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Is Ethnic Discrimination Due to Distaste or Statistics?

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ABSTRACT

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Employing a lab experiment, we directly test the empirical importance of key attitudes underlying the models of taste-based and statistical discrimination in explaining ethnic hiring discrimination. We find evidence that employer concern that co-workers and customers will prefer collaborating with native individuals drives unequal treatment.

JEL Classification: J24, J60, C92

Keywords: taste discrimination, statistical discrimination, hiring discrimination, economics of ethnic minorities

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1 Introduction

Recent studies have shown that discrimination is still a barrier for minority groups in the labour market. Using large-scale field experiments, Bertrand & Mullainathan (2004), Kaas & Manger (2012) and Baert et al. (Forthcoming) provide direct evidence for hiring discrimination based on ethnicity: job applications with native names receive between 14 and 50 percent more positive callbacks than applications with non-native names in the US, Germany and Belgium. However, identifying discrimination is one thing; tackling it is another.

To combat labour market discrimination effectively, we need to understand its underlying mechanisms. As reviewed by Guryan & Charles (2013), the leading explanations for labour market discrimination still go back to the theoretical models of taste-based discrimination, as introduced by Becker (1957), and statistical discrimination, as introduced by Phelps (1972) and Arrow (1973). In the model of taste-based discrimination, members of the majority experience a disutility from interacting with minority workers and are willing to pay a financial price to avoid such interactions. Becker (1957) describes three sources of discriminatory tastes: employers, co-workers and customers. Statistical discrimination occurs when employers examine statistics about a group's average performance to predict a particular applicant's productivity as a time-efficient and profit-maximising response to imperfect information about the actual productivity of the individual job candidate.

As reviewed by Guryan & Charles (2013), most papers attempting to answer the question whether taste-based or statistical discrimination is a more appropriate explanation for unequal treatment in the labour market have conducted indirect assessments: they have measured whether particular patterns in economic data square *predictions* of the model being tested. The problem with this literature is that testing between the two models is only convincing to the degree that a particular pattern is explicable exclusively by one model, a challenge that is, as shown by Guryan & Charles (2013), rarely met. Recent work, however, has attempted to test more essential arguments of the taste-based model or the statistical discrimination model in explaining labour market discrimination (see Bertrand & Mullainathan, 2004; List, 2004; Autor & Scarborough, 2008; Charles &

Guryan, 2008; Kaas & Manger, 2012). Still, the aforementioned contributions fall short in two aspects. First, notwithstanding their ingenious research design, these contributions are not able to test both models of discrimination within one framework. Second, these contributions test key outcomes of the models but not the attitudes at the base of these models.

Employing a lab experiment, we directly measure aversion to interacting with ethnic minorities on the one hand and negative perceptions regarding the average productivity characteristics of these minorities on the other hand with respect to employers making their hiring decisions. Second, we investigate whether the tested attitudes explain discriminatory behaviour based on ethnicity.[1] In addition to its potential to deepen academic understandings of how discrimination affects the labour market, our outcomes are relevant from a policy designing perspective and can generate new methods to detect discrimination in the labour market.

2 Experimental Design

We report on the results of a vignette study conducted in November 2013 (after a pilot experiment in October 2013). We recruited 268 participants from the undergraduate Microeconomics classes at Ghent University in Flanders, the Dutch speaking northern half of Belgium. These testers were each 19 or 20 years old.[2] After being seated, they received an envelope with a booklet containing the experimental instructions. At the beginning of this booklet, testers were informed about their role as a recruiter for the position of a counter assistant for a company selling building material. In addition, we mentioned some requirements for

[1] In this aspect, our study complements Zussman (2013) who studies whether attitudes related to the models of taste-based and statistical discrimination can explain discriminatory behaviour in the Israeli *product* market.

[2] Hosoda et al. (2003) and Falk et al. (2013) show that both in general and also more specifically in judging job candidates, students' ratings are nearly identical to those of professionals. Moreover, these subjects are less likely to respond in a socially desirable manner as one could expect them to be less worried about the reputation of the occupation of the recruiter. Moreover, we recruited students from the Business Economics course of study, one that leads to occupations in which typically hiring decisions are made.

adequately performing this task, such as being customer-oriented, service-minded and sales-oriented.

Then, the testers were asked to judge the resume of a fictitious candidate for this position. This resume revealed a graduate living in Ghent who had left school in June 2013 holding a secondary education degree in commerce. In addition, we added the following features: Belgian nationality, Dutch as their mother tongue, adequate French, English and German language skills, driving license, computer skills and student employment experience. The only aspect in which the resumes differed (the experimental manipulation) between participants was the name of the candidate. Alternatively the typically Flemish sounding (native) name "Jonas Vermeulen" or the typically Turkish sounding name "Emre Sahin" was assigned to the application.[3]

Based on this information, the testers were asked to complete four tasks. First, they had to complete a manipulation check in which we tested their perception of the origin (and to not give away the aim of the experiment, also the sex and residence) of the applicant. Second, the testers were asked to make their hiring decision. More concretely, they had to indicate the likelihood with which they would (i) invite the candidate for a job interview and (ii) hire him as a counter assistant. These are the outcome variables of our study. Third, they were asked to rank their agreement with seven statements, related to views defined in the theory of taste-based and statistical discrimination. Last, participants completed a post-experimental survey in which we gathered information on their gender, social background, political ideology (using the short version of the Right-Wing Authoritarianism (RWA) scale presented by Zakrisson (2005)) and need for closure (adopting the 15-item NFC scale developed by Roets & Van Hiel (2011)). These scales were included in the mediation analysis outlined in Section 4 to test whether the explanatory power of the aforementioned statements regarding discriminatory behaviour does not reflect other dynamics. All statements and scale items were scored on a 7-point Likert scale, except for the NFC scale, of

[3] Turkish names were used as the Turkish community forms the most significant ethnic minority in Ghent and as typical Flemish and Turkish names can be easily distinguished. The particular names were the same as those in Baert et al. (Forthcoming) who chose these names making use of frequency data on first names and surnames to avoid stereotypes.

which the items were scored on a 6-point Likert scale.

3 Explicit Attitudes towards Ethnic Minorities: Supporting Taste-based or Statistical Discrimination?

Table 1 describes the data gathered in the experiment described in the former section. In this table, we compare the average values for the manipulation check, participant characteristics, attitudes towards the job candidate and hiring decisions between both groups of participants, classified by the ethnicity of their assigned job candidate. Panel A shows that our experimental manipulation worked: there is a significant difference in perception of the Flemish and Turkish job candidates as being of foreign origin. Panel B also shows that the randomisation of this manipulation over the testers worked: both groups of testers are very similar in gender, social background, political ideology and need for closure.

TABLE 1 ABOUT HERE

Panel C enables us to judge aversion for cross-group contact in respect of our participants in their role as an employer. The three statements in this panel are closely related to the definition of employer discrimination, co-worker discrimination and customer discrimination within the taste-based discrimination framework of Becker (1957). Through the first statement, *"As an employer, I will enjoy collaborating with this candidate"*, we gauge the ground for employer discrimination related to our participants in a direct way. The average score for this statement is comparable between the experimental group that received a resume with a Flemish sounding name and the one that received a Turkish sounding name. We get a totally different picture when we monitor the average scores for the statements related to co-worker discrimination *("My co-workers will enjoy collaborating with this candidate"*) and customer discrimination *("My*

customers will enjoy collaborating with this candidate"). For these statements, the average score for the job applicant with the native sounding name is substantially higher than the score for the job applicant with the non-native sounding name. These statistics provide initial evidence for an important ground of discrimination: the concern that co-workers and customers will prefer collaborating with native individuals.

In Panel D, we depict the scores on four statements related to the perceived productivity of the candidate. Significant values in column (3) can, by construction, only be determined by perceptions regarding aggregate differences in productivity across the ethnic groups and thereby point in the direction of grounds for statistical discrimination. On the one hand, the results in Panel D are somewhat unexpected, as the average score of the statement *"This person will deliver the required productivity for this job"* is higher for the Turkish job candidate and the score for the statement *"This candidate will be often on sick leave"* is lower for the Turkish job candidate. On the other hand, we get a lower mean score for Turkish candidates on the statement *"This person belongs to a group of people who have good labour market outcomes".* These opposite results square to some extent those of Panel C. Again, our testers themselves do not seem to have prejudices – rather the opposite is true – but they are aware of the unfavourable position of ethnic minorities due to reasons beyond their scope.

The scores for the items in Panel C and Panel D were clustered into two scales (after reverse scoring the last two statements of Panel D).[4] Overall, as driven by the items indicating co-worker and customer discrimination, the scale related to taste-based discrimination is significantly higher for the job applicant with the native name. However, the scale capturing attitudes related to statistical discrimination does not differ significantly by the origin of the candidate, which is not surprising, giving the fact we got both answers in favour and answers to the detriment of non-native candidates for the items in this scale.

[4] The Chronbach's alpha for the former (latter) scale is 0.85 (0.61). Eliminating one of the statements does not increase this statistic.

4 Explicit Attitudes and Discriminatory Behaviour

In the former section, we provided suggestive evidence for grounds for taste-based discrimination against Turkish minorities. The question is now whether the attitudes pointing at co-worker and customer discrimination result in discriminatory behaviour towards the job candidate. In other words, do the tested views defined in the theory of taste-based discrimination together *mediate* unequal hiring chances for candidates of ethnic minorities? To answer this question, we perform a mediation analysis applying the state-of-the-art PROCESS procedure as described in Hayes (2013). The results of the benchmark analysis, using the likelihood of getting invited for a job interview as an outcome, are depicted in Figure 1.

FIGURE 1 ABOUT HERE

The total effect of presenting a job candidate of non-native (Turkish) origin on the likelihood of an invitation for job interview is, as we could expect based on the statistics presented in Panel E of Table 1, not significantly different from 0 ($c = 0.04, SE = 0.15$).[5] This total effect can be separated into a direct effect and indirect effects via the mediating variables: the scales of taste-based discrimination and statistical discrimination (as defined in the previous section). The direct effect, indicating whether the hiring decision is affected by the candidate's ethnicity after controlling for the mediating models of discrimination, is not significant ($c' = 0.07, SE = 0.13$).

Most interesting, however, are the estimated indirect effects. Concerning the mediating effect of the cluster of views defined in the theory of taste-based discrimination, we find, in line with the statistics presented in Panel C of Table 1, a significantly negative effect of foreign origin on the candidate's score for these views ($a_1 = -0.39, SE = 0.10$). In addition, we get a significantly positive effect of

[5] When discussing our results, we focus on the significance and the sign of the coefficients because their value has no useful substantive interpretation for non-continuous variables (Hayes, 2013).

the recruiter's judgment of the candidate concerning these views on the likelihood of inviting this candidate ($b_1 = 0.25, SE = 0.09$). Multiplying the estimation coefficients leads to a significantly negative mediation effect ($a_1b_1 = -0.10, SE = 0.04$)[6], and our results thereby provide evidence for the mechanisms captured by the model of taste-based discrimination as explaining unequal treatment in the labour market. Concerning the attitudes related to statistical discrimination, we find no significant mediation effect ($a_2b_2 = 0.06, SE = 0.06$) due to the fact that the scores for these attitudes are, taken together, not affected by the ethnicity of the candidates.

Alternative analyses (i) using the hiring likeliness as an outcome, (ii) leaving out the attitudes related to statistical discrimination as a mediator or (iii) adding gender, father's education level, the scales indicating right-wing authoritarianism or need for closure as a parallel mediator yield the same conclusions.

5 Conclusion

We conducted a vignette study to test the empirical importance of views defined in theories of taste-based and statistical discrimination. Our results provide evidence that co-worker and customer discrimination, as perceived by employers, underlie discrimination based on ethnicity in the labour market.

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[6] The standard errors for the mediation effect are based on 10000 bootstrap samples.

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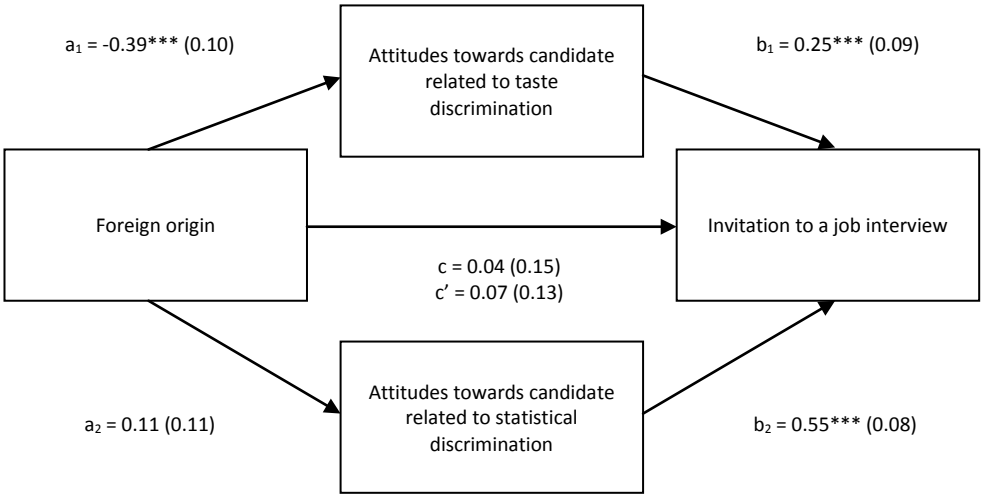
Table 1 – Summary Statistics of the Experimental Data

	(1)	(2)	(3)
	Mean		Difference
	Native applicant	Foreign applicant	
	N = 139	N = 139	
A. Manipulation check			
"The candidate is of a foreign origin."	1.769	4.784	-3.015*** [15.59]
B. Tester characteristics			
Female sex	0.433	0.448	-0.015 [0.245]
Highest diploma father			
Tertiary education: college	0.396	0.456	-0.060 [0.061]
Tertiary education: outside college	0.328	0.254	0.075 [0.134]
Secondary education	0.216	0.254	-0.037 [0.718]
Lower than secondary education	0.058	0.037	0.022 [0.851]
Right-Wing Authoritarianism (RWA) scale	3.302	3.304	-0.002 [0.028]
Need for Closure (NFC) scale	3.803	3.751	0.051 [0.538]
C. Attitudes related to model of taste-based discrimination			
"As an employer, I will enjoy collaborating with this candidate."	4.739	4.597	0.142 [1.237]
"My co-workers will enjoy collaborating with this candidate."	4.739	4.284	0.455*** [4.516]
"My customers will enjoy collaborating with this candidate."	4.806	4.239	0.567*** [4.684]
Average score on these statements	4.761	4.373	0.388*** [3.949]
D. Attitudes related to model of statistical discrimination			
"This person will deliver the required productivity for this job"	4.799	5.194	-0.396*** [0.292]
"This person belongs to a group of people who have good labour market outcomes."	4.211	3.530	0.681*** [4.463]
"By engaging this person I will take a risk."	3.567	3.276	0.291 [1.548]
"This candidate will be often on sick leave."	3.030	2.627	0.403*** [2.727]
Average score on these statements	4.608	4.705	-0.098 [0.899]
E. Hiring decision			
"I will invite this candidate for a first interview."	5.731	5.761	-0.030 [0.206]
"The probability with which I will engage this candidate is high."	4.545	4.582	-0.037 [0.246]

Note. All statements and scale items were scored on a 7-point Likert scale, except for the NFC scale, of which the items were scored on a 6-point Likert scale. t-tests are performed to test whether the difference presented in column (3) is significantly different from zero. *** (**) ((*)) indicate significance at the 1% (5%) ((10%)) significance level. t-statistics are between brackets.

Figure 1 – Results of the Mediation Analysis



Note. The presented results are non-standardised estimation coefficients following the PROCESS procedure as described in Hayes (2013). Standard errors are between parentheses. *** (**) ((*)) indicate significance at the 1% (5%) ((10%)) significance level. t-statistics are between brackets.