

Pre-Analysis Plan Amendment: Visibility as Vulnerability: Transgender Passing Privilege and Hiring Discrimination

Date: 8/30/2025

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Amendment

Add Job Posting Fixed Effects

The original PAP (filed May 13, 2025) mistakenly omitted job posting fixed effects in the regression equation; since I am using a paired experimental design (sending two applications to each job posting), the equation should be as follows, where ξ_j are job posting fixed effects:

$$y_{ij} = \delta DT_i + \gamma NP_i + \lambda[DT_i \cdot NP_i] + X'_i\beta_1 + Z'_j\beta_2 + \theta_{t(i)} + \xi_j + \varepsilon_{ij}$$

Sample Size Change

The original PAP (filed May 13, 2025) described a sample size target of N=18,000 (i.e., 9,000 matched pairs). This has been modified to N=10,000 (i.e., 5,000 matched pairs).

Rationale (Sample Size Change)

Power calculations in the original PAP were based on differences in proportions between two independent samples—see below (MDE is minimum detectable effect size at 80% power):

Group 1	Group 2	P.P. Differences (G1 – G2)				MDE (80% Power)
		3.5%	3.0%	2.5%	2.0%	

Panel A: Group 1 has a positive employer response rate of 30%

Pass: well (N=12,000)	Pass: poorly (N=6,000)	99.8%	98.7%	93.5%	79.0%	2.0 p.p. (6.7%)
Mtf: disclosed (N=6,000)	MtF: not disclosed (N=12,000)	99.8%	98.7%	93.6%	79.2%	2.0 p.p. (6.7%)
well / no MtF (N=9,000)	poorly / no MtF (N=3,000)	95.6%	87.8%	73.5%	53.9%	2.7 p.p. (8.9%)
well / MtF (N=3,000)	poorly / MtF (N=3,000)	83.7%	72.1%	56.0%	38.9%	3.3 p.p. (10.9%)

Panel B: Group 1 has a positive employer response rate of 20%

Pass: well (N=12,000)	Pass: poorly (N=6,000)	100.0%	99.8%	98.0%	89.3%	1.7 p.p. (8.7%)
Mtf: disclosed (N=6,000)	MtF: not disclosed (N=12,000)	100.0%	99.8%	98.1%	89.4%	1.7 p.p. (8.7%)
well / no MtF (N=9,000)	poorly / no MtF (N=3,000)	99.0%	95.3%	85.1%	66.1%	2.3 p.p. (11.5%)
well / MtF (N=3,000)	poorly / MtF (N=3,000)	93.6%	84.2%	68.8%	49.3%	2.8 p.p. (14.0%)

During the pre-specified July 14-28 window, with N=6,016 (3,008 pairs), variance was reassessed using the fixed effects specification:

$$y_{ij} = \delta DT_i + \gamma NP_i + \lambda[DT_i \cdot NP_i] + \theta_{t(i)} + \xi_j + \varepsilon_{ij}$$

The positive response rate for the control group was 45.0%; the observed standard errors were:

Coefficient	Std. Error
Does Not Pass	0.0138
Disclose MtF Name Change	0.0149
Does Not Pass × MtF Name Change	0.0251

Given the observed baseline response rate and standard errors, updated minimum detectable effect sizes are as follows:

Coefficient	MDE (80% Power)			
	N=8,000	N=10,000	N=14,000	N=18,000
Does Not Pass	3.4 p.p. (7.5%)	3.0 p.p. (6.7%)	2.5 p.p. (5.6%)	2.2 p.p. (5.0%)
Disclose MtF Name Change	3.6 p.p. (8.0%)	3.2 p.p. (7.2%)	2.7 p.p. (6.1%)	2.4 p.p. (5.4%)
Does Not Pass × MtF Name Change	6.1 p.p. (13.5%)	5.4 p.p. (12.1%)	4.6 p.p. (10.2%)	4.1 p.p. (9.0%)

Compared to MDEs in the original PAP, N=10,000 is sufficient to achieve the planned power levels in relative terms (i.e., when expressing the MDE as a share of the baseline response rate): 6.7-7.2% for individual and 12.1% for the interaction. The former is comparable to rows 1-2 in the original PAP power table (6.7-8.7%); the latter is comparable to the difference between rows 3 and 4 in that table (using the two-sample proportions calculations from the original PAP, this difference corresponded to an MDE of 4.3 p.p. or 14.3% at a 30% baseline, and 3.7 p.p. or 18.7% at a 20% baseline).

As such, to mitigate deception and avoid wasted time for employers, and considering a planned research assistant transition at the end of the summer term,¹ the amended sample size target was set at N=10,000. This decision was made during the pre-specified July 14–28 reassessment window, using application pairs sent as of July 14 and responses received through July 21.

¹ Concluding data collection at the end of August would allow for data collection up to N=10,000. Extending beyond this would have required additional data collection time past the research assistant transition, necessitating substantial training for a new cohort of research assistants.