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**THE REVERSE GENDER GAP IN
ETHNIC DISCRIMINATION:
EMPLOYER PRIORS AGAINST MEN
AND WOMEN WITH ARABIC
NAMES**

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The Reverse Gender Gap in Ethnic Discrimination: Employer Priors against Men and Women with Arabic Names

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Abstract

We examine differences in the intensity of employer priors against men and women with Arabic names in Sweden by testing how much more work experience is needed to eliminate the disadvantage of having an Arabic name on job applications. Employers are first sent CVs of equal merits in a field-experiment setup. Arabic-named CVs are thereafter enhanced with more relevant work experience than Swedish-named CVs. Results indicate a reverse gender gap in employer priors as initial differences in call-backs disappear for female applicants when CVs for Arabic-named applications are enhanced, but remain strong and significant for male applicants. Thus, contrary to what is often assumed about the interaction of gender and ethnicity, we find that Arabic men face stronger discrimination in the labor market than Arabic women.

JEL Classification: J15; J16; J71

Keywords: Employment Gaps, Ethnicity, Gender, Discrimination, Field Experiments

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1 Introduction

Xenophobic political parties in several European countries use a rhetoric in which Muslim immigrants are often the target. This is not limited to extreme-right and populist parties. Prohibition of certain types of Islamic head scarves in public spaces in France and Belgium and plans for similar legislation in Denmark, Austria and Holland are examples of policies that have been interpreted as stigmatizing segments of the population with backgrounds in the Muslim countries. Similar tendencies are observed in other European countries. For example, in Switzerland, constituents voted against the building of minarets via a referendum in 2009. In Sweden, the country in focus for this study, a nationalist party with a clearly islamophobic rhetoric, entered the parliament in the 2010 election for the first time gaining 5.8 percent of the votes.

In this study, we focus on measuring potential labor market discrimination, as well as the intensity of this discrimination, against Arabic-named job applicants in Sweden.¹ We choose Arabic names that are common in the Muslim communities of the Middle-East in order to examine the degree of priors against applicants with names that are likely to be perceived as distinctly foreign in the Swedish context and associated with Muslim belonging.

Ethnic, religious and/or racial discrimination as an explanation for existing social and economic disparities between groups is controversial for several reasons. First, most nation states legislate for equal opportunity, legislation that includes prohibitions against discrimination based on ethnicity, race or religion thus minimizing the scope for discriminatory behavior among for example employers. Second, and perhaps more importantly, discrimination is difficult to identify and quantify. Within the social sciences, survey and register data can provide information on a number of observable characteristics important for labor market outcomes. Employers, however, almost always have more information on characteristics not observable in data but of relevance for the employment (promotion or wage) decision. This implies that observed labor market gaps between groups can be due to differ-

¹See also [Dávila and Mora \(2005\)](#), [Kaushal et al. \(2007\)](#), [Faisal and Rodgers \(2009\)](#).

ences in productivity characteristics not observable in data, employer discrimination or both. Due to this ambiguity, field experiments have been forwarded as an alternative method for determining a causal link between race/ethnicity and labor market outcomes (Riach and Rich (2002)).

Field experiments typically involve applying for actual jobs with fictive resumes of equal quality where only race or ethnicity is varied. What is measured is either discrimination in call-backs only, i.e., invitations to job interviews (correspondence tests) or, in addition, discrimination in hiring when the application process includes sending trained pairs of testers to actual job interviews (audit tests).² These types of studies consistently find fairly large levels of unequal treatment for racial or ethnic minorities.³

Employers base their hiring decisions not only on the written information available on CVs but also on priors, i.e., preconceived notions concerning the group to which a candidate may belong, typically signaled on CVs by names reflecting a recognized ethnic or racial group. A drawback of previous field experiments examining discrimination in the labor market is that reported call-back gaps do not reveal the intensity of employer priors against the disfavored group. With equal quality CVs, employer preferences for job applicants belonging to the majority population may just as easily stem from a slight prior against ethnic minority job applicants as from large unfavorable priors. In other words, very small differences in priors among many employers can lead to large differences in call-backs.

Employer priors reflect preferences for or against different groups and/or varying estimates, or stereotype beliefs, about the averages and/or distribution of productivity for different groups. Statistical or

²The first field experiments on ethnic or racial discrimination in the labor market were performed by sociologists in the United Kingdom in the late 1960s. See Daniel, W. (1968) for the first audit study and Jowell and Prescott-Clarke (1970) for the first correspondence test as well as Frank Bovenkerk, Benjamin Kilborne, François Raveneau and David Smith (1979), Hubbuck and Carter (1980), Firth (1981), Esmail and Everington (2001a), Esmail and Everington (2001b), Bertrand and Mullainathan (2004), and Oreopoulos (2009). For a review of this literature, see Riach and Rich (2002) and for Swedish evidence, see Bursell (2007) and Carlsson and Rooth (2007). For more recent audit studies, see Pager and Quillian (2005) and Pager et al. (2009).

³For a critical discussion of audit studies see Heckman and Siegelman (1993).

stereotype discrimination concerns estimates about characteristics that are unobserved on CVs but correlated with group affiliation.⁴ Note that in a field experiment testing employer responses to observationally equivalent job applications, observed differences in call-backs for job interviews must stem from differences in priors about one group of applicants leading to a lower call-back rate for that group relative to the other. Groups can be treated differently for many reasons ranging from arbitrary preferences for or against a group to differentiated beliefs about various group's productivity-related characteristics. In this study, we do not attempt to examine the source of unequal treatment but rather aim to measure the intensity of priors against one group regardless of its source.

Previous laboratory experiments confirm that the strength of racial priors can affect how job applicants are evaluated. Social psychologists [Dovidio and Gaertner \(2000\)](#) study the racial priors of white American students against black American job applicants in a laboratory setting. They find considerable variation in discrimination depending on whether the presentation of the (equal) qualifications of the white and black applicants were clear or ambiguous. The authors argue that individuals with weaker priors (like the students in their experiment) react to information about job applicants whereas individuals with stronger priors might not.

In the real world, if one group is only marginally disfavored, an applicant from this group should be able to overcome the disadvantage associated with group belonging by investing in merits that can be verified on a CV. Such an investment would not, on the other hand, help these candidates when there are substantial negative employer priors against the disfavored group. The only remaining individual strategy in such a situation is to increase the frequency of job search in order to increase the probability of meeting employers with no or weaker negative priors.

In this study, the field experiment is setup as follows. Employers

⁴See [Becker \(1957\)](#), [Arrow \(1973\)](#) and [Phelps \(1972\)](#) for economic theories of discrimination usually labelled as taste-based discrimination or statistical discrimination. For recent theoretical papers see [Ása Rosén \(2003\)](#) and [Méon and Szafarz \(2010\)](#). For Error discrimination see [England \(1992\)](#) and [Fiske \(1998\)](#) on stereotype discrimination.

are sent CVs of equal observable quality in order to assess the call-back gap between Arabic-named applicants and Swedish-named applicants. Then, the CVs with Arabic names are given an advantage of, on average, two more years of relevant work experience, a substantial enhancement for this group of young job applicants. This setup allows us to examine to what degree observed unfavorable priors for a group of workers are compensated by enhanced merits thereby providing a measure for the strength of unfavorable priors against applicants with Arabic names.

Our contribution to the ethnic discrimination literature based on the correspondence testing methodology is to explore the strength of observed employer priors against minority job applicants. We test this for both female and male applicants to focus on ethnicity, holding gender constant. A drawback of many studies in the early field experiment literature on discrimination in the labor market is that discrimination against ethnic/racial minority women is underrepresented, a bias that the field experiment literature shares with the labor market stratification research in general. This is unfortunate since there are good reasons to believe that minority men and women face different employer priors/stereotypes which may influence how CVs are perceived and how discrimination manifests itself (Eagly and Kite (1987), Browne and Misra (2003)).

The remainder of the paper is as follows. The next section provides a brief theoretical overview of potential employer responses to job applications as well as an introduction to the Swedish context. Section 3 discusses the intersection of ethnic and gender discrimination. Section 4 describes the experimental design. Results are presented in Section 5. First, overall callback gaps are reported, thereafter, occupational differences in call-back rates between groups. To ensure that results are not affected by the partially sequential design, results from the overlapping time period of the two setups is also presented as well as result concerning the relative importance of merits for callback rates. The paper is concluded in Section 6.

2 Priors about Job-Applicants

In this section we describe how employer responses to job applications may reveal priors for or against different groups in society. Job applicants send resumes and cover letters to employers presenting their merits, education, work experience, etc. Employers evaluate these observable merits but might also have ideas about merits not observable on resumes (CVs). Conditional on observed merits/characteristics, employer form beliefs about unobservable characteristics. One such observed characteristic is the name of a job candidate. Names signal group belonging and employers may have differentiated priors about characteristics associated with this group belonging. This is the variation which the previous literature on correspondence testing has used to identify differentiated treatment for resumes with equal merits.

We study relative call-back chances of individuals sharing names with a common linguistic origin: job-applicants with Swedish or Arabic names. Names such as Fatima or Mohamed have been introduced into the pool of existing names in Sweden due to large scale immigration from countries in the Middle-East and Africa beginning in the 1980s. Since these names have not been frequent in Sweden until recent decades, they are likely to be perceived by employers as distinctly foreign.

Choosing Arabic names allow us to examine differences in job opportunities that a large group of workers with immigrant background face in the Swedish labor market. We choose Arabic names common in the Middle-East in order to study the structure of employer priors against a group of individuals that may be categorized as belonging to the Muslim community. Employers observing Arabic names are likely to not only perceive them as foreign but also as Muslim and may associate applicants with such names with stereotype stigmatizing narratives about muslims that flourish in today's public debate. This stigma can have a negative influence on some employer evaluations of Arabic-named CV's even though these CVs are observationally equivalent to the Swedish-named CVs (see [Goffman \(1990\)](#) for a theory of stigma).

The Swedish labor market, akin to the labor markets of other OECD countries, is characterized by persistent ethnic inequality in

employment as well as in the division of labor (OECD (2003)). Today 12 percent of the Swedish population is foreign born. Including the children of immigrants, a substantial part of the population is either foreign born or has an immigrant background. The employment rate for the foreign born is approximately 25 percent lower than native averages, and average income of the foreign born is only about 70 percent of native income levels. Employment gaps to natives are largest for workers originating from countries in Africa, Asia and the Middle East.⁵

When employers have priors about different groups of workers leading to favoritism of one group or the disfavoring of another group, job applicants from the disfavored group might be able to compensate the existing disadvantage by working for lower wages or by signaling higher merits at the given rate.

An employer evaluates presented merits in an application given his/her stereotype beliefs about different groups of candidates. It is hard to know exactly how stereotype beliefs influence the way merits are evaluated. Employers may evaluate the same merit, say two years of previous labor market experience, differently according to group belonging or evaluate observed merits equivalently but have different stereotypes concerning unobserved merits associated with group belonging. In both cases, enhanced merits can weaken the negative effect of unfavorable priors for a certain group and increase the probability of being called to an interview.

One simple way of enhancing the observable merits of a job applicant is to increase the candidate's historical rate of success in obtaining work. A candidate in the disfavored group with more relevant work experience than a candidate in the favored group must be regarded by employers as a more successful candidate. Observing a candidate with superior merits may lead the employer to deduce that the candidate belongs to the upper part of the overall merits distribution and, depending on the nature of priors; this information may be enough to compensate for the previous group-difference in callbacks. Notice that in comparison to candidates from the favored group, an additional year

⁵For an overview of immigrant-native labor market gaps in Sweden, see Schröder (2007) and the references therein.

of experience for a member of the disfavored group may be a stronger signal of ability in an environment characterized by higher unemployment risks for members of this group. A strong employment record for an applicant from the disfavored group signals a strongly positively selected applicant within this generally disfavored group.

In this study, we evaluate how large an augmentation of work experience is needed to overcome unfavorable employer priors against one group. However, an augmentation of work experience for one group of candidates should be within a range such that all job candidates are perceived by employers as competing in the same segment of the labor market. This is essential as job applications that deviate too much in terms of enhanced merits may be seen as distinctly overqualified for the position in question.

3 Ethnicity and Gender

Ethnically based employer priors may differ for female and male applicants. There are two potential reasons for this. First of all, the labor market is segregated with respect to gender. As many jobs are typically female or male, employer evaluations of job applicants may differ by gender due to the nature of the job being applied to. The second issue concerns gender differences in unequal treatment. In the sociological literature, gender and race/ethnicity is either treated as additive obstacles "double burdens", or as intersecting social categories that cannot be viewed in isolation of each other. Both approaches to gender and race/ethnicity assume that gender and ethnic (or racial) discrimination result in a stronger disadvantage for minority women than for minority men and majority women in the labor market.⁶ As far as economic outcomes are concerned, the double burden hypothesis is largely in line with empirical research in Sweden. Native born men have the highest wage and income levels, followed by foreign born men, native born women and foreign born women. There is however little evidence of intersectional effects as several studies show that labor market gaps between native and immigrant women are smaller than

⁶For a review of the intersectional literature on gender and race, see [Browne and Misra \(2003\)](#)

likewise gaps between native and immigrant men (For an overview see Schröder (2007)).

Many field experiments on racial/ethnic discrimination in the labor market have focused on men only. The field experiments that have included both genders show, contrary to what may be expected drawing on intersectional or "double burden" approaches, that if anything, discrimination appears to be stronger against minority men than against minority women. In a review of performed field experiments in different national contexts involving both genders, Sidanius and Pratto (2001) find that the mean discrimination rate is 29.5 percent for minority men and 22.5 percent for minority women (controlling for experimental method and skill level).

One of the strengths of the double burden or the intersectional approach is its intuitive explanatory appeal. Since it is assumed that both (some) minorities and women face discrimination in the labor market, there ought to be, if not an interaction effect, at least a double burden of discrimination for minority women. Any study presenting results suggesting that minority men face stronger unfavorable employer priors than minority women, needs to explain why this may be so.

One such explanation stems from gendered national stereotypes. Employer priors may stem from stereotype beliefs about different group characteristics such as national or regional origin, ethnicity or race. Studies within social psychology show that stereotypes about a group are often closely correlated to the stereotypes held about the men belonging to that group while the stereotypes about women from the same group may differ greatly from the group stereotype.⁷ Eagly and Kite (1987) empirically examine this hypothesis for 28 nationalities finding that national stereotypes are largely in line with the male stereotypes of that nation while the stereotype about women from the same nation often differ greatly from the male national stereotype. This is especially true when large gender differences in equality are included in the national stereotype. In such cases women are stereotyped according

⁷Browne and Misra (2003), in their review of American intersectional labor market research, conclude that African American women and men are exposed to different types of stereotypes and that there is no evidence that African American women are more disadvantaged than African American men due to these stereotypes.

to general female stereotypes rather than specific national stereotypes. Thus, it could be the case that when stereotypes against specific national or ethnic groups are negative, they are more negative toward men precisely because it is men that are believed to embody the stereotype.

To further explore gendered ethnic discrimination, the experiment carried out in this study allows for differences in employer priors by the gender of applicants. As described in detail in the next section, CVs in our field experiment are sent in female or male pairs and ethnic differences in call-backs examined separately for male and female applicants.

4 Experiment Design

The field experiment consists of two, partially overlapping, setups.⁸ The "equivalent-CV setup" was conducted between March 2006 and July 2007. Job applications were sent to job openings in the Stockholm metropolitan area advertised on Sweden's main internet-based Public Employment Service website ("Platsbanken"). To ensure an authentic look, applications were designed in line with already existing applications that actual job applicants had up-loaded on the Public Employment Service website job-applicant-pool. We also consulted specialists within each occupation to review our applications.

The applications were created as follows (see CV examples in Appendix A). When a job opening within any of the targeted occupations was announced on the Public Employment Service website, two applications were constructed each consisting of a personal letter of introduction (cover letter) and a CV.⁹ CVs were first constructed to match the job requirements specified in the job announcement. Age, schooling and experience levels were therefore determined by the job announcement and set to be equal between any given pair of applications. All our CVs were assigned at least one year of experience to ensure positive employer responses. Thereafter, the actual names

⁸This field experiment has been approved by the Stockholm Regional Authority Vetting the Ethics of Research Involving Humans.

⁹Initially 15 occupations were targeted within this setup in order to broadly test the existence of discrimination in the Swedish labor market (see Bursell (2007)). In this paper, we narrow our focus to five representative occupations.

of educational institutions and previous employers, matching the levels set initially and of equal quality, were randomly assigned to each CV. Two CVs sent to any given employer are therefore of equal observable quality but not identical. Due to the random assignment of actual school names and previous employers, any subjective quality differences between applications should be eliminated over time.

Cover letters were formed based on random assignment of pre-written modules and were randomly matched with a CV to ensure not only variation in the applications, but personal letters with random design. Addresses were then randomly assigned to each of the two job applications. Finally, before being sent to employers, ethnicity was randomly assigned each pair of job applications such that one application had a Swedish-sounding name and the other an Arabic-sounding name. As each pair of applications was also assigned the same gender, the applicant pairs consisted of applications with a common male Arabic name and a common male Swedish name or likewise female names.¹⁰ The names used in the experiment are listed in Table 1. These names are easily recognized as Arabic or Swedish. According to Statistics Sweden’s name register, the first and last names used in the experiment are frequent names in the Swedish context.

– Table 1 about here –

The enhanced-CV setup of the experiment was carried out between February and October 2007.¹¹ This setup differs from the equivalent-CV setup as the CVs with an Arabic-sounding name were assigned higher levels of relevant previous work experience than the CVs with

¹⁰With few exceptions, applicant pairs were randomly assigned to be female or male. This was not the case for certain male dominated applications where female applications were deemed as non-credible in the Swedish context. For example, only male applications were sent to driver occupations involving the operation of "heavy machinery" or "crane plant operators".

¹¹We chose a partially-overlapping setup for the following reason. Since this type of experiment had not been carried out in Sweden when we started the project, we needed a benchmark to determine the extent of call-back differences between groups. Thereafter, due to the costly nature of the experiment, we needed to limit ourselves to a subset of representative occupations. The drawback of this design is that we obtain a limited number of observations during the overlapping period. On the other hand, we avoid sending too many CVs to employers which would increase the risk of detection. This is especially important when testing in a limited geographical area such as Stockholm.

Swedish names. We chose to enhance the CVs by incrementing work experience instead of, for example, years of education as posted job announcements specified required levels of education.¹²

As in the initial setup, both CVs were initially constructed to match the experience requirements of the job announcement, thereafter the CVs with Arabic names were randomly assigned one to three years of extra relevant work experience. On average, the CV with the Arabic-sounding name was therefore enhanced with two extra years of work experience. As age and experience are correlated and applications were sent primarily to entry-level job openings, age was also adjusted for the enhanced Arabic named CVs in order to produce credible resumes. If one year of extra experience was assigned to the CV with Arabic names, no adjustment in age was made. When experience was adjusted with two years, age was adjusted upwards by one year and with three years of additional experience, age was adjusted upward by two years. The adjustment in age implies a slightly lower mean age in the equivalent-CV setup compared to the enhanced-CV setup, 24.7 years in comparison to 25.6 years.

The maximum age difference between the two groups of job candidates within the enhanced-CV setup of our experiment is therefore two years. A limit of three years of higher experience was imposed in order to avoid considerable age differences between applicants and the possibility of one candidate being perceived as over-qualified, both of which would hinder the general comparability of applicant pairs. Note that the experiment design implies that only one stimulus, relevant work experience, is implemented when CVs with Arabic names are enhanced by only one year of experience, as age is not adjusted in this case.

We focus on five types of occupations; Computer Specialists, Drivers, Accountants, Senior High School Teachers and Assistant Nurses. These occupations were chosen to provide variation in observed call-back rates and levels of required education and include both a female and male dominated occupation. The positions as Computer Specialist, Accountant and High School Teacher all require four to five years of tertiary

¹²Another alternative would be to vary the quality of education by for example grades. It is not however common to specify grades on job applications in the Swedish context.

education and can be seen as qualified positions. The positions as Assistant Nurses require secondary education with a medical profile and are female dominated. The positions for Drivers rarely specified any formal educational requirements, only valid drivers licenses. As it is common in Sweden to complete high school educations, all applications to Drivers were assigned high school degrees. This occupation is male dominated.

The applications included an e-mail address and a cell phone number. When employers contacted the job applicants through e-mail or by the voice mail on cell phones, a positive call-back was registered and the job interview offer promptly declined. Note that as the distribution of jobs applied to differs between the two setups, any comparisons of overall call-backs across setups should take this into consideration. Though sample sizes vary across the two setups, call-backs can, however, be compared directly *within each occupation* keeping in mind that call-backs within larger occupation cells, i.e., with more observations, will be measured with greater precision.

5 Results

Overall call-back differences

The first two rows of panel *a* and *b* in Table 2 report unweighted as well as occupation-weighted overall call-back rates by setup and gender. Within the equivalent-CV setup of the experiment, 566 (283 CV pairs) observationally equivalent CVs were sent to jobs within five occupations. We find a significant call-back difference between applicants with Arabic and Swedish names for both female and male applications. The relative call-back rate in favor of Swedish-named applications is 2.4 for females and 1.8 for men but the difference between genders is not statistically significant. In the enhanced-CV setup, 584 CVs (292 CV pairs) were sent to employers where applications with Arabic names were enhanced by higher levels of work experience. Results show that the ethnic call-back difference changed dramatically for female applicants. The relative call-back rate for females decreases to 1.2 and is no longer statistically significant, while the relative call-back rate for men

increases to 2.6. This increase is however not statistically significant at conventional levels.¹³

As the distribution of jobs applied to by occupation differs across the two setups of the experiment, a difference in the relative weights of occupations may generate differences in the overall relative call-back rates. To achieve relative call-back rates that are comparable to those in the equivalent-CV setup, relative call-back rates are re-weighted using the occupation weights from the equivalent-CV setup. The corresponding relative call-back rates in the enhanced-CV setup change from 1.2 to 1.1 for female applications and from 2.6 to 2.4 for male applications.

Call-back differences within occupations

As there is variation in relative call-back rates across occupations, callback rates by occupation are reported in Table 2, again by setup and gender. Although these descriptive statistics can indicate which occupations are driving reported results, it is important to bear in mind that many of the gender/setup/occupation cells are small leading to imprecise estimates of callback rates. Focusing initially on the equivalent-CV setup, it is interesting to note that the variation in relative call-back rates across occupations is much larger for female applicants compared to male applicants. The relative call-back rates range from 1 to 7 for females and 1.1 to 2.4 for male applicants. The largest call-back gaps for female applicants are observed in the occupations of Assistant Nurse (7) and Computer Specialist (3). The callback difference found for Assistant Nurses is significant at conventional levels while the callback difference for Computer Specialists is just short of being significant at the 10 percent level, but sample sizes are small. For male applicants, the largest relative call-back rates in the equivalent-CV setup are found for Accountants, Assistant Nurses and Drivers, all

¹³Using the data for men only and running a regression of the callback dummy on a dummy for Arabic-named/Swedish-named CV and a dummy for setup (enhanced/equivalent) as well as an interaction between these two variables we find a p-value of 0.32 for the interaction variable indicating that the worsening of call-backs for Arabic men across setups is not significant at conventional levels. The p-value is 0.94 for the setup dummy and virtually 0 for the Arabic/Swedish dummy. Similar results are obtained when including age and occupation dummies to control for the distribution of applications over occupations across setups.

of which are statistically significant (up to the 10 percent level).

– Table 2 about here –

In the enhanced-CV setup the variation in relative call-back rates across occupations decreases dramatically for female applicants while the variation for male applicants appears to increase slightly. In other words, the small and insignificant relative call-back rates for females in the enhanced-CV setup in comparison to the equivalent-CV setup stems from the fact that the occupations with the largest relative call-back rates (Assistant Nurses and Computer Specialists) no longer exhibit large call-back differences between Arabic- and Swedish-named applicants. The relative call-back rate for Assistant Nurses decreases from 7 in the equivalent-CV setup to 1 in the enhanced-CV setup. The corresponding change for Computer Specialists is a fall from 3 to 1.06.¹⁴

For male applicants, large and significant relative call-back rates persist in two of the three occupations found to have significant call-back gaps in the equivalent-CV setup (Accountants and Drivers). This is true despite the enhancement of work experience for CVs with Arabic names.

In short, we observe a significant difference across experimental setups in call-back gaps between Swedish- and Arabic-named applications by gender. Enhancing the CVs with Arabic names with on average two years of experience seems to increase the call-back probability for female applicants with Arabic names but does not improve the call-back probability for male applicants with Arabic names. The lower call-back rate for women in the enhanced CV-setup indicates that the extra merits assigned to Arabic-named CVs counteracts employers' disfavorable priors observed in the equivalent-CV setup. When it comes to men, the call-back rate increases implying that extra merits do not help and may even harm employment chances for Arabic-named

¹⁴One may object that the female applications in the equivalent-CV setup of the experiment also had high quality CVs implying that the pattern of a smaller call-back gap for women should be discernible already in this part of the experiment, which it is not. This objection however misses the point that weak differentiated priors may cause as large of a call-back difference as strong differentiated priors when merits are observationally equivalent.

men since employers might perceive Arabic-named male applicant with enhanced CV's as overqualified for these types of entry jobs.¹⁵

We reanalyze overall ethnic callback gaps controlling for potential differences in call-back rates between occupations and over time using linear probability models estimating the probability of receiving a call-back (defined as a zero/one variable equal to one if applicants are contacted by employers and zero otherwise). Two models are estimated for each setup of the experiment, the first controlling only for differences in names between applications, the second controlling also for a full set of occupation and time dummies. Time dummies are defined according to the date of application submission. Standard errors are corrected for any unknown form of heteroscedasticity and clustered by date of application in order to correct for correlated errors among applications sent on the same day.

– Table 3 about here –

Results, presented in Table 3, confirm that in the equivalent-CV setup there are significantly lower call-backs from employers for applicants with Arabic names. An Arabic name on an application is associated with, on average, a 20-21 percentage point lower probability of contact from employers than an application with a Swedish name (Model 1), regardless of gender. Adding controls for occupation and common time effects yield similar results, applicants with Arabic names are associated with 23-24 percentage points lower call-back probabilities from employers (Model 2). These estimates are in line with results from previous studies in Sweden indicating that employers have priors regarding the unobservable productivity characteristics that are unfavorable for both female and male job applicants with Arabic names and/or tastes for discrimination against persons with Arabic backgrounds (Carlsson and Rooth (2007), Bursell (2007)).

¹⁵Notice that the callback rate for Swedish named applicants should theoretically decrease in the enhanced-CV setup compared to the equivalent-CV setup as they are now competing with stronger Arabic-named applicants, all else equal. We observe a decrease in the weighted call-back rate from 37 to 32 percent for Swedish-named female applicants. For Swedish-named male applicants, there is instead an increase from 42 to 47 percent. This is consistent with our results showing that enhanced CVs help Arabic-named female applicants but do not improve the chances for call-backs among Arabic-named men.

Estimations from the enhanced-CV setup also confirm earlier reported results indicating that ethnic differences in call-back rates for female applicants are eliminated. The coefficient for female applications with Arabic names is small and no longer significant implying no differences in call-backs from employers between female applications with Arabic names and more qualified CVs and female applicants with Swedish names and standard applications. For male applicants, enhanced work experience on applications does not alter previously reported differences in call-back probabilities. On average, a CV with a male Arabic name is associated with a 27 percentage point lower call-back probability than a male applicant with a Swedish name, despite observationally higher levels of relevant work experience (Model 1).

The call-back increases significantly (from Model 1) when occupation and time dummies are included in estimation to a 39 percentage point difference (Model 2). The difference in call-backs for male Arabic applicants is not, however, significant across setups indicating that employer responses to male applicants with Arabic names are similar in both setups of the experiment. In summary, these results imply that employers react positively to higher merits or to what higher merits signal about unobserved productivity characteristics for female applicants with Arabic names but not for male applicants with Arabic names.

The overlapping time period

To ensure that the partially sequential experiment design does not affect results, We reanalyze the data using only the observations from the time period during which both the equal CV- and enhanced CV-setup are tested simultaneously. Results are qualitatively in line with those reported in Table 3. In the equivalent-CV setup both male and female Arabic-named applicants are associated with lower employer interest (around 21 percentage point lower) than Swedish-named applicants. Again, the largest relative call-back rate is observed for female applicants in the Assistant-Nurse occupation. In the enhanced-CV setup, consistent with results reported above, the call-back gap disappears for women but remains large and significant for men. Results for female applicants are driven by the huge fall in relative call-back

rates in the Assistant-Nurse occupation from 4 to 0.5 when CVs for Arabic-named applicants are enhanced. The corresponding change for the entire observation period was from 7 to 1. Thus, the level of the relative call-back rates differs using data from the overlapping time period due to differences in sample size, but the relative call-back rates decrease for females in a very similar manner, suggesting that the partially overlapping setup, i.e., potentially changing economic conditions over time, is not driving overall results.

Relative impact of merits

Knowing that on average more experience improves the chances of Arabic-named candidates to be called to a job interview, we now want to examine the relative impact of each additional (one, two or three) year of experience. Reanalyzing differences in call-backs by level of enhanced experience yields results indicating that differences in call-backs probabilities disappear for female applicants already when only one year of extra experience is assigned to applications with Arabic names.

As age is not altered on the CVs with Arabic names when only one year of extra work experience is added to the CV, i.e., age is equal across CV pairs, these results stem solely from employer responses to higher experience. For men, significant ethnic differences in call-back probabilities exist for each level of enhanced experience. These results indicate that one more year of experience eliminates call-back gaps for females. Increased experience thereafter does not further change call-back differentials.

Together these results show that enhanced merits help Arabic-named female applicants but do not increase the employment chances of Arabic-named male applicants. This cannot be a reflection of employer reactions to higher merits alone, as we would then expect an increase in the employment chances for both sexes. Our results rather suggest that employers react to the interaction between higher merits and the gender of the Arabic-named applicants. Another interpretation consistent with reported results is that, irrespective of ethnicity, employers reward higher merits for women but do not reward or even

penalize higher merits for men. We use a feature of the equal-CV setup to determine if enhanced merits are differentially rewarded by gender.

In the equal-CV setup, some job vacancies were sent CVs of generally higher quality (for both applicants) in terms of experience, addresses and other skills. Estimations testing to what degree higher quality CVs are rewarded – running a regression of call-backs (a zero/one variable equal to one if an application receives positive interest from employers) on a dummy variable equal to one for higher quality CVs and zero otherwise – suggest that if anything, male applicants are rewarded for higher merits. This effect, however, disappears with the inclusion of controls for age and occupation indicating that increased merits do not significantly increase call-back probabilities once applicants meet the formal job-requirements of the vacancy.

Results therefore suggest that in the equivalent-CV setup, although Arabic-named female applicants formally meet the given job-requirements, they fall short due to unfavorable employer priors. In the enhanced-CV setup, the extra merits for the Arabic CVs compensate for unfavorable employer priors and these female applicants are now deemed by employers as meeting the requirements for the job and thus receive the same level of call-backs as female applicants with Swedish names. Enhanced CVs do not, however, help male applicants with Arabic names to compensate for unfavorable employer priors.

6 Conclusions

Using a field experiment, this study analyzes to what degree observed employer priors against applicants with Arabic names are compensated by higher levels of previous work experience. The experiment consist of two setups. In one setup observationally equivalent CVs are sent to employers with only one difference, ethnic background as signaled by names. Applicants with Arabic names are found to have significantly lower call-back rates regardless of gender. In the other setup, CVs with Arabic names are enhanced by on average two years of relevant work experience. Results show that differences in call-backs between female applicants are eliminated. No changes in call-back rates are however

observed for men despite enhanced CVs for the applicants with Arabic names. These results suggest that employers revise their priors concerning unobservable characteristics for female ethnic minorities but do not react to signals of higher previous employment success for male minorities.

This reverse gender gap in employer responses contradicts the widely held belief that women with foreign backgrounds suffer from both ethnic and gender discrimination in the labor market. Rather, the results reported here suggest that it is Arabic men that suffer most from discrimination as higher qualifications do not compensate for the negative priors held by employers concerning this group.

Although more research is necessary to determine how generalizable these results are to other groups, occupations and labor markets, reported results are compatible with studies within social psychology showing gender differences in stereotypes against different groups in society. Employers may have stronger unfavorable priors regarding Arabic men than Arabic women simply because the stereotype about those with Arabic backgrounds is, to a large degree, a male stereotype.

The stereotypes about women with Arabic backgrounds may largely be generated from traditional gender stereotypes that place women in domestic and nurturing roles. In short, these stereotypes suggest that an Arabic woman successful in the labor market may be perceived by employers as deviating from the stereotypical norms associated with Arabic women. On the other hand, greater labor market experience may not alter the stereotypes associated with Arabic males. This implies that employers weigh the higher labor market experience of Arabic women as a signal of higher productivity, i.e., of an Arabic woman having overcome the traditional role ascribed to her, while little or no weight is attached to the higher labor market productivity of Arabic men.

The largest decrease in call-back gap occurs within the occupation of Assistant Nurses. This is not a high-skilled occupation but is dominated by females and has a considerable share of foreign-born workers. The additional average increase of two-years of experience relative to CVs with Swedish names is enough to overcome the negative disad-

vantage associated with Arabic-named CV's. It is therefore in this occupation that workers meet the weakest unfavorable priors. This result is not surprising since this occupation has experience with evaluating the CVs of workers with foreign names. This may imply that CVs with arabic names are more often considered and not simply rejected based on foreign name alone which we suspect may be occurring in other occupations. In addition, this is an occupation with a relative high turnover implying that employers may be more willing to consider CVs outside the normal parameters of interest.

In conclusion, the results in this study suggest that male and female members of an ethnic minority do not always face the same type of employer priors on unobserved characteristics. Employers in Sweden appear to have stronger unfavorable priors concerning the unobservable characteristics of Arabic men or inflexible tastes for discrimination against Arabic men implying that individual investment in human capital enhancement may not alone counter unequal treatment in the labor market and that other policy initiatives may be necessary to guarantee equal opportunity.

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Appendix A: Two Example CVs. The CV for Abdallah is enhanced to have an advantage of one more year of experience compared with the CV of Wallin

Aïcha Abdallah
Kammakargatan 52
111 24 Stockholm
Telefon: 0708-97 17 21
abdallah.aicha@hotmail.com

Concerning the position as Assistant Nurse

Hello!

My name is Aïcha Abdallah and I am applying for the position as an Assistant Nurse.

I am 24 years old and an Assistant Nurse by education. I already have five years of, for the position, relevant work experience. I like it at my present work place but feel that it is time for new challenges and experiences and think that your job description sounds very interesting.

Other people perceive me as happy and outgoing and I find it easy to be around different kinds of people. I am patient and a good listener.

Included in my CV is contact information to references.

With kind regards, Aïcha Abdallah

List of Merits

Education

Care program at Polhemsskolan in Gävle
1999-2002

Driver's license

2004

Relevant work experience

Assistant Nurse at Rosengården in Hägersten (care center for demented) since 2002, present employment.

Work description

Standard Assistant Nurse duties: support the patients in their every day life including contacts with relatives, assist with personal hygiene, cleaning, meals, outdoor activities, medication and care for minor wounds etc.

Computer skills:

MS Office

Application for the position as Assistant Nurse

Malin Wallin

Scheelegatan 13

112 28 Stockholm

Tel: 073-752 94 84

wallin.malin@gmail.com

23/8 2007, Stockholm

Hello!

My name is Malin Wallin and I wish to express my interest in the position as Assistant Nurse.

I am 24 years old and an Assistant Nurse by education. I have four years of work experience in the profession. At present, I work at a home for the demented in Botkyrka. I like it there but am ready for new experiences and am thus looking for a new position.

I am a sociable person, thorough about my work, and enjoy working with people which is why a job in the care sector is perfect for me.

My merits are attached but I would enjoy telling you more about myself at an interview.

Warm wishes.

Malin Wallin

Merits

Education: Sankt Görans gymnasium, Care program, exam in 2003

Employment: Assistant Nurse at Sandstugans Care Home in Botkyrka since graduation in 2003.

Driver's license

Computer experience: Word, Works, Excel, etc.

Table 1: Names of Applicants Used in the Experiment

First Name	Surname	First Name	Surname
Fateme	Ahmed	Kamal	Ahmadi
Nasrin	Hassan	Abdallah	Mohammed
Halima	Mohammadi	Islam	Hashemi
Aïcha	Abdallah	Abdelaziz	Hussein
Fatima	Ahmad	Abdelhakim	Hassan
Sara	Andersson	Jonas	Söderström
Marie	Björkvist	Erik	Östberg
Johanna	Gustafsson	Johan	Nyström
Karolina	Svensson	Mikael	Andersson
Malin	Wallin	Martin	Berggren

Table 2: Call-back rates for Swedish- (S) and Arabic- (A) named applications (percentages). N is the number of applications. (p) is the p-value for $H_0: (S-A)=0$. (S/A) is the relative callback rate. Weighted figures use Equivalent-CV weights.

	Equivalent-CV setup					Enhanced-CV setup				
	N	S	A	p	S/A	N	S	A	p	S/A
<i>Panel a: Females</i>										
All - Unweighted	192	37	15	0.00	2.4	260	35	29	0.29	1.2
All - Weighted	192	37	15	0.00	2.4	260	32	28	0.55	1.1
Comp. Spec.	30	40	13	0.11	3.0	54	63	59	0.79	1.1
HS Teacher	44	32	27	0.75	1.2	38	37	37	1.00	1.0
Accountant	40	30	15	0.27	2.0	94	34	23	0.26	1.4
Ass. Nurse	64	44	6	0.00	7.0	48	17	17	1.00	1.0
Driver	14	29	29	1.00	1.0	26	15	0	0.17	Inf
<i>Panel b: Males</i>										
All- Unweighted	374	42	23	0.00	1.9	324	43	16	0.00	2.6
All - Weighted	374	42	23	0.00	1.9	324	47	20	0.00	2.4
Comp. Spec.	90	40	27	0.18	1.5	56	75	25	0.00	3.0
HS Teacher	60	30	27	0.78	1.1	26	62	46	0.45	1.3
Accountant	74	32	14	0.05	2.4	68	32	15	0.09	2.2
Ass. Nurse	48	46	21	0.07	2.2	48	21	8	0.23	2.5
Driver	102	57	24	0.00	2.4	126	38	10	0.00	4.0

Table 3: Call-back Probabilities for Arabic-Named CVs in Comparison to Swedish-Named CVs (Linear Probability Models).

Equivalent CV				
	Females	Males	Females	Males
Arabic	-0.208*	-0.199*	-0.233**	-0.239*
	(0.062)	(0.049)	(0.101)	(0.072)
Occupation	NO	NO	YES	YES
Date	NO	NO	YES	YES
N	192	374	192	374
Enhanced Arabic CV				
Arabic	-0.062	-0.265*	0.041	-0.388*
	(0.067)	(0.053)	(0.081)	(0.074)
Occupation	NO	NO	YES	YES
Date	NO	NO	YES	YES
N	260	324	260	324

Note: * and ** denote significance at the one and five percent level. Estimations control for four occupation dummies and 73 date of application dummies. Standard errors in parentheses are clustered by the date of application.

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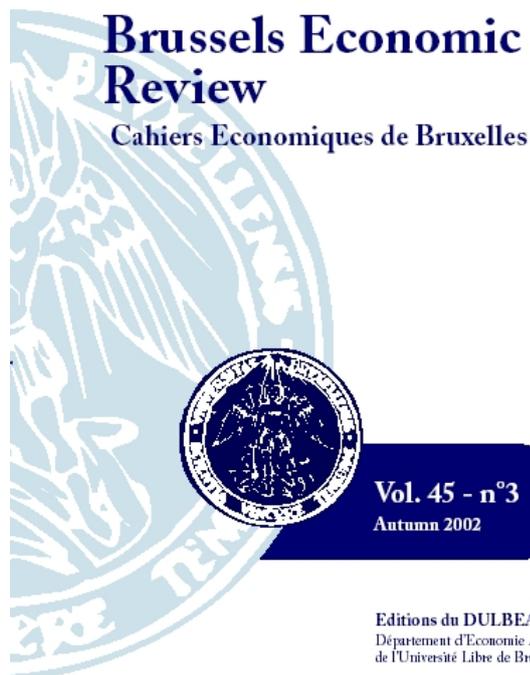
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