

Parallel Conjoint Experiments for Measuring Gender Stereotypes and Analyzing Preferences*

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Abstract

Identifying the effects of cognitive cues on political behavior is remarkably difficult because researchers cannot control subjects' assignment to stereotypes. Unlike easy-to-randomize traits such as candidates' race or gender, stereotypes are unknown quantities describing how voters associate these descriptive characteristics to a multivariate distribution of missing information about relevant candidate attributes. Because these cues are fundamentally unobservable and likely to vary across subjects, identification of their effects remains a challenge. This paper introduces a novel method based on parallel conjoint design that allows for measuring stereotypes and analyzing their effects on voters' preferences. We implemented original studies on political gender stereotypes in the US, Chile, and Uruguay. While a large stream of factorial candidate sex experiments has documented a small pro-female advantage, we find that feminine stereotypes have even larger positive effects on preferences. We also detect heterogeneity of preferences among different subgroups indicating that stereotypes operate in complex ways. Our method could generalize to other kinds of stereotypes based on race, ethnicity, and other political identities.

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Introduction

A common set of explanations for women’s underrepresentation in elected offices worldwide points to voter preferences. Studies from the U.S. suggest that while gender stereotypes often play a role in voter evaluations (Huddy and Terkilsen 1993; Alexander and Anderson 1993; Kahn 1996), voters do not seem to penalize women candidates or hold them to double standards (Dolan 2014; Brooks 2013). Moreover, a meta-analysis of 67 conjoint experiments from 12 countries and at different levels of government reveals a small pro-female bias among voters (Schwarz and Coppock 2021). Voters nevertheless may support male candidates strategically if they view female contenders as less electorally viable (Bauer 2020; Lawless and Fox 2010; Oliver and Conroy 2020; Sanbonmatsu 2006).

What role, then, do gender stereotypes, defined as cognitive associations between candidates’ sex and attributes, play in voters’ assessments? Measuring high-dimensional stereotypes and evaluating their electoral performance in a causal framework remains a methodologically challenging but crucial task for our understanding of gender and politics. Recent work shows that few gender stereotypes about “women in general” apply to the sub-type of “female politicians” (Schneider and Bos 2014). Research devoted to measuring associations between female politicians and a multitude of traits, however, cannot by itself tell us much about whether voters use these stereotypes to assess candidates’ viability and make decisions about which candidates to support. Moreover, while candidate sex experiments usefully identify causality (Schwarz and Coppock 2021), they cannot reasonably interpret causal effects of candidate sex as due to gender stereotypes rather than, for example, a baseline preferences for greater or less descriptive representation of women. Masking problems inherent in candidate sex studies (Bansak et al 2018) further limit our understanding of which gender stereotypes, if any, might causally affect vote choice.

This paper introduces a novel method to measure stereotypes and their causal effects. We define stereotypes as voters’ associations between candidate sex and other candidate attributes. In survey experiments, this resembles the masking process by which respondents given with a piece of information such as candidate sex impute missing data about candidate quality (Bansak et al 2018; Dafoe, Zhang, and Caughey, 2018). We exploit this phenomenon as a research opportunity to map the multivariate distribution of candidate traits on a latent dimension of gender stereotypes.

We develop a parallel conjoint design that allows for measuring stereotypes and analyzing their effects on voters’ preferences. The parallel design consists of two experiments. The first one occurs with a measurement sample which we use to train a machine learning

algorithm to classify profiles as either masculine or feminine. A key component of our design involves withholding information about candidates' sex and turning it into an outcome variable. This identifies the high-dimensional content of gender stereotypes. In another independent sample, the second experiment is a standard candidate choice experiment that enables the estimation of the causal effects of stereotypes on vote choice and viability perceptions. In this testing sample, we classify all candidates profiles as masculine or feminine using the estimates from the measurement sample.

We provide guidance to applied researchers on how to implement stereotypes studies and a discussion about the key methodological decisions regarding their empirical design.

References