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# Same religion, different treatment. The role of origin country characteristics in employers' decisions to hire Muslims

Valentina Di Stasio\* and Anne Margaretha de Vries\*

Department of Interdisciplinary Social Science, European Research Centre on Migration and Ethnic Relations (ERCOMER), Utrecht University, Utrecht, Netherlands

## ABSTRACT

Using data from a cross-nationally harmonised correspondence test, we examined how employers in five European labour markets (Britain, Germany, Netherlands, Norway, Spain) respond to applications received from Muslim job seekers with ancestry from 22 different countries of origin. Drawing on the interdisciplinary literature on anti-Muslim prejudice, we expected that callbacks would depend on characteristics of applicants' origin countries that could signal cultural value incompatibility and political and military oppression, thus triggering perceptions of symbolic and security threats, respectively. The results point to lower callback rates for Muslims, the higher the level of authoritarianism and gender inequality in their origin country. Results for authoritarianism are especially robust across different operationalizations of threat and model specifications. We also find that the association between authoritarianism and callbacks was only statistically significant for men, indicating that Muslim men are especially at risk of exclusion from employment opportunities.

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symbolic threat; security  
threat; correspondence test

## Introduction

According to recent statistics, a sizeable and growing share of the European population consists of Muslims, who are largely immigrants or descendants of immigrants (Pew Research Center 2017a). Alarming, Muslims have lower rates of employment and lower occupational attainments than the non-Muslim majority population in many countries, net of controls for sociodemographic and human capital factors (Connor and Koenig 2015; Foner 2015; Platt, Polavieja, and Radl 2022). While observational studies can only assume that these religious and ethnic penalties are, at least in part, due to employer discrimination (Koopmans 2016), field experiments have convincingly shown that Muslims face substantial discrimination when applying for jobs

**CONTACT** Valentina Di Stasio  [v.distasio@uu.nl](mailto:v.distasio@uu.nl)

\*The authors have contributed equally to the manuscript and are listed in alphabetical order.

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(Adida, Laitin, and Valfort 2010; Di Stasio et al. 2021; Pierné 2013; for a recent meta-analysis: Thijssen et al. 2021b).

Muslims are highly salient in people's minds, which makes them particularly vulnerable to prejudice. For example, Germans mostly think of Muslim groups when instructed to think of foreigners, even though the majority of foreigners living in Germany originate from Christian-majority countries (Wallrich, West, and Rutland 2020). Similarly, about one third of respondents in Flanders spontaneously associate foreigners with being Muslim or originating from a Muslim-majority country (Spruyt and Elchardus 2012). In both studies, those who associated Muslims with foreigners also held more prejudicial attitudes toward these groups. Furthermore, when explicitly primed to think about Muslims in survey experiments (i.e. contextual salience), the public tends to hold more hostile attitudes than when asked to think about non-Muslims or immigrants in general (e.g. Spruyt and Elchardus 2012; Strabac and Listhaug 2008; but see Strabac, Aalberg, and Valenta 2014).

Notwithstanding widespread anti-Muslim prejudice, employment participation, occupational attainments and levels of discrimination vary widely among Muslims, depending on their country or region of origin. For example, Khattab and Modood (2015) found that Pakistani, Bangladeshi and Black Muslims in the UK had a higher probability of being unemployed than both Indian and White Muslims. Similar differences between Muslim groups, with penalties particularly pronounced for Bangladeshi and black African Muslim men and for Muslim Arab women, were reported in a more recent study (Sweida-Metwally 2022). In two field experiments on hiring discrimination, Muslims from Africa and the Middle East were less likely to receive a positive response from employers (i.e. a positive callback) than European Muslims (Di Stasio et al. 2021; Pierné 2013).

While differences between Muslim groups have been documented, the reason why some Muslims face stronger barriers to enter employment than others is still unclear. Our study aims to fill this gap. We rely on data from the GEMM study, a cross-nationally harmonised field experiment conducted in Germany, Norway, the Netherlands, Spain and the United Kingdom (Lancee 2021) to scrutinise possible differences in callbacks between Muslims from different countries of origin. Fictitious applications were sent to employers in the form of a correspondence test, a state-of-the-art method to examine hiring discrimination. Exploiting the inclusion of Muslim applicants from 22 countries of origin in the design of the field experiment, we examine whether differences in callbacks across Muslim groups reflect characteristics of origin countries that could be traced back to common roots of anti-Muslim prejudice: threats to liberal, cultural and secular values (i.e. symbolic threats), as well as to political and military security (i.e. safety threats).

Findings indicate that employers in Europe are especially reluctant to hire Muslims originating from highly authoritarian and gender-unequal countries, with Muslim men from less well-established democracies suffering the strongest levels of discrimination. Through advancing our understanding of the sources of anti-Muslim discrimination, and of the groups that are most vulnerable, this study can aid in the design of more targeted anti-discrimination policies, campaigns and training programmes.

## Anti-Muslim attitudes in Western Europe

In the last 20 years, a growing body of research has focused on the drivers of anti-Muslim prejudice (Verkuyten 2021). Muslims are commonly stereotyped as violent, dishonest, inferior, politically disloyal, aggressive, fanatical and prone to terrorism (Ciftci 2012; Selod 2019; Spruyt and Elchardus 2012). In turn, negative stereotyping fuels the belief that Muslims are a threat to the ingroup value system and national identity (Sniderman and Hagendoorn 2007; Spruyt and Elchardus 2012) as well as a threat to public security and physical safety (Ciftci 2012; Fischer, Greitemeyer, and Kastenmüller 2007; Hellwig and Sinno 2017). These threat perceptions are sustained by media portrayals and a public discourse painting Muslims as both an internal enemy – i.e. deviant and cultural others, whose beliefs and behaviours are fundamentally at odds with the Western way of life – and an external enemy, i.e. the main cause of international terrorism and an existential military or political threat to national security (Cesari 2013).<sup>1</sup>

On the backdrop of strongly negative attitudes toward Muslims as a group, it is perhaps not surprising that Muslims are exposed to severe discrimination when applying for jobs in European labour markets, as confirmed by field experiments randomly assigning ethnic and religious cues to fictitious job applications (for two recent meta-analyses of discrimination against Muslims: Bartkoski et al. 2018; Thijssen et al. 2021b).

### *Group-level variation in anti-muslim discrimination: the role of symbolic and security threats*

The literature offers several explanations for anti-Muslim discrimination. According to economics models of statistical discrimination theory (Arrow 1973; Phelps 1972), in situations of high information uncertainty employers rely on signals of applicants' group membership (e.g. ethnic or religious) as a proxy of their expected productivity. Taste-based discrimination theory instead attributes discriminatory hiring decisions to prejudicial attitudes toward groups that employers or their customers dislike, even if this leads to productivity losses (Becker 1957). According to theories of intergroup relations from social psychology, prejudice stems from competition over scarce resources, of either tangible (e.g. safety, economic resources) or symbolic (e.g. beliefs, morals) nature. As long as intergroup conflict is perceived as real, outgroups trigger feelings of threat to the ingroup's status, interests and value system, which result in outgroup prejudice and outright hostility, including discrimination (Scheepers, Gijsberts, and Coenders 2002). Although adjudicating between different explanations remains challenging, studies that compared the explanatory power of taste-based and statistical discrimination tend to find more evidence in support of the former (Koopmans, Veit, and Yemane 2019; Lippens et al. 2022; Thijssen, Coenders, and Lancee 2021a). Furthermore, different outgroups elicit different types of threat, with Muslim immigrants triggering symbolic and security threats more strongly than other groups (Hellwig and Sinno 2017).

While theories of discrimination and intergroup threat can clarify the underlying causes of anti-Muslim discrimination, they do not readily explain the variation in employment outcomes among Muslims. In fact, because Muslims are one of the most stigmatised groups in Western Europe (Foner 2015), one might expect that applicants signalling their Muslim identity would be similarly penalised, regardless of their

origin. On the contrary, the considerable variation in outcomes among Muslim groups (e.g. Di Stasio et al. 2021; Khattab and Modood 2015; Sweida-Metwally 2022), depending on their country or region of origin, suggests that not all Muslims are similarly at risk of discrimination, nor are they perceived as equally threatening.

Because Muslims are negatively stereotyped as posing symbolic and security threats to Western European democracies, we hypothesised that employers would be especially reluctant to hire Muslims originating from countries where such symbolic or security threats are more strongly present (i.e. prototypical Muslims). Specifically, we reasoned that applicants' country of origin may serve as a cue that activates the negative stereotyping of Muslims. We built on the notion of stereotype prototypicality, that is, the extent to which a person or subgroup (e.g. a Muslim job applicant from a specific origin country) is perceived to have attributes or traits that best represent the larger group (e.g. Muslims in general). Research in social psychology has demonstrated that group stereotypes are more strongly applied to targets seen as more prototypical of the group (for a review: Hall et al. 2019).

In the hiring process, employers make decisions on the basis of limited knowledge of applicants and of whether they would be a good fit for the organisations. Employers might fall back on stereotypes, using group-level proxies such as origin country information, to infer applicants' expected productivity (statistical discrimination) and attitudinal dispositions (intergroup threat theories, taste-based discrimination). Consistent with this interpretation, in a German study applicants were less likely to be called back the larger the difference in emancipative values between Germany and their origin country, which suggests that differences in callback rates are partly attributed to perceptions of cultural distance (Koopmans, Veit, and Yemane 2019). Importantly, group-level stereotypes can be mitigated or exacerbated by individual-level information, to the extent that this is available. For example, a few studies show that Muslims receive better treatment if they openly endorse progressive values (Choi, Poertner, and Sambanis 2023) while they are penalised for expressing beliefs perceived to be at odds with Western liberal values (Moss et al. 2017; Van der Noll et al. 2018) or fundamentalist forms of religiosity (Helbling and Traunmüller 2020). However, it is rather unlikely that employers receive information on applicants' attitudes and strength of religious beliefs during the hiring process; in the absence of such 'highly diagnostic individuating information' (Jussim, Crawford, and Rubinstein 2015), the literature on stereotypes and person perceptions shows that people fall back on group-level stereotypes. Applied to our case study, we expect employers to rely on information about applicants' origin country to inform their preferences. In turn, this easily accessible group-level cue can make symbolic and security threats more or less salient.

With regard to symbolic threat, the public discourse focuses heavily on gender issues, often portraying Muslim women as lacking agency and autonomy and Muslim men as their oppressors (Selod 2019). Islam is criticised for stifling female emancipation and sexual liberation, to a much stronger degree than other religions and cultures (Moss et al. 2017). A second concern relates to the threat Muslims are perceived to pose to Europe's traditionally 'Judeo-Christian' identity, a belief sustained by the association of Christian values to the Enlightenment in the public discourse (Cesari 2013). Since the 1990s, the alleged lack of acceptance among Muslims of the separation of religion and the state has been a recurrent subject of public debates (e.g. Foner 2015; Nilsson

2015). Muslims, on average, hold more conservative views about marriage and sexuality than non-Muslim natives (Kalmijn and Kraaykamp 2018), and these values are seen as conflicting with the worldviews of increasingly secularised European societies. Based on the assumption that country characteristics can heighten perceptions of symbolic threat among employers, we expect:

Hp1: Muslim applicants originating from more gender unequal countries receive lower callback rates than Muslim applicants originating from more gender equal countries.

Hp2: Muslim applicants originating from more theocratic countries receive lower callback rates than Muslim applicants originating from more secular countries.

With regard to security threat perceptions, fears first and foremost stem from the rise of political (jihadist) Islam and the spread of Islamist terrorism on a global scale. Since the 9/11 attacks, concerns about Muslims supporting extremist groups and terrorist organisations have led to a securitisation of European policies on immigration and Muslim integration (Cesari 2013; Ciftci 2012). A related concern is that Muslims, as well as their political leaders, may oppose democracy and human rights and that liberal democratic values and freedoms would be jeopardised by the incorporation of Muslims in Western societies (Eskelinen and Verkuyten 2020). Hence, we drew the following hypotheses on perceived security threat:

Hp3: Muslim applicants receive lower callback rates the more severe the threat of Islamist terrorism in their country of origin.

Hp4: Muslim applicants receive lower callback rates the more authoritarian the government in their country of origin.

### *The gendered nature of symbolic and security threats*

While our reasoning so far has referred to Muslims in general, exposure to hiring discrimination differs by gender. For example, a correlational study found that in terms of socio-economic status, while Muslim women benefitted from residing in countries with stronger anti-discrimination policies, Muslim men did not, a finding they interpret as evidence that ‘discrimination against this group is based on distastes that are sufficiently strong to outweigh other considerations’ (Platt, Polavieja, and Radl 2022, 368). Furthermore, a correspondence test in Sweden showed that two years of additional work experience could eliminate callback differences between Arab women and the majority group (as would be expected based on statistical discrimination theory), while Arab men were still heavily discriminated against, despite their higher qualifications (Arai, Bursell, and Nekby 2016). In a field experiment conducted in France and focusing on fictitious job applicants all originating from Lebanon, only Muslims were penalised for signalling higher levels of religiosity in their CV, while Christian Lebanese even benefited from a religiosity premium (Valfort 2020). Interestingly, this religiosity penalty was only statistically significant for Muslim men. Similarly, women were not penalised for simply signalling their affiliation to a Muslim association in Germany, the Netherlands and Spain (Fernández-Reino, Di Stasio, and Veit 2022) but suffered from discrimination when wearing the hijab in the picture attached to their job application, relative to both non-Muslim majority applicants and other Muslim applicants.

These results suggest that negative attitudes toward Muslim women might be driven more by a rejection of specific religious practices than by anti-Muslim prejudice per se (Helbling 2014), although we note that the former might still stem from stereotyped views of hijab wearers as oppressed and in need of saving (Selod 2019).

Due to the pronounced gender differences in anti-Muslim discrimination, we present both pooled analyses and analyses split by gender. Tentatively, given theories of inter-group threat and social dominance and the gendered nature of stereotypes about Muslims (Selod 2019, 553), we expect security threats to be especially salient for Muslim men, who 'have been racialized as a terrorist, a threat to national security and disloyal'. Symbolic threats, instead, may be salient for both genders as the perceived subordination of Muslim women and the perceived misogyny of Muslim men are two sides of the same coin. We refrain from developing specific hypotheses on differences by gender as we did not think of this possibility when designing the study.

## Data and method

### *Design and sample*

For the empirical analysis, we relied on a cross-nationally harmonised field experiment (the GEMM study) conducted between 2016 and 2018 (Lancee et al. 2021). Following the correspondence testing methodology, fictitious applications were sent in response to real vacancies; the random assignment of ethnic and religious cues to the job applications allows us to causally identify whether employers discriminate against Muslims. An interesting feature of the GEMM study was its double-comparative design, with applicants from multiple countries of origin applying for jobs in five countries: Germany, Norway, the Netherlands, Spain and the United Kingdom. The project received clearance from the ethical committees of all participating universities.

To lower the risk of detection, the design was unpaired (Larsen 2020), with only one cover letter and CV being sent to any available vacancy. In each country, a web crawler sampled vacancies from online job search platforms based on a series of keywords. A randomiser then randomly assigned treatments to the collected vacancies and generated the necessary application material. Applications were targeted to ten occupational profiles, varying in skill level, gender composition and required level of customer contact (cook, payroll clerk, sales representative, store assistant, software developer, receptionist, hairdresser, carpenter, electrician and plumber). Applicants did not specify their family status and had four years of uninterrupted and occupation-specific work experience since finishing their studies. All applicants were in their early or mid-twenties, depending on the occupation and the required level of education (for more detailed information, see Lancee et al. 2019).

The GEMM dataset consists of 18,890 valid cases.<sup>2</sup> Of these, 14,287 were applicants with a migration background. Migration background was signalled in the CVs through the use of foreign-sounding names, the indication of a second mother tongue and, for those who were foreign-born, the place of birth. Additionally, the cover letter referred to the fact that the applicant was born abroad but then moved to the country of fieldwork before the age of six (1.5 generation migrant), or that the applicant was born in the country of fieldwork (second generation migrant).

For the main analysis, we restricted the sample to the 3,311 applicants who explicitly stated their Muslim identity in the CV and cover letter. Religious background was signalled through a spell of volunteering experience in a religious organisation (e.g. a Muslim community centre). To justify the inclusion of this information in the job application, the type of volunteering tasks were adapted to each occupational profile. We further dropped from the sample 502 Muslim women who wore a headscarf in the picture that was attached to the CV. The public display of religious symbols at the workplace is a controversial issue in the countries under study, where restrictions to the wearing of the veil have been implemented or are on the agenda. As pictures were omitted in Britain and Norway for reasons of ecological validity (i.e. their inclusion in a job application would be frowned upon), we excluded veiled Muslims from the comparative analysis.

The remaining 2,809 applicants originated from 22 countries in which Islam is either the dominant religion or a sizeable minority religion, namely: Albania, Bangladesh, Bosnia, Bulgaria, Egypt, Eritrea, Ethiopia, India, Indonesia, Iran, Iraq, Lebanon, Malaysia, Morocco, Nigeria, North Macedonia, Pakistan, Philippines, Russia, Somalia, Turkey, Uganda. Of these Muslim applicants, 44.2% were women (the gender unbalance is due to the exclusion of veiled Muslims from the sample) and 50.6% belonged to the second generation. In terms of geographical distribution, 50.9% of the applicants originated from the Middle-East or North Africa, followed by South Asia (18.6%), Sub-Saharan Africa (17.1%), Eastern Europe and Russia (9.5%), and Southeast and East Asia (3.9%). This uneven regional distribution reflects the oversampling, in each of the five GEMM countries, of more sizable or historically well-established Muslim groups, many of which originate from South Asia, North Africa, Turkey or the Middle East.<sup>3</sup>

To gauge the level of discrimination faced by Muslims in the five European countries under study, we first compared the callbacks received by Muslim applicants ( $N=2,809$ ) with those received by applicants from the majority group (i.e. no migration background, no foreign-sounding name, born in the country of fieldwork) who signalled volunteer work in a neutral association ( $N=2,253$ ). We then examined differences in callbacks among Muslims, with a focus on the relationship between origin country characteristics that could trigger perceptions of symbolic or security threat (as explained below) and applicants' likelihood to receive a callback from employers.

## **Measurements**

### **Dependent variable**

The outcome of interest is the response that applicants received from employers. We ran the analyses using both a broad and a strict indicator of positive callback. For the first, any sign of interest from the employer, including requests to provide further information, was considered a positive employer response. While using this broad definition ensures that genuine employer interest is not underestimated, an invitation to a job interview is a less ambiguous indication that applicants have passed the first stage of the hiring process. Therefore, the strict indicator only considered invitations to an interview as signals of positive callback.



### *Independent variables at the country-of-origin level*

We proxied the level of *gender inequality* in the origin country with the Gender Inequality Index (UNDP 2022a), which measures the extent to which women face disadvantages in the labour market and secondary education, a lack of political representation, and a compromised reproductive health. The original scores ranged between 0 (low inequality between men and women) and 1 (high inequality between men and women).

For *secularism*, we used data from the Pew Research Center (2017b) which classifies states as having an official religion, favouring certain religions, having no official or favoured religion, or having a hostile relationship with religious institutions. We recoded the data into a dichotomous variable (1 = *Islam as official state religion or favoured religion*, 0 = *else*) based on the expectation that Muslims from countries where Islam is the official state religion or a favoured religion would trigger stronger feelings of symbolic threat than Muslims from other countries. We relied on the latest available scores (2010) before the fieldwork.

For *authoritarianism*, we relied on an index provided by the 2016 Freedom in the World report (Freedom House 2016), which has been used in previous cross-national studies on ethnic penalties in the labour market as an indicator of political suppression (e.g. Van Tubergen, Maas, and Flap 2004). Countries received an overall freedom status score ranging from 1 to 7 (1–2.5 = free; 3–5 = partly free; and 5.5–7 = not free) based on 25 indicators measuring the degree of political rights and civil liberties enjoyed by individuals in each country, such as the right to vote, associational and organisational rights, political pluralism, freedom of expression and equality before the law. Scores refer to the calendar year 2015 and were given by experts based on fieldwork, consultations with local contacts and information derived from news articles, nongovernmental organisations, governments, expert advisers and regional specialists.

For *terrorist threat*, we drew on a database recently collected by the *Fondation pour l'Innovation Politique* and containing information on domestic Islamist terrorist attacks and related casualties obtained through search engines, other existing databases and academic research (Balmond 2019). We chose a database measuring Islamist terrorism specifically, as we see this as the most accurate measure of perceived security threats that are triggered by Muslims. To reflect the period of collective memory after the 9/11 attacks, we summed the estimated number of deaths and wounded from Islamist terrorist attacks that occurred between 2002 and 2015 in each country.

### *Control variables*

As cross-national differences in overall economic conditions and skill shortages are likely to affect both the baseline callback rate and the level of anti-Muslim discrimination, we controlled for the countries where the fieldwork took place. Fixed effects for *country of fieldwork* and for *occupation* also hold constant cross-national differences in levels of anti-immigration sentiments, Islamophobia and size of the Muslim population, as well as differences in labour demand. With regard to job applicants' characteristics, we controlled for all other treatments that were also randomly assigned in the field experiment, such as gender, grades, social skills, competence and the migration status of the Muslim applicant. Although, strictly speaking, these characteristics were randomly assigned to the profiles and it is thus not necessary to include them as statistical controls, their inclusion can reduce the standard error estimate on the treatment effect of interest, in

this case the origin country of the applicant (Mize and Manago 2022). We also checked the robustness of our findings when using different specifications, for example including a control for phenotype, as explained in detail below.

To rule out the possibility that the associations between the indexes of authoritarianism or gender inequality might be driven by employers' avoidance of applicants originating from socioeconomically less developed countries (Thijssen, Coenders, and Lancee 2021a), we controlled for the level of *human development* in the country of origin (UNDP 2022b). We averaged the index over the five years preceding the data collection. To account for possible differences in employers' knowledge about the countries of origin and their Muslim populations, we also controlled for *population size* (The World Bank 2023) and for the estimated *share of Muslims* (Pew Research Centre 2017a) in the origin country. The distribution of applications by country of origin is reported in Table 1, together with the macro-level indicators used in the multilevel analysis.

### Modelling strategy

While our dependent variable was measured dichotomously, the hypotheses were tested using linear probability models (LPMs). LPMs were preferred over logistic regression due to the more straightforward interpretation of coefficients, which refer to the percentage point increase in the probability that applicants receive a positive callback from employers.

To account for the multilevel data structure, with applicants (level 1) nested in countries of origin (level 2), we fitted two-level mixed models with random intercepts. This model reflects our expectation that applicants from the same origin country are perceived to be more similar by employers than applicants from different origin countries. Note that this specification ignores that applicants from the same origin country applying for a job in the same fieldwork country are likely to be treated more similarly than applicants from the same origin country but who applied in a different fieldwork country, a similarity that might result from local labour market conditions, for example. As a result, if there is random variation between fieldwork countries the standard errors of variables at the level of fieldwork countries might be underestimated (Schmidt-Catran and Fairbrother 2016). We still opted for this more parsimonious model, given that our interest lies in the origin country indicators only. We used restricted maximum likelihood for the estimation and the Satterthwaite correction for the limited number of clusters at level 2 (Elff et al. 2021). With this modelling strategy, the test statistic of the macro-level predictors is computed based on the t-distribution, which is recommended in order to avoid anti-conservative *p*-values and confidence intervals for hypothesis testing when the interest lies in the role of macro-level variables. Replication files for the analysis are available on the Open Science Framework at the link: <https://osf.io/cm3jf/>.

### Results

For our sample of Muslim applicants, the average positive callback rate in the broad definition was 25.6%, meaning that one in four applications was met with some interest from the employer. Looking at the strict definition, the average percentage was 18.3%: in other words, about one in five applicants was invited to a job interview. These callback

**Table 1.** Origin countries of job applicants and their characteristics.

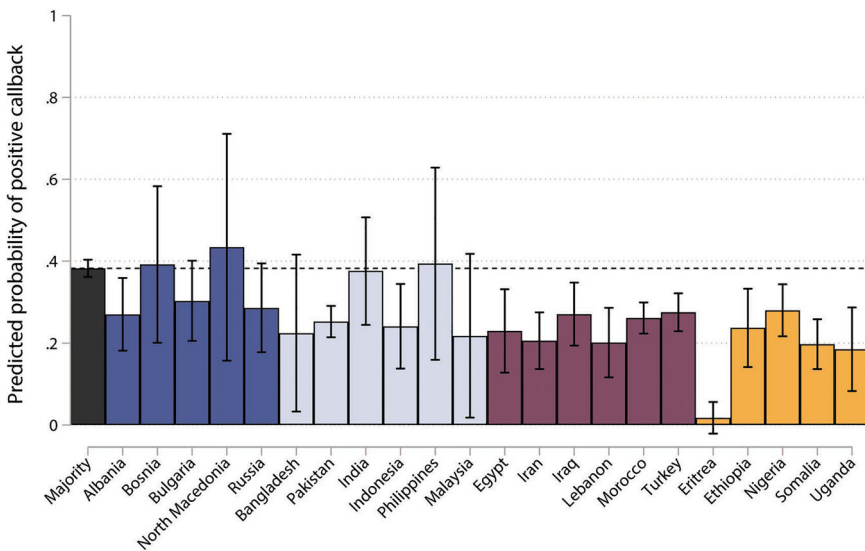
Panel a. Applications by country of origin.							Panel b. Country-of-origin indicators.						
	DE	NL	NO	ES	UK	Total	Gender inequality index	Islam as state or favoured religion	Level of authoritarianism	Casualties from Islamist terrorism	Human development index	Population size	% of Muslims in the population
Majority group	383	557	353	571	389	2253							
Muslim minorities	454	702	546	541	566	2809							
<i>Country of origin of Muslims:</i>													
Albania	6	26	9	16	20	77	0.267	0.00	3.00	.	0.779	2876101	79.90
Bangladesh	0	0	0	0	11	11	0.52	1.00	4.00	453	0.579	159784568	89.60
Bosnia	0	0	13	13	0	26	0.158	0.00	3.50	7	0.750	3480986	40.00
Bulgaria	13	49	7	13	8	90	0.223	0.00	2.00	37	0.800	7127822	12.20
Egypt	10	17	8	23	11	69	0.565	1.00	5.50	2874	0.681	99784030	94.60
Eritrea	0	0	7	0	0	7	.	0.00	7.00	.	0.447	3365287	36.50
Ethiopia	11	13	12	25	10	71	0.499	0.00	6.50	113	0.447	105293228	33.90
India	12	8	11	12	11	54	0.53	0.00	2.50	4287	0.606	1338636340	13.40
Indonesia	9	25	14	12	8	68	0.467	0.00	3.00	352	0.685	261850182	88.20
Iran	23	28	26	29	25	131	0.509	1.00	6.00	234	0.768	83306231	99.40
Iraq	26	23	18	20	30	117	0.525	1.00	5.50	41671	0.646	38697943	99.00
Lebanon	81	13	7	3	12	116	0.381	0.00	4.50	1247	0.755	6258619	59.30
North Macedonia	5	9	0	0	0	14	0.16	0.00	3.50	.	0.752	2072490	33.30
Malaysia	11	14	0	0	0	25	0.291	1.00	4.00	6	0.786	31526418	60.40
Morocco	20	211	10	280	30	551	0.494	1.00	4.50	195	0.643	35107264	99.00
Nigeria	23	9	15	4	111	162	.	0.00	4.50	20728	0.512	188666931	50.40
Pakistan	26	21	172	31	209	459	0.546	1.00	4.50	18457	0.525	213524840	96.30
Philippines	0	0	7	9	0	16	0.436	0.00	3.00	3034	0.690	104875266	5.10
Russia	12	12	12	9	15	60	0.271	0.00	6.00	1815	0.801	144342397	11.70
Somalia	0	0	167	0	15	182	.	1.00	7.00	8835	.	14292847	98.50
Turkey	158	208	19	33	27	445	0.328	2.00	3.50	1457	0.780	81019394	98.00
Uganda	8	16	12	9	13	58	0.522	0.00	5.50	147	0.514	38748299	12.10
Total	837	1259	899	1112	955	5062							

rates, though, mask large variation across origin groups and countries of fieldwork. It is instructive to compare them with the callbacks received by (non-Muslim) applicants from the majority group (i.e without a migration background and born in the country of fieldwork) to identify the level of discrimination faced by Muslims in European labour markets, before moving to the analysis of callback differences among different groups of Muslims.

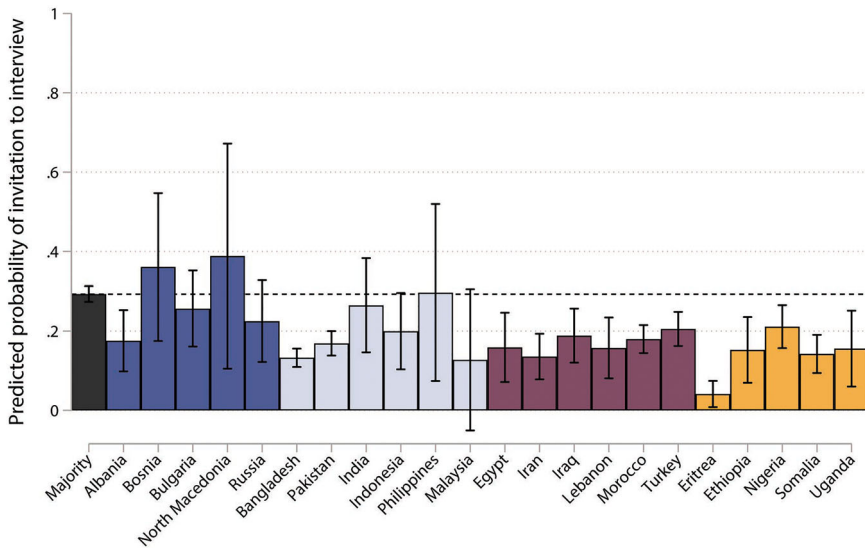
A widely used indicator of discrimination in the field experimental literature is the callback ratio, which refers to the ratio between the callback rate of the majority group and that of the minority group. This ratio can be interpreted as the relative advantage of one group over the other. For our analytical sample ( $N = 5,062$ ), the callback ratio was 1.5 for the indicator of any positive callback and 1.6 for the stricter indicator only considering invitations to job interviews as positive responses. These ratios remain virtually the same if we predict them from a linear probability model including controls for country of fieldwork, type of occupation, and all other characteristics that were randomly varied in the design. This means that Muslims had to send 50% to 60% as many applications as the majority group to receive an equal number of positive callbacks.

These results, though, mask large variation across origin groups. In Figures 1 and 2, we plotted the predicted callbacks according to the origin country of the Muslim applicants, next to the predicted callback of the majority group, here included as a benchmark. Origin countries are coloured depending of the world region they belong to (Europe, Asia, MENA, Sub-Saharan Africa). As can be seen from the figures, Muslims originating from Bosnia and North Macedonia were treated on par with the majority group, while Muslims from Uganda and Somalia were largely ignored by employers.

In the analyses that follow, we try to understand whether these sizeable differences in callbacks among Muslims can be traced back to origin-country differences in levels of



**Figure 1.** Predicted probability to receive an expression of interest from employers, by origin country. Source: GEMM data. Calculated from a linear probability model with robust standard errors, including controls for individual-level characteristics, occupations and fieldwork countries.



**Figure 2.** Predicted probability to receive an invitation to a job interview from employers, by origin country. Source: GEMM data. Calculated from a linear probability model with robust standard errors, including controls for individual-level characteristics, occupations and fieldwork countries.

gender inequality (hp1), the role of Islam as a state or preferred religion (hp2), authoritarianism (hp3) and the number of casualties from Islamist terrorism (hp4). Our expectation is that these country-level characteristics may trigger perceptions of symbolic and security threats, making employers more reluctant to hire Muslims who originate from such contexts. The results of random-intercept models including our proxies for symbolic and security threats are reported in [Tables 2](#) and [3](#).

The multilevel analysis finds support for hypotheses one and three: Muslims were less likely to receive a callback from employers the more gender unequal and authoritarian their country of origin. The findings are robust to the inclusion of controls for level of human development, population size and percentage of Muslims in the population (model 5 in [Tables 2](#) and [3](#)). When all origin country indicators of interest are included in the model, only the coefficient for authoritarianism remains statistically significant (model 7 in [Tables 2](#) and [3](#)), although we are cautious of interpreting models with too many level-2 variables, given the relatively low number of clusters.

With one standard deviation increase in authoritarianism or gender inequality, the likelihood that Muslim applicants were called back by employers decreases by three to five percentage points, respectively. This penalty corresponds to a 7.5% to 17% decrease from the predicted callback rate of a Muslim applicant originating from countries with average levels of inequality, authoritarianism, terrorism casualties and with a separation between Islam and the state (see the constant in the models). Overall, we found robust support for hypothesis three and some support for hypothesis 1.

To ease interpretation, predicted callback probabilities were calculated for specific values of the authoritarianism index corresponding to countries classified as *free* (2.5), *partly free* (5) and *not free* (7). Callbacks ranged from 30.2% for free countries (in our sample, India scored 2.5 on the authoritarianism index) to 20.5% for unfree countries

**Table 2.** Random-intercept multilevel models: Muslims' origin countries and positive callbacks ('Any sign of positive interest from employers').

	M1	M2	M3	M4	M5	M6	M7
<i>Symbolic threats:</i>							
Gender Inequality Index	-0.024* (0.012)				-0.055* (0.022)		-0.014 (0.016)
Islam state/preferred religion		-0.019 (0.019)					-0.007 (0.023)
<i>Security threats:</i>							
Level of authoritarianism			-0.033** (0.011)			-0.031* (0.014)	-0.034* (0.015)
Islamist terrorism casualties				0.006 (0.009)			0.014 (0.011)
<i>Macro-level controls:</i>							
% Muslims in the country					0.000 (0.000)	-0.000 (0.000)	
HDI index					-0.182 (0.151)	0.002 (0.098)	
Population size					0.000** (0.000)	0.000 (0.000)	
Constant	0.416*** (0.047)	0.429*** (0.044)	0.411*** (0.043)	0.409*** (0.044)	0.505*** (0.111)	0.419*** (0.086)	0.401*** (0.050)
N applications	2458	2809	2809	2711	2458	2627	2367
N origin countries	19	22	22	19	19	21	17

Standard errors in parentheses

Source: GEMM data. Satterthwaite correction for few clusters. The number of clusters per model depends on data availability for the independent variables and controls. Individual-level control variables are included in all models.

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

**Table 3.** Random-intercept multilevel models: Muslims' origin countries and invitations to a job interview.

	M1	M2	M3	M4	M5	M6	M7
<i>Symbolic threats:</i>							
Gender Inequality Index	-0.037*** (0.011)				-0.050* (0.020)		-0.027+ (0.015)
Islam state/preferred religion		-0.034+ (0.018)					-0.017 (0.020)
<i>Security threats:</i>							
Level of authoritarianism			-0.033*** (0.010)			-0.032* (0.013)	-0.029* (0.014)
Islamist terrorism casualties				-0.004 (0.010)			0.008 (0.009)
<i>Macro-level controls:</i>							
% Muslims in the country					-0.000 (0.000)	-0.000+ (0.000)	
HDI index					-0.086 (0.137)	0.073 (0.088)	
Population size					0.000+ (0.000)	0.000 (0.000)	
Constant	0.301*** (0.042)	0.309*** (0.040)	0.286*** (0.038)	0.283*** (0.040)	0.351*** (0.100)	0.277*** (0.078)	0.296*** (0.045)
N applications	2458	2809	2809	2711	2458	2627	2367
N origin countries	19	22	22	19	19	21	17

Standard errors in parentheses

Source: GEMM data. Satterthwaite correction for few clusters. The number of clusters per model depends on data availability for the independent variables and controls. Individual-level control variables are included in all models.

+ $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

(7 was the value for Somalia and Eritrea), that is, a one third reduction in the probability to receive any sign of positive interest from employers. The predicted probability to be invited to a job interview ranged from 23.1% for free countries to 13.1% for unfree countries, corresponding to a 43% reduction.

Finally, we split the analyses by gender. We reasoned that security threats should be especially salient for Muslim men. We did not expect gender differences for symbolic threats. Indeed, the negative association between levels of authoritarianism and callbacks is only present for Muslim men, as can be seen in [Tables 4](#) and [5](#). For Muslim women, the coefficient for authoritarianism is negligible and not statistically significant. We also formally tested these gender differences in a pooled model with a random slope for gender: the cross-level interaction between gender and authoritarianism is marginally significant ( $p < 0.1$ ) for the broader indicator of callbacks (models 4 and 5 in [Table 4](#)). In other words, employers' tendency to avoid Muslims originating from more authoritarian contexts is stronger for Muslim men, as visualised in [Figure 3](#). For them, the predicted probability of a positive callback more than halves when we compare countries at the opposite ends of the authoritarianism index. Although we cannot directly test the underlying mechanism, this finding suggests that Muslim men originating from authoritarian countries possibly heightened perceptions of security threat and, as a result, were less likely to receive a positive callback from employers.

## Robustness checks

We checked the sensitivity of our results with a series of robustness checks. First, we reran the models after excluding each origin country at a time to check whether results were driven by single countries: level of authoritarianism was always significantly

**Table 4.** Two-level models by gender, positive callbacks: the role of authoritarianism and gender inequality for Muslim men and Muslim women.

	M1	M2	M3	M4	M5
		<i>Only men</i>	<i>Only women</i>	<i>Random slope</i>	<i>Random slope</i>
Woman	0.033 <sup>+</sup> (0.017)			0.041* (0.016)	0.037* (0.018)
Level of authoritarianism	-0.031* (0.015)	-0.050** (0.019)	-0.006 (0.024)	-0.048*** (0.014)	-0.048** (0.018)
Gender Inequality Index	-0.008 (0.014)	-0.007 (0.019)	-0.009 (0.021)		-0.008 (0.014)
<i>Cross-level interaction:</i>					
Woman # Level authoritarianism				0.037 <sup>+</sup> (0.020)	0.043 <sup>+</sup> (0.025)
Constant	0.407*** (0.047)	0.434*** (0.063)	0.419*** (0.069)	0.410*** (0.043)	0.401*** (0.047)
N applications	2458	1388	1070	2809	2458
N origin countries	19	19	19	22	19

Standard errors in parentheses

Source: GEMM data. Satterthwaite correction for few clusters. The number of clusters per model depends on data availability for the independent variables and controls. Individual-level control variables are included in all models.

<sup>+</sup> $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Note: we checked the robustness of results with different macro-level indicators. The cross-level interaction is statistically significant ( $p < 0.05$ ) when including the SIGI indicator instead of the Gender Inequality Index, and marginally statistically significant ( $p < 0.1$ ) when using the CIRIGHTS indicator; it is non-significant when including the V-dem indicator of liberal democracy instead of the Freedom of House index of authoritarianism.



**Table 5.** Two-level models by gender, invitations to a job interview: the role of authoritarianism and gender inequality for Muslim men and Muslim women.

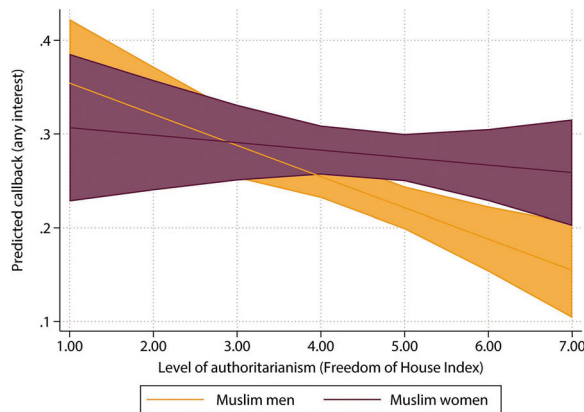
	M1	M2	M3	M4	M5
		<i>Only men</i>	<i>Only women</i>	<i>Random slope</i>	<i>Random slope</i>
Woman	0.018 (0.016)			0.025 <sup>+</sup> (0.014)	0.020 (0.016)
Level of authoritarianism	-0.025 <sup>+</sup> (0.014)	-0.033 <sup>+</sup> (0.018)	-0.018 (0.025)	-0.045 <sup>***</sup> (0.012)	-0.032* (0.016)
Gender Inequality Index	-0.024 <sup>+</sup> (0.013)	-0.025 (0.017)	-0.029 (0.024)		-0.024 <sup>+</sup> (0.013)
<i>Cross-level interaction:</i>					
Woman # Level of authoritarianism				0.028 (0.018)	0.017 (0.023)
Constant	0.294 <sup>***</sup> (0.042)	0.288 <sup>***</sup> (0.058)	0.348 <sup>***</sup> (0.064)	0.285 <sup>***</sup> (0.038)	0.292 <sup>***</sup> (0.043)
N applications	2458	1388	1070	2809	2458
N origin countries	19	19	19	22	19
N co-ethnic communities	79	79	78	87	79

Standard errors in parentheses

Source: GEMM data. Satterthwaite correction for few clusters. The number of clusters per model depends on data availability for the independent variables and controls. Individual-level control variables are included in all models.

<sup>+</sup>  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Note: we checked the robustness of results with different macro-level indicators. The cross-level interaction is statistically significant ( $p < 0.05$ ) when including the SIGI indicator instead of the Gender Inequality Index; it remains non-significant when including the CIRIGHTS indicator instead of the Gender Inequality Index, and when including the V-dem indicator of liberal democracy instead of the Freedom of House index of authoritarianism.



**Figure 3.** Predicted probability to receive a positive callback from employers ('any sign of positive interest') depending on the level of authoritarianism of the origin country, by gender. Source: GEMM data. Calculated from a random-effect multilevel model, including controls for individual-level characteristics, occupations and fieldwork countries (see model 4 in Table 4). A random slope for gender and the cross-level interaction between gender and level of authoritarianism in the country of origin are included in the model. Satterthwaite correction for few clusters.

associated to both indicators of callbacks; for gender inequality, the association was only robust for the invitation to interview indicator.

Second, we checked whether employers were not simply avoiding applicants that they perceived as more culturally distant. For the cultural distance indicators, we relied on measures of geographical distance (calculated between the capitals of each origin and

destination countries dyad), linguistic distance (a dummy variable singling out countries that share the same official language) and a dummy variable singling out countries that shared a common colonial past (Meyer and Zignago 2011). To account for the complex data structure, we estimated three-level hierarchical models, with applicants nested into 87 co-ethnic communities (level 2) which, in turn, are nested into 22 origin countries (level 3). With this approach, we ensured that the fixed effects of interest (that is, characteristics of origin countries, net of controls at the level of both origin countries and co-ethnic communities) were matched in the random effects specification (Schmidt-Catran and Fairbrother 2016), even if this meant that we occasionally ran into convergence issues and the random components could not always be estimated. In table A1 in the online appendix, we show that the coefficients for the gender inequality and authoritarianism indexes remain statistically significant after controlling for geographical and linguistic distance and for a shared colonial past, all measured at the level of co-ethnic communities as they vary across specific combinations of origin countries and fieldwork countries.

Third, we re-ran the analyses using different indicators of gender inequality and authoritarianism to ensure our findings are robust across different operationalizations of symbolic and security threat (tables A2-A6 in the online appendix). For gender (in)equality, we used the Social Institutions and Gender Index (SIGI), which measures discriminatory acts against women in social institutions (OECD 2014). Within the domains of the family, physical integrity, access to productive and financial resources, and civil liberties, the index measures the differences between men and women on a scale from 0 (*women and men enjoy the same rights in law and practice*) to 1 (*women and men do not enjoy the same rights in law and practice*). We also used the CIRIGHTS indicator of women's rights in the economic sphere, (Mark, Cingranelli, and Filippov 2023), ranging from 1 (*no rights under law*) to 3 (*rights are guaranteed by law*). While the Gender Inequality Index focuses on outcomes achieved by women in different domains of life (*de facto equality*), the CIRIGHTS index looks at women's rights as guaranteed by the law (*de jure equality*) and the Social Institutions and Gender Index considers both. Results were robust, with the exception of the SIGI index in the analysis of positive callbacks (table A2). For security threats, we used the liberal democracy index provided in the 2015 Varieties of Democracy (V-Dem) project dataset (Coppedge et al. 2023). Country and regional experts coded liberal democracy on a scale ranging from 0 (highly undemocratic) to 1 (highly democratic). This index emphasises the importance of protecting individual and minority rights against the tyranny of the majority and takes into account the presence of a strong rule of law, of an independent judiciary, of free elections, etc. Contrary to the Freedom of House index, higher values of the V-Dem liberal democracy index refer to less authoritarian contexts. Results were replicated with this index, too.

Fourth, we weighted all origin countries equally in order to remove potential biases resulting from the larger number of applicants in oversampled groups. These analyses, reported in tables A10 and A11 in the online appendix, confirm once again the robustness of results. Note, though, that the *mixed* command we used to run the analyses in Stata cannot support both weights and restricted maximum likelihood estimation at the same time. This explains why more coefficients are statistically significant in the models with weighed data than in the original ones.

Fifth, we checked whether *non-Muslim* applicants would still be penalised for the fact of originating from similarly authoritarian and gender unequal countries. In the GEMM study, religion was orthogonally assigned to applications. For 16 countries (i.e. Albania, Bosnia, Bulgaria, Egypt, Eritrea, Ethiopia, Indonesia, Lebanon, Nigeria, North Macedonia, Philippines, Russia and Uganda), the volunteer work experience mentioned in the application could take place at a Christian, Hindu, Buddhist or a Muslim community centre (so far, we only considered Muslim applicants for the analyses). We re-ran the analyses for Muslims and non-Muslims separately, retaining only the 16 countries where two religions (one of which Islam) were randomly assigned to the applications. Results, reported in tables A7 and A8 in the online appendix, indicate that only Muslim applicants were penalised for the fact of originating from authoritarian countries. The coefficient for the authoritarianism index is not statistically significant for non-Muslims. However, differences are admittedly negligible and the cross-level interaction in the pooled models is not statistically significant. This suggests that employers were reluctant to hire *any* applicant originating from authoritarian contexts, independent of whether or not the applicant was Muslim. At the same time, the models also show that Muslim applicants were still severely and significantly penalised compared to non-Muslims originating from similarly authoritarian contexts.

Finally, we controlled for the phenotype of the applicant, distinguishing between five groups: no information on phenotype (for the applications without a picture), European, North African/Turkish, African, and Asian phenotype. This test proves that Muslims originating from authoritarian countries were not merely subject to skin colour discrimination. For gender inequality, instead, the coefficients turn non-significant after including a control for phenotype in the models (it should be noted, though, that the more unequal countries are found in the African continent, so there is a very large overlap between skin colour/phenotypical features of the population and levels of gender inequality at the country level for the groups included in our sample).

## Discussion

Drawing on a cross-nationally harmonised field experiment, in the form of a correspondence test (the GEMM study), we examined differences in callbacks between Muslims applicants originating from 22 countries and applying for jobs in five European labour markets (Britain, Germany, the Netherlands, Norway and Spain). Unlike previous research on anti-Muslim discrimination in the hiring process (e.g. Adida, Laitin, and Valfort 2010; Di Stasio et al. 2021; Pierné 2013), we posed the question *why* Muslims from specific origin countries might be more exposed to employer discrimination.

We theorised that, insofar as discrimination stems from employers' negative stereotyping of Muslims, employers might not perceive all Muslims as equally threatening. Based on the interdisciplinary literature on anti-Muslim prejudice, we expected the threats triggered by Muslim applicants to depend on country-of-origin characteristics readily associable with cultural incompatibility (symbolic threats) and with political oppression, military instability or Islamist terrorism (security threats). Our findings confirmed that employers in Europe discriminate against Muslim applicants, and especially avoid Muslims originating from more gender unequal and authoritarian

countries. The results were especially robust for authoritarianism, and additional analyses indicated that this country characteristic mattered for Muslim men only.

Interestingly, the association between authoritarianism and callbacks was not stronger for Muslim than for non-Muslim applicants. While the fact of originating from strongly authoritarian contexts was penalising for all applicants, employers were still significantly less likely to call back Muslims compared to applicants of non-Muslim faith (Christian, Hindu or Buddhist) originating from similarly authoritarian and gender unequal contexts. This finding is consistent with previous research showing that, while Christians are not penalised for disclosing their religiosity at the workplace, Muslims do suffer from religious discrimination (Di Stasio et al. 2021; Valfort 2020). Plausibly, the security threat that we have here proxied by the authoritarianism indicator becomes more salient to employers when evaluating applications sent by Muslims.

While our hypotheses for gender inequality and especially authoritarianism were supported, we did not find a decrease in callbacks for applicants originating from countries where Islam is a state or favoured religion, or from countries with a high number of casualties from Islamist terrorism. We can only speculate that one reason for the lack of support for the hypothesis on terrorism might be that terrorist acts are, in general, extremely rare. Moreover, while we measured casualties from terrorist attacks that took place in the origin country, employers might be more concerned about homegrown terrorism and attacks perpetrated on European soil.

Of course, our study is not without limitations. First, we did not measure threat perceptions and cannot be sure these were indeed driving employers' hiring behaviour. Future studies could examine, in a lab or survey experiment, whether Muslims trigger different symbolic and security threat perceptions depending on their countries of origin. Second, we interpreted our indicators as proxies of symbolic and security threats but perceptions of economic threat could, in principle, also partly explain employers' decisions. For instance, employers may perceive Muslims from more authoritarian and gender unequal countries to be less qualified, based on the assumption that, for example, their access to education might be more limited. Still, this interpretation falls short of explaining why non-Muslims originating from the very same countries were not penalised to the same extent or why employers were especially wary of Muslim men. Furthermore, our controls for level of economic development and linguistic distance can also be seen as indirect measures of economic threat.

Third, we should be careful to interpret the observed levels of discrimination as an explanation of differences in overall labour market performance. Different degrees of social and cultural assimilation across Muslims from different origin countries may more strongly contribute to differences in labour market outcomes than employer discrimination, although studies on the role of sociocultural factors are inconclusive (cf. Koopmans 2016; Sweida-Metwally 2022). Moreover, applicants may anticipate discrimination and exert more effort in sending out applications or downplay or even hide ethnic and religious cues in their application. For this reason, the groups facing stronger levels of discrimination in field experiments are not necessarily the ones with the poorest labour market outcomes, although ethnic penalties and levels of discrimination show a reasonable correlation (Zwysen, Di Stasio, and Heath 2021).

To conclude, our study demonstrates that employers in Western Europe are reluctant to hire Muslims, especially those originating from more gender-unequal and especially

more authoritarian countries of origin. Muslims are one of the most stigmatised groups in Europe, and a large body of literature has already documented the strong barriers they face in many areas of life, including the labour market (Thijssen et al. 2021b). We contribute to this growing literature and identify the groups of Muslims that are most vulnerable to employer discrimination. In particular, we show robust evidence that Muslim men originating from less democratic countries are especially at risk of exclusion from employment opportunities, and this is possibly because them being Muslim is perceived as a security threat by European employers.

## Notes

1. The literature distinguishes between, on the one hand, an unjustifiable negative attitude toward Muslims as a group – a form of prejudice often resulting from feelings of hostility and fear – and, on the other hand, a more principled opposition toward Islam as a religion or culture (Verkuyten 2021). According to the latter perspective, individuals who oppose Islam as a religion need not be prejudiced: they may endorse secular and democratic convictions and reject fundamentalist forms of religiosity or practices perceived as incompatible with liberal democratic values (Helbling 2014; Helbling and Traunmüller 2020; Imhoff and Recker 2012). We do not build on this literature as we believe it is more suitable to understand opposition to specific religious practices more generally than discrimination against Muslims at the workplace.
2. Out of a total of 19,181 applications: the remaining 291 applications were either ambiguously recorded by the software or were never taken into consideration by employers (the latter could be because of missing documents that were required for applying but not included in the experimental protocol, because the hiring procedure had already closed at the moment the application was received, or because the advertised position was no longer available).
3. Moroccans were oversampled in the Netherlands and Spain; Turks in Germany and the Netherlands; Lebanese in Germany; Somali in Norway; Nigerians in Britain; Pakistani in Britain and Norway. More information on the research design are provided in Lancee et al. (2019; 2021). In the analyses, we always controlled for the country where the fieldwork took place.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Ethical statement

The studies involving human participants were reviewed and approved by: the Ethics Committee of the Faculty of Social and Behavioral Sciences of Utrecht University (FETC15-102), the Ethics Panel of Nuffield College, University of Oxford (ETH-160224306), the WZB Research Ethics Committee (WZB Berlin Social Science Centre, AdHoc Committee), the Norwegian National Research Ethics Committee for the

Social Sciences and Humanities (DENS, 2015/451) and the Committee of Ethics in Research of the Universidad Carlos III de Madrid (UC3M; CEI-2015-12). Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

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