

Discrimination unveiled: a field experiment on the barriers faced by Muslim women in Germany, the Netherlands, and Spain

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Abstract

We examine the penalties faced by veiled and unveiled Muslim women when applying for jobs in three European labour markets: Germany, the Netherlands, and Spain. We rely on recent literature comparing public opposition towards Muslims in general and opposition to Muslims' religious practices, such as the wearing of the *hijab*. Based on a cross-nationally harmonized field experiment on hiring discrimination, we use two different signals of Muslimness (volunteering activities in a Muslim community centre or wearing the Muslim headscarf) to identify whether employers discriminate against Muslims as a group or against Muslims adhering to specific Muslim practices—in this case, wearing the headscarf. We present robust evidence that veiled Muslim women are discriminated against in Germany and the Netherlands, but only when applying for jobs that require a high level of customer contact. In Spain, however, the level of discrimination against veiled Muslim women is much smaller than in the other two countries. The high level of discrimination we found in the Netherlands, where the institutional context has traditionally been open to the accommodation of religious minority rights, is particularly surprising and points to the possibly stigmatizing effect of recent policies geared towards the cultural assimilation of immigrants.

Introduction

Ever since the terrorist attacks claimed by Islamic extremists in the early 2000s, the integration of Muslim migrants and their descendants in their countries of settlement has received considerable attention (Statham and Tillie, 2016; Elsayed and de Grip, 2018). In the European context, Muslims are a very diverse group in terms of their national and cultural origins despite being frequently portrayed in the media and political debates as a homogenous community with an essentialized identity (Shoorman and Spielhaus, 2009). Muslims are perceived by the public at large as a difficult-to-integrate group, mainly due to their conservative gender role attitudes and high levels of religiosity, which are seemingly at odds with European values and the secular lifestyles of Western societies (Foner and Alba, 2008).

Muslim women are generally more visible than Muslim men simply because many of them wear the *hijab*,¹ an external marker of religious affiliation and religiosity that does not exist to the same degree for Muslim men. Countries' bans on the wearing of religious symbols in public spaces have sparked controversy in the political sphere—as they mostly affect veiled Muslim women—and from a legal perspective, because they could contravene both the right not to be discriminated against on the ground of religion or belief and the right to religious freedom (Howard, 2017).² The Muslim veil has been interpreted as a symbol of women's unwillingness to integrate into mainstream society (Kiliç, Saharso and Sauer, 2008) and has raised concerns about the role of religion in the public sphere (van der Noll *et al.*, 2018; Helbling and Traummüller, 2020). Although ethnographic studies indicate that

veiling is often a personal choice and an important identity marker (Williams and Vashi, 2007), the veil is commonly perceived as a symbol of women's oppression in Muslim communities, based on the argument that women do not wear it by choice but out of social pressure (Howard, 2012). When examining discrimination against Muslim women it is therefore crucial to consider alternative markers of Muslimness that are less charged with political symbolism than the *hijab*. Previous studies have shown that liberal natives do not display strongly negative attitudes towards Muslims migrants, but they feel uncomfortable with some religious practices, such as the use of the Muslim headscarf at school or at the workplace (Helbling, 2014).

In this study, we rely on data from a cross-nationally harmonized correspondence study (Lancee et al., 2021) to investigate employers' behaviour towards female ethnic minority job applicants who use different combinations of Muslim religious signals in their resumes, namely: (i) doing volunteering work in a Muslim community centre or (ii) doing volunteering activities in a Muslim community centre and wearing the headscarf in their CV photo. These two signals—wearing the *hijab* and volunteering at a Muslim community centre—do not only reflect different degrees of religious involvement but may also be perceived as qualitatively different by employers. Wearing the Islamic headscarf is a religious practice that unequivocally identifies someone as Muslim; in addition, veiled women are generally seen as highly religious and traditional³ (van der Noll, 2010; Helbling, 2014). Therefore, we expect employers to perceive applicants wearing the *hijab* as devout Muslims. Throughout the article, we refer to these groups of applicants as *veiled Muslims*. By contrast, unveiled applicants who volunteer in a Muslim community centre are likely to be perceived either as practicing Muslims with less conservative attitudes, or as 'cultural or nominal Muslims'; that is, secular Muslims who retain an attachment to certain elements of Islam due to their background, but whose connection to Islam could be described as 'fuzzy fidelity' (Voas, 2008). We refer to this group of applicants as *unveiled Muslims*. Our analysis also includes native (majority group) and ethnic minority women from countries with Muslim populations who do not include any religious signal in their job applications; we refer to this latter group of ethnic minority candidates as *non-religious minorities*.

Correspondence studies like ours are able to measure employers' behavioural responses to job applications, but not their attitudinal or emotional reactions when reviewing them. Previous research on Muslim discrimination provides a framework to understand the attitudinal drivers behind employers' behaviour. Employers may discriminate against all women who

include Muslim signals in their application irrespective of whether they wear the *hijab*. In that case, employers' behaviour would be driven by an anti-Muslim sentiment or Islamophobia whereby any signal of Muslim identity would be negatively evaluated. Even the mere fact of having family roots in a country where Islam is the dominant religion may be perceived by some as a Muslimness marker (Di Stasio et al., 2021). Alternatively, employers may only discriminate against applicants wearing the Islamic headscarf for reasons such as a dislike of religious conservatism (Helbling and Traummüller, 2020), the belief that religion should be a private matter (van der Noll and Saroglou, 2015), or the perception that wearing a conspicuous religious symbol such as the *hijab* conveys a lack of professionalism (Unkelbach et al., 2010). Importantly, due to the high visibility of the *hijab*, veiled Muslim women are exposed to the risk of both employers' and customers' discrimination when applying to positions involving constant face-to-face customer contact. Compared to previous field experiments measuring discrimination against Muslim women (e.g. King and Ahmad, 2010; Ghuman and Ryan, 2013; Weichselbaumer, 2020), we include a higher number of occupations that vary in the level of required face-to-face interactions with customers, which increases the external validity of our findings.

We use data from a cross-nationally harmonized correspondence study on hiring discrimination conducted during 2017 and the first half of 2018 (Lancee, 2021). We focus on Germany, the Netherlands, and Spain, which differ in ways that could significantly affect the level of discrimination experienced by veiled and unveiled Muslim women. First, the three countries have different migration histories; in Germany and the Netherlands, Muslim minorities are mostly descendants of Turkish and/or Moroccan guest workers who arrived during the 1960s, while in Spain the size of the Muslim population was negligible until the 2000s. Second, the salience of immigration in national politics and, in particular, of the Muslim integration debate varies across the three national contexts (Czymara, 2020). While both the Netherlands and Germany have legislations restricting the use of religious clothing in certain public spaces (Howard, 2017; Hass, 2020), in Spain, the public debate over the wearing of religious garments is almost non-existent at the national level and there are currently no plans to pass legislation on this issue (Howard, 2017). Finally, the three countries differ in the degree of accommodation of minority religious rights. While Germany has traditionally been known for its restrictions on minority religions (Koopmans, 2013), the Netherlands has a stronger legacy of multiculturalism despite the recent shift towards more assimilationist policies (Meer et al., 2015). While

the effect of specific country-level variables on discrimination rates cannot be formally tested with only three countries, the cross-national comparison is still relevant from a descriptive and qualitative perspective. To the best of our knowledge, the only previous field experiment—correspondence or audit study—on hiring discrimination against veiled women in Europe focused on the German case (Weichselbaumer, 2020) (for single-country studies conducted in the United States, see King and Ahmad, 2010; Ghuman and Ryan, 2013). The penalty against women wearing the headscarf could, however, be higher in Germany than in other European countries, as Germany has been one of the most restrictive Western democracies with regard to the accommodation of the religious rights of ethnic minorities, together with Switzerland and France (Koopmans, 2013).

In sum, we make three important contributions to scholarly debates on anti-Muslim discrimination. First, compared to previous field experiments, which signalled applicants' Muslimness with a single treatment, we include two different treatments. With this design, we are able to identify whether employers discriminate against all Muslim applicants (veiled and unveiled), or only against those who adhere to Muslim religious practices—in this case, wearing the headscarf. Second, we examine whether veiled Muslims are more penalized than unveiled Muslims in high-customer-contact jobs due to the conspicuousness of the Muslim veil and customer preferences. And finally, the cross-national design allows us to compare the penalty experienced by women in three European countries where Muslims are a significant minority, but which differ in their institutional and political environments in ways that could affect the size of the penalties experienced by Muslim women, especially those wearing the *hijab*.

The discrimination of Muslims: the role of religious practices

Public hostility towards Islam and Muslim minorities in Western countries has prompted some scholars to start using the term *Islamophobia*, which conceptually distinguishes the prejudice specifically directed towards Islam and/or Muslims from other types of prejudice directed towards other outgroups. Previous research has indeed shown that Europeans' attitudes towards Muslims tend to be more hostile than attitudes towards other immigrant minorities (Strabac and Listhaug, 2008; Bansak, Hainmueller and Hangartner, 2016). Compared to non-Muslim minorities, Muslims face a double opposition driven by two seemingly incompatible beliefs that are sometimes intertwined in the political debate. On the one hand, hostility towards Muslim minorities might be based on the perception

that they represent a threat to national identities, i.e. a nativist argument. On the other hand, Muslims might trigger a more general aversion to strict forms of religiosity and the presence of (majority or minority) religions in the public sphere, i.e. a secularist argument (Mondon and Winter, 2017; Helbling and Traummüller, 2020). Previous survey-based research has indeed shown that European populations tend to hold negative views towards public expressions of Muslim religiosity or Muslim religious rights, but not necessarily towards Muslims as a group (e.g. Helbling, 2014; van der Noll and Saroglou, 2015; van der Noll *et al.*, 2018; Helbling and Traummüller, 2020), which would include the population who self-identify as Muslim regardless of their practices or level of religiosity.

In addition to the nativist and secularist arguments, the hostility towards Muslim minorities could also be driven by the perception that they represent a security threat to Western societies. Especially after 9/11, Muslims have often been cast as potential terrorists, associated to radical Islam and subjected to constant surveillance (e.g. Cesari, 2009; Hellwig and Sinno, 2017). As in the case of the secularist argument, this negative stereotype is likely to be associated to perceived levels of Muslims' religiosity, i.e. natives might be more likely to associate observant Muslims or Muslim religious practices to Islamic fundamentalism.

Survey and field experimental research on anti-Muslim attitudes and discrimination against Muslims

Research on anti-Muslim attitudes in Western countries is extensive. While some studies have shown that attitudes towards Muslims are more negative than attitudes towards non-Muslim minorities (Strabac and Listhaug, 2008; Storm, Sobolewska and Ford, 2017), other studies reached different conclusions (e.g. Strabac, Aalberg and Valenta, 2014; Creighton and Jamal, 2015). According to a recent survey experiment conducted in the United Kingdom, the public is strongly opposed to extremely religious Muslims (or Christians) but evaluates non-practising Muslim migrants and non-practising Christian migrants similarly (Helbling and Traummüller, 2020).

Field experiments have focused on the discriminatory behaviour of employers. Several single-country studies have shown high levels of employment discrimination against Arab or Middle Eastern minorities in Europe (for a review, see Zschirnt and Ruedin, 2016), the majority of whom are Muslim. However, the use of Arab-sounding names as the only signal of religion is their main limitation, as these studies inevitably confound religious and ethnic discrimination (Bartkoski *et al.*, 2018; Di Stasio *et al.*, 2021). To identify if being

Muslim is the reason why some ethnic minorities are penalized in Western labour markets, it is thus necessary to use distinct markers for religion and ethnicity. Signalling different degrees of religious involvement or religiosity is also required to identify whether discrimination is driven by anti-Muslim or anti-religious sentiments. To disentangle religious from ethnic discrimination, Adida, Laitin and Valfort (2010) and Pierné (2013) focused on applicants of Nigerian and North African ethnicity, respectively, varying only their religious affiliation (no religion, Christian, or Muslim). Di Stasio *et al.* (2021) used a cross-national and multi-group design (the GEMM study, on which the present study is also based), independently varying ethnicity and religion for a large number of ethnic minorities. In all these studies, applicants signalling affiliation to Islam received lower callbacks than applicants of the same ethnic origin signalling affiliation to Christianity. However, none of them considered yet another potential penalty that may put Muslim women at a disadvantage in the labour market, i.e. wearing the Islamic headscarf, which is a marker of religious affiliation, religious identity, and religiosity.

Research based on non-experimental survey data has shown that women who wear the *hijab* are less likely to be in paid employment than unveiled Muslim women (see, e.g. Abdelhadi, 2019, for the United States; or Blommaert and Spierings, 2019, for the Netherlands). The more conservative gender values of the former (Khoudja and Fleischmann, 2015) could be a possible reason for this difference, though, next to employer discrimination. The evidence from field experiments on employment discrimination against Muslim women wearing the veil is scarcer mainly because it requires in-person audits or the use of pictures in job applications, a practice that in some countries is frowned upon. To date, research on this topic has exclusively focused either on Germany (where including pictures in job applications is the norm) or the United States (using in-person audits in low-skilled segments of the labour market). Weichselbaumer (2020) found that, in Germany, women with a Turkish background were less likely to be hired than native women, but those wearing the *hijab* experienced an even stronger penalty. Two small-scale audit studies were conducted in shops and restaurants in the United States; Ghumman and Ryan (2013) showed that veiled women were less likely to receive callbacks for a job interview and less likely to be given permission to complete job applications than unveiled applicants. They also experienced more negativity and less interest from employers. King and Ahmad (2010) found that the interviews of women wearing Muslim attire were shorter, with auditors perceiving more negativity during the interaction; the callback rates for veiled and unveiled applicants were, however, similar.

Based on this literature, we hypothesize that there is a hierarchy in employers' preferences in the three countries we study:

H1: Native majority women receive the highest callback rate, followed by non-religious minorities, unveiled Muslims and, at the bottom of the hierarchy, veiled Muslim women.

The role of customers in the discrimination against veiled Muslims

Customer discrimination occurs when a substantial share of consumers do not want to interact with ethnic minorities, which leads employers to avoid hiring minority candidates for positions requiring face-to-face customer contact (Becker and Gary, 1971). Even unprejudiced employers might discriminate to the extent that they anticipate customers' preferences. It is also possible that employers erroneously discriminate on behalf of their customers by overestimating their customers' ethnic preferences (Leonard, Levine and Giuliano, 2010).

Although members of *any* minority may be exposed to customer-driven discrimination, visible minorities—due to their accents, phenotypes, or clothing (e.g. wearing the *hijab*)—are likely to be more vulnerable. Weichselbaumer's (2020) field experiment on the headscarf penalty in Germany was not supportive of customer discrimination, though she only included three rather similar occupations in the research design (secretaries, accountants, and chief accountants). Likewise, Leckcivliz and Straub (2018) found in their lab experiment that students in a German university equally discriminated against veiled Turkish women in high- and low-customer-oriented occupations.

In our study, unveiled Muslims can only be identified as Muslims by employers; customers, on the other hand, cannot distinguish this group from non-religious minority applicants based on their appearance. Veiled Muslims can be identified as Muslims by customers due to the high visibility of the *hijab*. Since we assume that customer-driven discrimination mostly occurs in jobs requiring high face-to-face customer contact, veiled Muslims are more likely to be penalized in high- rather than low-customer-contact occupations relative to other (unveiled) minority applicants. The potential sources of discrimination (employer or customer discrimination) to which the three groups of minority applicants may be exposed to are summarized in Table 1.

Overall, we expect all ethnic minority applicants to be more penalized in high- than low-customer-contact occupations relative to native majority women; this is because they are all exposed to customer discrimination due to their ethnic minority status. However, we

Table 1. Potential sources of employer and customer discrimination against non-religious minorities, unveiled Muslims, and veiled Muslims in low- and high-customer contact jobs

	Degree of face-to-face customer contact	Employer discrimination		Customer discrimination	
		Anti-Muslim	Anti-Muslim religious practices	Anti-Muslim	Anti-Muslim religious practices
Non-religious minorities (unveiled)	High	No	No	No	No
	Low	No	No	No	No
Unveiled Muslims	High	Yes	No	No	No
	Low	Yes	No	No	No
Veiled Muslims	High	Yes	Yes	Yes	Yes
	Low	Yes	Yes	No	No

Notes: all three types of minority applicants are also potentially exposed to the same level of (employer and customer) ethnic discrimination due to their ethnic minority status.

expect the three groups of minority applicants to be exposed to different levels of employer and customer discrimination based on the signals of Muslimness (or lack thereof) included in their application. Because unveiled minority applicants (non-religious minorities and unveiled Muslims) cannot be identified as Muslims by customers, we expect no additional disadvantage in high-customer-contact jobs for these two groups, but we expect stronger discrimination against veiled Muslims in high- than in low-customer-contact jobs. Based on [Table 1](#), we formulate the following two hypotheses:

H2a: Compared to majority group women, the penalty experienced by veiled Muslims is larger in high- than in low-customer-contact occupations.

H2b: Compared to unveiled Muslims and non-religious minorities, the penalty experienced by veiled Muslims is larger in high- than in low-customer-contact occupations.

The politicization of Muslim minorities' integration and the salience of the headscarf debate in Western Europe

Muslim minorities are unevenly distributed across European countries, their share being higher in countries that actively recruited guest workers during the post-war reconstruction, such as the Netherlands and Germany (7.1% and 6.1%, respectively), than in Southern European countries, such as Spain (2.6%) ([Pew Research Center, 2017a](#)). In Germany and the Netherlands, Muslim minorities are mostly descendants of guest workers who arrived during the 60s from Turkey or Morocco. In Spain, Muslim minorities

mostly originate from Morocco ([Ramos, Thijssen and Coenders, 2021](#)). Compared to Germany and the Netherlands, the share of Muslims among the total population not only is smaller in Spain, but their presence is also more recent, as Spain did not become an immigration country until the early 2000s. We acknowledge that Spain also differs from Germany and the Netherlands for the more sluggish economic situation during the time of our fieldwork (2017 and first half of 2018). Spain recorded a staggering female unemployment rate of 19% in 2017, much higher than in the Netherlands and Germany (3.3% and 5.3%, respectively: Eurostat). Economic conditions could potentially affect the overall levels of discrimination against ethnic minorities due to increased labour market competition during economic downturns ([Johnston and Lordan, 2016](#)). Contrary to expectations, however, meta-analyses of field experiments have not found any relationship between ethnic discrimination and unemployment at the country level ([Zschirnt and Ruedin, 2016](#); [Quillian et al., 2019](#)). In addition, the main goal of this study is not to measure overall ethnic penalties, which might be affected by the economic conditions of a country, but to identify the extra penalties that minority applicants experience when they signal their Muslimness. In the next paragraphs, we therefore focus on two country-level factors that are closely related to specific *Muslim* penalties: (i) the salience of the political debate over Muslim integration and (ii) the accommodation of Muslim religious rights within the existing legal frameworks.

The salience of political debates over the integration of Muslim minorities

Political elite discourses mobilize and shape public opinion towards migrants and Muslim minorities,

especially in countries where political elites endorse exclusionary discourses and far-right parties have strong electoral support (Dolezal, Helbling and Hutter, 2010; Dennison and Geddes, 2019; Czymara, 2020). Although the political rhetoric in the Netherlands and Germany is not as exclusionary as in Austria or Denmark, it is still significantly more negative than in Spain, where migration-related topics are not often discussed among political elites (Czymara, 2020). In the Netherlands, far-right parties have been relatively successful since the early 2000s and the anti-immigrant discourse is, above all, about Muslim migrants and their integration (Sniderman and Hagendoorn, 2009). In Germany, the 2015 refugee crisis prompted the electoral success of the far-right, which became the third largest party in the 2017 federal election (Franzmann, Giebler and Poguntke, 2020). In both countries, far-right parties endorse anti-Muslim positions and mobilize grievances over ethnic and immigration threats. By contrast, in Spain, the electoral success of the far-right in the 2019 parliamentary elections was related to the salience of territorial issues (i.e. support for independence in Catalonia) instead of immigration (Simón, 2020). In both the Netherlands and Germany, the public discourse on Muslims' integration is also highly gendered: headscarves, honour killings, genital mutilations, domestic violence, and forced marriages often take centre stage in a culturist and assimilationist discourse which sees Islam as incompatible with liberal Western values (Korteweg and Yurdakul, 2009).

The issue of veiling has taken centre stage in political discourses to varying degrees, depending on the presence of far-right parties and the salience of the Muslim integration debate. In the Netherlands, the headscarf debate has been on-going since the 1990s, although it has intensified in the last few years (Howard, 2017). In 2020, a new law forbidding face-covering garments such as the *burqa* or *niqab* in certain public spaces was passed (Hass, 2020). In Germany, several federal states have enacted headscarf bans for workers in specific occupations, such as teachers or lawyers, since the 2000s. In Spain, some municipalities passed laws banning the use of the *burqa* in public spaces, almost all in the region of Catalonia (Astor, 2016), which explains why the public debate over the wearing of Islamic garments is almost non-existent at the national level (Howard, 2017).

Despite cross-national differences in the salience of the veil in the public debate, public attitudes towards the Muslim headscarf are not more tolerant in Spain than in the other two countries. According to a recent survey, about a quarter of the population in both Spain and Germany thought that Muslim women should not be allowed to wear any religious clothing, while this share was significantly lower (14.5%)

in the Netherlands (authors' calculations based on Pew Research Center, 2017b). The lower opposition towards the headscarf reported by Dutch respondents in 2017 confirms findings from previous studies (e.g. Helbling, 2014; Statham, 2018), suggesting that the salience of Muslim integration in the political debate and the long-standing presence of strong far-right parties do not necessarily translate into more hostile attitudes.

Church-state relations and the accommodation of minority religious rights

Scholars have also investigated the role of institutional factors in explaining the recognition of Muslim religious rights and natives' attitudes towards Muslim minorities. Among these institutional explanations, countries' citizenship models and, especially, the regulation of church-state relations have received most attention (e.g. Fetzer and Soper, 2004; Dolezal, Helbling and Hutter, 2010; Carol and Koopmans, 2013). The literature on citizenship models argues that national conceptions of nationhood and citizenship (civic vs ethnic) have an impact on migrant integration policies and how integration is framed in political debates (Brubaker, 1992). Though this approach has received criticism (Joppke, 2007), countries' citizenship policies are still relevant to explain migrants' integration outcomes (e.g. Carol and Koopmans, 2013).

According to this literature, the historical relationship between the state and the majority religion—from close relationship to strict separation—shapes the accommodation of Muslim minorities and public attitudes towards minority religious rights, including the wearing of headscarves. For example, Helbling (2014) examined public attitudes towards veiling in seven European countries and found the most negative views in France, where there is a strict separation between the church and the state, and the least negative in the Netherlands and Sweden, two countries that have traditionally been highly accommodating of religious rights. van der Noll (2010) also found higher support for the headscarf ban among German respondents compared to the Dutch, though they both had more negative attitudes than the British and more positive attitudes than the French.

Within the European context, Germany has traditionally been known for its weak multiculturalism and strong restrictions on minority religions (Koopmans, 2013), although citizenship and integration policies have become more accommodating in recent years. The Netherlands has a strong legacy of multiculturalism policies, although these have weakened considerably, possibly as a result of the electoral gains of populist radical-right parties (for a review, see Ersanilli and Koopmans, 2010). Spain has not

received much attention in the literature on church-state relations, most likely because it became an immigration country relatively recently. Based on the Religion and State Project dataset (Fox, 2019), which examines government religion policy, support for the majority religion, and accommodation of religious minorities, Spain is ranked between Germany and the Netherlands.⁴ This intermediate positioning for Spain is also consistent with the analysis by Koopmans and Michalowski (2017).

The cross-country differences that have been described in this section are summarized in Table 2. A higher number of crosses indicates more salience of Muslim integration debates, stronger opposition towards the headscarf, and more restrictions to the accommodation of religious minority rights.

To summarize, public attitudes towards veiling are more negative in Germany and Spain than in the Netherlands; Germany is also the most restrictive of the three countries in terms of granting religious rights to minorities. Therefore, we derive the following hypothesis on the strength of the headscarf penalty:

H3: Compared to unveiled Muslims, the penalty against women wearing the Muslim headscarf is the largest in Germany.

Data and research design

The data for this article come from a larger field experiment relying on written applications (i.e. a correspondence study), conducted during the year 2017 and the first half of 2018 using an unpaired design (Lancee *et al.*, 2019). Compared to paired designs, unpaired designs are

more successful in avoiding employers' suspicion and/or detection because each employer receives only one application; at the same time, the random allocation of treatments to experimental units ensures unbiased estimates as long as the randomization process is properly implemented (Vuolo *et al.*, 2016). A computer-assisted procedure was used to automatize the job application process, which involved retrieving vacancies from popular job-search platforms and generating the resumes based on a predefined randomization code.

We used a subsample ($n=2,397$) of the larger field experiment; we excluded data from male applicants and from Norway and the United Kingdom, as the headscarf penalty can only be detected by including pictures in job applications, which is not a common practice in these countries. Next to the native majority group, we included women originating from countries where Islam is the main religion (e.g., Morocco, Turkey) or where Muslims are a significant minority (e.g., Bulgaria, India). The research design maximized the ethnic heterogeneity of Muslim minorities by including applicants from 19 countries.⁵ The majority group and the largest ethnic minorities in each country (i.e. Turks and Lebanese in Germany, Moroccans and Turks in the Netherlands, and Moroccans in Spain) were over-represented, so, within each country, the majority group represents a quarter of applications, and the largest minorities make up a third of applications. We retained data from applicants who either did not include any religious signal or, in the case of ethnic minorities, who signal their Muslimness with their involvement in a Muslim community centre or by wearing the *hijab*.

In addition to ethnicity, (Muslim) religion and occupation, we also varied applicants' phenotype. Crucially, both religion and phenotype are non-orthogonal and depend on applicants' ethnicity; that is, the range of phenotypes and religious affiliations that could be randomly assigned to an applicant depends on his/her ethnic origin (e.g. all Nigerian applicants were black), as some ethnicity-phenotype combinations are extremely unlikely (see the distribution of phenotypes across ethnicities in Supplementary Table SA4).⁶ Other characteristics that are not the focus of this study were randomly assigned to both native and minority applicants and are not described further. Finally, applicants' place of birth (born in the destination country vs migration at age six) was randomly assigned to minority applicants only, all of whom are citizens of the destination country and completed all their education there. For more detailed information about the GEMM field experiment, see Lancee *et al.* (2019).

The dependent variable

We coded employers' response to each job application as a positive callback ($y=1$) if the candidate received an

Table 2. Summary of cross-country differences in political debates, public opinion, and the accommodation of religious rights

	Germany	The Netherlands	Spain
Salience of political debates over Muslim integration	+++	+++	+
Opposition towards the Muslim headscarf	+++	+	+++
Restrictions to the accommodation of religious minority rights	+++	+	++

invitation to an interview, was shortlisted, or received a request to provide more information. Only responses that explicitly signalled an interest in the candidate were considered positive callbacks. Responses were coded as a negative callback ($y=0$) if the candidate received an outright rejection, nothing more than a confirmation of receipt, or no response at all.

The ethnic minority signal

Ethnic minority status was signalled with foreign-sounding names and proficiency in the official language of the country of origin. This information was included in the cover letter to assure employers that they were native German/Dutch/Spanish⁷ speakers. For each ethnicity, the most common forenames in the country of origin at the time of applicants' birth year—between 1991 and 1996, depending on the occupation—were chosen. In countries where such data was not available, forenames that were frequently included on websites listing countries' popular names were selected. Forenames with religious connotations, of popular figures, and gender-neutral forenames were avoided. Finally, forenames that were easier to pronounce for employers were preferred. Surnames were chosen based on the most common surnames in each country.

The two signals of muslimness

Muslim religious signals were only included in applications sent by ethnic minority members. We opted for

not assigning any Muslim treatment to majority group applicants as they probably would have been perceived as converts (Pierné, 2013). Women's Muslim religious involvement was signalled in their resumes either by including information about applicants' volunteering activities in a Muslim community centre (unveiled Muslims), or by including a digitally manipulated picture of a woman wearing the *hijab*, in addition to volunteering work in a Muslim community centre (veiled Muslims). Ethnic minority applicants who did not signal their Muslimness in their resume (non-religious minorities) included volunteering activities in a non-religious community centre and a picture without the Islamic headscarf. Their resumes were thus equivalent to those of majority group women, except for the signals of ethnic minority status. Figure 1 gives an example of an applicant's picture with and without the *hijab*. The distribution of the ethnicity and religious treatments across the four groups of applicants is shown in Table 4.

Signalling religious affiliation with the inclusion of volunteering activities in job applications has been a common approach (e.g. Adida, Laitin and Valfort, 2010; Pierné, 2013). Although this experimental manipulation may not be sufficiently strong, including a signal of applicants' religious affiliation that is too evident could compromise the realism of the application. In our case, the type of volunteering activity was adapted to each occupational profile, so the inclusion of this information in the resume



Figure 1. Example of a photograph attached to job applications, with and without the Muslim headscarf. Note: All photographs used in the field experiment are shown in the [Supplementary Material](#).

Table 3. Distribution of treatments across applications in Germany, the Netherlands, and Spain

	Germany	The Netherlands	Spain	Total
Majority group (unveiled)	183	135	265	583
Non-religious minorities (unveiled)	331	238	363	932
Unveiled Muslims	113	97	180	390
Veiled Muslims	103	110	279	492
Ethnicity ⁰				
Eastern European				
Albanian	14	18	52	84
Bulgarian	19	36	27	82
Russian	18	14	20	52
Macedonian	13	12	0	25
Bosnian	0	0	26	26
Middle East and North Africa (MENA)				
Egyptian	13	19	29	61
Iranian	16	13	44	73
Iraqi	25	13	45	83
Lebanese	100	9	14	123
Moroccan	22	122	355	499
Turkish	159	109	45	313
Sub-Saharan African				
Ethiopian	26	7	17	50
Nigerian	32	9	26	67
Ugandan	15	11	20	46
South and Southeast Asian				
Indian	16	16	26	58
Indonesian	16	9	12	37
Pakistani	29	14	38	81
Malaysian	14	14	0	28
Philippine	0	0	26	26
Occupation				
High-customer contact				
Receptionist	96	67	94	257
Sales representative	128	99	46	273
Shop assistant	120	73	171	364
Hairdresser	60	25	206	291
Low-customer contact				
Cook	113	127	330	570
Payroll clerk	118	97	194	409
Software developer	95	92	46	233
Phenotype				
Used for both majority and minority applicants ⁰				
White—blonde, blue eyes	58	59	94	211
White—light brown hair, green eyes	124	77	121	322
White—dark brown hair, brown eyes	164	151	291	606
Arab (black hair, brown eyes)	174	147	277	598

Table 3. Continued

	Germany	The Netherlands	Spain	Total
Used only for minority applicants				
Black—light shade	49	63	179	291
Black—dark shade	40	19	32	91
East Asian	8	6	15	29
Southeast Asian	113	58	78	249
Total	730	580	1,087	2,397

Notes: *Unveiled Muslims* include information about their volunteering work in a Muslim community centre. *Veiled Muslims* wear a headscarf in the job application photograph and include information about their volunteering work in a Muslim community centre. *Non-religious minorities (unveiled)* do not include any religious signal and do volunteering work in a secular community centre. Source: Lancee et al. (2021).

Table 4. Distribution of the ethnicity and religious treatments across the four groups of applicants included in the analysis

Treatments	Majority group	Non-religious minorities	Unveiled Muslims	Veiled Muslims
Ethnicity	German/Dutch/ Spanish ethnicity	Same ethnicities randomly assigned across these three groups, within each country		
Volunteering work in a secular community centre	✓	✓	✗	✗
Volunteering work in a Muslim community centre	✗	✗	✓	✓
Wearing the Muslim headscarf in profile picture	✗	✗	✗	✓

Source: Lancee et al. (2021).

seemed relevant and realistic. The treatment was included both in the CV and the cover letter and, for cooks, it read as follows:

- ‘I am a passionate cook both in my professional life and in my spare time. This is shown by my active participation at *Muslim Youth Enrichment Project/Youth Enrichment Project* where I help with the preparation of meals for various events like local fairs and open days’. (Cover letter)
- ‘Volunteer at *Muslim Youth Enrichment Project/Youth Enrichment Project*: Assisting with cooking and preparation of meals for various events like open days and local fairs’. (CV)

Occupations

Job applications were sent to occupations assumed to involve a *high* degree of face-to-face customer contact (hairdresser, shop assistant, receptionist, sales representative) and a *low* degree of customer contact (cook, payroll clerk, software developer). The selected occupations vary in their educational requirements, with cooks, shop assistants, and hairdressers generally

requiring lower qualifications than the rest of occupations in all three countries. Applicants had 4 years of work experience, so we only applied to entry-level jobs. Applications are not equally distributed across the seven occupations, as in some countries there were few vacancies for some of them (see Table 3).

Results

The average callback rate was very different across the three countries (Table 5), i.e. 52%, 48%, and 21% in the Netherlands, Germany, and Spain, respectively. The low callback rate in Spain most likely reflects the high competition for jobs in a context of high unemployment.

We estimated the probability of applicants receiving a positive callback with linear probability models (LPM) using robust standard errors. LPM were preferred over logit or probit models when estimating causal effects of experimental treatments, particularly when interaction terms are included in the model (Gomila, 2020). Given the nature and complexity of the research design, the LPM included controls for occupation (since applications were not

equally distributed across occupations due to differences in labour demand between occupations), ethnicity (given that the largest ethnic minorities in each country were over-represented by design and the oversampled ethnicities vary across countries), and phenotype, which is non-orthogonal and depends on applicants' ethnicity. We collapsed the nineteen ethnicities and eight phenotypes into five categories each for reasons of statistical power. Other characteristics that were randomly assigned to the applications and are thus orthogonal (e.g., information about grades, competence, and warmth) were not included as controls.

The models for customer discrimination did not control for occupation; instead, we created a weighting factor for each observation (occupation weights), which is the result of dividing the actual number of applications per occupation sent in each country by the average number of applications per occupation in each country. That way, we ensure that each occupation in the low- and high-customer-contact groups had exactly the same weight in the statistical analysis, so the results are not driven by a single occupation. A detailed explanation of how occupation weights were calculated in each country as well as alternative models without occupation weights are included in the [Supplementary Material](#).

Is there a hierarchy in employers' preferences?

[Figure 2](#) shows two sets of LPM, run for each country, that only differ in the reference group used for comparison. Native majority women were the reference group in the first model, while unveiled Muslims were the reference group in the second model.

In both Germany and the Netherlands, veiled Muslims received fewer callbacks than native majority women ($\beta = -0.19$ in Germany and $\beta = -0.30$ in the Netherlands, both coefficients are statistically significant at $P < 0.05$). However, neither non-religious minority women nor unveiled Muslim women were penalized relative to majority group applicants. In the Netherlands, compared to native majority women, the coefficients for both groups of minority unveiled applicants are negative ($\beta = -0.12$), but they do not reach the threshold of statistical significance ($P < 0.05$). In Spain, none of the three groups of minority women were penalized compared to majority group women, although the coefficients are negative for unveiled Muslims ($\beta = -0.02$) and veiled Muslims ($\beta = -0.05$); in consequence, we fail to reject the null hypothesis in Spain and H1 was not confirmed.

In all three countries, unveiled Muslim women did not receive fewer callbacks compared to minority women who did not signal any religion ([Figure 2](#),

bottom panel). However, veiled Muslims were penalized compared to unveiled Muslims in both Germany ($\beta = -0.27$, significant at $P < 0.05$) and the Netherlands ($\beta = -0.17$, significant at $P < 0.05$). In these two countries, we found strong evidence of employer discrimination against veiled Muslim women, but not against other unveiled minority women, regardless of whether they included information about their involvement in a Muslim community centre. We therefore cannot reject the null hypothesis of no hierarchy in employers' preferences in Germany and the Netherlands and H1 is not confirmed. Note, however, that the size of the coefficient for non-religious minorities and unveiled Muslims in the Netherlands, relative to natives, is negative and substantial ($\beta = -0.12$) for both groups. We acknowledge that we may lack statistical power to detect an effect of that size at conventional levels of statistical significance in the Dutch sample due to the small sample size.

Are women wearing the Muslim headscarf exposed to customer discrimination?

As shown in [Table 1](#), unveiled Muslims cannot be identified as Muslims by customers. Without the *hijab* as a marker of religion, unveiled Muslims should not be exposed to anti-Muslim or anti-religious *customer* discrimination (H2b). However, we expected *hijab* wearers (veiled Muslims) to be more penalized in high- than low-customer-contact occupations, compared to both native women (H2a) and other (unveiled) minority women (H2b). [Figure 3](#) shows the main coefficients and interaction terms between the four groups of applicants and the level of face-to-face customer contact required in an occupation, with veiled Muslims as the reference group.

As shown in [Figure 3](#), H2a was confirmed in Germany and the Netherlands: veiled Muslims were less likely to receive a callback, relative to majority group women, when applying to high-customer-contact jobs as compared to low-customer-contact jobs. We interpret this as evidence of customer discrimination against women wearing the *hijab* in these two countries, as the interaction terms for natives in high-customer contact jobs are positive and significant at $P < 0.05$ in [Figure 3](#). In the case of Spain, the interaction term for natives in [Figure 3](#) is smaller in size and non-significant, so we cannot reject the null hypothesis of no customer discrimination against veiled women. Thus, H2a was not confirmed for Spain.⁸ Compared to women wearing the headscarf, the premium for native applicants is not significant at $P < 0.05$ when they applied to occupations involving low face-to-face contact with customers.

With regard to the size of the headscarf penalty in relation to unveiled Muslims and non-religious minorities, we hypothesized this penalty to be larger in high- than in low-customer-contact jobs (H2b),

Table 5. Callbacks and callback rates in Germany, the Netherlands, and Spain

	Germany		The Netherlands		Spain	
	Applications (n)	Callback rate (%)	Applications (n)	Callback rate (%)	Applications (n)	Callback rate (%)
Low customer-contact occupations						
Majority group (unveiled)	82	51.2	78	73.1	139	23.0
Non-religious minorities (unveiled)	150	54.7	118	61.0	195	28.7
Unveiled Muslims	47	48.9	61	52.5	94	17.0
Veiled Muslims	47	34.0	59	49.2	142	21.8
High customer-contact occupations						
Majority group (unveiled)	101	54.5	57	64.9	126	26.2
Non-religious minorities (unveiled)	181	49.7	120	40.8	168	21.4
Unveiled Muslims	66	51.5	36	41.7	86	14.0
Veiled Muslims	56	17.9	51	17.6	137	9.5
All occupations						
Majority group (unveiled)	183	53.0	135	69.6	265	24.5
Non-religious minorities (unveiled)	331	52.0	238	50.8	363	25.3
Unveiled Muslims	113	50.4	97	48.5	180	15.6
Veiled Muslims	103	25.2	110	34.5	279	15.8
Average callback rate	730	48.2	580	51.7	1087	21.1

Notes: *Unveiled Muslims* include information about their volunteering work in a Muslim community centre. *Veiled Muslims* wear a headscarf in the job application photograph and include information about their volunteering work in a Muslim community centre. *Non-religious minorities (unveiled)* do not include any religious signal and do volunteering work in a secular community centre. Source: [Lancee et al. \(2021\)](#).

since customers can only identify veiled Muslims as Muslims. As shown in [Figure 3](#), the interaction terms for unveiled Muslims and non-religious minorities were not statistically significant at conventional levels.

[Figure 4](#) shows the differences in callback rates with respect to veiled applicants in low- and high-customer-contact jobs, which are expressed as marginal effects (ME). The lack of statistical significance of the interaction terms in [Figure 3](#) led us to reject H2b. It is, however, possible that we do not have enough power to detect a significant interaction term given our country sample sizes and that we would have found a significant interaction (and, thus, confirmed H2b) with a larger sample, especially in Germany and the Netherlands. [Figure 4](#) shows that the penalties experienced by veiled women, relative to unveiled Muslims and non-religious minorities, appear to be larger in high- than in low-customer-contact jobs in both Germany and the Netherlands. Although we formally rejected H2b, this

should not be interpreted as a confirmation of the null hypothesis.

Cross-country differences in the size of the headscarf penalty

Our final model pooled the data from the three countries and took unveiled Muslims as the reference group, as we were interested in comparing the sizes of the penalties experienced by veiled women compared to unveiled Muslims.

[Figure 5](#) shows that veiled Muslim women in Germany were penalized compared to unveiled Muslims ($\beta = -0.26$, $P < 0.05$). The non-significant interaction term for the Netherlands indicates that we cannot reject the null hypothesis of a headscarf penalty of equal size in both countries. By contrast, the headscarf penalty was significantly smaller in Spain than in Germany, as expected. Thus, H3 was only partially

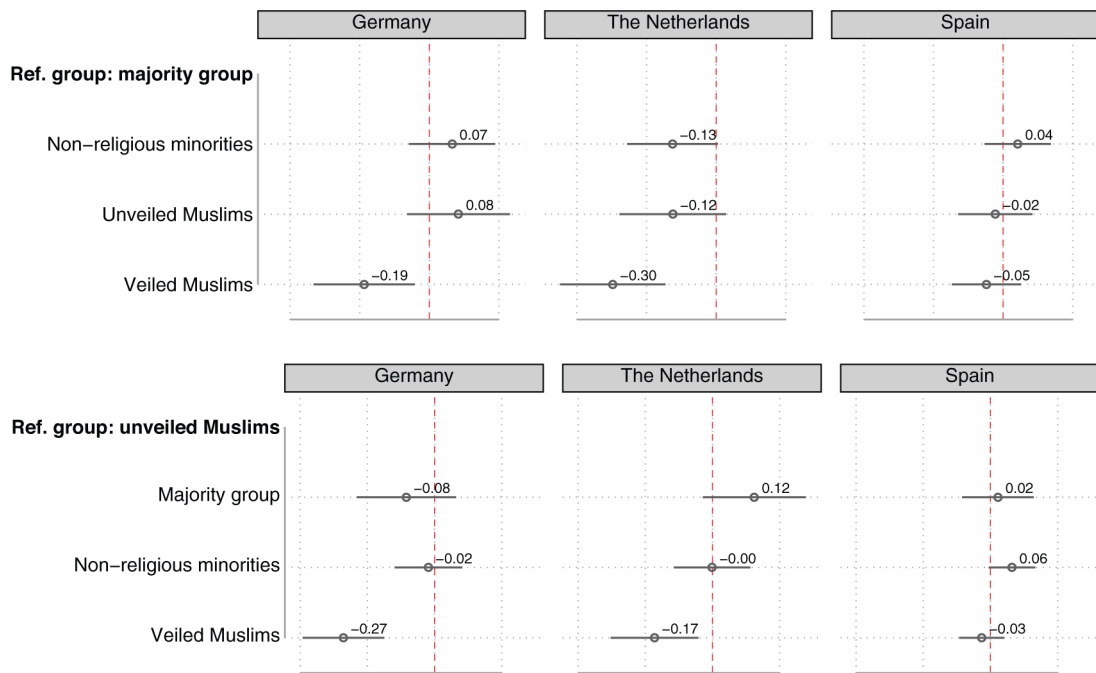


Figure 2. Probability of receiving a positive callback from the employer (coefficient estimates). Notes: Germany $n = 730$, the Netherlands $n = 580$, and Spain $n = 1,087$. LPM with robust standard errors for each country. Control variables: ethnicity, phenotype, and occupation. Source: Lancee et al. (2021).

confirmed. Spain also differs from the Netherlands in that veiled Muslims in the latter country were penalized compared to unveiled Muslims ($\beta = -0.17$, which is significantly different from the coefficient for veiled Muslims in Spain). While differences in the severity of the headscarf penalty between Germany and Spain are in line with H3, the results for the Netherlands are surprising, as we expected the headscarf penalty to be smaller in the Netherlands than in Germany.

The pooled data model with the Netherlands as the reference category also shows that native majority women received a premium compared to unveiled Muslim women ($\beta = +0.15$, $P < 0.05$), thus suggesting that there was indeed a hierarchy in employers' preferences (H1) in the Netherlands. While we rejected H1 in the single country model earlier (Figure 2, top panel) on the basis of a P -value exceeding the conventional threshold for statistical significance, this result should be interpreted with caution as a lack of statistical power may have prevented us from detecting a significant effect.

Conclusion

In this study, we have presented experimental evidence on employers' hiring behaviour in Germany, the Netherlands, and Spain, with a focus on responses to unveiled Muslims (who do not wear the *hijab* and

signal their Muslimness with their volunteering work in a Muslim community centre) and veiled Muslims, who wear a *hijab*. In Spain, we found no evidence of discrimination, regardless of whether or how the applicants indicated their Muslimness. In Germany and the Netherlands, unveiled and veiled Muslim were perceived differently by employers as only the latter faced discrimination. In these two countries, wearing the *hijab* while applying for jobs not only led to a disadvantage relative to native majority women but also relative to unveiled Muslim women. It is likely that doing voluntary work in a Muslim community centre and not wearing the veil was interpreted as an indication that the applicant was less religious, or even non-religious, than women wearing the veil. In other words, unveiled Muslims may have been perceived as 'cultural Muslims', i.e. people who are familiar with Muslim traditions and might even self-identify as Muslims, but who are not strongly committed to Islam. By contrast, *hijab* wearers were likely perceived as highly religious, which elicited strong negative reactions among a larger group of employers. These results are consistent with the literature showing that negative attitudes towards Muslims might be driven more by a rejection of (perceived) high levels of religiosity or specific religious practices than by anti-Muslim sentiments (Helbling and Traunmüller, 2020). At the same time, they also qualify previous findings from country-specific analyses that

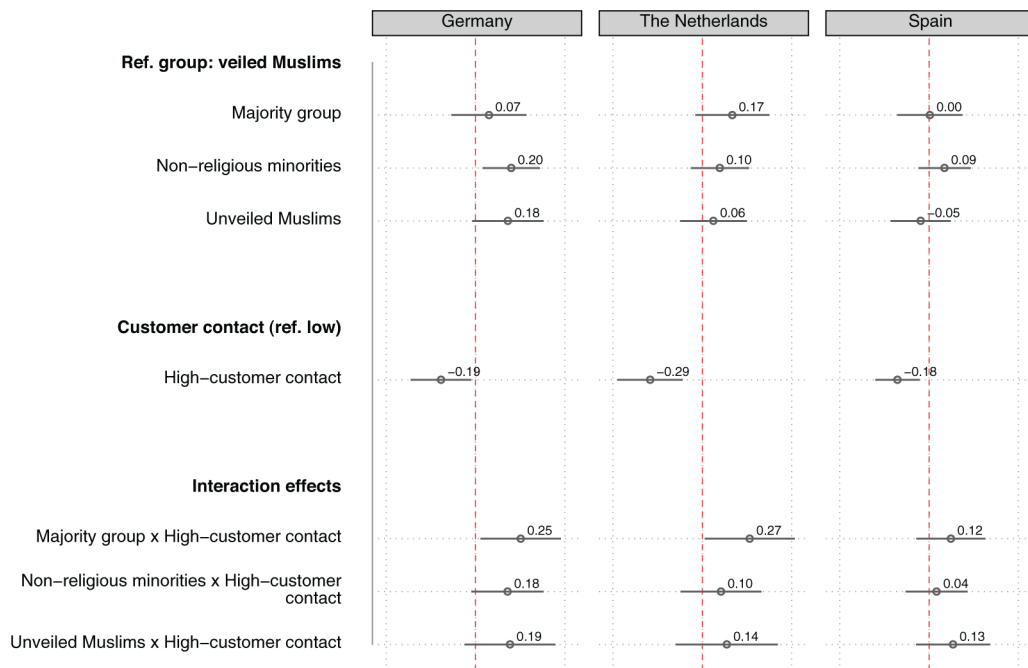


Figure 3. Probability of receiving a positive callback from the employer (coefficient estimates). *Notes:* Germany $n = 730$, the Netherlands $n = 580$, and Spain $n = 1,087$. Interactions with occupations' degree of customer contact. LPM with robust standard errors for each country. Control variables: ethnicity and phenotype. All models include occupation weights to correct for the unequal distribution of applicants across occupations. *Source:* Lancee et al. (2021).

did not differentiate by gender, showing that applicants originating from Muslim-minority countries were discriminated even when they did not explicitly signal their Muslimness (Di Stasio et al., 2021). It is possible that employers' reactions to signals of Muslimness are gender-specific: employers may be discriminating against *any* male ethnic minority member perceived as Muslim, while for women the source of discrimination largely stems from the wearing of the *hijab*. When looking at differences across high- and low-customer-contact occupations, we found evidence of customer-driven discrimination against veiled Muslim women in Germany and the Netherlands. Relative to natives, women wearing the veil were, in fact, only penalized in high-customer-contact jobs.

Finally, the pooled cross-national analysis revealed that the headscarf penalty is of similar size in the Netherlands and Germany, a somewhat unexpected finding given the traditionally stronger multiculturalism of the Dutch citizenship model and the less negative attitudes towards the headscarf recorded in the Netherlands (e.g., van der Noll, 2010; Helbling, 2014; Pew Research Center, 2017a,b). Cross-country differences in survey attitudes could, however, simply reflect cross-country differences in the degree of social acceptability of explicit opposition towards Muslims

or Muslim rights. The salience of the Muslim integration debate in the Dutch and German media has probably contributed to the stronger stigmatization of women wearing the veil in these two contexts, compared to Spain. Furthermore, our results are less surprising if one considers the strong culturist—and some would argue assimilationist—turn of the Dutch integration debate, exemplified by the increasing importance of Dutch language, rituals, values, and traditions in the framing of national identity. In this context, the emphasis on Dutch culture as modern and progressive could have led to the othering of Muslims, who are often framed as inevitably traditional and backward, especially with regard to gender inequality and sexual oppression (Balkenhol, Mepschen and Duyvendak, 2016). It is plausible that, in the Netherlands, the *hijab* may trigger these associations even though policies have been more accommodating than in Germany.

Our study contributes to the debate on Muslim integration and the role of religious garments in the public sphere, with a focus on the opposition to the practice of veiling from both a nativist and a secularist perspective. Before concluding, we would like to acknowledge what could be perceived as two limitations of our study. First, it is possible that the stronger penalty experienced by veiled women in high-customer-contact

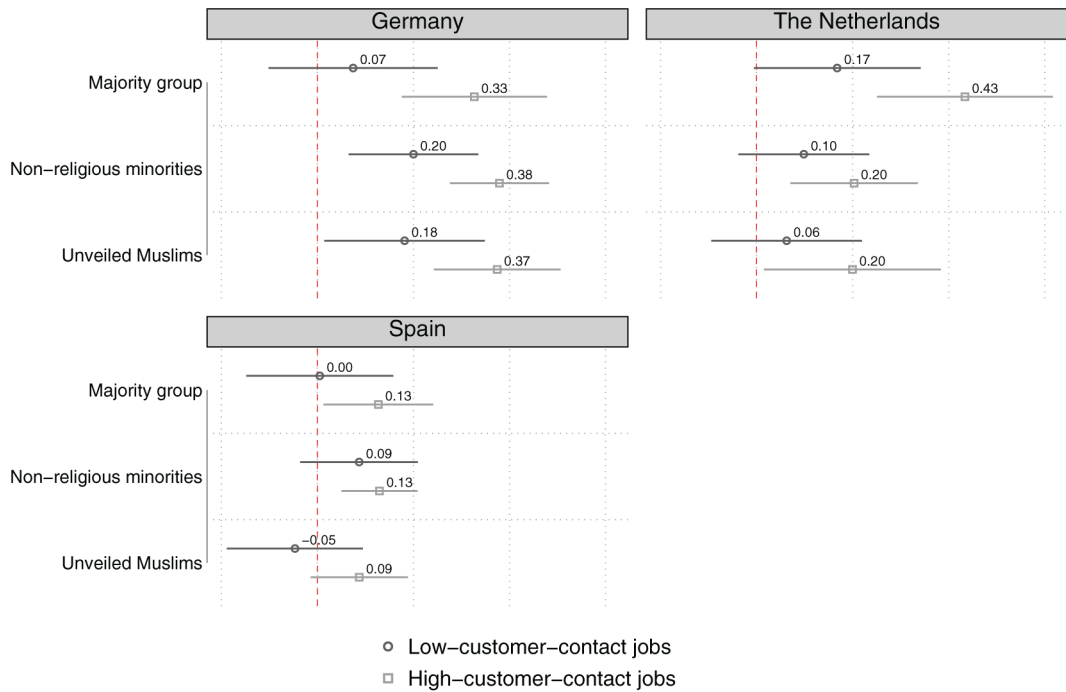


Figure 4. Differences in callback rates with respect to veiled applicants (ME). *Notes:* Germany $n = 730$, the Netherlands $n = 580$, and Spain $n = 1,087$. LPM with robust standard errors for each country. Control variables: ethnicity and phenotype. All models include occupation weights to correct for the unequal distribution of applicants across occupations. *Source:* Lancee et al. (2021).

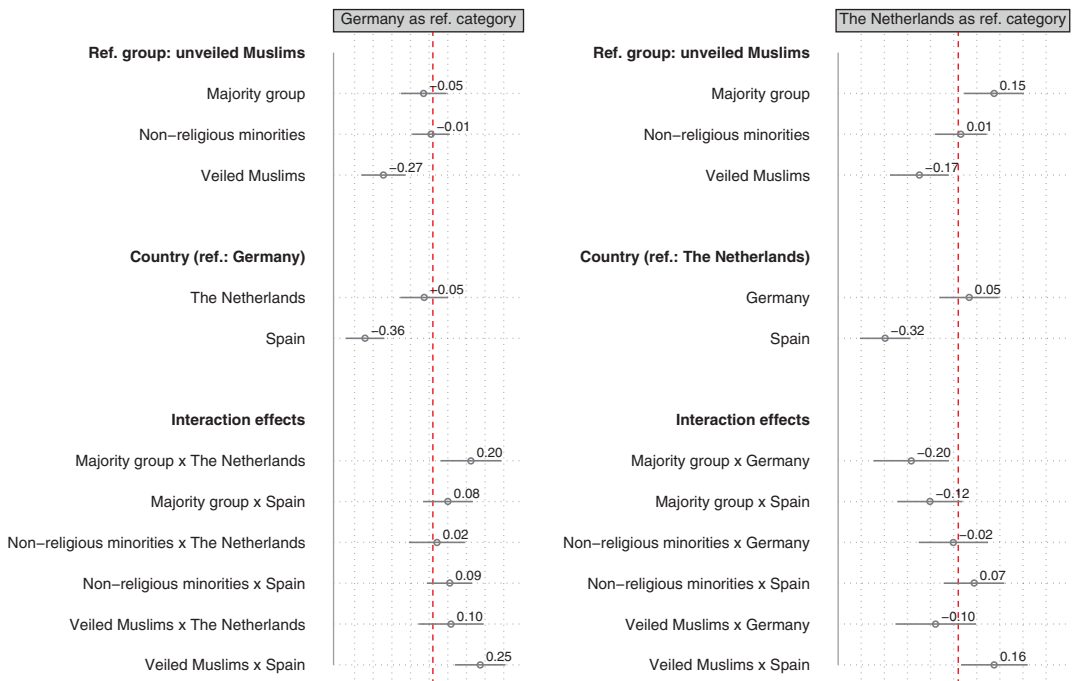


Figure 5. Probability of receiving a positive callback from the employer (coefficient estimates). *Notes:* $n = 2,397$. LPM with robust standard errors for each country. Control variables: ethnicity, phenotype, and occupation. *Source:* Lancee et al. (2021).

occupations is not only explained by their higher exposure to customer discrimination. The seven occupations included in our study (and/or the employers in those seven occupations) may differ in relevant characteristics (other than the required level of face-to-face customer contact) that could affect the penalties experienced by veiled and unveiled Muslim women. Future studies may include a larger number of occupations and collect more information about required customer contact from the sampled job ads. And second, our design does not allow us to determine whether employers would have had the same negative reactions towards Muslim men wearing highly visible religious symbols or towards applicants wearing highly visible religious symbols from other religions. In other words, we cannot rule out the possibility that employers, instead of showing a bias against the Muslim veil, are simply showing an aversion to *any* type of conspicuous religious garment. Wearing visible religious clothing at the workplace might not only be perceived as a signal of traditional gender values and religious conservatism, but also as an indication that the applicant is lacking in professionalism. To distinguish anti-Muslim attitudes from a more general aversion to any religion, a recent study compared attitudes towards Christians wearing a necklace with a cross with attitudes towards Muslims wearing a necklace with a crescent moon (Sleijpen, Verkuyten and Adelman, 2020). While this is certainly a neat design, the specific garments of most religions are not as conspicuous as the *hijab* and, thus, hardly comparable. We therefore agree with Unkelbach *et al.* (2010: p. 382) in that it makes little difference whether discrimination against veiled women is due to the headscarf being associated with a lack of professionalism or to a distaste for the Muslim headscarf, Islam, or all religions in general.

Religion is such an important component of one's identity, and people might sincerely perceive an obligation to wear religious symbols at the workplace. Indeed, attaching a photograph with a headscarf is not an uncommon practice among Muslim women in the three national contexts considered here. Our study shows that this practice exposes Muslim women to the risk of discrimination if they apply to jobs that require face-to-face contact with customers. Future investigations should include a larger number of occupations and examine the impact of other variables, such as the labour demand for certain occupations on discrimination against veiled women. We should also bear in mind that we did not examine countries with very restrictive (i.e. France) or more permissive (i.e. United Kingdom) regulations of religious garments. The range of cross-national variation is, therefore, likely to be larger than what we could demonstrate in this study.

Notes

- 1 We will use the terms veil and headscarf interchangeably to refer to the *hijab*, which is the piece of clothing that covers the hair and neck of a woman but leaves the face clear.
- 2 In 2017, the Court of Justice of the European Union (CJEU) ruled in *Achbita v G4S Secure Solutions Case C-157/15* against two female employees who were dismissed for refusing to remove their headscarves, thus upholding the right of private companies in EU countries to ban visible political, philosophical or religious signs in the workplace (Howard, 2017). In 2018, the European Court of Human Rights concluded that these bans could represent a breach of religious freedom protected by Article 9 European Convention of Human Rights. However, in July 2021, the CJEU largely confirmed its 2017 sentence. For a detailed discussion, see Vickers (2021).
- 3 We are interested in how the practice of veiling affects employers' behaviour towards Muslim women rather than to identify the profile of Muslim women who are more likely to wear the *hijab*. Nonetheless, it is worth noting that levels of religiosity correlate with the practice of wearing the Muslim veil in Western Europe (Brünig and Fleischmann, 2015), so it is likely that employers see veiling as a signal of traditionalism, religiosity, and religious identity, among other factors.
- 4 The RAS3 State Discrimination of Minority Religions Index is based on the Religion and State Project (Fox, 2019). The index ranges from 0 to 108 and examines the restrictions that are placed on the religious institutions and practices of religious minorities that are not placed on the majority group. The index score is 30 for Germany, 10 for Spain, and 3 for the Netherlands.
- 5 Albania, Bulgaria, Egypt, Ethiopia, India, Indonesia, Iran, Iraq, Lebanon, Morocco, Nigeria, Pakistan, Russia, Turkey, Uganda, Bosnia, Macedonia, Malaysia, and the Philippines. In Spain, there were no applicants from Macedonia and Malaysia, while in Germany and the Netherlands, there were no applicants from the Philippines.
- 6 Small online surveys with convenience samples of students were conducted to determine which of the eight phenotype profiles were plausible for each ethnicity. In addition, a post hoc online survey (Veit and Yemane, 2020) with more than 2,000 respondents from Germany tested the comparability of the profile pictures in terms of attractiveness, competence, and agreeableness.
- 7 In the case of Spain, fluency in Catalan/Basque/Galician languages was also mentioned when applying to vacancies in regions where one of those languages is spoken.
- 8 Supplementary Table SA8 shows the LPM used in Figure 3, with and without occupation weights. The interaction term for natives in high-customer-contact jobs is statistically significant in Spain when the model does not include occupation weights. The distribution of applications across occupations is particularly uneven in Spain compared to Germany and the Netherlands, so the inclusion of occupation weights is necessary to ensure that the estimation is not driven by a single occupation in the low- and high-customer-contact categories.

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