

Online Appendix – AEA Papers and Proceedings

Males Should Mail? Gender Discrimination in Access to Child Care

Henning Hermes¹, Philipp Lergetporer², Fabian Mierisch³, Frauke Peter⁴, and Simon Wiederhold⁵

¹*Düsseldorf Institute for Competition Economics (DICE), Heinrich Heine University Düsseldorf*

²*Technical University of Munich, TUM School of Management, and ifo Institute Munich*

³*KU Eichstaett-Ingolstadt, Ingolstadt School of Management*

⁴*German Centre for Higher Education Research and Science Studies (DZHW)*

⁵*Halle Institute for Economic Research (IWH), MLU Halle-Wittenberg, and ifo Institute Munich*

Contents

1	Appendix Figures	2
2	Appendix Tables	4

1 Appendix Figures

Figure A1: Email Text

Dear Sir or Madam,

We are looking for a child care slot for our [son/daughter] starting in January 2022. [He/she] is now 1 year and 5 months old.

Do you still have a slot available? How can we apply for a slot?

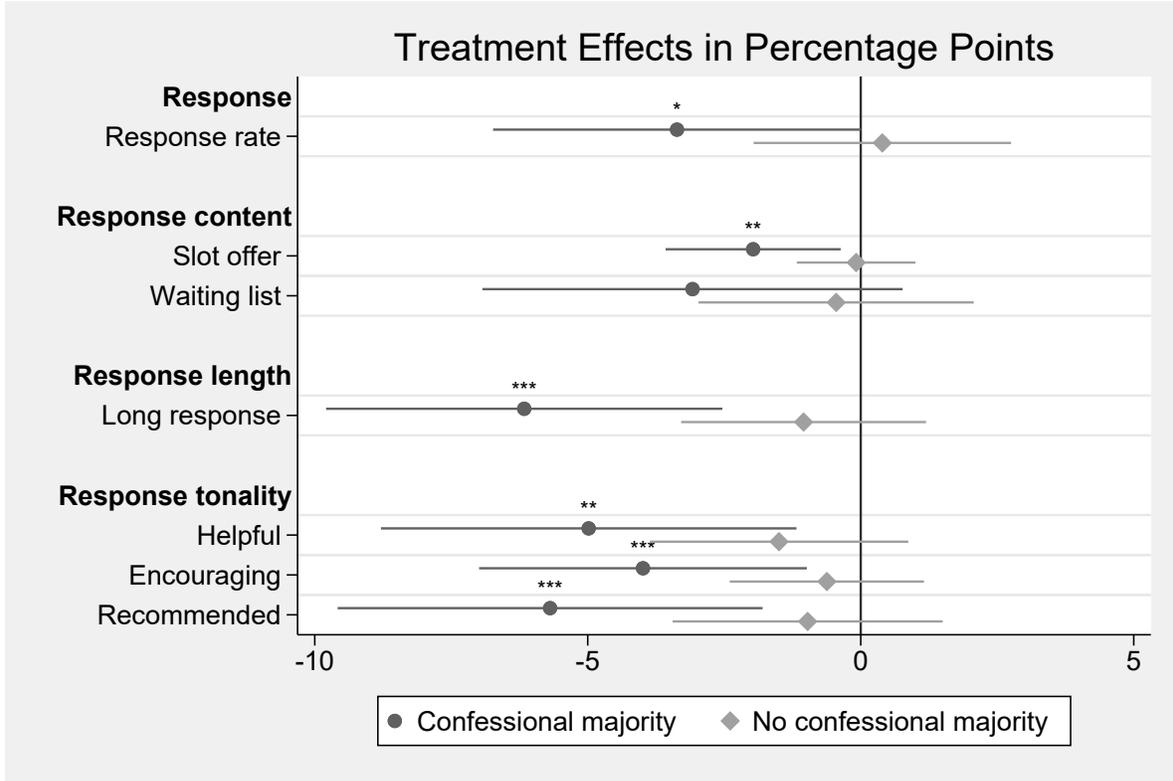
Thank you!

Sincerely,
[Name]

[Name], Bachelor of Arts (FH)
Email: [Name]0528@...

Notes: Figure shows the email we sent from fictitious parents to child care centers. Email shown is a translation of the German version. In the email, text marked in grey is randomized and differs by version of the email: we randomized the gender of the child (2 variations), the name of the parent (16), and whether we include the email signature (2). The signature indicates that the parent holds a bachelor's degree from a University of Applied Sciences, which is the most common university degree in Germany. We sent a total of 64 different versions of the email to the child care centers.

Figure A2: Effects of Email from a Woman by Type of Region



Notes: Figure shows treatment effects, i.e., effects of email from a woman rather than a man, on various outcome measures, separately for child care centers in municipalities with a confessional majority and for child care centers in municipalities without a confessional majority. In municipalities with a confessional majority, Catholics or Protestants constitute the majority (more than 50%) of the population. In our sample, 30% of municipalities are with a confessional majority (20% are majoritarian Catholic and 10% are majoritarian Protestant). See Figure 1 for details on the outcome measures. We estimate OLS models without control variables; see Table A3 for the corresponding regression table. Information on confessional majority is missing for 807 child care centers, as we do not have geolocation data of these centers in our data set. Error bars show 95% confidence intervals based on robust standard errors. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

2 Appendix Tables

Table A1: Balancing

Variable	Email by man		Email by woman	
	Mean (1)	SD (2)	Diff (mean) (3)	<i>p</i> -value (4)
Sender characteristics				
Higher education signal	0.499	(0.500)	0.003	0.779
Child male	0.510	(0.500)	0.014	0.162
Child care center characteristics				
Kindergaten (age 3-6 years)	0.934	(0.248)	0.002	0.670
Daycare (age >6 years)	0.098	(0.298)	0.009	0.124
Center’s maximum capacity	69.47	(41.626)	1.236	0.167
<i>Provider</i>				
Church	0.251	(0.434)	0.002	0.788
Public	0.180	(0.384)	0.001	0.944
Other	0.569	(0.495)	-0.003	0.772
Regional characteristics				
Confessional majority	0.298	(0.458)	0.004	0.716
<i>Urban class</i>				
Rural	0.183	(0.387)	0.001	0.882
Intermediate	0.374	(0.484)	-0.001	0.913
City	0.443	(0.497)	-0.000	0.993
<i>Region</i>				
North	0.152	(0.359)	-0.008	0.292
South	0.292	(0.455)	-0.002	0.845
East	0.203	(0.402)	0.006	0.433
West	0.353	(0.478)	0.003	0.740
Total (N = 9,313)	4,666		4,647	

Notes: Table shows group means and standard deviations after randomization for control group (columns 1 and 2) and difference between control group means and treatment group means (column 3). Column 4 shows the *p*-value of a two-sided t-test between the means of the specific variable in treatment and control groups. *Higher education signal* takes a value of one if the email includes an email signature indicating that the sender has obtained a university degree, zero otherwise; *Child male* takes a value of one if the child mentioned in the email is male (“son”), and is zero for female children (“daughter”); *Kindergarten* takes a value of one if the child care center also caters to children aged 3 to 6, zero otherwise; *Daycare* takes a value of one if the child care center also offers a daycare for schoolchildren, and hence also caters to children aged 6 to 10, zero otherwise; *Center’s maximum capacity* refers to the legal maximum number of children a child care center is allowed to take in; *Church*, *Public*, and *Other* are indicators taking a value of one if the provider of the child care center is the church, the public, or some other entity such as a club (or missing information), zero otherwise. *Confessional majority* is an indicator for when the child care center is located in a municipality where either Catholics or Protestants form a majority; *Rural*, *Intermediate*, and *City* are indicators take a value of one if the center is located in a predominantly urban area (“city”), a suburban area (“intermediate”), or a predominantly rural area (“rural”) following the Eurostat classification, zero otherwise; *North*, *South*, *East*, and *West* are indicators that take a value of one if the child care center is located in the north (Bremen, Hamburg, Lower Saxony, and Schleswig Holstein), south (Baden-Württemberg, and Bavaria), east (Berlin, Brandenburg, Mecklenburg Western Pomerania, Saxony, Saxony-Anhalt, and Thuringia), or west (Hesse, Northrhine-Westphalia, Rhineland Palatinate, and Saarland) of Germany, zero otherwise. For further details on the variables, see Hermes et al. (2023).

Table A2: Treatment Effects on Response Rate and Response Characteristics

	Response Rate	Slot Offer	Waiting List	Long Response	Helpful	Encouraging	Recommended
Email by woman	-0.007 (0.009)	-0.005 (0.004)	-0.011 (0.010)	-0.026*** (0.009)	-0.025** (0.010)	-0.021*** (0.008)	-0.024** (0.010)
Control group mean	0.710	0.051	0.571	0.297	0.358	0.167	0.431
Scaled treatment effect	-1.0	-9.3	-1.9	-8.9	-6.9	-12.6	-5.5
N	9,313	9,313	9,313	9,313	9,313	9,313	9,313

Notes: Table shows treatment effects, i.e., effects of an email from a woman rather than a man, on various outcome measures. We estimate OLS models without control variables. *Response Rate* is an indicator for whether or not a child care center responded to the parent's email. All remaining outcomes are unconditional on response. For instance, if the outcome is an indicator for whether or not a response included a "slot offer," then a one indicates that the child care center responded and offered a child care slot, while a zero indicates either that the center's response did not contain a slot offer or that the center did not respond at all. *Control group mean* denotes the group mean of the respective outcome for emails from men. *Scaled treatment effect* reports the effect of an email from a woman rather than a man scaled by the control group mean in percent. Robust standard errors in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A3: Treatment Effect Heterogeneity by Region

	Response Rate	Slot Offer	Waiting List	Long Response	Helpful	Encouraging	Recommended
Email by woman	-0.034* (0.017)	-0.020** (0.008)	-0.031 (0.020)	-0.062*** (0.019)	-0.050** (0.019)	-0.040*** (0.015)	-0.057*** (0.020)
Email by woman \times No confessional majority	0.038* (0.021)	0.019* (0.010)	0.026 (0.023)	0.051** (0.022)	0.035 (0.023)	0.034* (0.018)	0.047** (0.024)
Email by woman + Email by woman \times No confessional majority (SE)	0.004 0.012	-0.001 0.006	-0.005 0.013	-0.010 0.011	-0.015 0.012	-0.006 0.009	-0.010 0.013
Control group mean	0.769	0.054	0.598	0.349	0.416	0.201	0.500
Scaled treatment effect	-4.4	-36.4	-5.2	-17.6	-12.0	-19.8	-11.4
N	8,506	8,506	8,506	8,506	8,506	8,506	8,506

Notes: Table shows treatment effects, i.e., effects of an email from a woman rather than a man, on various outcome measures, separately for child care centers in municipalities with a confessional majority and for child care centers in municipalities without a confessional majority. In municipalities with a confessional majority, Catholics or Protestants constitute the majority (more than 50%) of the population. In our sample, 30% of municipalities are with a confessional majority (20% are majoritarian Catholic and 10% are majoritarian Protestant). Information on confessional majority is missing for 807 child care centers, as we do not have geolocation data of these centers in our data set. *Control group mean* denotes the group mean of the respective outcome for emails from men to child care centers in municipalities without confessional majority. *Scaled treatment effect* reports the effect of an email from a woman rather than a man to child care centers in municipalities with a confessional majority scaled by the control group mean in percent. Robust standard errors in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.