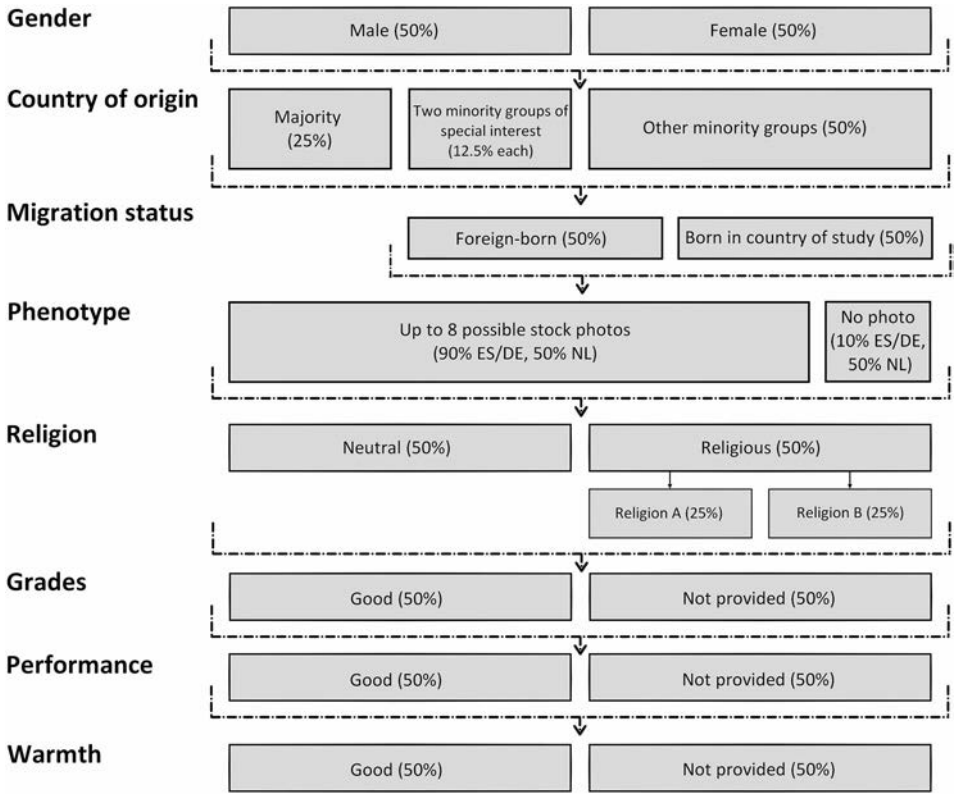


**Figure 1.** Overview of treatment conditions of the GEMM study.

combinations were not realistic, a plausibility pre-test was carried out in the form of an online survey (For details, see the technical report).

*Headscarf*. For each of the eight female phenotypes, a version with headscarf was created (see also Ghumman and Ryan 2013; Weichselbaumer 2016). As it is unrealistic that non-Muslim women wear a headscarf, the headscarf treatment is conditional on being assigned Islam on the religion treatment (see below). Thus, among women who are assigned Islam, 50% was assigned a headscarf.

*Religion*. Following previous correspondence studies (Adida, Laitin, and Valfort 2010; Pierné 2013) religious affiliation was signalled by mentioning the applicant's engagement in a voluntary association in both the cover letter and the CV. Applicants either indicated no religious affiliation (50%), or were affiliated with a Christian, Muslim, Buddhist or Hindu organisation. All applicants volunteered, but some did so in a religious organisation (religion treatment), while others volunteered in a secular organisation (neutral treatment). On the CV, the line read: '*Volunteer at* [*religion treatment: Christian/Muslim/Hindu/Buddhist*] *Youth Project*'. In the neutral condition, the part between brackets was omitted. The cover letter contained a similar, but occupation specific sentence. For example, for the cook, the sentence read: *I am an active member of* [***treatment***] *where I, among other things, help with the preparation of meals during various events like local fairs and open days* (see technical Report for the other occupations). The religion

treatment depends on the applicant's ethnicity and is thus not orthogonal. For example, an applicant of Iranian descent can be assigned Islam, but not Buddhism[9].

*Migration status* is varied for ethnic minorities. We distinguish between ethnic minorities born in the study country and foreign-born ethnic minorities who migrated at the age of six. Hence, all applicants have obtained most of their primary and all their secondary education in the study country. Migration status was signalled in both the CV and cover letter. For foreign-born minorities, the cover letter included a sentence.: 'I was born in [origin country], but moved to [region of company] at the age of 6 and all my relevant education and training has been in [host country]'. For minorities born in the study country, the sentence read: 'My family is originally from [origin country], but I was born in [region of company] and all my education and training has been in [host country]'. Furthermore, the CV contained the place of birth: in a city close to the job offer versus in a foreign capital.

*Gender*. The job candidate was randomly assigned a male of female first name and the gender was mentioned explicitly on the CV. Furthermore, the grammar in the application material was adjusted to match the gender of the candidate (i.e. adding-in for female applicants in Germany).

*Grade*. To test whether information on school grades differently affect hiring behaviour for natives and immigrants (Damelang and Abraham 2016; Lancee and Bol 2017), information about the grades was varied. 50% of the applicants mentioned good final grades on their CV, while the other half did not mention any grades. Thus, not the skill level of the applicant is varied, but the amount of information on the applicant's skills. As such, the treatment serves as a test for statistical discrimination theory.

*Performance*. For 50% of the applicants, a statement was included indicating they are particularly productive and hardworking, while the other 50% did not receive this treatment (neutral condition). The sentence in the cover letter read as follows:[10] '*My job as* [*profession*] *prepared me well to work under pressure. Because of the great range of duties in my current job, I am used to master new challenges and I am always eager to expand my skills. As a result of my consistently high work performance, my employer passed more responsibilities on me. For example, since last year I am responsible for training new* [ *occupation specific: members of the kitchen staff*]'. To signal the additional responsibilities in the prior job, the CV included bullet points (see the example in the appendix).

*Warmth*. Inspired by the work of Argerström et al., we varied social skills. For 50% of the applicants, a statement was included in their application indicating they are particularly social and work well in teams, while the other 50% did not receive this treatment (neutral condition). The sentence in the cover letter read: '*My friends and colleagues think that I am a pleasant and social person, who gets along well with others, both at work and elsewhere. I am a team player who values a good work environment, and that is why I am always friendly and attentive to other people's needs*'. The CV contained a similar statement in bullet points.

## Coding employer's responses

The dependent variable consists of the employer's response to the application. Contact information was provided on the applicant's CV, consisting of an e-email address, a mobile phone number, and a postal address. All employer's responses were recorded;

Table 4 lists the categories used and its distribution, by country.[11] The research team did not engage in further communication with the employer. In case of the response types (pre-)invitation, additional info wanted or incomplete application, the application was politely withdrawn stating that the candidate is no longer interested.

Based on the categories listed in Table 4, a dichotomous variable differentiating positive (signal of interest) from negative (no signal of interest) responses was constructed. Employers signal interest in the job candidate in three ways: First, the employer invites the job candidate for an interview. Second, the job applicant receives what we have labelled a 'pre-invitation': the candidate has passed an early selection process but s/he is not (yet) formally invited for an interview/meeting. Third, employers sometimes request additional information or ask to be called back.[12]

While the 'pre-invitation' and 'additional information wanted' categories are not as clearly a positive signal of interest as an invitation itself, these categories are coded as interest for two reasons. First, inquiries with employers in the pilot phase of the project indicated that these categories would lead to a formal invitation to an interview. Second, countries differ in their hiring procedures. For example, while in the United Kingdom, a pre-invitation, occurred in three per cent of the cases, this never happened in Spain. Similarly, in Spain, virtually all positive responses come in the form of an invitation, while Germany and the United Kingdom receive about the same percentage of invitation as requests for additional information. For that reason, a binary coding of the employer response in 'interest' versus 'no interest' is better comparable across countries.

The category 'No signal of interest' is also based on three different response types. First, employers may explicitly reject the job applicant. Second, there may be no response at all. Third, the final response is a confirmation of receipt. Usually, the confirmation of receipt is a standard response from the employer. As can be seen in Table 4, also in the no interest category there are cross-national differences: in the Netherlands, an explicit rejection occurs almost as frequently as no response at all. On the other hand, in the UK, 'no response' is by far the most common form of signalling no interest. For that reason, a dichotomous variable of interest versus no interest is analysed as a dependent variable in the papers in this special issue. Naturally, the data itself allows for different analyses too, not only using the detailed response categories, but also the amount or sequence of responses in case of multiple contact attempts of an employer.

**Table 4.** Employer's response, by country.

| Interest | Final response | United Kingdom | Spain | Germany | Norway | The Netherlands | Total |
|---|---|---|---|---|---|---|---|
| *Signal of interest* | Additional info wanted | 237 | 12 | 440 | 264 | 442 | 1.395 |
| | Pre-invitation | 99 | 0 | 51 | 32 | 87 | 269 |
| | Invitation | 226 | 703 | 1.027 | 487 | 1.504 | 3.947 |
| *No signal of interest* | Rejection | 330 | 1.49 | 613 | 642 | 1.068 | 4.143 |
| | No response | 2.242 | 682 | 888 | 1.08 | 1.132 | 6.024 |
| | Confirmation of receipt | 109 | 2.403 | 100 | 277 | 167 | 3.056 |
| *Missing* | Missed call | 0 | 3 | 60 | 43 | 2 | 108 |
| | Incomplete application | 62 | 0 | 12 | 2 | 1 | 77 |
| | Detection | 0 | 0 | 0 | 0 | 5 | 5 |
| | Other | 34 | 0 | 43 | 25 | 55 | 157 |
| **Total** | | **3.339** | **5.293** | **3.234** | **2.852** | **4.463** | **19.181** |

Source: Gemm data.

## Findings and conclusion

This special issue presents unique harmonised field experimental data that allow for the comparative study of ethnic discrimination in hiring behaviour in six countries: Germany, The Netherlands, Norway, Spain, United Kingdom and United States. The findings show that, in line with earlier research, all else equal, ethnic minorities have substantially lower hiring chances then the majority population.

However, the papers in this special issue show that the extent of discrimination varies across national contexts and across ethnic groups. The empirical evidence presented can be summarised in two conclusions. First, discrimination varies across national contexts. Comparing Moroccans in Spain and the Netherlands, Ramos, Thijssen, and Coenders (2021) find that discrimination against Moroccans is significantly higher in the Netherlands. Whereas job candidates of Moroccan origin are six percentage points less likely to receive a positive response from an employer in Spain, this ethnic gap in call-back rates is fourteen percentage points in the Netherlands. Given the high unemployment rate in Spain and the low rate in the Netherlands, these findings might be surprising. However, there are several arguments to expect discrimination against Moroccans to be higher in the Netherlands. For example, the highly polarised debates about the immigration and integration of Muslim minorities might have fuelled employers' perceptions of cultural group threat in the Netherlands. Furthermore, levels of cultural group threat might be higher in the Netherlands due to larger cultural differences between the majority and the Moroccan minority.

Similarly, Thijssen et al. (2021) find that discrimination against Turks is significantly lower in Germany then it is in the Netherlands. In Germany, job candidates of Turkish origin are five percentage points less likely to receive a callback than equally qualified majority candidates, whereas in the Netherlands this ethnic gap is fifteen percentage points. An often-mentioned explanation for lower levels of discrimination in Germany is the large and relatively standardised amount of information that is provided by job seekers in their application (Zschirnt and Ruedin 2016). However, Thijssen and colleagues did not find that the amount of information in application materials explains why discrimination against Turkish minorities is lower in Germany. The question why discrimination is relatively low in Germany remains thus answered.

Larsen and Di Stasio (2021) compare Pakistani in Norway and the United Kingdom, a group that is highly similar in both countries. Postulating an institutionalist argument, Larsen and Di Stasio expect discrimination to be lower in the UK, compared to Norway due to its flexible labour market, the stricter anti-discrimination legislation, and more liberal church-state relations. In more flexible and less regulated labour markets, employers can more easily hire and fire employees (Kogan 2006; Lancee 2016). Since employers are risk-averse, discrimination is likely to be lower in the UK. Furthermore, the UK is characterised as a country that favours an associational and voluntary mode of religious organisation and recognises a plurality of individual religious orientations in the public sphere (Koopmans et al. 2005). However, despite these different contexts, discrimination against Pakistani is not substantially different in the UK and Norway.

Also Yemane and Ramos (2021) focus on two heterogeneous national contexts: Spain and the US. They analyse discrimination against Latinos, one of the largest and fastest growing ethnic minorities in both countries. Due to the proximity in terms of culture

and language, discrimination against Latinos is expected to be lower in Spain than in the US. Yemane and Ramos find that, in the US labour market, Latinos are highly discriminated. However, there are important gender differences. Discrimination against Latino men is high and statistically significant, whereas there is no significant discrimination against Latino women. In Spain, by contrast, there is no discrimination against Latino men, but substantial discrimination against Latino women. According to Yemane and Ramos, this can be explained by the rather different stereotypes of Latino men and women in the US and Spain.

A second finding of this special issue is that group characteristics matter a great deal too. Di Stasio et al. (2021) study hiring discrimination towards Muslims in five European countries. The GEMM research design allows distinguishing between the effect of originating from a country with a sizeable Muslim population (a mere 'country of origin' or 'Muslim by default' effect) and the additional stigma that applicants face when signalling their closeness to Islam (a 'religious belief' or 'disclosed Muslim' effect). Di Stasio et al. (2021) find a substantial 'Muslim by default' effect in three of the five countries. Moreover, job seekers who signal closeness to Islam in their application by means of voluntary work suffer an additionally penalty, albeit not in all countries of study. The findings show that Muslims face substantial discrimination, but also that that there are large differences across countries of destination.

Finally, Veit and Thijssen (2021) study how perceived social and cultural distance matters by varying the birth place of the job applicant. In line with taste-based discrimination theory, foreign-born minorities are less likely to receive a callback than domestic-born minorities. Furthermore, there are large differences across origin groups: compared to individuals with European ancestry, a Middle Eastern or African background decreases the probability of a positive response by five percentage points. Veit and Thijssen also document important country differences, both with respect to the size of the minority penalty and the joint effect of birthplace and origin group.

The findings in this special issue show that ethnic discrimination is the result of a complex interplay between the national institutional context and the characteristics of the job applicant. In line with the 'new institutionalist's' argument (Brinton and Nee 1998), employers' recruitment behaviour depends on the institutional context in which they make their decisions. While the importance of the institutional context is nothing new among scholars who study the stratification of labour markets, research on ethnic discrimination has largely ignored it. The papers in this special issue clearly show that the same ethnic group is treated differently in different countries. The contributions in this special issue thus point to the need for research that links discriminatory outcomes to the context of employment. By comparing discrimination rates between countries using a harmonised design, this special issue is a first step towards explaining differences across national institutional contexts. Future research could continue in this direction, for example, by directly studying the mechanisms that explain cross-national differences. Furthermore, future work could focus on the workplace context. Despite the longstanding plea of that we must 'bring the firm back in' (Baron and Bielby 1980; Powell and DiMaggio 2012; Tomaskovic-Devey and Avent-Holt 2017), analysing the meso context is rare in discrimination research (a notable exception is Midtbøen 2015).

Second the special issue shows that group differences matter a great deal too: there are large country of origin effects. In line with the theory of ethnic hierarchies (Hagendoorn

1995), discrimination is higher for groups with a lager social distance to the majority population, such as Muslims and African or Middle eastern origin countries. To the extent that differential treatment of ethnic groups is rooted in cultural differences, this is evidence in line with taste-based discrimination theory. Future research could further test the theory of ethnic hierarchies (see, for example, Bessudnov and Shcherbak 2018; Koopmans, Veit, and Yemane 2018), or study which stereotypes are most influential in explaining ethnic discrimination.

This special issue documents and explains variation in the extent of ethnic discrimination across groups and contexts. This is an important contribution in better understanding the persistent inequality between ethnic groups on the labour market. However, besides variation, the papers in this special issue show that there is pervasive discrimination in all countries studied. These findings are a sobering reminder that discrimination is (still) widespread in both Europe and the United States.

## Notes

1. In the United Kingdom, data is only collected in England.
2. For example, if a pair consists of a minority and a majority candidate, the pair is typically either male or female. In this setup, one cannot analyse the effect of gender on hiring chances independently of ethnicity.
3. This is most extreme in the case that, besides the field experimental application, the employer receives only one other application. In a paired design, the pool then consists of three applications: two identical competitors, plus an unknown application. In the unpaired design, the pool consists of the field experimental application and the unknown application. In designs with more than two applications per vacancy, this problem is even more severe.
4. The search terms used in each country can be found in the Technical Report (Lancee et al. 2019).
5. Comparability across countries relates both to occupations to be similar across countries, as well as the application procedure.
6. Applicants 'age' during the field work.
7. Majority and minority members were born in the region; foreign-born applicants were born in the capital of their country of birth and migrated to the region at age six.
8. To avoid potential confusion about the candidate's language proficiency, the destination country language was also specified as mother tongue.
9. One or two dominant religion(s) were identified in each country. Applicants can only be assigned to (one of) the dominant religion(s) of their country of origin (with equal probability). The threshold for a country to be listed with two dominant religions was that more than five percent of the population belongs to the second dominant religion. An overview of which religion affiliations were used for which ethnicities can be found in the Technical Report (Lancee et al. 2019).
10. In the UK and the Netherlands, there was an additional phrase included on the applicant's CV that was worded as follows: "*A hard-working person, successful in meeting the targets of the company and responsible for training [see treatment wording in the above list]. Now looking for opportunities to further develop in the [job specific] sector.*"
11. Responses that were not clearly positive or negative (confirmation of receipt, missed call, or "other" responses) were replaced by subsequent employer responses. If the ambiguous response was not followed by any other response type, it was not overwritten.
12. This category indicates that the employer has most likely reviewed all applications and requests additional information about the candidate. Presumably, not all candidates are contacted for additional information.

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