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Public officials' treatment of minority clients

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Public officials' treatment of minority clients

Separating ethnic and socioeconomic discrimination in a field experiment [a]

by

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Abstract

The aim of this paper is to investigate the occurrence of discrimination based on ethnicity in public officials' treatment of welfare clients. Previous research has confirmed the existence of ethnic discrimination, but we argue that further investigations are needed. Field experiments in the form of correspondence tests, as we use here, are in many ways appropriate for discovering discrimination. However, an ethnic minority background is often perceived to be associated with low socioeconomic status (SES), which most previous field experiments have not paid attention to. Hence, ethnic discrimination may have been confused with socioeconomic discrimination. Our research design provides possibilities to take this problem into consideration. Furthermore, the research design allows investigation of whether ethnic discrimination occurs primarily among individuals with certain SES levels, which is currently an open question in the literature. Discrimination is assessed through a field experiment in which one administrator at each Swedish municipality is randomly contacted by an individual with an Arabic-sounding or a Swedish-sounding name who is interested in moving to the municipality. We find no statistically significant signs of ethnic discrimination. Admittedly, this may be due to the limited sample size and not only to our efforts of separating ethnic and socioeconomic dimensions. Furthermore, no signs of ethnic discrimination occurring at any particular SES level are discovered.

Keywords: ethnic discrimination, field experiment, Sweden, socioeconomic discrimination, correspondence test
JEL-codes: C93, D63, D73, D91, I24

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1 Introduction

In a democratic society, all citizens should be treated equally. Any violation of this fundamental democratic principle, such as the unequal treatment due to ethnicity, conflicts with the normative goals of democratic governance (Rothstein and Teorell 2008). As in all kinds of social interactions, however, there is a risk for biased behaviour, and empirical research has found evidence of public officials discriminating against clients with minority/immigrant backgrounds to a noticeable degree (see, e.g., Christiansson et al. 2010; Gooden 1998; Brodkin 1997). Most of these studies, however, have employed surveys or direct observation. While these methods are useful when studying perceptions and experiences of discrimination, they are associated with problems in regard to objectively assessing discrimination. For example, some individuals may not be aware that they are being discriminated against, and others might attribute certain behaviour to discrimination when it is not.

Over the last decade, there have been a growing number of experiments in the form of email correspondence tests, in which emails from fictional persons of varying ethnicities are sent to public officials. The researcher compares the extent to which the different fictional persons receive replies to their emails and answers to their questions (see, e.g., Einstein and Glick 2017; White et al. 2015). Mostly, the findings have confirmed the existence of ethnic discrimination. Recently, however, a common deficiency has been acknowledged. The names of ethnic minority individuals are often associated with low socioeconomic status (SES). If this is not taken into account there is a risk of mistakenly considering the observed treatment differences as ethnic discrimination when they actually are socioeconomic discrimination (Carnes and Holbein 2019; Jilke et al. 2018, p. 433; Bertrand and Mullainathan 2004). Only two studies have accounted for this problem; one of these did not find that ethnic discrimination occurred (Jilke et al. 2018, for the opposite result see White et al. 2015).

Our first aim is therefore to investigate the occurrence of ethnic discrimination among public officials in Sweden while considering the problem of separating ethnic and socioeconomic discrimination. To our knowledge, this type of research has never been done before in Scandinavia. Sweden is an interesting case due to its reputation as an immigration-friendly welfare state and a well-functioning, egalitarian democracy (see, e.g., Migration Policy Group 2014; Eger 2010), although integration, admittedly, is not fully achieved (see OECD 2012). Moreover, Scandinavian field experiments on public officials are very rare; in fact, we know of only two such studies (Ahmed and Hammarstedt 2019; Adman and Jansson 2017).

We investigate the email replies from public administrators working in Swedish municipalities. All 290 municipalities were contacted via email from fictional aliases. We study

whether the Arabic-sounding aliases receive information of the same quality as the Swedish-sounding aliases in the email replies from the administrators. The aliases pose questions about how the process works when choosing schools for their children in the municipality. SES is accounted for by using a Swedish-sounding name associated with a low SES similar to that of the ethnic minority names.

Our second aim is to investigate whether ethnic discrimination is mostly or only present at certain SES levels. The likelihood of ethnic discrimination may depend on the (perceived) education, income, and work position of the client. However, few studies have analysed this topic.

We use two techniques to signal different socioeconomic statuses: (1) varying the formal tone and language quality of the letters and (2) adding occupational signatures at the end of some emails indicating a highly skilled profession. Combining these approaches with the use of low SES names has, to our knowledge, never been done before. In addition, we not only pay attention to whether the emails are answered. We also analyse their *informal tone* (i.e., whether citizens are answered in a friendly and welcoming way) and whether any questions are asked in the reply, indicating possible compliance costs for the sender (more on this below). This is important: the tone and compliance costs may affect important life decisions, such as deciding whether to move to a particular municipality, and may also affect trust in political institutions more generally (Mettler and Soss 2004). Most earlier studies have not taken these dimensions into consideration (e.g., Giulietti et al. 2019; Distelhorst and Hue 2014).

2 Previous research

Ethnic discrimination here denotes negative treatment of individuals in relation to *physical characteristics,* such as skin, hair, or eye colour, or *cultural factors*, such as nationality, name, regional culture and language (cf., De los Reyes and Wingborg 2002, p. 11). The person who is discriminated against does not necessarily have to be poorly treated in a general sense but treated worse than comparable individuals. Hence, in our case, a rather friendly and informative email reply from a public official may still indicate discrimination, e.g., if comparable individuals receive more friendly and informative email replies. Ethnic discrimination is different from socioeconomic discrimination, which we define as unequal treatment based on the individual's education, occupation and/or income.

As members of welfare states, contemporary citizens have frequent social interactions with public officials in several societal sectors, including social services, health care, employment offices, and schooling. Hence, ethnic discrimination of welfare clients may take place during many situations and in many sectors. Most previous research has focused on the US. These

studies have been based on direct observation at social welfare offices and interviews with officials (e.g., Soss 2002; Davis 1989) or on survey analyses of client views (e.g., Gooden 1998; Nelson 1981; Goodsell 1980). Some studies have analysed the distribution of sanctions among clients for violating the rules of social assistance programmes (e.g., Keiser et al. 2004; Kalil et al. 2002). The findings generally indicate the existence of discrimination against ethnic minorities, with studies employing direct observation methods often reporting somewhat stronger evidence. In general, studies in Sweden using such methods – mainly interviews and surveys – have also observed ethnic discrimination (cf., Christiansson et al. 2010; Integrationsverket 2006; Lange 2000; see also Bursell 2018).

Although useful for studying general perceptions and subjective experiences of discrimination these methods are associated with problems. For example, some individuals may not be aware of being discriminated against, and others might attribute certain behaviour to discrimination when it is not (see, e.g., Bobo and Fox 2003). In addition, surveys are associated with unrepresentative samples and social desirability bias. To draw well-founded conclusions, it is beneficial to complement these approaches with experiments, as less bias and more direct measurements are often achieved when using carefully constructed and controlled comparisons (Pager and Shepherd 2008, p. 4; Quillian 2006, p. 303). Field experiments are particularly useful, as discrimination can then be observed in real-world contexts.

Interest in field experiments has recently increased, especially in the form of correspondence tests, with a majority of the studies being conducted in the US. A noteworthy example concerns information about voting offered by local election administrators in the US (White et al. 2015). Emails sent from Latin American aliases were significantly less likely to receive any response than emails from non-Latin American ('White') aliases, and the Latin American aliases also received responses of lower quality. Another American study (Einstein and Glick 2017) analysed whether discrimination occurred with regard to bureaucracies that provide access to public housing. Officials responded at equal rates to African American and White email requests. However, evidence of discrimination against Latin Americans was found. Third, Giulietti et al. (2019) sent out simple queries to more than 19,000 American local public service providers. They found that emails from putatively African American senders were less likely to receive responses than emails signed with White-sounding names. Moreover, responses to the putatively African American senders were less likely to have a friendly tone.

Correspondence experiments have also been conducted in a few other countries. In their investigation of public officials at German welfare offices, Hemker and Rink (2017) found that emails from German aliases were not more likely to receive responses than emails from Turkish/Romanian aliases. However, the emails from non-German aliases received responses of

significantly lower quality, which would potentially deter individuals from applying for benefits (for similar findings, see Grohs et al. 2016). In an investigation of Chinese public officials, it was discovered that the officials were less likely to offer assistance to members of the out-group (i.e., Muslims) than the in-group (i.e., non-Muslims; Distelhorst and Hue 2014). Finally, Adman and Jansson (2017) observed discrimination in the form of the tone in emails sent to clients with Arabic-sounding names who were interacting with Swedish municipality officials. Although being a rather small-scale study, to our knowledge, it is the only one that has been conducted in Scandinavia (see also Ahmed and Hammarstedt, 2019, who replicated these findings with a very similar design).[4]

In sum, most findings show rather clear signs of public officials discriminating against ethnic minorities. The degree of discrimination differ to some extent, and in some cases, the discrimination is visible mostly in regard to informal aspects of the officials' communication (e.g., the tone and level of friendliness). Nevertheless, the general impression from these findings is that ethnic discrimination occurs in all countries under study.

However, a serious concern has been raised regarding these findings (see, e.g., Jilke et al. 2018, p. 433). Names usually carry with them not only an ethnic but also a certain SES association, and names belonging to ethnic minorities are often associated with low education, low income and disadvantageous employment positions (Carnes and Holbein 2019; Aldrin 2017; Elchardus and Siongers 2011). Therefore, it is preferable that the majority group names being used are also associated with low SES. Unfortunately, most existing studies have not been designed in this way (e.g., Einstein and Glick 2017; Hughes et al. 2017; Grohs et al. 2016). In fact, we have identified only two examples within the public administration literature. As already mentioned, White et al. (2015) found signs of ethnic discrimination, but Jilke et al. (2018) did not in their analysis of welfare services in the Netherlands (interestingly, they reported the occurrence of socioeconomic discrimination). Some studies have tried to account for SES by manipulating the formality and language quality of letters and/or by adding signatures indicating an occupation requiring higher education (see, e.g., Hemker and Rink 2017; Giulietti et al. 2019). However, it is not certain that such approaches are sufficient because names likely send stronger socioeconomic signals than spelling errors. Hence, many correspondence experiments may have overestimated the degree of ethnic discrimination in public officials' treatment of minority clients.

[4] Worth mentioning is that rather many Swedish experimental studies have been conducted, focusing on the labor and housing markets. These findings also indicate discrimination against ethnic minorities (see, e.g., Eriksson et al. 2017; Arai et al. 2016; Molina 2015; Andersson et al. 2012; Rooth 2010; Ahmed and Hammarstedt 2008; Carlsson and Rooth 2007).

3 Our contribution

The present investigation is, to our knowledge, the most ambitious attempt yet to consider the problem of separating socioeconomic and ethnic discrimination. First, we pre-tested the associations between names and SES and then chose majority group and ethnic minority group names (for the senders of the emails) that send similar socioeconomic signals (c.f., Jilke et al. 2018; White et al. 2015).[5] Second, we randomly included occupational signatures signalling highly skilled professions in the emails from the majority as well as the ethnic minority aliases (c.f., Hemker and Rink 2017; Giulietti et al. 2019). Third, we randomized the formality and language quality of the emails (c.f., Hemker and Rink 2017; Giulietti et al. 2019).

These three approaches all have their limitations. Using only the first option relies on the assumption that all included names signal approximately the same SES level. In spite of our pre-test we cannot be completely sure that this is the case for each administrator participating in the experiment. Moreover, grammatical and spelling errors may signal language skills more than SES. In addition, a stressed person may write a rather informal email full of typos, despite being highly educated and possessing strong language skills. Finally, including only occupational signatures could lead to credibility problems since the SES signal of the individuals without signatures is unclear. We contribute by utilizing all three strategies at once. In this way, our study provides better opportunities to isolate ethnic discrimination from socioeconomic discrimination than in previous studies. Adman and Jansson (2017) utilized a similar correspondence test design, investigating the same group of public administrators, with the exceptions that no low SES Swedish-sounding names or SES signatures were included and that the language quality/formality was the same in all the emails. The similarities between the studies allow for interesting comparisons of the findings, as will be discussed further below.

We also contribute by investigating whether ethnic discrimination is present mostly at certain SES levels. We do not have clear expectations on this topic. Low SES might be associated with social problems and higher financial expenses, e.g., for social benefits. On the other hand, high SES individuals could be perceived as more capable of reaching a prominent position in society and hence be considered a greater threat to someone who dislikes persons with a minority background (cf. Branton et al. 2011). As a natural consequence of not including SES indicators, few previous experiments have acknowledged these issues. In fact, we have identified only two published studies that have done so, which focused on the US and Germany and reported no differential treatment based on SES (e.g., Hemker and Rink 2017; Giulietti et

[5] Preferably, names would also have been varied also when it comes to different SES levels. Unfortunately, this was not possible due to the limited number of observations.

al. 2019). In sum, little is known about this topic, and it has not been previously investigated in Scandinavia.

4 Our case: Local Swedish administrators

We focus on Sweden, which is known for being a well-functioning, egalitarian democracy (see, e.g., Eger 2010). Large-scale immigration is a relatively recent phenomenon in this country, mostly occurring from the 1960s and onwards. Waves of immigrants have arrived from both within and outside Europe, and now Sweden has a both substantial and very mixed immigrant population that constitutes more than 20 percent of the entire population of the country.

Sweden is ranked first among 31 developed countries in integration policies and immigrants' opportunities to participate in society (Migration Policy Group 2014). Nevertheless, it is often argued that outcomes for immigrants are comparatively poor in terms of unemployment and segregation, and there are indications of discrimination taking place within these societal areas (e.g., OECD 2012; Koopmans 2010; Ahmed and Hammarstedt 2008). Moreover, the general discourse towards migrants, in particular those with Middle Eastern backgrounds, seems to have become more intolerant in recent years. Hence, it is not evident how to consider the Swedish case, although it seems highly interesting and well-worth studying in itself. In addition, it is unclear whether findings from countries such as the US are valid in Sweden, as the historical, social, cultural and political contexts differ substantially.

Our study concerns administrators working at municipalities. Municipalities are particularly important in Sweden, being in charge of, for example, schooling, day care, elderly care, local road maintenance, and the environment (Loughlin 2000). During daily interactions, municipal officials therefore transmit messages to clients, with possibly important consequences for citizens' future lives. These interactions are governed by law as well as informal rules (public servant ethics). Officials are obliged to answer all emails they receive, and answers are required to be provided in an informative and equal way. More precisely, we focus on information provided by front-line public administrators when answering emails from the general public. The questions asked concern access to schools. In Sweden, parents may choose which school they want their children to attend. In order for parents to make the best possible choice it is therefore essential that correct and equal information is given to them, no matter their ethnical background.

5 Design and variables

As already mentioned, we wanted the design to be as similar as possible to Adman and Jansson (2017). Hence, we conducted a correspondence experiment in which all 290 Swedish municipalities were contacted via emails sent from different aliases. Using emails is highly relevant, as encounters between public officials and ordinary members of society frequently occur online. Furthermore, when answering emails, some amount of discretion is needed, as emails from clients may differ greatly in character. Only general guidelines for how to respond are likely to exist, leaving room for fairly different ways of replying. Moreover, we believe that the replies send important messages about who is in fact welcome in a certain municipality and who is taken seriously as a citizen (cf., Ernst et al. 2013), especially as the emails from the aliases indicated that the sender's family was considering moving to the municipality in question (see Box 1 below).

To further maximize comparability with Adman and Jansson's (2017) study, immigrants with a Middle Eastern background were selected. This approach was also chosen because Middle Eastern immigrants are among the least politically and socioeconomically integrated in Sweden. In addition, research into ethnic hierarchies – performed in Western countries in general, as well as in Sweden in particular – has suggested that these immigrants are seen as occupying the lowest levels of such hierarchies (Myrberg 2010; Snellman and Ekehammar 2005; see also Lange 2000). Additionally, Swedish labour market studies have reported discrimination especially against Middle Eastern immigrants (see, e.g., Carlsson and Rooth 2007). Moreover, Middle Eastern immigrants often report being discriminated against by officials at public institutions such as employment services, police and social services (see, e.g., Integrationsverket 2006; Lange 2000). Finally, constituting approximately 20 percent of the immigrant population in Sweden, the size of Middle the Eastern immigrant population is substantial.

The aliases used in this study were a male Arabic-sounding name and a male Swedish-sounding name.[6] Using a design such as ours, it is of utmost importance that the names used are clear 'ethnic indicators'. Comparing Swedish-sounding names with Arabic-sounding names has the advantage that the names are easily distinguished from each other. In line with Adman and Jansson's (2017) study, 'Abdelhakim Hassan' was chosen as the Arabic-sounding name. As for

[6] Unfortunately, the low number of observations in this study (290 Swedish municipalities) made it difficult to also study gender-based discrimination. Both female and male sender names were included in Adman and Jansson's (2017) study without any significant gender differences being concluded. In fact, after collecting the data, we discovered that there were a handful of women named Abdelhakim living in Sweden. Most Swedish inhabitants with that name are men, and although we believe the name to foremost be associated with men, we cannot be completely sure in every case. Hence, gender discrimination could to some extent be involved here, although its impact should be modest.

the Swedish name, we undertook a pre-study on administrators working at schools (see Appendix 2). They were asked how they would judge the educational/income level of school parents with different names. The results showed that 'Kevin' is associated with low SES to a similar degree as common Arabic male names such as Ahmad and Mahmoud.[7] We used the full name 'Kevin Andersson', as Andersson is very common in Sweden, and we believe that it is associated with neither a high nor a low SES.

To further analyse the impact of socioeconomic discrimination, first, half of the letters were written with informal language and spelling errors. The spelling errors were intended to be easily noticed but to not make it difficult to understand the questions asked (something that could have had an independent effect on the replies). Second, half of the letters contained a signature signalling the profession of the sender, i.e., "Certified Dentist" ("Leg. tandläkare"), which was placed one row below the name of the sender. In Sweden, many dentists operate privately and have an interest in highlighting their profession. In addition, it is rather common for both individuals with Middle Eastern backgrounds as well as individuals with Swedish backgrounds to work as dentists. The signatures were therefore assumed to provide a clear, non-suspicious marker of high SES. In regard to emails from senders that did not include signatures, we assumed that administrators would base any SES associations mainly on the names of the senders, which in this case were likely to be associated with low SES.[8] Examples of the emails are displayed in Box 1.[9]

[7] Since none of the administrators in our study had an Arabic background (or, at least, did not have Arabic-sounding names), we believe it is unlikely that they would distinguish between Arabic-sounding names in terms of SES (accordingly, in our own pre-study, all investigated Arabic-sounding names were placed at approximately the same SES level, contrary to the Swedish-sounding names; see table 10 in Appendix 2 below).

[8] We considered using a signature that would indicate low SES but decided against that option; we suspected that it might cause suspicion among the administrators (it is our impression that signatures such as 'cleaner' are very rarely used, at least in Sweden).

[9] The first email in Box 1 was originally written in the following way in Swedish: *"Hej. Vi funderar på att flytta till er kommun. Eftersom vi har barn har vi frågor om skolplats. Hur lång är kötiden och hur anmäler man sig? Var finns det lediga skolplatser? Finns det någon möjlighet att få förtur? Tack för att du tog dig tid att svara, Med vänliga hälsningar XX. Leg. Tandläkare".* The second email was written as follows: *"Hej, vi har barn i skolan och ska kanske flytta till er kommun. Hur lång är kötiden och hur anmäler mna sig? Var finns det plats? Kan man få förtur? Tacksamm för svar. MVH XX".*

Box 1 Examples of emails sent to the public administrators

Email 1 (More correct and formal language with a signature included)

Hi!

We are considering moving to your municipality. As we have children, we have some questions about school openings. How long is the waiting time and how do you sign up? Where can we find empty slots? Is it possible to get priority?

Thanks for your response,

Kind regards
XX
Certified Dentist

Email 2 (Less correct and formal language with no signature included)

Hi,

We have children in school and are thinking about moving to your municipality. How long is the waiting time and how od you sign up? Where can we find empy slots? Can we get priority? Thankss for answers

Regards,
XX

The municipalities were randomly divided into eight groups corresponding to the two aliases and the four types of emails used.[10] All emails were sent simultaneously on the same day in May 2018. An end date was set two weeks after the emails were sent, after which an observation was assigned a 'no reply' status (Swedish law does not define a specific time frame). Most answers were received within one week. We investigate three dimensions of the quality of the school administrators' replies:

- *formal correctness*: the degree to which the emails and the questions posed are answered;
- *friendliness*: the degree to which the replies are friendly and encouraging;
- *compliance costs:* the degree to which the replying administrator poses questions to the sender before providing all information requested.

Formal correctness is the dimension that prior research has mostly investigated. The friendliness dimension has been investigated in some studies (e.g., Adman and Jansson 2017; Einstein and Glick 2017; White et al. 2015). Finally, we inductively added the third dimension, compliance costs, as we discovered through reading the emails that some of the senders received significantly more questions in return than others (e.g., about when the sender plans to move to the municipality, the age of the children, and whether the sender has access to housing and where it is located). Having to provide information of that kind could be considered a compliance cost, i.e., an added administrative burden on the individual when she/he is asking

[10] An advantage of our factorial design is that it requires fewer experimental subjects than comparable alternative designs to maintain the same level of statistical power. As the data variation for each treatment is maximized in the sample (around 50 percent of the observations are treated, 50 percent untreated), we do not lose statistical power by adding more than one factor (cf., Collins et al., 2009).

for simple information (Herd and Moynihan 2019). To be specific, administrators may, on a more or less conscious level, consider some clients extra resource demanding or less suitable in other ways. Therefore they may make more demands on such clients before providing (all) the information requested (in our case by asking the sender for additional information).[11]

A coding scheme was created. It consists of five variables measuring whether a reply was received, the number of questions answered, the manner in which the public administrator replied and the number of questions asked in the response.[12] In Table 1, the descriptive statistics for these variables are presented. Nine percent of all municipalities did not reply at all. Furthermore, an average of only 1.7 of the four questions were answered. For the friendliness dimension, in one-third of the emails, the administrator invited future contact, and slightly less than half of the administrators used a welcoming phrase. In regard to compliance costs, the senders received an average of 0.4 questions asked in the responses, but the variation was remarkably large (the observed maximum being five questions).

Table 1 Presentation of the email variables

Dimension	Variable	Description	Mean	Std. dev.
Formal correctness	Reply	Did a public administrator respond to the email? (0 = no, 1 = yes)	0.91	0.28
Formal correctness	No. of questions answered	How many of the four questions are answered? (0–4)	1.69	1.23
Friendliness	Invitation for future contact	Does the administrator invite future contact? (0 = no, 1 = yes)	0.32	0.47
Friendliness	Welcome	Does the administrator welcome the sender to the municipality and/or express gratefulness for receiving the email? (0 = no, 1 = yes)	0.44	0.50
Compliance costs	No. of questions in reply	How many questions are included in the reply? (0-)	0.39	0.86

[11] True, asking for supplementary information could be a sign of an interest in providing a useful and correct answer to the sender. However, when questions were asked in this case they were mostly of a slightly suspicious and not a helpful kind.

[12] Regarding variables 2-5, we coded non-responses as 0. Conditioning such variables on the response outcome could make a causal interpretation of the results problematic under some circumstances (cf. Coppock 2019; Kalla et al. 2018), but we do not expect this problem here due to the overall high response rate (more than 90 percent).

To exemplify our coding procedure, two complete email responses are presented in Box 2. In the first email response, two of the posed questions are answered ('where are there empty slots?'; 'how to apply?'), resulting in a value of 2 for the variable 'number of questions answered'. Moreover, the sender is welcomed to the municipality in a friendly way, and the administrator encourages future contact. Hence, the municipality receives a value of 1 for the variables 'welcome' and 'invitation for future contact'. No questions are asked in the response, and therefore, the variable 'number of questions in the reply' is given a value of 0. In sum, this email is an example of a rather formally correct response that is friendly and that does not place any compliance costs on the sender.

Regarding email 2, in Box 2, the municipality scores 1 on the number of questions answered ('how long is the queue?'). Concerning both of the friendliness variables this email receives a value of 0, as the sender is not welcomed to the municipality and the email does not invite future contact. Furthermore, the email contains four questions posed to the sender and is accordingly coded as 4 in regard to the number of questions in the reply. Hence, this is an example of a rather incorrect response that is not clearly friendly in tone and that places comparatively high compliance costs on the sender.

Box 2. Examples of email replies form the administrators

Email 1:

Hi XX

Thank you for contacting us!

How nice that you are planning to move to X.

If you wish your child to attend the school you will geographically belong to, you are guaranteed a slot.
If you choose a different school than the one you will belong to, you are not guaranteed a slot.

Attached is a form that you should send to your current school and to the school you wish to move to.

If you have any more questions, please feel free to contact us again.

Email 2:

Hi!

If this is about elementary schools, then this should not be a problem. In our preschools, we have long queues, and in that case, it might be difficult to find an empty slot.

When are you moving and when do you need a school slot? And to which town? How old are your children?

In our multivariate regressions below we include control variables that could influence how the administrators responded. The reason is to ensure that the randomization did not result in slightly different characteristics for the different treatment groups. Descriptive statistics for these variables are presented in Table A1 in the Appendix (alongside two additional variables:

how many times the email was forwarded before being replied to – as an indicator of the size of the bureaucracy in question – and whether the reply encouraged the sender to respond to the replier). The inclusion of controls did not have any noteworthy impact on the coefficients for the ethnic name variable or the socioeconomic variables. Therefore, to save space, only analyses without controls are reported in the text (analyses with control variables are presented in Tables A2 and A3 in the Appendix).

We end this section with a note on research ethics. When field experiments are implemented, it is essential that the research subjects are not aware that they are part of an experiment. Discrimination is potentially sensitive, and the results may not be accurate if the administrators had been informed and asked to participate beforehand. Moreover, the respondents were anonymized. In addition, the purpose is to investigate only aggregate level tendencies and not specific answers. Below, the emails are presented in a way that prevents the identification of the municipalities from which they were sent. Furthermore, we minimized the time the administrators spent on emails by keeping the questions simple. Some administrators asked questions in their replies, but these questions were not answered to prevent additional working hours for them. The design was approved by a Swedish Regional Ethical Review Board.

6 Findings

Table 2 reports the differences in the means for the responses to emails from senders with Arabic-sounding names and from senders with Swedish-sounding names. For three of the five variables, the results were to the disadvantage of senders with Arabic-sounding names: senders with Swedish-sounding names had more of their questions answered in the replies, were more often welcomed to the municipality, and received fewer questions in the replies. Senders with Arabic-sounding names were, however, somewhat more likely to receive a reply at all. However, all these differences were rather modest, and none of them was statistically significant. In regard to encouraging future contact, the difference was negligible and not statistically significant.

Table 2. Differences in the means of the email variables for the responses to emails from senders with Swedish-sounding names and from senders with Arabic-sounding names

	Arabic-sounding name	Swedish-sounding name	Difference
Formal correctness			
Reply (0-1)	0.937	0.8890	0.047
No. of questions answered (0-4)	1.620	1.759	-0.137
Friendliness			
Invitation for contact (0-1)	0.331	0.317	0.014
Welcome (0-1)	0.428	0.462	-0.034
Compliance costs			
No. of questions in reply (0-)	0.441	0.331	0.110

Note: ***p < .01. **p < .05. *p < .1.

In Table 3 the control for SES is expanded. Here signatures signalling a highly skilled profession are included in half of the letters, as well as incorrect/informal language in half of the letters. The results from these regression analyses are highly similar to what was found in Table 2: the Swedish aliases had more questions answered in the replies, were more often welcomed and received fewer questions in the replies, while the Arabic aliases were more likely to receive replies and to be encouraged to contact the administrators with further questions. However, none of these effects were statistically significant, as shown by the Swedish-sounding name variable.

In sum, the signs of ethnic discrimination are less clear here than in previous research. One reason might be the low number of observations in this study, making the confidence intervals large (e.g., the 95 percent confidence interval for Swedish-sounding name in Model 1 in Table 3 is between -0.114 and 0.016). Hence, for any effect to become statistically significant, it needs to be of a rather substantial size. On the other hand, using a low SES Swedish name in the way we do may also have an impact (this matter is discussed at more length in the concluding section).

Looking again at Table 3, the statistically significant effects of the highly skilled signatures indicate *socioeconomic discrimination*. Emails that included such signatures received more informative and friendly replies and fewer questions in the replies from the administrators. However, the SES indicator based on incorrect/informal language does not reveal any statistically significant coefficients.

Table 3 Effects of Swedish/Arabic-sounding name, controlling for socioeconomic status

	Reply	No. of questions answered	Invitation for contact	Welcome	No. of questions in reply
	(1)	(2)	(3)	(4)	(5)
Swedish-sounding name	-0.049	0.136	-0.014	0.033	-0.109
	(0.033)	(0.142)	(0.055)	(0.058)	(0.100)
Highly skilled signature	0.021	0.455**	0.124**	0.131**	-0.234**
	(0.033)	(0.142)	(055)	(0.058)	(0.100)
Incorrect/informal language	0.035	-0.156	-0.028	0.020	-0.025
	(0.033)	(0.142)	(0.055)	(0.058)	(0.100)
Constant	0.91***	1.472***	0.283***	0.353***	0.570***
	(0.033)	(0.142)	(0.055)	(058)	(0.100)
Number of observations	290	290	290	290	290
Adjusted R2	0.002	0.031	0.008	0.009	0.013

Note: Entries are unstandardized regression coefficients from ordinary least squares (OLS) regressions (standard errors in parentheses). ***p < .01. **p < .05. *p < .1.

Let us move on to our second purpose, i.e., whether ethnic discrimination is present (only) at certain SES levels. The interaction effects between ethnic discrimination and SES are analysed in Table 4 and Table 5. The signs of the coefficients do not indicate any obvious pattern. In addition, no significant effects are found, with two exceptions: that administrators were somewhat more likely to reply to emails with high SES signatures when being sent from Swedish aliases (Model 1 in Table 4, statistically significant only at the 10 percent level), and they were less likely to ask questions in their replies to emails with spelling errors *only when* the letter was sent from a Swedish alias (Model 4 in Table 5). Hence, the general picture does not indicate that ethnic discrimination occurs at some SES levels and not at others. It should be pointed out though, that the limited sample size makes it even more difficult to achieve statistically significant results here than in Table 3.

Table 4 Interaction effects of Swedish-sounding name with highly skilled signature

	Reply	No. of questions answered	Invitation for contact	Welcome	No. of questions in reply
	(1)	(2)	(3)	(4)	(5)
Swedish-sounding *x* highly skilled	0.127*	-0.047	0.019	-0.026	-0.038
	(0.066)	(0.285)	(0.110)	(0.117)	(0.020)
Highly skilled	-0.042	0.479**	0.115	0.144*	-0.214
	(0.046)	(0.202)	(0.078)	(0.082)	(0.142)
Swedish-sounding	-0.112**	0.159	-0.024	0.046	-0.089
	(0.046)	(0.202)	(0.078)	(0.082)	(0.142)
Incorrect/informal language	0.035	-0.156	-0.028	0.020	-0.025
	(0.033)	(0.143)	(0.055)	(0.058)	(0.100)
Constant	0.942	1.46***	0.288***	0.347***	0.560***
	(0.037)	(0.159)	(0.061)	(0.065)	(0.112)
Number of observations	290	290	290	290	290
Adjusted R2	0.012	0.028	0.005	0.005	0.009

Note: Entries are unstandardized regression coefficients from ordinary least squares (OLS) regressions (standard errors in parentheses). ***p < .01. **p < .05. *p < .1.

Table 5 Interaction effects of Swedish-sounding name with incorrect/informal language

	Reply	No. of questions answered	Invitation for contact	Welcome	No. of questions in reply
	(1)	(2)	(3)	(4)	(5)
Swedish-sounding *x* incorrect/informal	-0.067	0.284	-0.119	-0.026	-0.452**
	(0.066)	(0.285)	(0.110)	(0.117)	(0.199)
Incorrect/informal	0.068	-0.298	0.031	0.033	0.201
	(0.047)	(0.201)	(0.078)	(0.082)	(0.141)
Swedish-sounding	-0.015	-0.006	0.045	0.047	0.117
	(0.047)	(0.201)	(0.078)	(0.082)	(0.141)
Highly skilled signature	0.021	0.455***	0.124**	0.131**	-0.234**
	(0.033)	(0.142)	(0.055)	(0.058)	(0.099)
Constant	0.894***	1.54***	0.254***	0.347***	0.458***
	(0.037)	(0.158)	(0.061)	(0.065)	(0.111)
Number of observations	290	290	290	290	290
Adjusted R2	0.002	0.031	0.009	0.005	0.027

Note: Entries are unstandardized regression coefficients from ordinary least squares (OLS) regressions (standard errors in parentheses). ***p < .01. **p < .05. *p < .1.

7 Concluding discussion

Previous research has found rather convincing evidence of discrimination taking place when public officials interact with ethnic minority clients. However, many correspondence tests may have overestimated the degree of ethnic discrimination due to not sufficiently taking SES into account. This paper attempts to address this problem through a combination of three approaches: (1) choosing low SES majority group names, (2) adding signatures at the end of

some letters signalling high SES and (3) varying the level of formality and language quality in the letters signalling different SES levels.

Our study was undertaken in a part of the world where discrimination among public officials has almost not been investigated with experimental methods. One of the very rare Scandinavian studies we know of, conducted by Adman and Jansson (2017), found signs of ethnic discrimination using an almost identical design as ours. The main difference was that SES was not taken into consideration. Interestingly, the results presented in this paper differ from the previous results, as we did not find evidence of ethnic discrimination. Admittedly, our study is small, and a larger sample would perhaps render significant effects. Moreover, the data collection for the two studies was conducted approximately four years apart, during which time the public debate concerning immigrants, especially those from the Middle East, seemingly became more intense. We can only speculate if the changed debate might have affected public officials' client interactions. Choosing names associated with similarly low SES levels *may have* impacted on the results. Admittedly, though, we cannot know for sure if the different findings might primarily be due to other matters, such as the just mentioned ones. Worth noticing is that our other SES controls did not have any substantial impact (in particular, our findings do not support the usefulness of incorrect/informal language as a SES signal). Furthermore, we investigated whether ethnic discrimination is more visible at certain SES levels. What we found is in line with the only previous studies, conducted in Germany (Hemker and Rink 2017) and the US (Giulietti et al. 2019), i.e., that there are no statistically significant interaction effects between ethnic discrimination and SES discrimination.

To repeat, the small sample size and some other methodological problems imply that all conclusions must be made carefully. Nevertheless, the results seemingly indicate *socioeconomic discrimination*. Emails with signatures indicating a highly skilled profession received more informative and friendly responses and fewer questions asked in return. This result may come as a surprise, considering Sweden's reputation for socioeconomic equality (see, e.g., Eger 2010). The only existing correspondence study we know of focusing on this matter did not find signs of such discrimination. It investigated information provided by school principals in response to parents seeking information about school music and art programmes in the US (Carnes and Holbein 2019). Further studies seem called for in other countries, preferably using methods explicitly designed to capture this kind of discrimination. The topic is not only of scholarly interest. To improve measures for combatting discrimination, it is critical to know as much as possible about its character and its sources.

Finally, a word of caution is merited: the choice of the social interaction medium may have an impact. Email conversations are different from face-to-face interactions; reading a name in

an email might be a weaker signal than meeting someone in person. On the other hand, it has been argued that the more anonymous email context may "permit" biased interaction to a greater extent (White et al. 2015, footnote 7). Only further research using various methods may reveal the degree to which individuals belonging to different ethnic groups and SES levels are in fact treated unequally.

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Appendix 1: Alternative specifications and summary statistics

Tabell A 1 Descriptive statistics for the control variables

Variable	Mean	Standard deviation	Minimum	Maximum
Foreign-background population (prop)	0.150	0.061	0.062	0.415
Municipal economy results (income subtracted by costs, divided by the number of inhabitants; in thousands of SEK)	2107	6522	-10225	108598
Population growth (percent change in the last year)	0.008	0.010	-0.028	0.041
Population growth of refugees (percent change in the last year)	0.008	0.008	-0.017	0.036
Inhabitants' income (thousands of SEK)	306	39.3	245.3	604.4
Population size	34897	72284	2451	949761
Urban (percent living in more densely populated/urban areas)	74.36	14.5	31	100
Times email forwarded	0.700	0.652	0	4
Sender should call	0.021	0.143	0	1

Tabell A 2 Effects of Swedish/Arabic-sounding name, with control variables included

	Reply	No. of questions answered	Invitation for future contact	Welcome	No. of questions in reply
	(1)	(2)	(3)	(4)	(5)
Swedish-sounding name	-0.057* (0.033)	0.156 (0.141)	-0.005 (0.055)	0.030 (058)	-0.135 (0.100)
Highly skilled signature	0.027 (0.033)	0.472*** (0.141)	0.115** (0.055)	0.152*** (0.058)	-0.207** (0.100)
Incorrect/informal language	0.029 (0.033)	-0.147 (0.141)	-0.009 (0.055)	0.016 (0.058)	-0.051 (0.100)
Foreign-background population	0.157 (0.325)	0.631 (1.37)	1.02* (0.539)	-0.753 (0.567)	-0.177* (0.973)
Municipal economy					
Population growth	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000* (0.000)
Population growth refugees	-3.01 (6.37)	28.9 (26.9)	9.19 (100.6)	21.5* (11.1)	28.5 (19.1)
Inhabitants' income	4.31 (7.75)	-300.5 (32.7)	-100.7 (12.9)	-29.6** (13.5)	-41.3* (23.3)
Population size	0.000 (0.001)	0.002 (0.002)	0.001 (0.001)	0.000 (0.001)	-0.003** (0.002)
Urban	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Times email forwarded	0.000 (0.001)	-0.002 (0.006)	-0.001 (0.002)	0.002 (0.003)	0.001 (0.004)
Sender should call	0.067** (0.026)	0.216** (0.109)	-0.061 (0.043)	0.041 (045)	0.042 (0.077)
Constant	0.097 (0.117)	-1.83*** (0.492)	-0.183 (0.194)	-0.513** (0.204)	0.254 (0.350)
	0.815*** (0.168)	0.781 (708)	-0.000 (0.278)	0.366 (0.293)	1.86 (0.502)
Number of observations	290	290	290	290	290
Adjusted R2	0.004	0.073	0.012	0.030	0.038

Note: Entries are unstandardized regression coefficients from ordinary least squares (OLS) regressions (standard errors in parentheses). ***p < .01. **p < .05. *p < .1.

Tabell A 3 Interaction effects of Swedish-sounding name with highly skilled signature, with control variables included

	Reply	No. of questions answered	Invitation for future contact	Welcome	No. of questions in reply
	(1)	(2)	(3)	(4)	(5)
Swedish name x highly skilled	0.127*	-0.053	0.010	0.007	0.041
	(0.066)	(0.282)	(0.111)	(0.117)	(0.200)
Swedish name	-0.121**	0.183	-0.010	0.026	-0.156
	(0.047)	(0.200)	(0.079)	(0.083)	(0.142)
Highly skilled signature	-0.036	0.498**	0.111	0.149*	-0.228
	(0.047)	(0.198)	(0.079)	(0.082)	(0.141)
Incorrect/informal language	0.028	-0.146	-0.009	0.016	-0.051
	(0.033)	(0.141)	(0.056)	(0.058)	(0.100)
Foreign-background population	0.130	0.642	1.02*	-0.754	-0178*
	(0.323)	(1.380)	(0.540)	(0.569)	(0.976)
Municipal economy	0.000	0.000	0.000	0.000	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Population growth	-2.86	28.8	9.21	21.5*	28.6
	(6.34)	(27.0)	(10.6)	(11.2)	(19.1)
Population growth refugees	3.69	-30.2	-10.7	-29.6**	-41.5*
	(7.72)	(32.8)	(12.9)	(13.6)	(23.3)
Inhabitants' income	-0.00	0.002	0.001	0.000	-0.003**
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Population size	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Urban	0.000	-0.002	-0.001	0.002	0.001
	(0.001)	(0.006)	(0.002)	(0.003)	(0.004)
Times mail forwarded	0.069**	0.216**	-0.061	0.041	0.043
	(0.026)	(0.109)	(0.043)	(0.045)	(0.077)
Sender should call	0.096	-1.83***	-0.183	-0.514**	0.253
	(0.116)	(0.493)	(0.194)	(0.204)	(0.350)
Constant	0.850***	0.766	0.003	.0368	1.87
	(0.168)	(0.713)	(0.280)	(295)	(0.506)
Number of observations	290	290	290	290	290
Adjusted R2	0.013	0.069	0.009	0.026	0.034

Note: Entries are unstandardized regression coefficients from ordinary least squares (OLS) regressions (standard errors in parentheses). ***p < .01. **p < .05. *p < .1.

Appendix 2: Selection of Swedish names

The choice of the Swedish name was based on a smaller study in which school administrators rated the perceived socioeconomic status of individuals with different names. The survey was distributed via email to all upper-secondary schools in Sweden (the survey in full is accessible at https://survey.rudbeck.uu.se/surveys/?s=87LCHXFYPX). The respondents had to rate names on a scale from 0 to 100, where 0 indicated low income and low education and 100 indicated high income and high education. Of the 715 schools that received the invitation, 297 (41.5 percent) participated.

The respondents were given the following instruction: "Below we present different first names. Imagine that it is the name of a parent of a student that you will meet for the first time. The first name is everything you know about the parent right now. If you didn't know anything else about this person other than his or her name, what would you guess is his education level and income?" ("0" equals low education and income, and "100" equals high education and income). As Table A.4 shows, unlike 'Carl' and 'Daniel', the name 'Kevin' was rated on a rather low SES level, similarly to common male Arabic names such as Mahmoud and Ahmad.

Tabell A 4 Perceived socioeconomic status of Arabic- and Swedish-sounding names (0-100)

Name	Observations	Mean	Standard deviation	Minimum	Maximum
Ahmad	259	44.0	18.4	0	100
Carl	270	70.1	14.6	38	100
Daniel	253	57.3	13.8	25	100
Jimmy	259	39.3	18.1	0	100
Kevin	261	39.2	18.2	0	100
Mahmoud	258	41.3	19.3	0	100
Omar	256	47.2	19.2	3	100

Note: The results do not change significantly if we remove missing observations so that all name variables have the same number of observations.