Online Appendix

Multiple Discrimination against Female Immigrants Wearing Headscarves

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Additional Information on the Experimental Design

Identities Tested
To evaluate whether the model depicted in the photograph was sufficiently ethnically ambiguous to pass as both German and Turkish, I showed her photo to students who were told that she lived in Germany. The students indicated on a Likert scale (1–7) how plausible they thought it was that the model’s parents had German (or Turkish) roots. Participants considered it equally plausible that the model had German roots (mean = 4.68) or Turkish roots (mean = 4.40) ($t = 0.7481$, $p = 0.456$, two-sided).

I also tested to confirm that the headscarf shown in the photograph was perceived to be “more modern” and “less religiously fundamentalist” than a more traditional headscarf that covers ears and throat. I showed photographs of smiling, attractive women wearing headscarves bound in two different ways to business and economics students. One photograph showed a conservative binding of the headscarf that fully covered head, ears, and throat, and the other showed a binding that bared the throat (as used in this study). Students used a Likert scale (1–7), to indicate how “modern” and how “religiously fundamentalist” they perceived the woman to be. The woman wearing the headscarf as used in this study was considered significantly more modern (mean = 3.57 versus mean = 4.2, $t = -2.768$, $p = 0.006$, two-sided) and less religiously fundamentalist (mean = 5.59 versus mean = 4.68, $t = 5.322$, $p = 0.000$, two-sided) than the woman wearing a headscarf that fully covered head, ears, and throat.

Additional Information on the Reference Letters
For the reference letter, I implemented phrases that signaled a “good” level of work quality. In particular, in the overall assessment of performance the firm stated that the applicant’s performance “was always to our full satisfaction”; in the overall assessment of behavior the reference letter said that the applicant “was highly appreciated due to her exemplary behavior” and “always behaved flawlessly.”
Additionally, according to the reference letter, the applicant “demonstrated fast comprehension” and “pursued her training with great dedication and enthusiasm.” Further, it emphasized that the applicant performed tasks “with diligence, reliably and promptly.” Note that in the experiment, reference letters were identical for all applications. Of course, in real life it is likely that discrimination also occurs with respect to job evaluation and that immigrant workers receive less favorable reference letters.

Results show that reference letters did not improve the absolute chances of the immigrant, but instead reduced those of the non-immigrant (see section Reasons for Unequal Treatment in the article). The reason may be that the experimental reference letter was based on established quality levels (see also Huber and Großblotekamp 2006), which may not have met employers’ expectations. In 2014, the German Federal Labor Court confirmed that the third of the six quality levels (i.e., “satisfactory”) constitutes the “average” level of quality of a reference letter (Bundesarbeitsgericht, 9. Senat 2014). The “good” reference letter used in this study was thus, juridically, above average. It is possible, however, that because of legal particularities, the “statistical average” differs from the “juridical average.” In particular, if a “below juridical average” grade is given in a reference letter, the company bears the burden of proof for this moderate evaluation in a lawsuit. Companies may therefore avoid poor evaluations, thus pushing the statistical average above “satisfactory.” As a result, the reference letters used in this study may have been perceived as only “average” in statistical terms. To the best of my knowledge, no evaluation of a representative sample of reference letters is available that could shed light on the “true statistical average” of grades indicated in reference letters (for a non-representative sample, see, e.g., Huesmann 2008).

Another possible explanation for the effect of the reference letter may be that by stating “we very much regret that due to internal restrictions, we cannot grant Ms. X an employment contract,” it emphasized more clearly than the résumé that the applicant was not kept by the firm after vocational training. Employers may have perceived this information as more negative than expected for the autochtonous applicant and as negative as expected for the immigrant woman.

References
Bundesarbeitsgericht, 9. Senat. 2014. Aktenzeichen 9 AZR 584/13. Accessed at https://juris.bundesarbeitsgericht.de/zweitesformat/bag/2015/2015-03-16/9_AZR_584-
Huber, Günter, and Beatrix Großblotekamp. 2006. *Das Arbeitszeugnis in Recht und Praxis. Rechtliche Grundlagen, Musterzeugnisse, Textbausteine, Zeugnisanalyse.* Planegg bei München: Haufe Verlag.

Huesmann, Monika. 2008. *Arbeitszeugnisse aus personalpolitischer Perspektive. Gestaltung, Einsatz und Wahrnehmungen.* Wiesbaden: Gabler Verlag.
| Variable                          | Mean  | Standard deviation | Callback | Bauer | Öztürk | Öztürk with headscarf | Secretary | Accountant | Chief accountant |
|----------------------------------|-------|--------------------|----------|-------|--------|------------------------|-----------|------------|------------------|
| Callback                         | 0.12  | 0.32               | 1        |       |        |                        |           |            |                  |
| Bauer                            | 0.32  | 0.47               |          | 0.146 |        |                        |           |            |                  |
| Öztürk                           | 0.34  | 0.47               | 0.029    | -0.491|        |                        |           |            |                  |
| Öztürk with headscarf            | 0.34  | 0.47               | -0.173   | -0.495| -0.514 |                        |           |            |                  |
| Secretary                        | 0.6   | 0.49               | -0.128   | 0.019 | -0.014 | -0.004                 |           |            |                  |
| Accountant                       | 0.24  | 0.43               | 0.094    | -0.017| 0.011  | 0.006                  | -0.678    | 1          |                  |
| Chief accountant                 | 0.17  | 0.37               | 0.060    | -0.005| 0.007  | -0.001                 | -0.542    | -0.250      | 1                |
| Small firm                       | 0.1   | 0.3                | 0.008    | 0.006 | -0.035 | 0.029                  | 0.024     | -0.034      | 0.007            |
| International firm               | 0.54  | 0.5                | -0.010   | -0.041| 0.003  | 0.037                  | -0.011    | -0.009      | 0.026            |
| Reference letter                 | 0.32  | 0.47               | -0.039   | 0.008 | -0.001 | -0.007                 | 0.014     | -0.028      | 0.014            |
| Special qualification requirements | 0.17 | 0.38               | -0.046   | 0.028 | -0.035 | 0.007                  | 0.044     | -0.114      | 0.073            |
| German proficiency required      | 0.24  | 0.43               | -0.039   | -0.034| 0.018  | 0.016                  | 0.242     | -0.153      | -0.143           |
| Team and/or customer contact     | 0.65  | 0.48               | -0.005   | 0.007 | -0.061 | 0.054                  | 0.020     | -0.005      | -0.021           |
| Interculturalism                 | 0.02  | 0.15               | 0.039    | -0.079| 0.030  | 0.048                  | 0.020     | 0.007       | -0.034           |
| Appearance                       | 0.03  | 0.18               | -0.013   | 0.013 | -0.049 | 0.036                  | 0.156     | -0.106      | -0.085           |
| Berlin                           | 0.11  | 0.31               | 0.011    | 0.009 | -0.008 | -0.002                 | 0.024     | -0.023      | -0.006           |
| Dresden                          | 0.01  | 0.12               | -0.027   | -0.021| -0.025 | 0.046                  | -0.006    | 0.027       | -0.023           |
| Frankfurt                        | 0.16  | 0.37               | 0.022    | -0.007| -0.014 | 0.021                  | 0.029     | -0.011      | -0.026           |
| Hamburg                          | 0.23  | 0.42               | -0.012   | -0.027| 0.043  | -0.016                 | -0.054    | 0.042       | 0.022            |
| Cologne                          | 0.18  | 0.39               | -0.033   | 0.028 | 0.015  | -0.042                 | 0.025     | 0.006       | -0.040           |
| Munich                           | 0.2   | 0.4                | 0.042    | 0.030 | -0.024 | -0.006                 | 0.011     | -0.034      | 0.025            |
| Stuttgart                        | 0.1   | 0.3                | -0.025   | -0.030| -0.013 | 0.042                  | -0.030    | 0.006       | 0.034            |
| Industry dummy: Services         | 0.65  | 0.48               | 0.050    | -0.011| -0.004 | 0.015                  | -0.013    | -0.014      | 0.033            |
| Industry dummy: Trade            | 0.19  | 0.4                | -0.028   | -0.002| -0.012 | 0.013                  | -0.020    | 0.058       | -0.039           |
| Industry dummy: Public services  | 0.04  | 0.2                | -0.047   | 0.020 | -0.002 | -0.018                 | 0.120     | -0.079      | -0.068           |
| Industry dummy: Production       | 0.12  | 0.32               | -0.011   | 0.007 | 0.021  | -0.027                 | -0.030    | -0.001      | 0.041            |

Notes: N = 1,474; all variables are dichotomous taking values of 0 or 1.
Table A.2 Callback Rates by City

| City    | 1. Bauer | 2. Öztürk | 3. Ö. headscarf | (1) | (2) | (3) |
|---------|----------|-----------|-----------------|-----|-----|-----|
|         | Callback rate (%) | Callback rate (%) | Callback rate (%) | N   | Sig. 1- | Sig. 1- | Sig. 2- |
| Berlin  | 24.1     | 11.1      | 5.4             | 163 | **   | ***   |       |
| Dresden | 20.0     | 0         | 0               | 21  | *    | —     |       |
| Frankfurt | 22.4    | 15.4      | 4.5             | 242 | ***  | ***   |       |
| Hamburg | 13.9     | 15.7      | 3.6             | 339 | ***  | ***   |       |
| Cologne | 14.0     | 11.6      | 2.5             | 268 | ***  | **    |       |
| Munich  | 21.3     | 14.1      | 8.2             | 293 | *    | ***   | *     |
| Stuttgart | 21.4    | 10.6      | 0               | 148 | *    | ***   | ***   |

Notes: Column (1) compares the callback rates of Ms. Bauer and Ms. Öztürk (without headscarf), (2) of Ms. Bauer and Ms. Öztürk with a headscarf, and (3) of Ms. Öztürk without and with a headscarf. Sig. significance.
Results from a t-test: *** p < 0.01; ** p < 0.05; * p < 0.1.