

The Gender Distribution of Political Power

Perceptions and preferences from Tanzania*

Pablo Selaya
pablo.selaya@econ.ku.dk
University of Copenhagen

Sina Smid
sina.smid@unibocconi.it
Bocconi University

Edith Zink
ezi@econ.ku.dk
University of Copenhagen

— PRELIMINARY VERSION, DO NOT CIRCULATE —

Abstract

Gender quotas are often justified by the expectation that greater descriptive representation leads to substantive representation, yet whether voters themselves make this link remains poorly understood. We study this question using original panel survey data from Tanzania — a setting with longstanding gender quotas in local and national politics but persistent barriers to women’s political influence — collected across two major political events: the 2020 general election and the appointment of Samia Suluhu Hassan as Tanzania’s first woman president in 2021. We introduce novel measures of preferences for both the share of women Members of Parliament (MPs) and their distribution across parliamentary committees, capturing distinct dimensions of political representation. The latter reflects a measure of inclusive representation: preferences for women’s equal influence across the institutional arenas where policy is shaped. On average, preferences for descriptive and substantive representation move together, but this masks important heterogeneity. Respondents who favor increasing women’s presence without equalizing their influence across policy domains are more likely to believe women candidates must invest more political capital than men — an asymmetry that disappears following the appointment of Samia Suluhu Hasan, suggesting that women leadership can reshape beliefs about gender-specific barriers. We further find that process-oriented affirmative action policies are preferred over the current reserved-seat quota. Our findings suggest that public support for descriptive representation does not automatically translate into demand for equal inclusion in policy committees, with implications for how quota design and symbolic representation shape beliefs about gender equality in politics.

*We thank Esther Chevrot-Bianco, Olle Folke, Johanna Rickne, Carl-Johan Dalgaard, and seminar participants at the University of Dar es Salaam, Bocconi University, and Uppsala University for comments and discussion. We are also grateful to Servacius Likwelile and Joel Lincoln of the University of Dar es Salaam, who were co-authors of an earlier version of this study and provided help for the start of the project. Finally, we are grateful for financial support from DANIDA and the Growth and Development Research Project (GDRP) of the United Nations University’s World Institute for Development Economics Research (UNU-WIDER), the Development Economics Research Group at University of Copenhagen, and the Department of Economics at the University of Dar es Salaam. EPCG and Kaitlin Senk (discussant).

1 Introduction

Efforts to increase women's representation in politics have largely focused on policies, which increase descriptive representation, such as gender quotas. These are often justified by the expectation that more women in office will improve the substantive representation of women's interests. Whether the public links these two dimensions of representation in their preferences, however, remains an open question.

We ask whether preferences for the descriptive representation of women in parliament are connected to preferences over how political power between genders is distributed across policy domains, and make two contributions.

First, previous research has typically distinguished between descriptive representation – women's numerical presence in political institutions – and substantive representation – political action that advances women's interests. We identify a related dimension that sits in between: inclusive representation, defined as women's equal opportunities to exercise political influence within parliamentary institutions. Inclusive representation goes beyond numerical presence but, unlike substantive representation, but concerns whether women are equally positioned to shape political decisions. Using original online panel survey data collected around two major political events in Tanzania between 2020 and 2021 among university students in Dar es Salaam, we introduce and test novel measures of preferences for descriptive and inclusive representation. First, we measure preferences for the overall level of women's representation in parliament. Second, we measure preferences for the distribution of women across parliamentary committees, in which legislators scrutinize, amend and shape policy and widely understood as an important measure of policy influence (Heath et al., 2005; Escobar-Lemmon and Taylor-Robinson, 2009a; Murray and Sénac, 2018).

Second, we analyze the relationship between these two dimensions of representation and support for affirmative action policies in politics. While substantive representation is often referred to as a justification for policies that increase descriptive representation, whether this reasoning is reflected in individuals' preferences has received little empirical attention. Building on this distinction, we argue that support for women's political representation is not one-dimensional. Individuals can support women's descriptive presence in parliament while differing in whether they also believe women should exercise equal influence across parliamentary institutions. These differences reflect alternative conceptions of political equality rather than stronger or weaker support for gender equality. Some view the election of women itself as sufficient evidence of progress (descriptive representation), others also view influence of women in some areas (and maybe not necessarily all areas) as progress (substantive representation), whereas others view equal participation in the institutions where political decisions are made as equally important (inclusive representation). Our analysis examines whether these conceptions help explain heterogeneous beliefs about the merit and qualifications required of women politicians.

We make these contributions in the context of Tanzania, a pioneer in the adoption of gender quotas. Following the 1977 Constitution, Tanzania introduced reserved seats for women at the local level in 1982 and in the national parliament in 1985 (Slaa, 2011). Under the current system, 30% of parliamentary seats are reserved for women through "special seats" allocated proportionally across parties, with the total women MP share stable at around

35% since 2010, due to persistent barriers for women politicians during nomination, campaigning, and voting, suggesting that descriptive gains do not automatically translate into equal access to political influence (IRI, 2015; Sender, 2015). This makes Tanzania a useful setting for studying not only preferences for the overall level of representation, but also for how political power is distributed across policy areas in a context where descriptive representation is perceived as partly symbolic (Bjarnegård and Zetterberg, 2016).

Our data span two major political events: the 2020 general election—in which the ruling party won 84% of votes amidst reports of electoral irregularities—and the subsequent appointment of Samia Suluhu Hassan, the vice-president at the time, as Tanzania’s first woman president, following the unexpected death of her predecessor in March 2021. We rely on online panel survey data collected from university students in Dar es Salaam. While not nationally representative, this population is politically engaged, highly aware of the political quotas (96% of respondents) and more likely to hold positions of political influence later in life (Zimmerman, 2019). The online data collection facilitated data collection during the COVID-19 pandemic and allowed us to field both follow-up survey rounds closely after both political events.

Our main findings are as follows. On average, preferences for a higher share of women MPs are significantly and positively associated with preferences for their broader inclusion across parliamentary committees. Building on our theoretical framework, we classify respondents into four types according to whether their ideals exceed their perceptions of the status quo in terms of women’s parliamentary representation, women’s inclusion across committees, or both. Prior to Samia’s presidency, respondents who favor more women in parliament but not greater committee inclusion are more likely to believe that political capital investments are more important for women than for men candidates. Respondents who favor both greater presence and broader inclusion consistently reject this asymmetry and are also the most willing to take costly action in support of gender-equal representation. Finally, across all types, respondents prefer process-oriented affirmative action—policies that support women candidates in building political capital—over the current quota, which fixes outcomes.

The remainder of the paper is organized as follows. Section 2 discusses the literature on descriptive and substantive representation and outlines our theoretical and empirical contribution. Section 3 describes our data collection, measurements, and empirical methods. Section 4 presents the empirical findings, and Section 5 concludes.

2 Preferences for Descriptive and Substantive Representation

Political representation of women has increased steadily over the past century, driven by extended voting rights, reduced barriers to participation and the adoption of gender quotas (Goldin, 2023). Yet despite these gains, women remain significantly underrepresented in political office worldwide. This persistent gap in descriptive representation sits at the heart of a longstanding normative and empirical debate: does it matter, and for whom, how many women are represented in politics?

Pitkin (1967)'s distinction between descriptive and substantive representation remains relevant until today. Descriptive representation captures women "standing for" women by shared identity; substantive representation captures women "acting for" women. The normative case for gender quotas typically rests on a causal claim linking the two: that increasing the number of women in office will, over time, improve the substantive representation of women's interests – as a process (Wängnerud, 2009) – or regarding policy outcomes beneficial for women (Clayton, 2021) – the latter often being more difficult. The link between descriptive and substantive representation, however, remains theoretically and empirically contested (Celis and Childs, 2020), and might depend on other factors than just the politician's gender (Senk, 2023).

Empirical evidence is mixed and context-dependent. In some settings, women's representation has improved outcomes in health, education, and political trust, and strengthened women's engagement with political institutions (Macmillan et al., 2018; Beaman et al., 2012; Barnes and Beaulieu, 2018; Tusalem, 2022). Research on gender quotas in India provides some of the strongest causal evidence that women politicians shift local policy priorities and generate long-term changes in political participation and gender norms (Chattopadhyay and Duflo, 2004; Beaman et al., 2009). In other contexts—particularly new or hybrid democracies—quotas have served symbolic or strategic purposes, leaving the political influence largely unchanged and in some cases coexisting with policies that work against women's interests. These differences are often attributed to the variation in institutional quality, party systems and the reasons and context of why quotas were introduced in the first place (Krook, 2009b; Hughes et al., 2015; Bush and Zetterberg, 2020; Bjarnegård and Zetterberg, 2016; Clayton et al., 2019).

Existing work has typically conceptualized substantive representation as whether representatives act in ways that advance women's interests, through legislative behaviour, agenda-setting, or policy outcomes (Pitkin, 1967). We focus on a related dimension of representation: whether women have equal opportunities to exercise political influence within legislative institutions. Research on cabinet appointments has shown that political influence depends not only on how many women enter government, but also on the portfolios they receive. Women remain disproportionately appointed to traditionally feminine and often less prestigious ministries, while men continue to dominate prestigious portfolios such as finance, defence, and foreign affairs (Escobar-Lemmon and Taylor-Robinson, 2005, 2009b; Krook and O'Brien, 2012). Extending this logic to legislatures suggests that representation also depends on whether women participate equally across the parliamentary committees where legislation is debated. We therefore use a measure of inclusive representation, defined as the equal distribution of opportunities to exercise political influence across the institutional arenas where political decisions are made. Whereas substantive representation concerns what representatives do on behalf of women, inclusive representation concerns whether women are equally represented to shape political decisions, irrespective of the policies they ultimately support. Inclusive representation is therefore best understood as a complementary dimension, and potential institutional precondition, of substantive representation rather than an alternative definition of it.

Parliamentary committees are one of the principal arenas through which legislators exercise political influence. Committees scrutinize legislation, oversee executive action, develop policy expertise, and shape the legislative

agenda before bills reach parliament. Committee assignments therefore determine not only the issues on which legislators work but also their opportunities to influence policymaking. Recent work highlights committee membership as an important way through which substantive representation can occur (Kroeber, 2018). Building on this, our measure of inclusive representation captures preferences for women's equal participation across parliamentary committees, focusing on equal access to legislative influence rather than on the substantive content of political action.

What is less well understood is how individuals think about representation itself. Existing research largely examines elites or institutions, leaving two questions about preferences open. While the literature distinguishes between descriptive representation (who is elected) and substantive representation (how representatives act), individuals may evaluate political equality in terms of a different question: whether women are equally empowered to participate in political decision-making. We argue that this constitutes a distinct dimension of representation, which we term inclusive representation. Rather than asking whether women advance women's interests, inclusive representation concerns whether women have equal opportunities to exercise political influence within legislative institutions. This distinction allows us to examine whether support for women's descriptive representation also extends to support for women's equal political influence. We further ask whether these preferences depend on the means through which descriptive representation is achieved: competitive selection or institutional intervention.

Inclusive representation differs from descriptive representation because it concerns the equal distribution of power rather than just overall representation. Related to the theoretical discussions on descriptive and substantive representation, we argue that individuals hold different conceptions of what gender equality in politics entails. For some, equality is primarily descriptive: increasing the number of women in elected office is sufficient to achieve more equal representation. For others, descriptive representation is only one dimension of equality; representation also requires women to participate equally across the parliamentary institutions where political influence is exercised. We refer to this second dimension as inclusive representation. These alternative conceptions of representation have important implications for how individuals evaluate policies such as gender quotas and how they interpret women's political qualifications. We hypothesize that individuals who primarily value descriptive representation regard the election of women as the central objective, whereas those who also value inclusive representation find more important whether women are equally represented in positions of legislative influence. Distinguishing between these conceptions moves beyond asking whether individuals support more women in politics to understanding what kind of representation they support in parliament.

These questions matter because public support for gender quotas is often conditional on perceptions of candidates' qualifications (Nugent and Krook, 2015), suggesting that individuals draw normative distinctions between advancement through merit and advancement through mandate. Counter-arguments to quotas are often framed as a trade-off between equity and efficiency: increasing women's representation is seen as desirable in principle, but potentially costly if it interferes with meritocratic selection. Apart from that, this trade-off, however, depends on how individuals evaluate the status quo (Besley et al., 2017). If existing political selection is perceived as broadly

fair, quotas may be interpreted as preferential treatment. If, instead, the status quo is understood as shaped by unequal access to resources, networks, party support, or political experience, institutional intervention may be seen as correcting rather than violating meritocratic principles. If individuals do not view quotas as effective policies for substantive influence, they may prefer policies that target the conditions of political selection rather than its outcomes – what we show is particularly relevant in the Tanzanian context.

While existing research suggests that voters are generally willing to elect women candidates (Schwarz and Coppock, 2022), much less is known about whether the public supports women’s equal influence once they enter political institutions. Our findings suggest that support for women’s descriptive inclusion does not always translate into support for equal representation and political power. Preferences related to a demand for substantive representation are often related to reflecting individuals’ expectations of shared experience and aligned policy priorities (Kroeber, 2018). We argue, however, that this inference may be too quick. The desire for more women in parliament does not necessarily mean the desire for women to exercise equal influence in all policy domains. Individuals can support the symbolic presence of women in politics while holding different views about where and how political power should actually be exercised. This distinction is important because support for women’s substantive representation may be domain-specific. Voters may view women politicians as legitimate on issues associated with care, family policy, education, or gender equality, as these have been shown to be influenced by women legislators (Clayton, 2021), while being less likely to support equal influence in other policy areas. Recent work corroborates this argument by showing that descriptive representation is often considered less important to voters than candidate competence (Wolkenstein and Wratil, 2021; Blumenau et al., 2025), though this evidence comes predominantly from high-income Western democracies.

A related challenge is that substantive representation is difficult to identify empirically. Much of the literature asks whether women in office shift policy priorities or spending toward domains such as health, education, childcare, family policy, or violence against women (Heath et al., 2005; Escobar-Lemmon and Taylor-Robinson, 2009a; Krook and O’Brien, 2012; Murray and Sénac, 2018). While many studies find such patterns, interpreting them causally is complicated by party selection, constituency preferences, institutional constraints, and the non-random allocation of politicians to committees or portfolios. Observed associations between women’s presence in a policy domain and higher spending in that domain may therefore reflect both women’s substantive influence and the political conditions that allowed women to enter those positions in the first place. We take a different approach: rather than estimating whether women politicians change policy outcomes, we study preferences for inclusive representation: whether women should exercise equal influence across the parliamentary committees where legislation is shaped. Parliamentary committees are one of the main institutional bodies through which legislators influence policymaking, allowing us to capture preferences over women’s inclusion in political decision-making rather than preferences over specific policy outcomes.

3 Data and Methods

Data collection We collected three rounds of online survey data from university students in collaboration with the University of Dar es Salaam (UDSM) between October 2020 and May 2021 to create a panel survey dataset on perceptions of descriptive and substantive gender representation. Conducting the survey online minimized interviewer demand effects,² enabled data collection during the COVID-19 pandemic, and allowed us to field surveys closely after two major political events. These included, first, the national elections held on October 28, 2020 which resulted in the re-election of President John Magufuli with a landslide win amidst reports of electoral fraud and internet cuts, and, secondly, the appointment of elected Vice President Samia Suluhu Hassan as the country's first woman President on March 19, 2021, which followed President Magufuli's unexpected passing on March 17, 2021, shortly after the start of his second term.

The resulting dataset is an unbalanced panel. Across all rounds, 898 students were invited to participate. In rounds 1 and 2, we sampled students from the Department of Economics ($N = 495$) and subsequently expanded recruitment to the Departments of Sociology and Anthropology to increase sample size. We merged all rounds and retained respondents who provided consent, allowing for partial responses. The final analysis sample, with no missing values in key variables, consists of 610 respondent-round observations from 397 individuals.

Our sample is not representative of the Tanzanian population, as university students constitute a highly educated subset—only about 6% of the population had higher secondary education according to round 8 of the Afrobarometer (see Supplementary C). However, this population is relevant to our research question: more educated individuals are disproportionately likely to occupy positions of political influence (Zimmerman, 2019), and we document that individuals with tertiary education are overrepresented among members of parliament in Tanzania. The sample is also politically engaged: 43% report being interested or very interested in politics, and 96% are aware of the country's gender quota system. Higher engagement is associated with more attentive and reliable survey responses (Poncheri et al., 2008). Moreover, the relative homogeneity of students along key characteristics (e.g., age and parental background) reduces concerns about confounding variation.

The core module of the survey in all three implemented survey rounds elicits respondents' perceived and ideal number of women in parliament and in parliamentary committees using sliders (see Supplementary A), which show the absolute number seats for women in the parliament and each of the existing policy committees in the parliament. In the second survey module, we field several survey experiments examining perceptions of political capital investments for men versus women candidates and willingness to support more equal representation through costly actions. Lastly, we complement these core modules with questions about respondents' beliefs and perceptions of gender equality, norms, policies and voting behaviour. The survey and pre-analysis plan were pre-registered on AEA.³ Further details on survey implementation, response rates, and sample construction are provided in

²Krosnick (1999); Kreuter et al. (2008); Vaus (2014) show that one of the advantages of online data collection is that it reduces social desirability bias. We still account for social desirability bias using a composite index, which is a short version of Crowne and Marlowe (1960)'s social desirability index developed by Reynolds (1982). Our results are robust to controlling for social desirability.

³See <https://www.socialscienceregistry.org/trials/6584>.

Supplementary A, with summary statistics by round reported in Supplementary C.

We complement our survey data with publicly available information from Tanzania's parliamentary website on members of parliament and parliamentary committees, which provides information on the gender distribution, background and experience of each of the members.⁴

Measuring the “ideal” gender distribution A central contribution of our paper is to propose a measure of preferences over the gender distribution of political power. We conceptualize this distribution as a problem of distributive justice and design a survey instrument that elicits respondents' *ideal* – or preferences – for allocation of political representation. Our approach draws on Harsanyi (1953, 1977)'s theory of moral preferences, which distinguishes genuine value judgments about social welfare from preferences shaped by individuals' own social position. In this framework, respondents reveal moral preferences when they evaluate societal outcomes while (a) abstracting from their own position, and (b) considering all possible positions as equally likely (the *equiprobability postulate*). A closely related logic underlies Rawls (1971)'s *veil of ignorance*, in which individuals reason from an *original position of equality* to identify just principles of social organization. Other examples of such deliberative settings from the literature include Buchanan (1977)'s *veil of uncertainty* and Smith (1759)'s *impartial spectator*. To mimic such impartial reasoning, our survey asks respondents to state their preferred share of women MPs in parliament and across parliamentary committees while considering a hypothetical *lottery of nature*.⁵ In this scenario, respondents are instructed to imagine that they do not know their future position in society—such as their gender, income, health, or group membership—and that they could occupy any of these positions with equal probability. While survey responses always remain shaped by respondents' own experiences and characteristics, we find that the thought experiment reduces their relative influence and encourages evaluations based more on broader considerations of social welfare. This operationalization follows a broader literature that uses deliberative or impartial settings as a method to characterize fair or optimal distributive outcomes.^{6 7}

Our survey includes several features to support respondents to engage and understand the survey prompt of the lottery-of-nature. We begin with questions on the distribution of income and wealth to familiarize respondents with the logic of distributive choice under uncertainty. We also include comprehension checks to verify that respondents understand the randomness implied by the lottery and the requirement to abstract from their own social position. Finally, we field a battery of questions that elicit how respondents characterize their distributive ideals (i.e. ideal in what sense?). Supplementary D provides evidence that respondents were able to understand the randomness of this

⁴Sources include official parliamentary records: composition list, committee types, and committee data, last accessed March 30, 2022.

⁵Exact wording: A hypothetical situation in which: (a) you do not know whether you will be rich or poor, healthy or ill, men or women, religious or not, belonging to a small ethnic group or a large one, etc., and (b) you could be any of them.

⁶See Weale (2020) for a discussion of deliberative settings as a theoretical method. Empirical applications include studies of income and wealth distributions using laboratory experiments and survey designs that simulate such conditions (e.g., Frohlich et al. 1987; Lissowski et al. 1991; Ackert et al. 2007; Norton and Ariely 2011; Cappelen et al. 2013; Faillo et al. 2015). While this literature focuses on economic outcomes, we extend the approach to political representation, shifting attention from economic to political inequalities.

⁷While many believe the abstraction into deliberative settings is necessary to develop ideal distributive principles, critics of deliberative settings have emphasized that such ideals are ideological and not useful to handle injustices in the real world (see for example Sen (2006); Pateman and Mills (2007)). Stemplowska and Swift (2012) argue against this criticism, highlighting the importance of an ideal societal consensus for long-term achievements of societal goals (or societal aspirations (Genicot and Ray, 2020)) such as gender equality in politics and in public life. Deliberative settings can thereby help to develop testable predictions, aspirations, and benchmarks for social arrangements, not just theoretically or in a lab, but also in the real world (Rawls, 1996; Gaus, 2011; Kang, 2016).

lottery and describe their *ideal* distributions as more egalitarian and fairer rather than beneficial to themselves.⁸

Measuring inclusion of women in policy-making committees To measure the inclusion of women in policy-making committees, we construct an inclusion index based on the segregation index proposed by Duncan and Duncan (1955), which is a standard measure of segregation across organizational units. For respondent i in survey round t , we define inclusion as

$$\text{inclusion}_{it} = 1 - \underbrace{\frac{1}{2} \sum_{c=1}^{18} \left| \frac{f_{it}^c}{F_{it}} - \frac{m_{it}^c}{M_{it}} \right|}_{\text{segregation index}}, \quad (1)$$

where f_{it}^c and m_{it}^c denote the number of women and men MPs assigned by respondent i to committee c in round t , and F_{it} and M_{it} denote the total number of women and men MPs assigned across all committees. The index compares the committee-level distribution of women and men, and aggregates the absolute differences across committees. It provides the share of women or men that would have to move a committee to achieve parity across all committees. Subtracting the segregation index from one yields a measure of inclusion. We multiply the measure by 100 to align the scale with the percentage share of women MPs (descriptive representation). All our estimates can be read as percentage point (pp) changes. The supplementary Appendix F.3 presents an alternative inclusion measures based on Lieberson (1981)'s isolation index, which capture women's within-committee exposure to men rather than distributional parity across committees, as a robustness check.

Based on respondents' stated ideal and estimated preferences of distribution, we compute the perceived gap in the share of women MPs and their inclusion:

$$\text{gap seats}_{it} = \text{women MPs}_{it}^{\text{ideal}} - \text{women MPs}_{it}^{\text{estimated}} \quad (2)$$

$$\text{gap inclusion}_{it} = \text{inclusion}_{it}^{\text{ideal}} - \text{inclusion}_{it}^{\text{estimated}} \quad (3)$$

we use these gaps to assign each respondent to one of four types: (1) both gaps ≤ 0 , (2) gap seats ≤ 0 , gap inclusion > 0 , (3) gap seats > 0 , gap inclusion ≤ 0 , both gaps > 0 . The largest group is type (4) with 44% of respondents, followed by types (2) with 22%, (3) with 20%, and (1) with 14%. In terms of the average scores on the gender norms index and its political and economic sub-indexes, type (1) with both gaps ≤ 0 and type (4) with both gaps > 0 have the highest values. On average, type (1) respondents overestimate the status quo of women political representation but do not hold the lowest ideals, while type (4) respondents underestimate it and have the highest ideal values. Details on the four types, summary statistics on gender norms, ideals and estimates by type and sample sizes are in Supplementary Appendix E.1.

⁸The share of respondents saying that the *ideals* are beneficial for everyone is relatively low (32%). Due to the way this question was posed this might reflect that it is in general difficult to imagine any distribution that will benefit everyone.

Survey experiments We conducted two pre-registered survey experiments. In the first, we randomize the gender (women, men) of a hypothetical candidate and ask respondents to indicate how important having a university degree, accumulating more political experience, or exerting more effort during the political campaign is for a political candidate to be successfully elected. We chose these three aspects as representing different parts of merit

⁹ We interpret this as differences in the perceived importance of political capital investments.¹⁰

In the second experiment, we ask respondents how likely they would be to engage in a proposed action to support more gender-equal political representation. We randomize the type of action presented. The first involves signing a petition—that is, expressing support by adding one’s name without incurring any financial cost. The second involves donating the amount respondents received as compensation for participating in the survey—an anonymous form of support that entails a financial cost. The supplementary Appendix A.1 reports the share of respondents in the World Values Survey and Afrobarometer who have participated, or would be willing to participate, in different forms of political action. While most respondents report that they have not “joined others to raise an issue” or “signed a petition,” more than 40% indicate that they would be willing to do so. We interpret this as evidence that petition signing is a realistic and meaningful behavioral margin for respondents. Accordingly, we benchmark our interpretation of the treatment effects against expressed willingness to make a donation, which may be influenced by additional considerations such as perceived efficacy or concerns about corruption (and is therefore more difficult to interpret). Respondents in our sample receive 5,000 Tanzanian shillings, which is not negligible in the Tanzanian context. We hypothesize that respondents with higher gaps in descriptive and substantive representation, will be more likely to sign a petition and that the difference in likelihoods of signing a petition versus donating money should be largest for respondents with both gaps > 0 .

Details on the exact wording of the questionnaire and ex-ante power calculations can be found in the Supplementary Appendix A.1.

4 Results

4.1 Changes in perceived and ideal representation

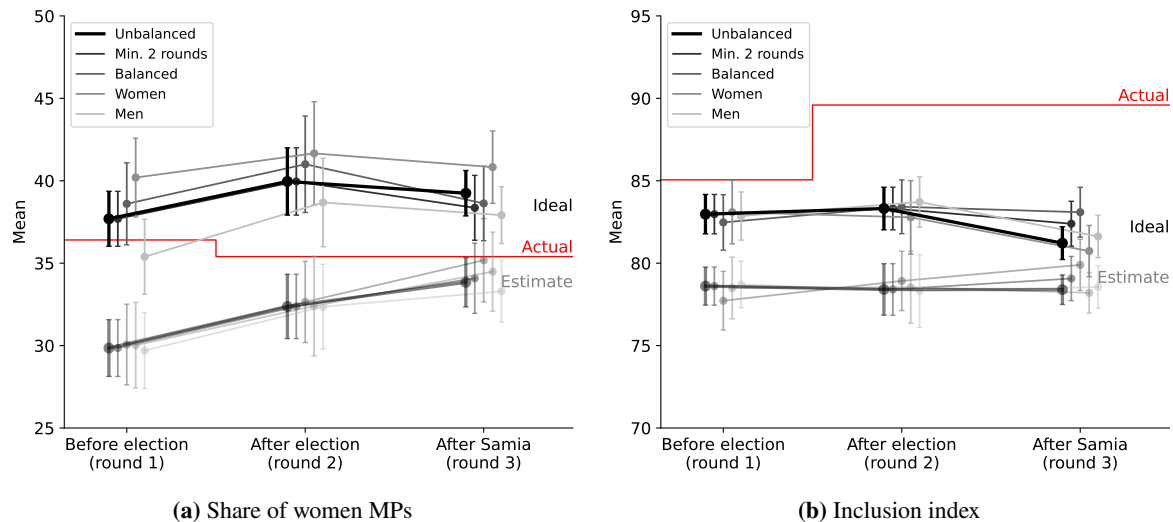
We begin by showing how respondents’ perceptions and normative preferences regarding women’s political representation changed around the two major political events that we observed during our survey data collection. Distinguishing between what respondents believe the current level of representation is and what they consider desirable provides a first indication of whether political developments update beliefs about the status quo or alter underlying preferences. Figure 1 compares respondents’ estimates and ideals for women’s representation in par-

⁹Numerous reports have stressed supply barriers for women politicians during the campaigning stage in Tanzania, see for example (IRI, 2015) and (Sender, 2015)).

¹⁰This is inspired by previous literature. For example, Teele et al. (2018) use survey experiments and show that voters make different and largely unreasonable demands of women candidates compared to traits demanded of men political candidates. Similarly, Bertrand et al. (2018) show that unconscious biases have increased the challenges faced by women who seek to advance to leadership positions; and Vasconcelos (2018) and Heursen et al. (2020) show that gender norms and stereotypes, especially in men-dominated jobs, reinforce existing preferences for men leaders, both in political and corporate leadership.

liament and parliamentary committees across the three survey rounds, alongside the actual levels of representation – for women and men respondents. The timing of the panel survey allows us to distinguish between two major political events: the October 2020 general election (between rounds 1 and 2) and the appointment of Samia Suluhu Hassan as Tanzania’s first woman president in March 2021 (between rounds 2 and 3).

Figure 1: Actual, ideal and estimated share of women MPs and their inclusion across parliamentary committees



Note: Averages with 90% confidence intervals. Use to replace current Figure 1.

While respondents update their perceptions of women’s political representation following these events, their normative preferences remain more stable. In other words, political developments affect what respondents believe the status quo is but not what they consider desirable. Panel (a) shows the share of women MPs. Following the 2020 election, the actual share of women in parliament changed only marginally, from 36.4% to 35.3%. Respondents’ estimates, however, increased from approximately 30% in the first survey round to around 34% by the third round, showing that perceptions became more closely aligned with reality over time. By contrast, respondents consistently preferred higher levels of women’s representation—around 38–40%—with little change after either the election or the appointment of the women president. Throughout all rounds of the survey, respondents consistently expressed a preference for greater representation of women than they believed to currently exist. On average, ideal representation exceeded the estimated representation by approximately seven percentage points ($p < 0.001$), indicating a gap between perceptions of the status quo and normative preferences. Panel (b) presents the inclusion of women across parliamentary committees using the inclusion index. Here, the change following the election was more pronounced: the actual level of women’s inclusion increased from 85.1 to 89.6. Nevertheless, respondents’ estimates remained lower (around 78–79) and showed little adjustment, while ideal levels remained stable around 81–83 throughout. Respondents therefore neither fully perceived nor normatively responded to the increase in women’s committee representation.

Our findings suggest that political events primarily influence respondents’ perceptions rather than their normative

beliefs about representation. While respondents updated their beliefs about the composition of political institutions, their views about the desirable level of women’s representation are more stable over time. This interpretation is reinforced by the gap between estimated and ideal representation across all survey rounds. The patterns are consistent across balanced and unbalanced samples as well as respondents’ gender, indicating that the observed dynamics are not driven by attrition or changes in sample composition. Apart from a small gender difference in the first survey round, where women expressed slightly higher ideals for parliamentary representation than men, we find no evidence of gender differences over time.

Figure E1 in the Appendix shows the full distributions of estimated and ideal representation. These closely mirror the patterns in Figure 1: the distributions of ideals remain stable across survey rounds, whereas the distribution of estimated parliamentary representation gradually shifts towards the observed level. Appendix Table ?? reports the corresponding summary statistics and tests of mean differences across rounds, together with results for individual parliamentary committees and the Lieberman (1981) inclusion index.

4.2 Preferences for descriptive and inclusive representation over time

The descriptive evidence above shows that respondents’ ideals for both descriptive and inclusive representation remain stable across survey rounds, despite the 2020 election and the appointment of Tanzania’s first woman president. We next examine whether these two dimensions of representation are systematically related. Specifically, we ask whether respondents who prefer a higher share of women Members of Parliament (descriptive representation) also prefer women to be more evenly represented across parliamentary committees (inclusive representation).

To assess the relationship between preferences for descriptive and inclusive representation, we run the following regressions:

$$\text{Inclusion}_{it}^{ideal} = \alpha + \beta \text{ women MPs}_{it}^{ideal} + \gamma \mathbf{X}_{it} + \mu_t + \lambda_{R_i} + \varepsilon_{it} \quad (4)$$

for respondent i in survey round t . Our coefficient of interest is $\hat{\beta}$ that captures the relationship between the ideal share of women MPs (descriptive representation) and their preferred inclusion of women across parliamentary committees (inclusive representation). The baseline specification $\mathbf{X}_{it}$ includes the estimated share of women MPs and estimated committee inclusion. We control for demographics, origin, ethnicity, religiosity, gender norms, social desirability, trust in parliament, and voting behaviour. All specifications include survey-round fixed effects (μ_t) and fixed effects for the number of survey rounds in which respondents participated (λ_{R_i}).

Due to the panel structure of the data, we distinguish between variation across respondents and changes within respondents over time (Table 1). The pooled estimates reveal a strong positive relationship between preferences for descriptive and inclusive representation. Respondents who prefer a larger share of women MPs also consistently prefer women to be more broadly represented across parliamentary committees. In column 6, a one percentage-point increase in the ideal share of women MPs is associated with a 0.14-point increase in the ideal inclusion index

($p < 0.01$), conditional on respondents' estimates of current representation. Although the estimated coefficient is small in magnitude, it is meaningful. Increasing the preferred share of women MPs from the current quota level (30%) to gender parity (50%) corresponds to an increase of approximately 3 pp in the ideal inclusion index. This positive relationship confirms the descriptive pattern underlying the respondent types (Figure 2): respondents who favour more women in parliament also tend to favour their broader inclusion across parliamentary committees. Estimated representation itself is a strong predictor of ideal representation, highlighting the importance of perceptions as a benchmark when evaluating desired levels of representation.

Table 1: Ideal inclusion

	Pooled OLS			Between individual variation			Within individual variation		
	Baseline	+ Round FE	+ Estimated	Baseline	+ Round FE	+ Estimated	Baseline	+ Round FE	+ Estimated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ideal % female MPs	0.130*** (0.033)	0.131*** (0.034)	0.105*** (0.038)	0.179*** (0.042)	0.185*** (0.042)	0.143*** (0.037)	-0.032 (0.051)	-0.036 (0.051)	-0.023 (0.056)
Round 2		-0.204 (1.067)	-0.029 (0.920)		-1.064 (1.981)	-0.667 (1.736)		0.564 (0.987)	0.323 (0.928)
Round 3		-1.625* (0.922)	-1.682** (0.778)		-3.027** (1.268)	-2.429** (1.134)		-0.124 (1.136)	-0.715 (1.058)
Est. % female MPs			0.025 (0.039)			0.015 (0.035)			0.050 (0.062)
Est. inclusion			0.528*** (0.072)			0.633*** (0.060)			0.253*** (0.083)
Woman	-0.914 (0.797)	-0.957 (0.798)	-0.816 (0.687)	-0.574 (0.949)	-0.716 (0.948)	-0.508 (0.753)			
Rounds participated	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
N	610	610	610	397	397	397	396	396	396
Individuals	397	397	397	397	397	397	184	184	184
Adj. R^2	0.036	0.038	0.319	0.059	0.068	0.402	0.448	0.444	0.499

Note: Stars indicate statistical significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Heteroskedasticity-robust standard errors in parentheses. For the estimation using only between-respondent variation, we aggregated the data to averages by respondent ID.

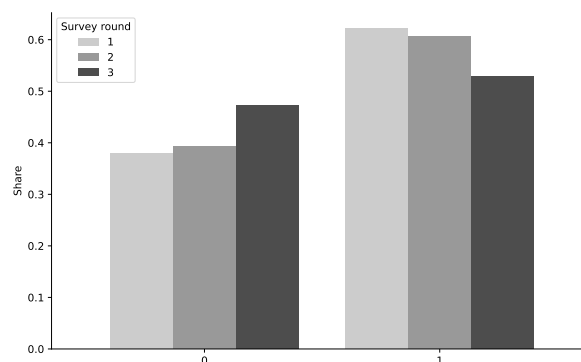
Importantly, this relationship is almost entirely driven by differences between respondents rather than changes within respondents over time. While the pooled and between-respondent estimates are consistently positive (0.11–0.19), the within-respondent coefficient becomes small, negative, and statistically insignificant (-0.023-0.036) once respondent fixed effects are included (Columns 7,8,9). In other words, respondents who generally favour greater descriptive representation also favour greater inclusive representation, but these preferences show little within-individual change over time. This finding complements the descriptive findings in Figure 1, which show that ideals remained stable across survey rounds despite two major political events and highlights that preferences for women's political representation reflect long-term individual attitudes rather than short-term opinion updating. The regression results also show a small but statistically significant decline in ideal committee inclusion in the third

survey round in the pooled (-1.682^{**}) and between-respondent (2.429^{**}) specifications, mirroring the slight decline observed descriptively in Figure 1. However, this effect disappears once respondent fixed effects are introduced, suggesting that it primarily reflects differences in respondent composition rather than systematic within-individual changes in preferences. Across all specifications, we find no statistically significant gender differences in ideal committee inclusion.

Figure 2 examines the extent to which respondents' preferences for descriptive and inclusive representation are aligned. We classify preferences as aligned when respondents who prefer a higher—or lower—share of women MPs also prefer correspondingly higher—or lower—levels of women's inclusion across parliamentary committees. This classification does not imply that respondents with divergent preferences are internally inconsistent. Rather, it distinguishes individuals who apply a similar conception of gender equality to women's numerical presence and institutional influence from those who differentiate between these two dimensions of representation.

Consistent with our theoretical expectation that descriptive and inclusive representation are related but distinct, respondents' ideal share of women MPs is positively and statistically significantly associated with their preferred level of committee inclusion in both the pooled specifications ($0.105\text{--}0.131^{***}$) and the between-individual specifications ($0.143\text{--}0.185^{***}$). Approximately half of the respondents fall into this category in the first two survey rounds, but this share declines to around 37% in the third round. This suggests that, following President Suluhu's appointment, preferences for descriptive and inclusive representation became somewhat less coupled for a subset of respondents, even though average ideals remained stable. We use this stable between-respondent classification in the heterogeneity analysis of the survey experiment in the next section.

Figure 2: Types (share of respondents) by round



Note: 0 are respondents whose ideals and estimates don't follow the relationship in Table 1, and 1 are respondents for who ideals and estimates do follow the relationship in Table 1: that is higher (lower) share and higher (lower) inclusion.

Results including the full set of controls are reported in Supplementary Appendix F. Other than ethnicity and religiosity, these variables are generally unrelated to respondents' ideal committee inclusion. Including the full set of controls slightly attenuates the coefficient on ideal descriptive representation to approximately 0.10 while increasing the adjusted R^2 to 0.42. The results are robust to using Lieberman (1981)'s isolation index as an alternative measure of committee-level gender segregation; the between-individual coefficient increases to

0.3 pp and, unlike the Duncan-based estimates, the within-individual coefficient is also positive and statistically significant (Supplementary F.3). The between-respondent relationship remains positive and becomes somewhat stronger, while the within-respondent coefficient is positive and statistically significant. We attribute this difference to the Lieberman index's greater mechanical sensitivity to the overall share of women MPs assigned to committees rather than to substantively different patterns of preference updating.

Overall, we show that respondents hold stable and coherent preferences regarding women's political representation. While individuals who favour greater descriptive representation also tend to favour broader inclusive representation, these preferences change little over time.

4.3 Merit requirements and perceived gaps of representation

To examine whether perceptions of gender differences in merit requirements depend on respondents' perceptions of existing representation gaps, we interact survey experiment treatment effects with whether respondents perceive women to be underrepresented in parliamentary seats and committee inclusion:

$$y_{it} = \alpha + \beta_1 \text{treated}_{it} + \beta_2 \text{treated}_{it} \times \mathbf{1}(\text{gap seats}_{it} > 0) + \beta_3 \text{treated}_{it} \times \mathbf{1}(\text{gap inclusion}_{it} > 0) \quad (5) \\ + \beta_4 \text{treated}_{it} \times \mathbf{1}(\text{gap seats}_{it} > 0) \times \mathbf{1}(\text{gap inclusion}_{it} > 0) + \mu_t + \lambda_{R_i} + \varepsilon_{it}.$$

where the indicator $\mathbf{1}(\text{gap seats}_{it} > 0)$ equals one if respondent i perceives that women are underrepresented in seats, while $\mathbf{1}(\text{gap inclusion}_{it} > 0)$ captures whether the respondent perceives a shortfall in inclusion. The coefficient β_1 therefore captures the treatment effect for the reference group consisting of respondents with no positive gap in either dimension. We estimate treatment effects by survey round in the main part and with using pooled, aggregated, and first response data in the Supplementary F.4. We include fixed effects for the total number of survey rounds a respondent participated in (λ_{R_i}) and survey round fixed effects (μ_t) for the results in Supplementary F.4. We aggregate the β s to get the composite treatment effect for each type.¹¹

Figure 3 presents the estimated treatment effects across respondent groups and survey rounds. When pooling all survey rounds, aggregating responses by respondent, or using only responses from the first survey round¹², we find no significant treatment effects.

However, we find significant differences across survey rounds. Before Samia Suluhu Hassan assumed the presidency, respondents who perceived women to be underrepresented in parliament but not in committee inclusion consistently evaluated political capital investments as more important for women than for men candidates. The strongest and most consistent effects are observed for university education and previous parliamentary experience, with smaller positive effects for the average across all three political-capital attributes. By contrast, respondents

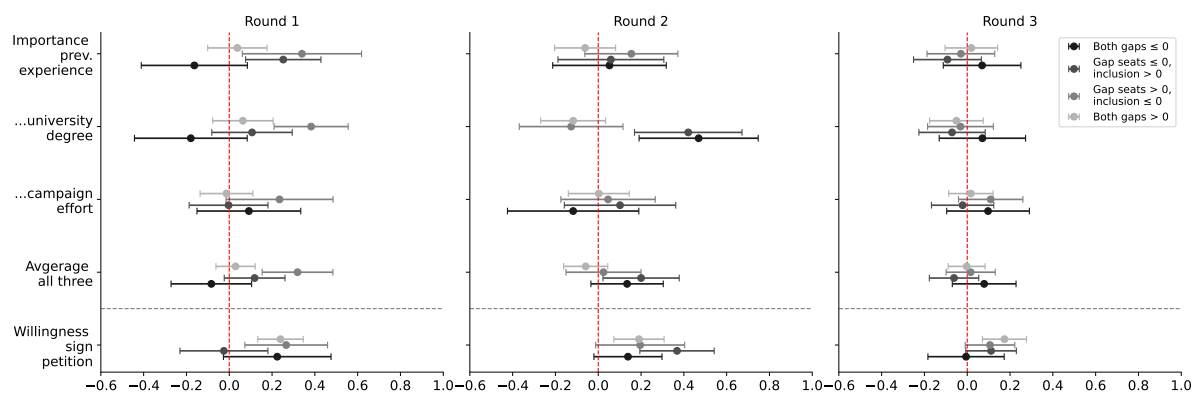
¹¹The treatment effect for each type is obtained by aggregating coefficients as follows: (1) No positive gap in seats or inclusion: β_1 , (2) positive gap in seats only: $\beta_1 + \beta_2$, (3) positive gap in inclusion only: $\beta_1 + \beta_3$, (4) positive gaps in both seats and inclusion: $\beta_1 + \beta_2 + \beta_3 + \beta_4$.

¹²Within-individuals, we do not randomize the treatment effect over time.

who simultaneously perceived gaps in both parliamentary representation and committee inclusion show treatment effects close to zero throughout.

The second key finding is that these differences disappear after the President's appointment. In the third survey round, treatment effects converge towards zero across all respondent groups and outcomes, with estimates for the two groups becoming indistinguishable¹³. This pattern mirrors the descriptive evidence presented in Figure 1, where perceived and ideal representation became more closely aligned following Suluhu's appointment. Together, these findings suggest that, on average, the visibility of women political leadership may reduce beliefs that women must possess stronger merit credentials than comparable men candidates.

Figure 3: Survey experiments



Note: Estimated coefficients from OLS estimation controlling for number of rounds participated, heteroscedasticity robust standard errors, 90% confidence intervals. Estimations using the balanced sample across rounds, only respondents who participated for the first time each round, the aggregate responses by respondent ID, first response and pooled data in Supplementary F.4.

The balanced-panel estimates tell the same story. Although confidence intervals widen because of the smaller sample size, the strongest treatment effects continue to be concentrated among respondents who perceive a gap in parliamentary representation but not committee inclusion, particularly for previous parliamentary experience in Round 1 and university education in Round 2. This indicates that the main results are not driven by sample attrition.

An interesting implication of these findings is that treatment effects are concentrated among respondents whose preferences for descriptive and inclusive representation are less aligned, as identified in the previous section. Respondents whose ideals for women's parliamentary representation and committee inclusion are aligned show no different merit standards throughout. In contrast, respondents whose preferences are less coherent are more likely to judge that women candidates require stronger merit qualifications than men candidates, an asymmetry that disappears after the appointment of Tanzania's first woman president.

These findings highlight that symbolic political representation can shape perceptions of women's competence independently of changes in respondents' normative ideals. Prior to Suluhu's appointment, some respondents compensated perceived barriers to women's political advancement by placing greater emphasis on merit signals

¹³We can not rule out that this finding is due to learning.

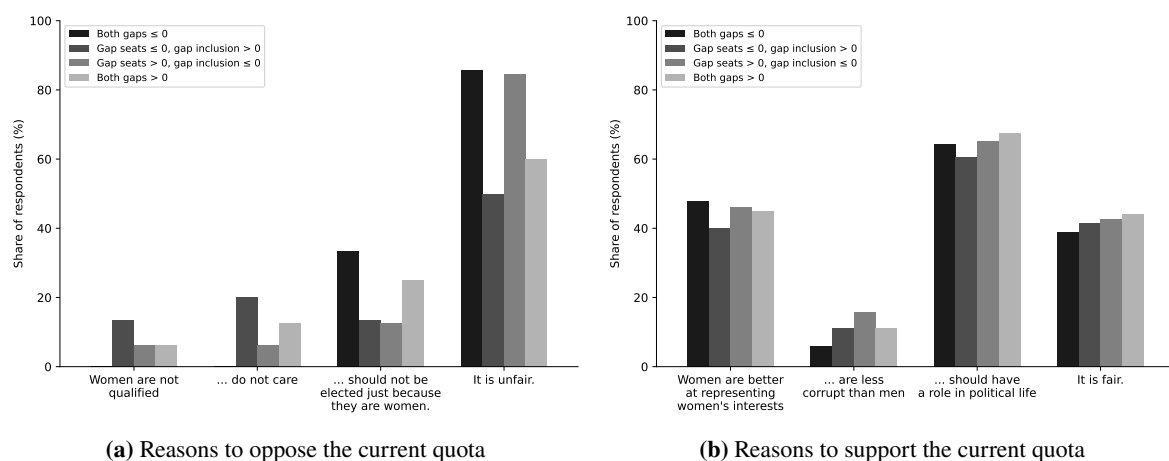
such as education and political experience. These gendered merit requirements largely disappeared over time, even though respondents' ideals regarding women's political representation remained stable.

4.4 Policy preferences

Having shown that respondents distinguish between women's numerical presence in parliament and their inclusion in committee positions, we next examine whether these different conceptions of representation shape preferences over how political equality should be achieved. Gender quotas provide a useful test because they pursue descriptive representation through direct institutional intervention, whereas alternative affirmative-action policies alter the conditions under which women enter and advance within political institutions.

A large majority of 87% of respondents support Tanzania's current gender quota. Reasons to support and oppose it are plotted in Figure 4. Among those who oppose it, the most frequently cited reason is unfairness; however, respondents who favor broader committee inclusion for women are less likely to invoke this objection than those who do not. Across all types, differences in reasons for support are small: the most common justifications are that women better represent women's interests and that women should have a role in political life, pointing toward the quota being valued primarily as a tool for substantive representation rather than symbolic presence. Finally, a consistent pattern emerges across all respondent types: affirmative action policies that support women candidates through the selection process and essentially the supply side — such as additional campaign funding or cross-party organizational platforms — are ranked as both more effective and more justified than the current outcome-based quota, see Supplementary E.1. This preference for process-oriented over outcome-oriented policies holds regardless of whether respondents perceive a gap in seats, inclusion, or both and in line with general considerations in favor of generating equality of opportunity Taylor (2009).

Figure 4: Views on affirmative action



Note: Computed among respondents who oppose (panel (a), 13% of respondents) or support (panel (b), 87% of respondents) the quota separately. Multiple choice, share of women/men respondents who choose a specific response option on the vertical axis by type.

We fielded several open-ended survey question throughout the questionnaire to understand respondents' reasoning

about their choice of the gender distribution in parliament, why they support or oppose the current gender quota and why they believe gender equality may or may not be achieved in Tanzania. The responses corroborate our earlier findings and provide details on the mechanisms used by respondents in connecting descriptive and inclusive representation. Many respondents explicitly grounded their support for higher women representation in the expectation that women would bring more direct knowledge of women's lived experiences to the policy process. Several described women's substantive inclusion as instrumentally necessary, not merely symbolically desirable; for example, emphasizing that women are better positioned to represent communities affected by poverty, reproductive health, or caregiving burdens.¹⁴ At the same time, respondents frequently cited internalized barriers as a key obstacle to greater participation, including lack of confidence among women themselves,¹⁵ often attributed to religious norms or insufficient empowerment from an early age.¹⁶ Respondents also expressed hope that the presidency of the first woman president had already or might shift what is perceived as possible noting "that it is now seem possible to lead by a woman is huge fact".

5 Discussion

This paper examines how individuals conceptualize the gender distribution of political power, and whether preferences for women's descriptive representation extend to preferences for their inclusive representation. We contribute in two ways: by introducing novel measures of preferences for descriptive and inclusive representation using panel survey data in a unique setting with two major political events; and by analyzing how these preferences relate to perceptions of merit and support for affirmative action.

Our main finding is that preferences for greater descriptive and inclusive representation tend to move together at the individual level: respondents who favor a higher share of women MPs also tend to favor their broader inclusion across parliamentary committees. This relationship is stable across survey rounds and robust to a wide range of controls, indicating that it reflects individual-level differences in orientation toward gender equality in politics rather than reactions to political events.

Yet, this overall association between preferences and views of descriptive and inclusive representation masks meaningful heterogeneity in how respondents perceive the current situation of gender representation in politics and what they believe is required to change it. Respondents who favor increasing women's presence without necessarily equalizing their committee influence are more likely to believe that investments into political capital are more important for women than for men to succeed. This belief pattern points to what we summarize as a

¹⁴On respondent noted: *"there are lots of problems in many societies especially poor ones which affect women directly, so if women are given opportunities to represent other women who are out there in different societies to present their problems in the parliament they will do well... compared to when given to men who just observe those problems indirectly."* Another emphasized that "they can better represent the women's views and also with passion and heart they can represent well their citizens," while a third noted that "women are reproductive in nature and thus if given a chance they will be able to increase productivity in each sector of the economy."

¹⁵One respondent noted, *"Because women still being underestimate themselves due to religious reason and inadequate women empowering,"* while another emphasized, *"The idea of inferiority that most women have... making it effective in a girl's mind should start from the roots as young girls."*

¹⁶Comments such as, *"Tanzania still with men superiority in different sectors and not much awareness is available in the young generation,"* and, *"Some tribes still think that women are inferior thus they will always be under men dominance."* A related sentiment was that *"most Tanzanians are conservative in nature and are not ready to accept change."*

“merit asymmetry”: an implicit acceptance of women’s descriptive inclusion while also believing that women still have to work “harder” – or that they might not be equally accepted or viewed as competent in all policy spheres. Our results suggest that similar dynamics operate in the domain of political selection: even respondents broadly supportive of women’s representation can believe that women must work harder to attain the same positions, which is an inherent reproduction of current gender inequalities in many political systems. This acceptance likely dampens both women’s political ambitions and broader demands for structural reform.

This pattern is consistent with research on gendered standards of political merit, which shows that women are frequently expected to demonstrate greater competence, experience, or qualifications than men before being viewed as equally deserving of political power (Krook, 2009a; Bauer, 2020). Rather than rejecting women’s representation overall, such beliefs may legitimize unequal distributions of influence by framing them as the product of merit rather than institutional barriers.

Our analysis offers rare survey-panel evidence that a single, salient political event — the visible entry of a woman into the highest office — can potentially reshape perceptions of gender-specific barriers in politics in the short term. This finding resonates with research on role model effects (Beaman et al., 2012) and suggests that symbolic representation, even when it arrives unexpectedly, may have measurable downstream effects on beliefs about what is required of women candidates. Whether such shifts persist beyond the immediate shock or translate into long-term changes in political behavior and norms remains an important question for future research.

These patterns suggest that support for women’s political representation in Tanzania is primarily substantive: respondents want women in politics because they expect them to improve policy, not merely to fulfill a norm of fair presence. This has implications for how gender quotas are evaluated. While respondents broadly support the current quota, their most common justification is substantive — that women better represent women’s interests — rather than procedural. And across all respondent types, the preferred reform is not the current outcome-related quota but rather policies that support women candidates earlier in the selection process. This preference for process-oriented affirmative action aligns with the logic that genuine substantive representation requires women to enter politics through routes that build political capital and democratic legitimacy, not just reserved seats.

An important scope condition of our analysis is that respondents evaluate a reserved-seat quota system. Tanzania’s reserved seat quota has often been perceived as democratically less legitimate than other quota systems, while also raising concerns about merit-based selection (Nugent and Krook, 2015). Additionally, in politically and democratically challenging contexts, the adoption of gender quotas might also lead to a backlash (Bjarnegård and Zetterberg, 2016). Preferences for process-oriented affirmative action may therefore partly reflect attitudes toward reserved seats specifically rather than opposition to gender quotas more broadly.

Our findings suggest that the assumption underlying many gender quota policies — that increasing women’s descriptive presence will translate into greater substantive influence — is partially reflected in preferences and perceptions. A significant share of the respondents supports higher numbers of women MPs without necessarily demanding their equal inclusion across all policy domains. Differences between preferences for women’s

descriptive and inclusive representation are not simply a measurement issue. They reflect distinct beliefs about merit, barriers to political participation, and the policies needed to promote gender equality. Understanding these differences is important for designing policies that promote not only women's symbolic inclusion in politics but also their political influence and gender (re-)distribution of political power.

References

- Ackert, L. F., J. Martinez-Vaquez, and M. Rider (2007, July). Social Preferences And Tax Policy Design: Some Experimental Evidence. *Economic Inquiry* 45(3), 487–501.
- Barnes, T. D. and E. Beaulieu (2018, June). Women Politicians, Institutions, and Perceptions of Corruption. *Comparative Political Studies* 52(1), 134–167.
- Bauer, N. M. (2020). Shifting standards: How voters evaluate the qualifications of female and male candidates. *The Journal of Politics* 82(1), 1–12.
- Beaman, L., R. Chattopadhyay, E. Duflo, R. Pande, and P. Topalova (2009, 11). Powerful Women: Does Exposure Reduce Bias? *The Quarterly Journal of Economics* 124(4), 1497–1540.
- Beaman, L., E. Duflo, R. Pande, and P. Topalova (2012). Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India. *Science* 335(6068), 582–586.
- Bertrand, M., S. E. Black, S. Jensen, and A. Lleras-Muney (2018, 06). Breaking the Glass Ceiling? The Effect of Board Quotas on Female Labour Market Outcomes in Norway. *The Review of Economic Studies* 86(1), 191–239.
- Besley, T., O. Folke, T. Persson, and J. Rickne (2017, August). Gender Quotas and the Crisis of the Mediocre Man: Theory and Evidence from Sweden. *American Economic Review* 107(8), 2204–2242.
- Bjarnegård, E. and P. Zetterberg (2016, April). Gender Equality Reforms on an Uneven Playing Field: Candidate Selection and Quota Implementation in Electoral Authoritarian Tanzania. *Government and Opposition* 51(3), 464–486.
- Blumenau, J., F. Wolkenstein, and C. Wratil (2025). Citizens' preferences for multidimensional representation. *Perspectives on Politics* 23(2), 588–610.
- Buchanan, J. (1977). *Freedom in Constitutional Contract*. College Station-London: Texas AM University Press.
- Bush, S. S. and P. Zetterberg (2020, September). Gender Quotas and International Reputation. *American Journal of Political Science*.
- Cappelen, A. W., J. Konow, E. Ø. Sørensen, and B. Tungodden (2013, June). Just Luck: An Experimental Study of Risk-Taking and Fairness. *American Economic Review* 103(4), 1398–1413.
- Celis, K. and S. Childs (2020, 11). *Feminist Democratic Representation*. Oxford University Press.
- Chattopadhyay, R. and E. Duflo (2004). Women as Policy Makers: Evidence from a Randomized Policy Experiment in India. *Econometrica* 72(5), 1409–1443.
- Clayton, A. (2021). How Do Electoral Gender Quotas Affect Policy? *Annual Review of Political Science* 24(1), 235–252.
- Clayton, A., D. Z. O'Brien, and J. M. Piscopo (2019). All male panels? representation and democratic legitimacy. *American Journal of Political Science* 63(1), 113–129.
- Cohen, J. (2013, may). *Statistical Power Analysis for the Behavioral Sciences*. Routledge.
- Crowne, D. P. and D. Marlowe (1960). A New Scale of Social Desirability Independent of Psychopathology. *Journal of Consulting Psychology* 24(4), 349–354.
- Dodson, D. L. and S. J. Carroll (1991). *Reshaping the Agenda: Women in State Legislatures*. New Brunswick, NJ: Center for American Women and Politics, Rutgers University.
- Duncan, O. D. and B. Duncan (1955, April). A Methodological Analysis of Segregation Indexes. *American Sociological Review* 20(2), 210–217.
- Escobar-Lemmon, M. and M. M. Taylor-Robinson (2005). Women ministers in latin american government: When, where, and why? *American Journal of Political Science* 49(4), 829–844.
- Escobar-Lemmon, M. and M. M. Taylor-Robinson (2009a). Getting to the Top: Career Paths of Women in Latin American Cabinets. *Political Research Quarterly* 62(4), 685–699.

- Escobar-Lemmon, M. and M. M. Taylor-Robinson (2009b). Getting to the top: Career paths of women in latin american cabinets. *Political Research Quarterly* 62(4), 685–699.
- Faillio, M., S. Ottone, and L. Sacconi (2015, March). The Social Contract in the Laboratory: An Experimental Analysis of Self-Enforcing Impartial Agreements. *Public Choice* 163(3-4), 225–246.
- Franceschet, S. and J. M. Piscopo (2008). Gender quotas and women’s substantive representation: Lessons from argentina. *Politics & Gender* 4(3), 393–425.
- Frohlich, N., J. A. Oppenheimer, and C. L. Eavey (1987). Laboratory Results on Rawls’s Distributive Justice. *British Journal of Political Science* 17(1), 1–21.
- Gaus, G. (2011). *The Order of Public Reason*. Cambridge University Press.
- Genicot, G. and D. Ray (2020, aug). Aspirations and Economic Behavior. *Annual Review of Economics* 12(1), 715–746.
- Goldin, C. (2023). Why women won. *Working Paper*.
- Harsanyi, J. C. (1953, October). Cardinal Utility in Welfare Economics and in the Theory of Risk-taking. *Journal of Political Economy* 61(5), 434–435.
- Harsanyi, J. C. (1977). Morality and the Theory of Rational Behavior. *Social Research* 44(4), 623–656.
- Heath, R. M., L. A. Schwindt-Bayer, and M. M. Taylor-Robinson (2005). Women on the Sidelines: Women’s Representation on Committees in Latin American Legislatures. *American Journal of Political Science* 49(2), 420–436.
- Heursen, L., E. Ranehill, and R. A. Weber (2020). Are Women Less Effective Leaders Than Men? Evidence from Experiments Using Coordination Games. *CESifo Working Paper No. 8713*.
- Hughes, M. M., M. L. Krook, and P. Paxton (2015, 05). Transnational Women’s Activism and the Global Diffusion of Gender Quotas. *International Studies Quarterly* 59(2), 357–372.
- IRI (2015). Tanzania National Elections Gender Assessment October 25, 2005.
- Jones, M. P. (1997). Legislator gender and legislator policy priorities in the argentine chamber of deputies and the united states house of representatives. *Policy Studies Journal* 25(4), 613–629.
- Kang, H. R. (2016). Can Rawls’s Nonideal Theory Save his Ideal Theory? *Social Theory and Practice* 42(1), 32–56.
- Kreuter, F., S. Presser, and R. Tourangeau (2008, dec). Social Desirability Bias in CATI, IVR, and Web Surveys: The Effects of Mode and Question Sensitivity. *Public Opinion Quarterly* 72(5), 847–865.
- Kroeber, C. (2018). How to Measure the Substantive Representation of Traditionally Excluded Groups in Comparative Research: A Literature Review and New Data. *Representation* 54(3), 241–259.
- Krook, M. L. (2009a, jun). Beyond Supply and Demand: A Feminist-institutionalist Theory of Candidate Selection. *Political Research Quarterly* 63(4), 707–720.
- Krook, M. L. (2009b). *Quotas for Women in Politics: Gender and Candidate Selection Reform Worldwide*. Oxford: Oxford University Press.
- Krook, M. L. and D. Z. O’Brien (2012). All the President’s Men? The Appointment of Female Cabinet Ministers Worldwide. *The Journal of Politics* 74(3), 840–855.
- Krosnick, J. A. (1999). Survey Research. *Annual Review of Psychology* 50(1), 537–567. PMID: 15012463.
- Lieberson, S. (1981). *An Asymmetrical Approach to Segregation*, pp. 61–82. London: Croom Helm.
- Lissowski, G., T. Tyszka, and W. Okrasa (1991, March). Principles of Distributive Justice. *Journal of Conflict Resolution* 35(1), 98–119.
- Macmillan, R., N. Shofia, and W. Sigle (2018). Gender and the Politics of Death: Female Representation, Political and Developmental Context, and Population Health in a Cross-National Panel. *Demography* 55, 1905–1934.

- Murray, R. and R. Sénac (2018). Explaining Gender Gaps in Legislative Committees. *Journal of Women, Politics & Policy* 39(3), 310–335.
- Norton, M. I. and D. Ariely (2011, January). Building a Better America—One Wealth Quintile at a Time. *Perspectives on Psychological Science* 6(1), 9–12.
- Nugent, M. K. and M. L. Krook (2015, 05). All-Women Shortlists: Myths and Realities. *Parliamentary Affairs* 69(1), 115–135.
- Pateman, C. and C. W. Mills (2007). *Contract and Social Change: A Dialogue Between Carole Pateman and Charles W. Mills*, pp. 200–229. Cambridge: Polity Press.
- Pitkin, H. F. (1967). *The Concept of Representation*. University of California Press.
- Poncheri, R. M., J. T. Lindberg, L. F. Thompson, and E. A. Surface (2008). A Comment on Employee Surveys: Negativity Bias in Open-Ended Responses. *Organizational Research Methods* 11(3), 614–630.
- Rawls, J. (1971). *A Theory of Justice* (1 ed.). Cambridge, Massachusetts: Belknap Press of Harvard University Press.
- Rawls, J. (1996). *Political Liberalism*. Columbia classics in philosophy. New York: Columbia University Press.
- Reynolds, W. M. (1982). Development of Reliable and Valid Short Forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology* 38(1), 119–125.
- Schwarz, S. and A. Coppock (2022). What Have We Learned about Gender from Candidate Choice Experiments? A Meta-Analysis of Sixty-Seven Factorial Survey Experiments. *The Journal of Politics* 84(2), 655–668.
- Schwindt-Bayer, L. A. (2006). Still supermadres? gender and the policy priorities of latin american legislators. *American Journal of Political Science* 50(3), 570–585.
- Sen, A. (2006). What Do We Want from a Theory of Justice? *The Journal of Philosophy* 103(5), 215–238.
- Sender, I. A. (2015). Election Observation Delegation to the General Elections in Tanzania (23 - 27 October 2015).
- Senk, K. (2023). When do women represent women’s rights: exploring seniority and political security. *Politics, Groups, and Identities* 11(5), 1077–1097.
- Slaa, W. (2011). Chaging the Standing Orders of Parliament in Tanzania. In A. I. A. H. C. K. Frederick Stapenhurst, Rasheed Draman (Ed.), *African parliamentary reform*, Chapter 11. London: Routledge.
- Smith, A. (1759). *The Theory of Moral Sentiment*. Indianapolis : Liberty Classics, 1982, c1976.).
- Stemplowska, Z. and A. Swift (2012). *Ideal and Nonideal Theory*, pp. 1–17. Oxford University Press.
- Taylor, R. S. (2009, April). Rawlsian Affirmative Action. *Ethics* 119(3), 476–506.
- Taylor-Robinson, M. M. and R. Heath (2003). Do women legislators have different policy priorities than their male colleagues? a critical case test. *Women & Politics* 24(4), 77–101.
- Teele, D. L., J. Kalla, and F. Rosenbluth (2018). The Ties That Double Bind: Social Roles and Women’s Underrepresentation in Politics. *American Political Science Review* 112(3), 525–541.
- Tusalem, R. F. (2022). Does gendered representation in national legislatures promote substantive representation and human development? evidence from the developing world. *Politics & Policy* 50(6), 1096–1137.
- USAID (2020). Gender Equality and Women’s Empowerment.
- Vasconcelos, A. F. (2018). Gender and leadership stereotypes theory: is it reaching the boundaries? *Management Research Review* 41(11), 1336–1355.
- Vaus, D. D. (2014). *Surveys In Social Research*. London: Routledge.
- Weale, A. (2020, June). *Modern Social Contract Theory*. Oxford University Press.
- Wolkenstein, F. and C. Wratil (2021). Multidimensional representation. *American Journal of Political Science* 65(4), 862–876.

- Wängnerud, L. (2009, June). Women in parliaments: Descriptive and substantive representation. *Annual Review of Political Science* 12(1), 51–69.
- Zimmerman, S. D. (2019, January). Elite colleges and upward mobility to top jobs and top incomes. *American Economic Review* 109(1), 1–47.

Supplementary Material for

Motivations for female political representation

Pablo Selaya
`pablo.selaya@econ.ku.dk`
University of Copenhagen

Sina Smid
`sina.smid@statsvet.uu.se`
Bocconi University

Edith Zink
`ezi@econ.ku.dk`
University of Copenhagen

[Tables of content](#)

A Survey

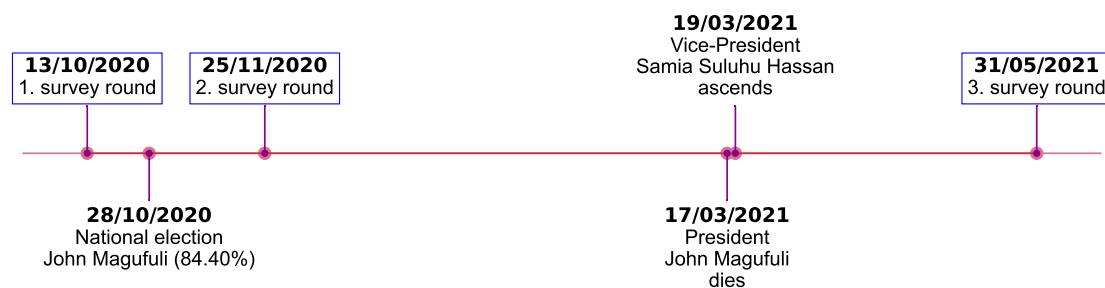
We launched the first survey round two weeks before the national election on October 28, 2020. In this election, the governing party was re-elected with 84% of votes. The second survey round started on November 29, 2020, a month after the national election. The third survey round followed on May 30, 2021 - circa two months after former Vice-president Samia Suluhu Hassan took over from the just re-elected president John Magufuli, who passed away unexpectedly on March 17, 2021. Thereby, she became Tanzania's first ever female president.

Each survey round lasted between two and three weeks. All survey respondents were invited via email to participate in the survey. We sent participation reminders by email and WhatsApp. The average survey completion time was 15 minutes. Each participant received 5,000 TZS (about 2 USD) after the completion of the first and second survey round and 10,000 TZS (about 4 USD) after the third survey round. Respondents were informed about this scheme to incentivize participation in all rounds.

Table A1: Response rates

Round	Contacted	Partially complete		Completed	
	N	N	RR1	N	RR2
1	495	255	48.48%	186	37.58%
2	494	184	37.25%	149	30.16%
3	894	362	40.49%	280	31.33%
Panel structure:					
Any	898	501	55.79%	396	44.10%
1 & 2	497	137	27.57%	108	21.73%
1 & 3	897	123	13.71%	89	9.92%
2 & 3	895	121	13.52%	93	10.39%
All 3	898	96	10.69%	73	8.13%

Figure A1: Timeline data collection



A.1 Survey experiments

We conducted the same pre-registered survey experiments in all three survey rounds.¹⁷

- **Experiment 1:** To test whether specific elements of merit are considered more important for female than for male parliamentary candidates, we randomized a hypothetical candidate's gender and elicited how important (*not important at all* – *very important*) respondents consider his/her education level, previous experience, and campaigning effort in order to be elected into parliament. We define merit-based appointment of politicians

¹⁷Pre-registered with the American Economic Association's registry for randomized control trials, RCT ID: AEARCTR-0006584.

Figure A2: Screenshot from survey questionnaire

KØBENHAVNS UNIVERSITET

Ideal distribution of parliament seats between women and men

Adjust the slider below to indicate what would be an **ideal** distribution of **seats** in the Parliament of Tanzania between **women and men**, but imagining that you first participate in a **lottery of nature**, just as described above.

The slider shows the number of seats for women

0 393

PREVIOUS NEXT

38%

based on candidates' education, experience and effort and ask about the three elements on a 10-point response scale ranging from 1 (not at all important) to 10 (very important).

The survey experiment in the survey reads as follows:

Table A2: Survey Experiments on The Importance of Merit for Candidate Selection

<i>The next parliamentary elections are coming up at the end of this month. How important are the following qualities for a [male/female] candidate to become Member of Parliament?</i>		
Education	Experience	Effort
Candidate has a university degree.	Candidate has previous experience as Member of Parliament.	Candidate put a lot of effort into campaigning for the election.
Outcome Scale from (1) Not at all important to (10) Very important		

- **Experiment 2:** We ask on an abstract level about respondents' opinions about whether they theoretically support, or think they should support gender equality in politics and elsewhere. With this experiment, we want to capture respondents' actual support of gender equality matters and see whether signing a petition for gender equality in politics is considered more or less costly than donating money, whether men behave differently than women, and whether over time respondents become more or less willing to bear the cost. 5000 TZS corresponds to ca. 2 USD. It is the same amount that respondents received as incentive to participate in the survey and is an affordable amount for a student. The response scale ranges from 1 (absolutely not) to 4 (absolutely yes), with no neutral option.

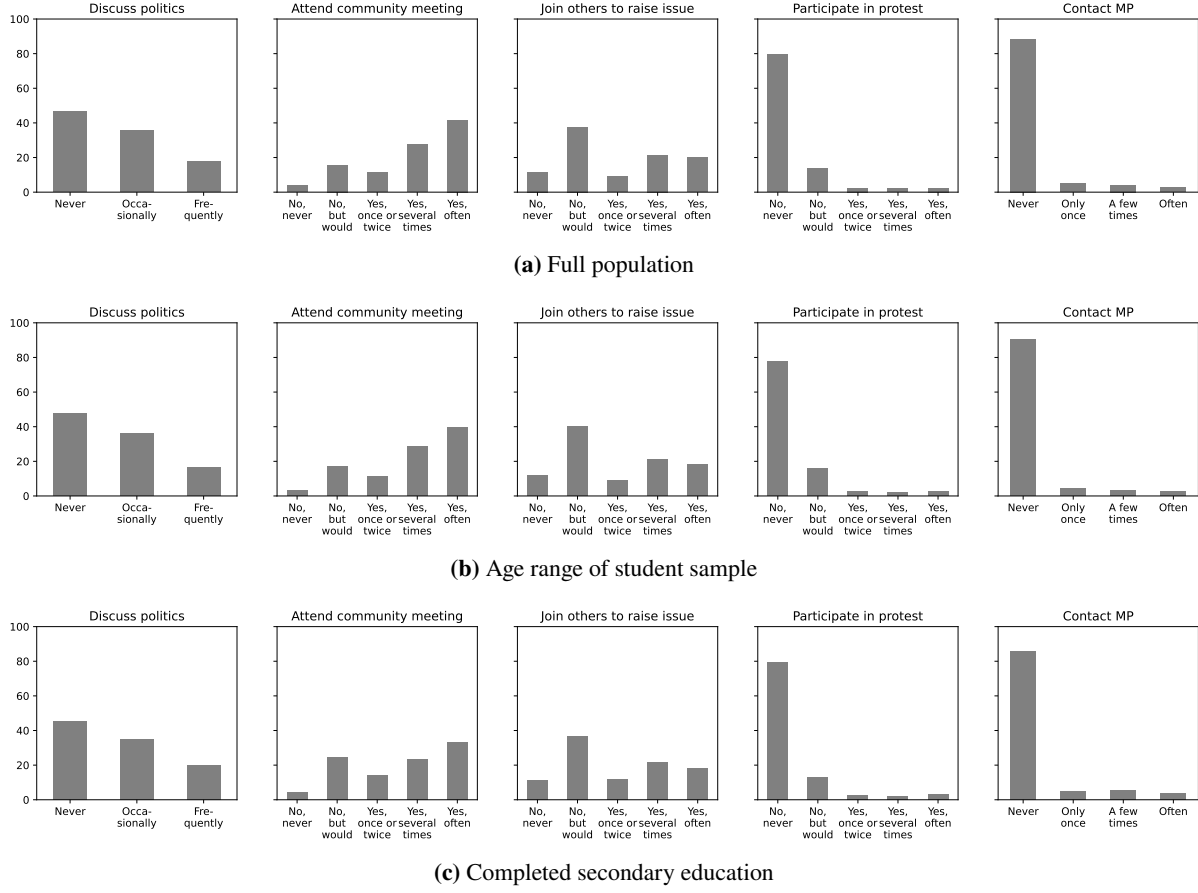
The survey experiment in the survey reads as follows:

This week, some of your fellow students are going to request action from the government to increase gender equality. Do you think you will support this goal?

Control : To show your support, would you sign their petition letter?

Treatment : To show your support, would you donate them 5,000 TZS?

Figure A3: Civic engagement in Afrobarometer round 8



Note: Afrobarometer round 8, data collection February-March 2021.

Power Analysis We conducted and pre-registered a power analysis expecting ca. 500 responses.¹⁸ Figure A5 shows that even with lower response rates we would still be able to correctly reject that our treatment had an effect of moderate size with a 80% probability, i.e. the conventional level of power, for a minimum of 200 responses. We do not reach this threshold in every round resulting in lower lower levels of power down to 60% for the first two rounds. Ex post, we computed effect sizes for our treatments and all five outcomes using Cohen (2013)'s d :

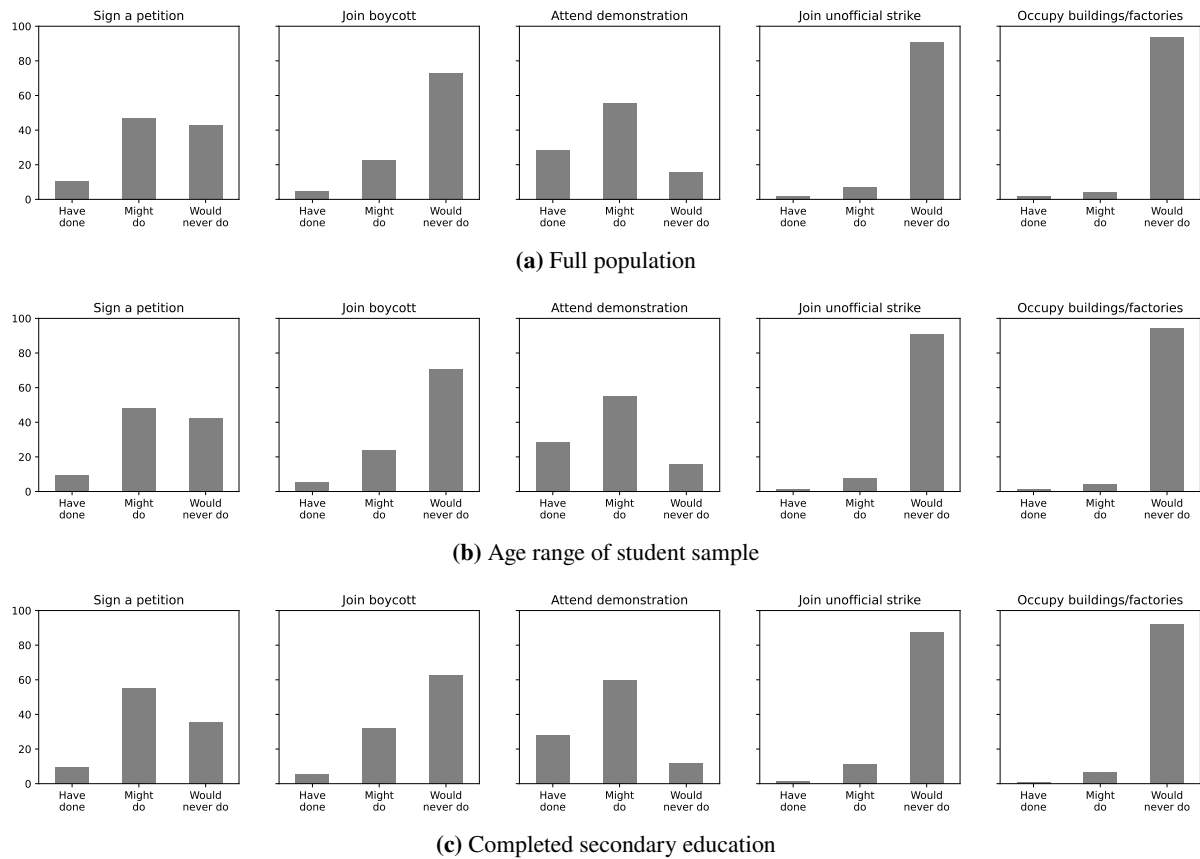
$$d = \frac{\bar{Y}_{treated} - \bar{Y}_{control}}{\sqrt{\frac{1}{2}(\sigma_{treated}^2 + \sigma_{control}^2)}}$$

With these, we see that even pooling the sample we have very little power for the meritocracy outcomes. Only for *Experiment 2* on respondents' willingness to take action for gender equality, the realized number of responses allows us to correctly reject that our treatment had an effect with >80% probability. Regarding the importance of campaigning effort, we reach a power level of 63%, for all other outcomes it is <20%.¹⁹ We conclude that in these cases absence of evidence does not necessarily mean evidence of absence.

¹⁸Pre-registered with the American Economic Association's registry for randomized control trials, RCT ID: AEARCTR-0006584.

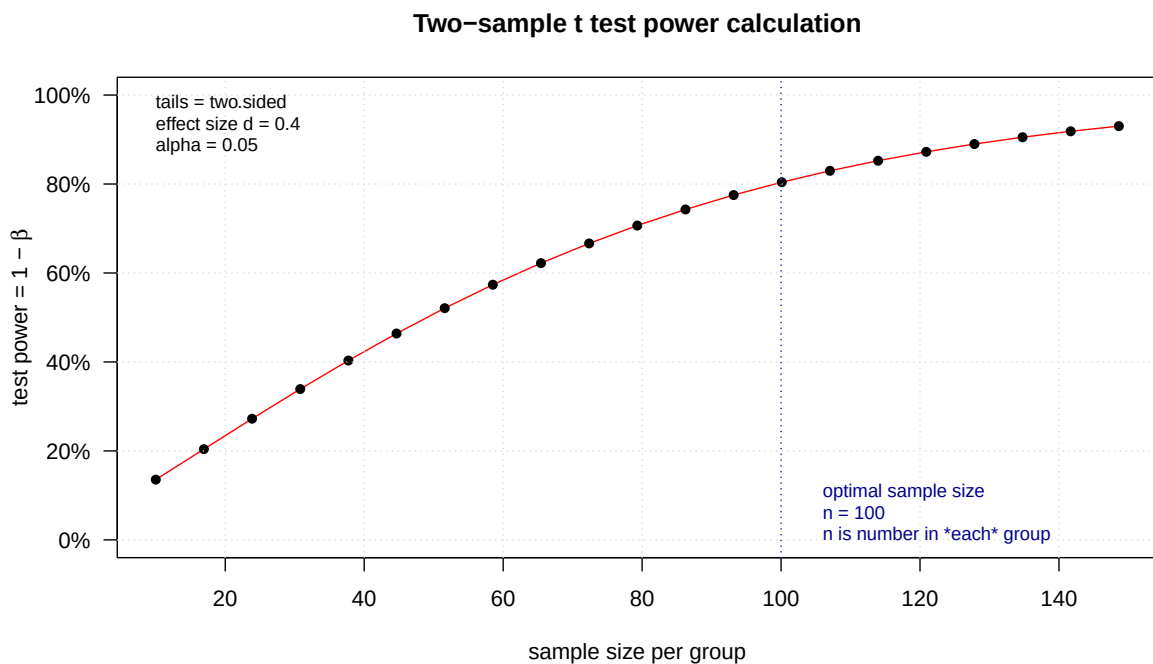
¹⁹All of this was computed using significance level $\alpha = 0.05$ and the `pwr` R package: <https://github.com/heliosdrm/pwr>.

Figure A4: Political action in world value survey round 4



Note: World Value Survey, round 4, data collection 1999-2004.

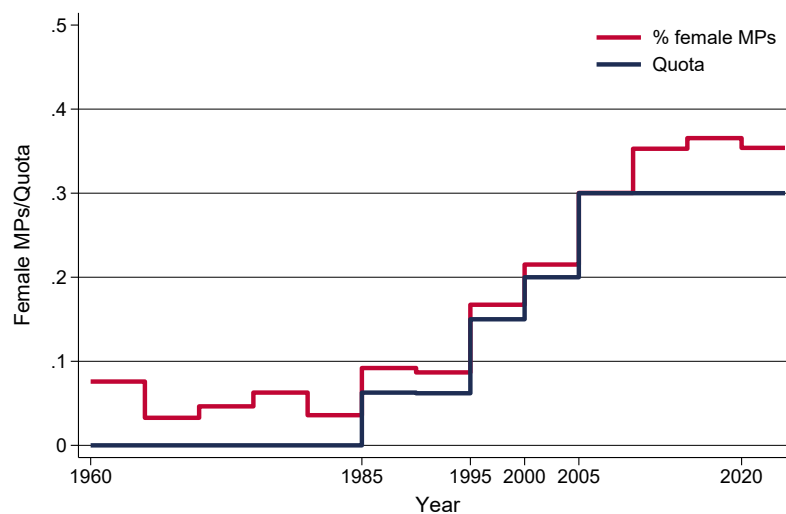
Figure A5: Ex-ante power analysis as pre-registered



B Context

The inclusion of women in all public spheres, including politics, was legally introduced in the 1977 Constitution of Tanzania. Subsequently, the country adopted a gender quota in the form of special seats reserved for women in local elections in 1982, and in the Parliament in 1985.²⁰ Despite the gender quota, which has been raised incrementally to the current level of 30%, female political empowerment in the country, measured as the number of women in parliament, in ministerial (leadership) positions, and as head of state, has increased much less than in other Sub-Saharan countries (USAID, 2020). In fact, the quota has so far served as a low bound for the number of women in parliament. This means that since the introduction of the gender quota, the number of women elected in constituency elections and not via reserved seats has been minimal. The share of female MPs has stagnated at around 35% since the 2010 election, when the quota was last increased.

Figure B1: Time trend of gender quota and female representation in politics in Tanzania



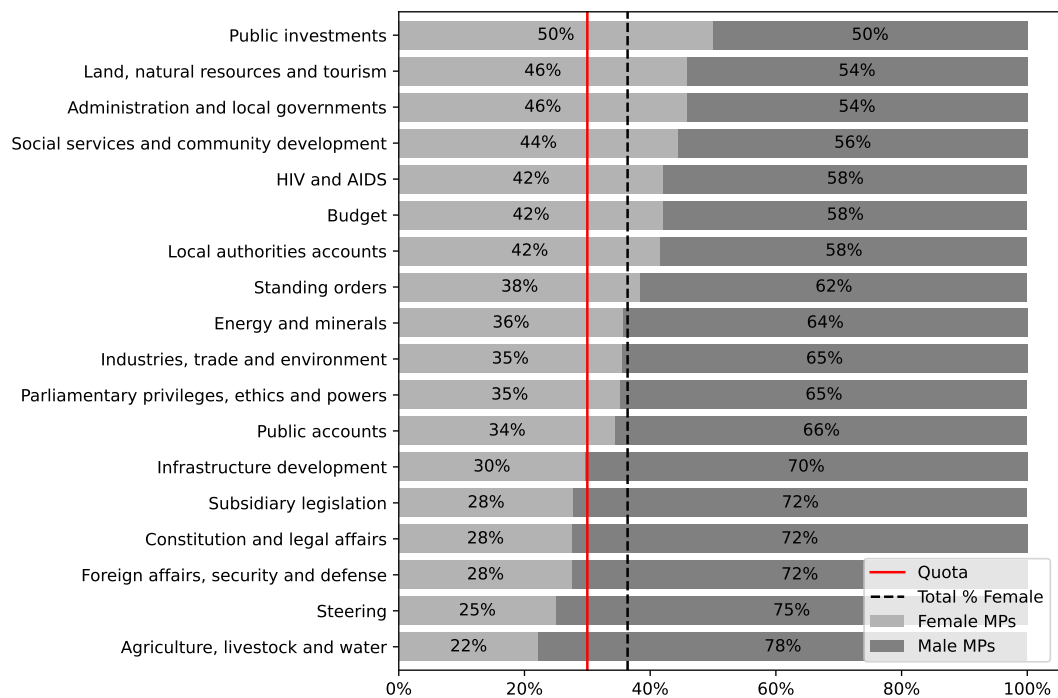
Note: The figure shows the evolution of the gender quota in Tanzania's parliament and the share of women elected in the parliament. Data are from Tanzania's parliamentary website.

We plot the gender composition of the parliament's committees before and after the 2020 election below. Much of the evidence on gender quotas and female representation from other countries shows that the collective influence of female politicians on the legislative process is often less than the number of women in parliament might otherwise suggest.²¹ Women also occupy fewer executive positions in politics compared to men, and their participation in governments is typically concentrated on portfolios of social and women's affairs, and gender equality. Apart from numeric representation, female politicians often have less access and influence than men in all spheres of policy making. Evidence shows that quota designs (reserved seats, voluntary party quotas, candidate quotas) and political selection often promote female membership in some legislative committees while discouraging it in others; female legislators are often relegated to committees such as education, culture and welfare, and others that focus on so-called 'minority interests' (Clayton, 2021; Kroeber, 2018). In general, the data for Tanzania suggest that the gender segregation in topic-specific political committees is not as large in Tanzania as in other countries.

²⁰Gender Quotas Database: <https://www.idea.int/data-tools/data/gender-quotas/database>

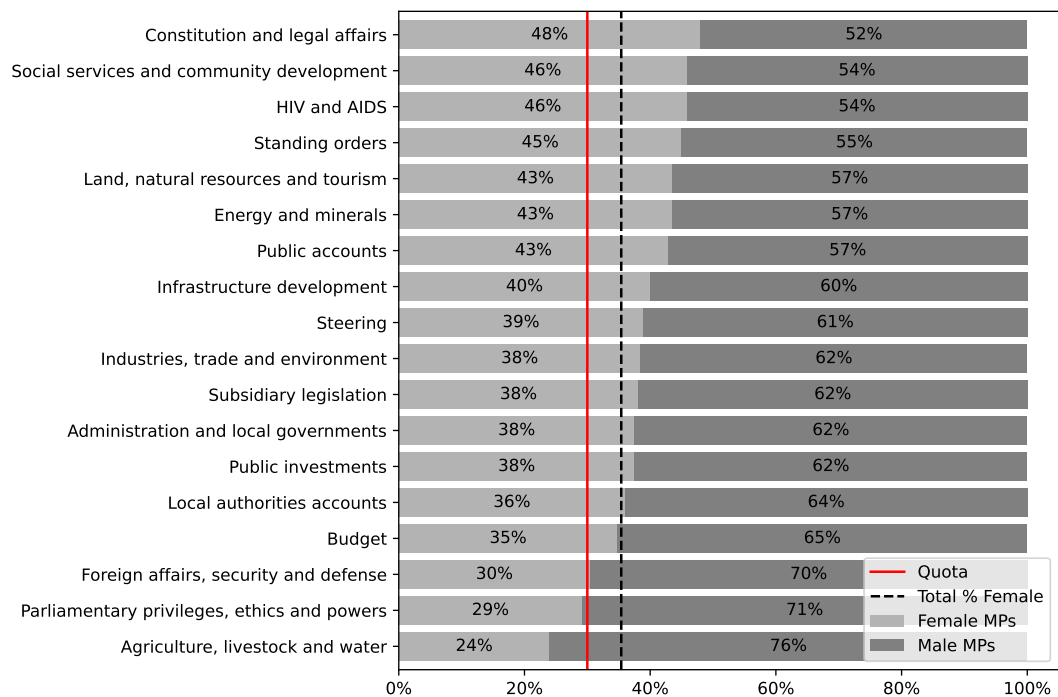
²¹Data from the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women): www.unwomen.org, and Inter-Parliamentary Union (IPU): www.ipu.org.

Figure B2: Actual distribution of committee seats before 2020 election



Note: Sorted by share of female MPs in committee.

Figure B3: Actual distribution of committee seats before 2021 election



Note: Sorted by share of female MPs in committee.

C Substantive representation

C.1 Parliamentary committee structure

Table C1 presents Tanzania's parliamentary committees included in the analysis and their membership number during the 2015–2020 and 2020–2025 parliamentary terms. The Parliament of Tanzania distinguishes among housekeeping, sector, cross-cutting, and watchdog committees. Committee members are appointed by the Speaker with consideration given to party, gender, regional representation, individual preferences, and relevant expertise.

C.2 Gendered classification of committees

To show whether women and men are assigned to different areas of parliamentary work, we classify committees according to both the gendered character of their policy area and their institutional prestige. This approach follows research on gendered political institutions, which emphasizes that representation should be evaluated not only by the number of women holding office, but also by the policy areas and positions of authority to which they gain access (Schwindt-Bayer, 2006).

First, we distinguish among traditionally feminine, traditionally masculine, and gender-neutral policy domains. The classification adapts the strategy used in the literature on legislative specialization and cabinet portfolio allocation (Dodson and Carroll, 1991; Jones, 1997; Taylor-Robinson and Heath, 2003; Schwindt-Bayer, 2006; Krook and O'Brien, 2012). Traditionally feminine, or “soft,” jurisdictions cover policy fields associated with care, the family, education, health, children, community development, and social welfare. Traditionally masculine, or “hard,” jurisdictions cover defence, security, foreign affairs, finance, production, agriculture, energy, extractive industries, trade, and physical infrastructure.

The distinction reflects both the substantive responsibilities of the committee and the symbolic association of those responsibilities with conventional gender roles. It captures whether a committee's jurisdiction has historically been regarded as an appropriate sphere of political activity for women or for men (Krook and O'Brien, 2012). Committees that do not clearly correspond to either set of gendered policy domains are classified as neutral.

Second, we separately classify committees according to institutional prestige. Gender and prestige are related but conceptually distinct dimensions. Some traditionally feminine policy areas, such as health and education, control public resources, while some traditionally masculine policy areas have comparatively limited institutional authority (Krook and O'Brien, 2012). Following the comparative cabinet literature, prestige is assessed on the basis of a committee's visibility, control over public resources, agenda-setting power, jurisdiction over constitutionally important issues, and authority to oversee government activity (Krook and O'Brien, 2012).

We classify as high prestige those committees that exercise direct influence over the national budget, public expenditure, constitutional and legal affairs, national security, parliamentary procedures, legislative agenda setting, or executive accountability. These include the Budget Committee, Public Accounts Committee, Local Authorities Accounts Committee, Public Investments Committee, Constitution and Legal Affairs Committee, Foreign Affairs, Defence and Security Committee, Standing Orders Committee, Steering Committee, Parliamentary Privileges, Ethics and Powers Committee, and Subsidiary Legislation Committee.

Unlike cabinet portfolios, parliamentary committees perform a broader range of institutional functions. Whereas cabinet ministers each head a government department, parliamentary committees are responsible not only for specific policy sectors but also for legislative oversight, executive accountability, or the internal organization of Parliament. The committee system includes bodies such as the Budget Committee, Public Accounts Committee, Standing Orders Committee, and Steering Committee, which have no direct equivalent in the cabinet literature. To capture these institutional differences, we introduce a third classification distinguishing between *sectoral*, *oversight*, and *procedural* committees. Sectoral committees oversee specific policy areas and government ministries, oversight

Table C1: Parliamentary committees included in the analysis

Committee	Description	2015–20	2020–25
Housekeeping committees			
Steering	Consists of the Speaker, who chairs the committee, the Deputy Speaker, the Leader of Government Business, the Leader of the Opposition, the chairs of standing committees, the Attorney General, and the Clerk as committee secretary.	20	–
Standing Orders	Oversees parliamentary rules, procedures, and the organization of parliamentary business.	17	20
Parliamentary Privileges, Ethics and Powers	Considers parliamentary privileges, ethical standards, disciplinary matters, and the institutional powers of Parliament and its members.	17	24
Sector committees			
Agriculture, Livestock and Water	Oversees agriculture, livestock, fisheries, irrigation, and water policy.	33	25
Infrastructure Development	Oversees transport, communications, construction, and other physical infrastructure.	25	25
Energy and Minerals	Oversees energy policy, mining, minerals, and extractive industries.	30	23
Industry, Trade and Environment	Oversees industry, commerce, trade, investment, and environmental policy.	27	26
Constitution and Legal Affairs	Oversees constitutional reform, legal affairs, justice-sector institutions, and related legislation.	23	25
Administration and Local Government Affairs	Oversees public administration, regional government, and local government authorities.	31	24
Social Services and Community Development	Oversees health, education, social welfare, community development, gender, children, and related social policy.	25	24
Land, Natural Resources and Tourism	Oversees land policy, natural resources, conservation, forestry, wildlife, and tourism.	28	23
Foreign Affairs, Defence and Security	Oversees foreign affairs, international cooperation, defence, policing, national security, and related matters.	31	23
Subsidiary Legislation	Reviews regulations, rules, orders, and other forms of delegated or subsidiary legislation.	20	21
Cross-cutting committees			
Budget	Reviews the national budget, fiscal policy, public expenditure, and government revenue.	22	23
HIV and AIDS	Oversees legislation and public policy related to HIV/AIDS prevention, treatment, social protection, and public health.	20	24
Watchdog committees			
Public Accounts	Examines public expenditure and reports of the Controller and Auditor General concerning central government institutions.	28	21
Local Authorities Accounts	Examines public expenditure and audit findings concerning local government authorities.	26	25
Public Investments	Monitors whether public investments are managed according to sound financial and commercial principles.	23	24

Notes: The table reports the number of members assigned to each committee in the 2015–2020 and 2020–2025 parliamentary terms. Committee members are appointed by the Speaker with consideration given to party strength, gender, region, individual preferences, and expertise. A dash indicates that information was not available.

committees scrutinize public expenditure and executive action, while procedural committees regulate the internal functioning and agenda-setting processes of Parliament. This additional dimension complements the gendered policy domain and prestige classifications and adapts the comparative literature on cabinet portfolios to the institutional organization of legislatures.

This classification also draws on work conceptualizing committee membership as an indicator of substantive representation. Committee assignments identify the policy arenas in which legislators develop expertise, participate in scrutiny, shape legislation, and act on behalf of social and minority groups (Kroeber, 2018). They provide an intermediate measure between women's numerical presence in Parliament and observable legislative or policy outcomes. This distinction is consistent with research that separates substantive representation as a political process from substantive representation as a final policy outcome (Franceschet and Piscopo, 2008; Clayton, 2021). Table C2 presents our classification. Because several Tanzanian committees combine multiple policy jurisdictions, the coding is based on their dominant responsibilities. Committees are classified as prestigious independently of whether their jurisdiction is feminine, masculine or neutral.

Table C2: Classification of parliamentary committees

Committee	Gendered policy domain	Prestige	Institutional function
Steering	Neutral	High	Procedural
Standing Orders	Neutral	High	Procedural
Parliamentary Privileges, Ethics and Powers	Neutral	High	Procedural
Agriculture, Livestock and Water	Masculine	Medium	Sectoral
Infrastructure Development	Masculine	Medium	Sectoral
Energy and Minerals	Masculine	Medium	Sectoral
Industry, Trade and Environment	Masculine	Medium	Sectoral
Constitution and Legal Affairs	Neutral	High	Sectoral
Administration and Local Government Affairs	Neutral	Medium	Sectoral
Social Services and Community Development	Feminine	Medium	Sectoral
Land, Natural Resources and Tourism	Masculine	Medium	Sectoral
Foreign Affairs, Defence and Security	Masculine	High	Sectoral
Subsidiary Legislation	Neutral	High	Oversight
Budget	Neutral	High	Oversight
HIV and AIDS	Feminine	Low	Sectoral
Public Accounts	Neutral	High	Oversight
Local Authorities Accounts	Neutral	High	Oversight
Public Investments	Neutral	High	Oversight

Notes: The classification adapts the framework developed by ?? and Krook and O'Brien (2012) for cabinet portfolios to parliamentary committees. Committees are first classified according to their policy jurisdiction as *feminine*, *masculine*, or *neutral*. Feminine domains include health, education, social welfare, gender, children, and community development, while masculine domains include defence, security, agriculture, infrastructure, energy, trade, and natural resources. Prestige is classified as *low*, *medium*, or *high*, reflecting agenda-setting authority, constitutional responsibilities, control over public resources, and oversight powers. Finally, committees are classified according to their institutional function. *Sectoral* committees oversee policy areas and government ministries; *oversight* committees scrutinize executive action, public expenditure, and delegated legislation; and *procedural* committees regulate the internal organization and agenda-setting of Parliament. Following Kroeber (2018), committee assignments are treated as an intermediate measure of substantive representation because they identify the policy and institutional arenas in which legislators exercise influence.

C Summary statistics survey population

Table C1: Summary statistics of survey population across rounds

		Survey round		
		1	2	3
Female	Share =1	47.98	42.76	45.69
	N non missing	198	145	267
Birth year	Mean	1997.66	1997.78	1997.97
	SD	2.24	1.46	1.33
	N non missing	198	138	254
From Dar es Salaam				
Born in capital region	Share =1	36.36	30.34	33.33
	N non missing	198	145	267
Father born in capital region	Share =1	7.07	6.21	3.75
	N non missing	198	145	267
Mother born in capital region	Share =1	8.08	9.66	7.12
	N non missing	198	145	267
Ethnic group (top 5)				
Chaga	Share =1	19.19	26.21	27.34
	N non missing	198	145	267
Nyakyusa	Share =1	3.54	4.14	5.24
	N non missing	198	145	267
Sukuma	Share =1	6.57	7.59	7.12
	N non missing	198	145	267
Haya	Share =1	6.57	7.59	7.49
	N non missing	198	145	267
Nyamwezi	Share =1	5.56	6.90	7.49
	N non missing	198	145	267
Nyingine	Share =1	5.56	7.59	5.24
	N non missing	198	145	267
Religion (if religious)				
Christian	Share =1	45.96	63.45	63.30
	N non missing	198	145	267
Muslim	Share =1	13.64	17.93	17.60
	N non missing	198	145	267
Gender norms and political attitudes				
Social desirability index	Mean	0.56	0.58	0.59
	SD	0.24	0.25	0.25
	N non missing	198	145	267
Gender norms index (-1 – 1)	Mean	0.35	0.25	0.29
	SD	0.41	0.37	0.40
	N non missing	188	133	249
Trust in parliament (0–1)	Mean	0.65	0.54	0.59
	SD	0.27	0.31	0.28
	N non missing	163	133	247
Voted in last election	Share =1	28.05	57.58	57.72
	N non missing	164	132	246

Table C2: Comparison with Afrobarometer sample

Variable	Full Population			Student Sample			Diff	p-value
	N	Mean	SE	N	Mean	SE		
<i>Demographics</i>								
Female	2398	0.500	0.010	791	0.470	0.018	-0.029	0.153
Age	2398	39.601	0.316	754	23.171	0.075	-16.430	0.000
<i>Education</i>								
Max primary education	2398	0.737	0.009	791	0.000	0.000	-0.737	0.000
Max secondary education	2398	0.201	0.008	791	1.000	0.000	0.799	0.000
Higher secondary education	2398	0.062	0.005	791	0.000	0.000	-0.062	0.000
<i>Language at home</i>								
Kiswahili	2398	0.645	0.010	791	0.723	0.016	0.078	0.000
English	2398	0.002	0.001	791	0.100	0.011	0.098	0.000
<i>Region</i>								
Dar es Salaam	2398	0.107	0.006	791	0.314	0.017	0.207	0.000
Kilimanjaro	2398	0.037	0.004	791	0.110	0.011	0.073	0.000
Mbeya	2398	0.037	0.004	791	0.046	0.007	0.009	0.291
Arusha	2398	0.037	0.004	791	0.101	0.011	0.064	0.000
Morogoro	2398	0.047	0.004	791	0.043	0.007	-0.004	0.658
Other region	2398	0.736	0.009	791	0.387	0.017	-0.350	0.000
<i>Religion</i>								
Christian	2398	0.593	0.010	791	0.551	0.018	-0.041	0.042
Muslim	2398	0.367	0.010	791	0.168	0.013	-0.199	0.000
<i>Political attitudes</i>								
Trust in parliament	2333	0.830	0.006	575	0.595	0.012	-0.235	0.000
Voted in last election	2333	0.739	0.009	575	0.510	0.021	-0.230	0.000
<i>Experience with discrimination</i>								
Gender-based discrimination	2394	0.096	0.005	233	0.119	0.018	0.023	0.212
Religion-based discrimination	2394	0.027	0.003	233	0.117	0.018	0.090	0.000
Ethnicity-based discrimination	2394	0.025	0.003	233	0.083	0.016	0.058	0.000

Note: Based on Afrobarometer round 8 with data collection in February-March 2021.

Table C3: Comparison with Afrobarometer sample: Age-range

Sample	N	IQR	Min	Max
Full population	2398	23	18	90
Student sample	754	2	19	49

Note: Based on Afrobarometer round 8 with data collection in February-March 2021.

D Lottery of nature

Figures D1 and D2 provide validation evidence that respondents engaged meaningfully with the lottery-of-nature framework. Figure D1 plots the distribution of respondents' stated probability of being female under the lottery, separately by gender. Both male and female respondents center their responses close to 50%, consistent with the equiprobability postulate embedded in the lottery design; i.e. the instruction that one could occupy any social position with equal probability. The distributions are broadly similar across gender, with female respondents showing a marginally tighter concentration around parity, suggesting that the abstract reasoning required by the device was overall accessible to respondents regardless of their own gender. Figure D2 presents respondents' self-reported characterizations of their stated ideals relative to the status quo. Across both male and female respondents, the modal characterization is that ideals are "different" from the current distribution, and a majority describe them as more "egalitarian" and "fairer." By contrast, relatively few respondents characterize their ideals as primarily "beneficial for myself," and the share doing so does not differ systematically by gender. Taken together, these patterns suggest that the lottery framing successfully shifted respondents toward impartial evaluation of social arrangements, in line with Harsanyi (1953, 1977)'s equiprobability postulate, and that this holds comparably for men and women—the dimension of central interest in our study.

Figure D1: Probability to be of different gender under lottery of nature

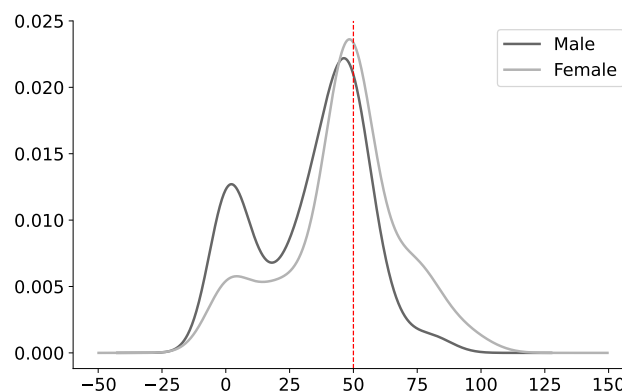
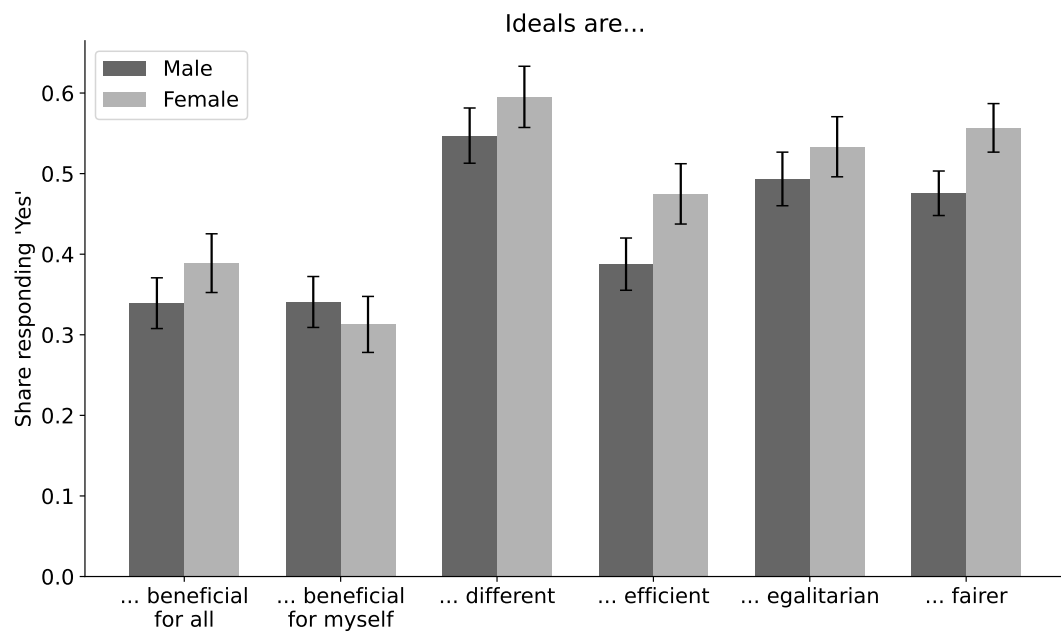
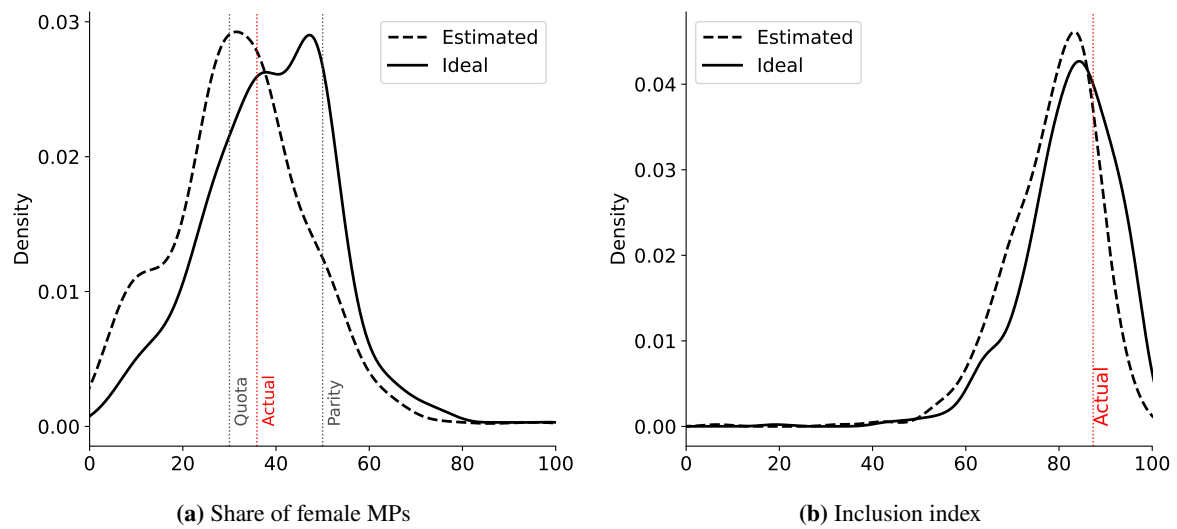


Figure D2: Characterization of ideals as compared to actual



E Descriptives Ideals, Estimated

Figure E1: Actual, ideal and estimated share of female MPs and inclusion



Note: Using data from all rounds. Detailed summary statistics on these distribution and t-test for mean differences across rounds are in Supplementary E along with similar graphs using the Lieberman inclusion index, the average share across committees, and the share of each committee.

Figure E2: Actual, ideal and estimated

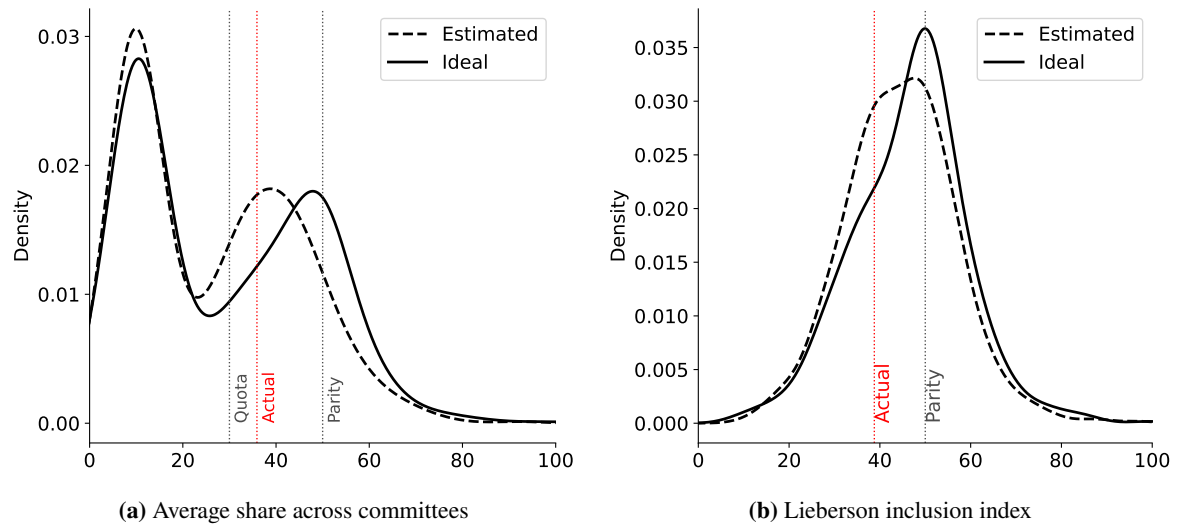


Figure E3: Density plots ideal, estimated for each committee

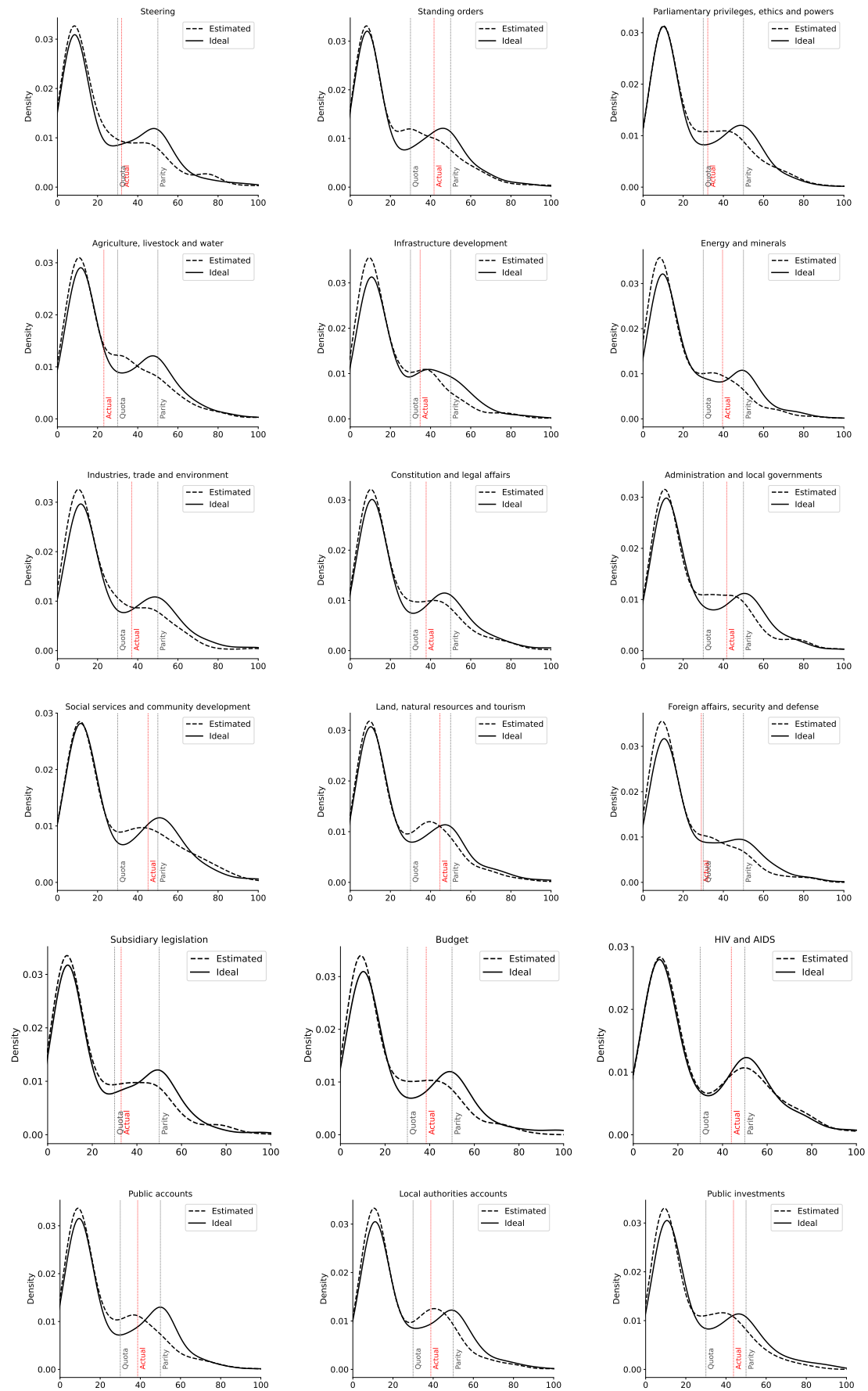


Table E1: Summary statistics on ideal and estimated

Measure	Mean	Median	Variance	Skewness	N
Overall					
Estimated share of female MPs	32.196	31.679	216.898	0.428	610
Ideal share of female MPs	38.910	38.677	200.241	0.195	610
Estimated inclusion (Duncan)	78.466	80.140	97.089	-1.402	610
Ideal inclusion (Duncan)	82.284	83.612	97.948	-1.155	610
Estimated inclusion (Lieberson)	44.551	44.800	142.353	0.250	610
Ideal inclusion (Lieberson)	46.544	48.035	155.944	0.021	610
Overall (ID-averaged)					
Estimated share of female MPs	32.327	31.807	195.679	0.475	397
Ideal share of female MPs	38.990	39.059	174.367	0.129	397
Estimated inclusion (Duncan)	78.260	79.514	75.724	-0.850	397
Ideal inclusion (Duncan)	81.867	82.924	90.591	-0.984	397
Estimated inclusion (Lieberson)	44.737	44.203	134.699	0.250	397
Ideal inclusion (Lieberson)	46.645	47.721	138.949	0.097	397
Survey round 1					
Estimated share of female MPs	29.851	30.407	216.537	0.275	198
Ideal share of female MPs	37.692	38.168	202.367	-0.187	198
Estimated inclusion (Duncan)	78.608	79.958	97.610	-1.191	198
Ideal inclusion (Duncan)	82.972	83.932	103.837	-1.674	198
Estimated inclusion (Lieberson)	43.385	42.011	152.258	0.379	198
Ideal inclusion (Lieberson)	46.952	48.286	180.645	0.315	198
Survey round 2					
Estimated share of female MPs	32.375	30.789	203.714	0.841	145
Ideal share of female MPs	39.956	38.677	222.421	0.737	145
Estimated inclusion (Duncan)	78.407	80.821	130.573	-2.097	145
Ideal inclusion (Duncan)	83.314	84.505	89.001	-0.650	145
Estimated inclusion (Lieberson)	44.447	45.085	119.319	0.626	145
Ideal inclusion (Lieberson)	45.217	47.721	119.165	-0.546	145
Survey round 3					
Estimated share of female MPs	33.837	34.097	219.117	0.363	267
Ideal share of female MPs	39.244	40.712	186.352	0.131	267
Estimated inclusion (Duncan)	78.393	80.000	79.284	-0.784	267
Ideal inclusion (Duncan)	81.215	83.126	97.090	-1.012	267
Estimated inclusion (Lieberson)	45.473	47.293	146.687	0.011	267
Ideal inclusion (Lieberson)	46.962	48.471	157.475	-0.099	267

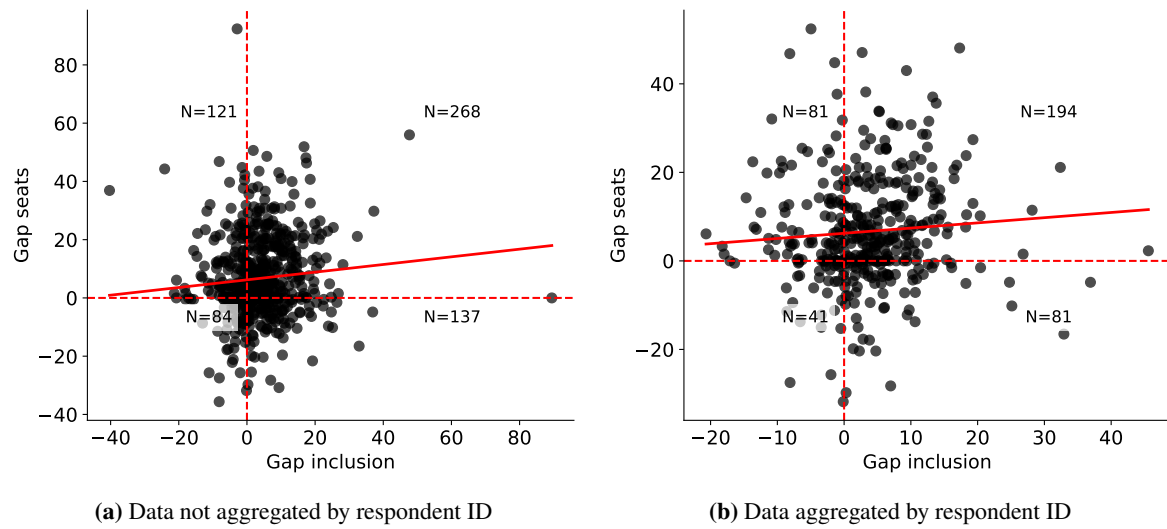
Table E2: Average differences ideal-estimated

Measure	Avg. difference	t statistic	p-value	N
Overall				
Seats	6.714***	11.75	0.000	610
Duncan	3.818***	9.92	0.000	610
Liebersen	1.993***	4.98	0.000	610
Overall (ID-averaged)				
Seats	6.663***	10.55	0.000	397
Duncan	3.607***	8.78	0.000	397
Liebersen	1.908***	4.20	0.000	397
Survey round 1				
Seats	7.842***	7.36	0.000	198
Duncan	4.364***	6.14	0.000	198
Liebersen	3.566***	4.79	0.000	198
Survey round 2				
Seats	7.581***	6.01	0.000	145
Duncan	4.907***	5.28	0.000	145
Liebersen	0.770	0.92	0.359	145
Survey round 3				
Seats	5.406***	6.94	0.000	267
Duncan	2.822***	5.80	0.000	267
Liebersen	1.490***	2.65	0.009	267

Note: Stars indicate statistical significance: *** p < 0.01, ** p < 0.05, * p < 0.1.

E.1 Gaps: Ideal-Estimated

Figure E4: Scatter plot gaps



Note: Based on data aggregated by respondent giving one observation by respondent with the average gap. Red linear is the linear fit.

Figure E5: Perceptions, preferences, and gender norms across types

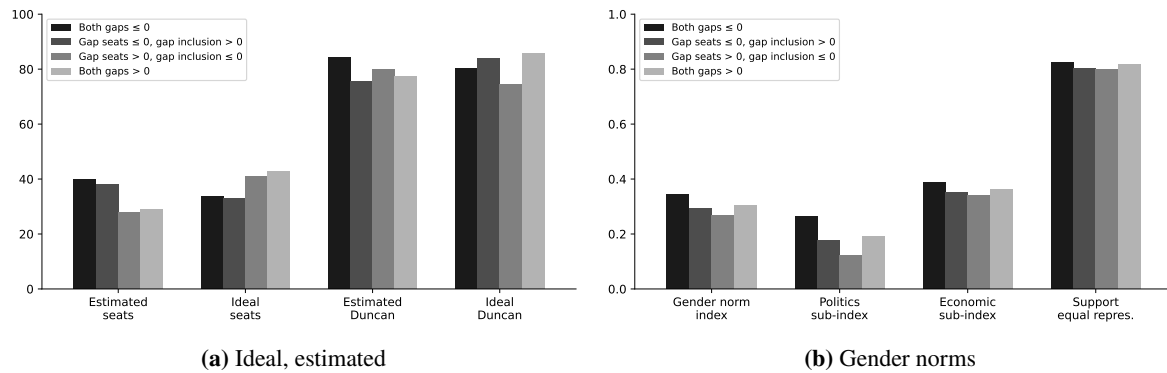
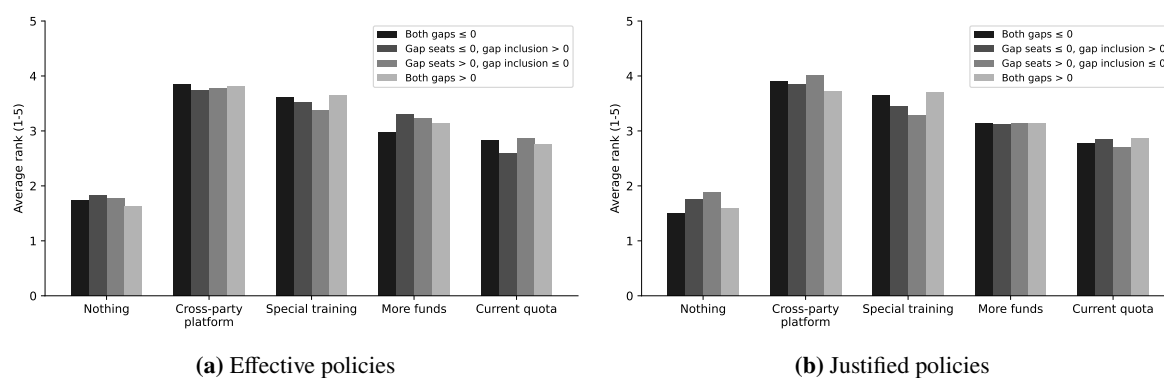


Figure E6: Average rank (1-5) of affirmative action policy options



Note: The figure shows respondents' average ranking on how justified a policy is on the left-hand side and on how effective a policy is on the right hand side, separately for male and female respondents. The 'Cross-Party Platform' was specified to be a women's organization across parties, whose main task is to monitor women's possibilities to engage in politics. It actually exists in Tanzania. 'More resources' are additional funding as well as more media coverage for female candidates.

F Additional results

F.1 Numeric and substantive representation

Figure F1: Non-linearity

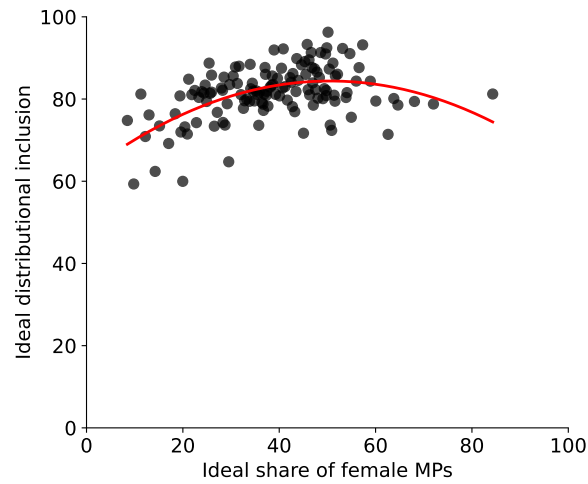


Table F1: Ideal inclusion, non-linearity

	Pooled OLS	Between variation	Within variation
Female MPs ^{ideal}	0.091 (0.167)	0.316** (0.140)	-0.200 (0.201)
(Female MPs ^{ideal}) ²	0.000 (0.002)	-0.002 (0.002)	0.002 (0.002)
Female MPs ^{estimated}	0.026 (0.040)	0.018 (0.036)	0.054 (0.062)
Inclusion ^{estimated}	0.530*** (0.062)	0.615*** (0.062)	0.281*** (0.078)
Survey round FE	Yes	No	Yes
Rounds participated	Yes	Yes	No
N	610	397	396
Individuals	397	397	184
Adj. R^2	0.317	0.405	0.502

Note: Stars indicate statistical significance: *** p < 0.01, ** p < 0.05, * p < 0.1. Heteroskedasticity-robust standard errors in parentheses.

Figure F2: Ideal % female MPs in each committee

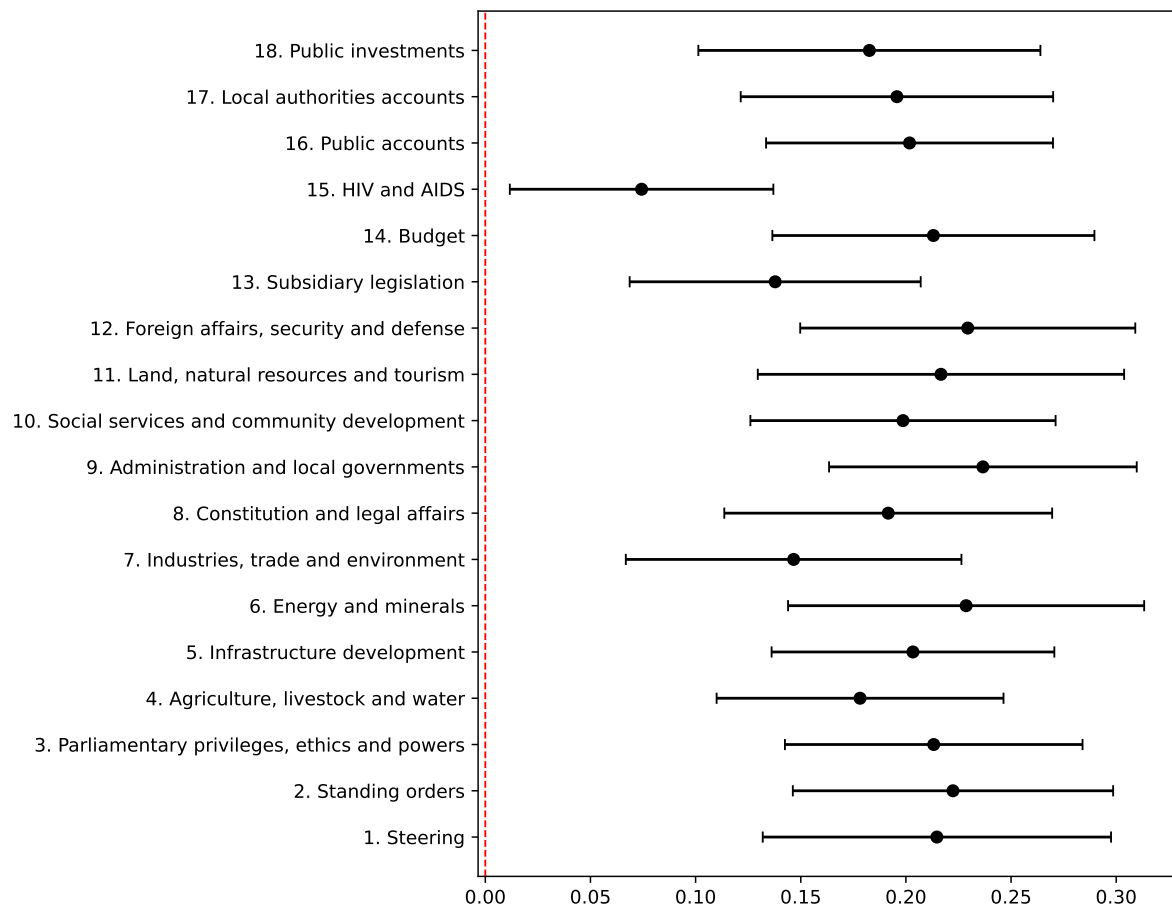


Table F2: Pooled OLS for ideal inclusion with controls

	Baseline	+ demographic controls	+ origin controls	+ attitudinal controls	+ political behavior controls
Female MPs ^{ideal}	0.101*** (0.038)	0.091** (0.036)	0.087** (0.035)	0.107*** (0.036)	0.100*** (0.038)
Female MPs ^{estimated}	0.026 (0.039)	0.003 (0.034)	0.000 (0.034)	-0.021 (0.033)	-0.025 (0.035)
Inclusion ^{estimated}	0.529*** (0.072)	0.593*** (0.053)	0.590*** (0.052)	0.607*** (0.054)	0.642*** (0.059)
Female		-0.564 (0.672)	-0.410 (0.683)	-1.173 (0.744)	-1.283 (0.797)
Birth year		0.176 (0.194)	0.276 (0.215)	0.337 (0.218)	0.634** (0.256)
Born in capital region			-0.232 (0.805)	-0.326 (0.795)	-0.540 (0.854)
Father born in capital region			0.847 (1.760)	0.194 (1.739)	0.526 (1.835)
Mother born in capital region			0.265 (1.672)	1.469 (1.318)	1.773 (1.432)
Chaga			-2.448*** (0.883)	-2.660*** (0.925)	-2.673*** (0.975)
Nyakyusa			-3.747** (1.599)	-3.482** (1.651)	-3.778** (1.758)
Sukuma			1.346 (1.221)	1.323 (1.203)	1.056 (1.301)
Haya			-2.785** (1.246)	-4.152*** (1.251)	-4.377*** (1.295)
Nyamwezi			-0.478 (1.688)	-1.034 (1.763)	-0.458 (1.886)
Nyingine			-1.457 (1.198)	-2.014* (1.194)	-1.803 (1.184)
Christian				2.255*** (0.819)	2.191** (0.882)
Muslim				1.217 (1.068)	0.666 (1.100)
Social desirability index				0.749 (1.729)	0.616 (1.973)
Gender norms index (-1 – 1)				1.146 (0.848)	0.841 (0.884)
Trust in parliament (0–1)					-0.671 (1.266)
Voted in last election					-0.731 (0.725)
Survey round FE	Yes	Yes	Yes	Yes	Yes
Rounds participated	Yes	No	No	No	No
N	610	590	590	550	505
Individuals	397	388	388	364	344
Adj. R^2	0.318	0.356	0.366	0.404	0.420

Note: Stars indicate statistical significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Heteroskedasticity-robust standard errors in parentheses. Reference category for ethnicity is "other", and for religiosity "not religious/other".

Table F3: Gap Inclusion (ideal-estimated)

	Pooled OLS		Between individual variation		Within individual variation	
	Baseline (1)	+ squared (2)	Baseline (3)	+ squared (4)	Baseline (5)	+ squared (6)
Gap Female MPs	0.056 (0.034)	0.069** (0.034)	0.047 (0.033)	0.054 (0.041)	0.056 (0.070)	0.034 (0.064)
Gap Female MPs ²		-0.001 (0.001)		-0.000 (0.002)		0.001 (0.002)
Survey round FE	Yes	Yes	Yes	Yes	Yes	Yes
Rounds participated	Yes	Yes	Yes	Yes	No	No
N	610	610	397	397	396	396
Individuals	397	397	397	397	184	184
Adj. R^2	0.008	0.007	0.005	0.002	0.083	0.079

Note: Stars indicate statistical significance: *** p < 0.01, ** p < 0.05, * p < 0.1. Heteroskedasticity-robust standard errors in parentheses.

F.2 Lieberman (1981) based inclusion index

F.3 Robustness: Lieberman (1981) Segregation Index

As an alternative measure of the distribution of women across parliamentary committees, we use Lieberman (1981)'s isolation index. Applied to our setting, the index is defined as:

$$\text{Lieberman}_{it} = \sum_{c=1}^{18} \left(\frac{f_{it}^c}{F_{it}} \cdot \frac{f_{it}^c}{f_{it}^c + m_{it}^c} \right) \quad (6)$$

where f_{it}^c and m_{it}^c denote the number of female and male MPs assigned by respondent i to committee c in round t , and F_{it} denotes the total number of female MPs assigned across all committees. The first term, f_{it}^c/F_{it} , is the probability that a randomly selected female MP is assigned to committee c ; the second term, $f_{it}^c/(f_{it}^c + m_{it}^c)$, is the proportion of women within that committee. Their product, summed across committees, yields a weighted average of within-committee female shares, where the weights reflect the overall distribution of female MPs. Higher values indicate greater concentration of women among themselves—that is, more gender segregation across committees. While the Duncan index captures distributional parity across committees and abstracts from within-committee composition, the Lieberman index emphasizes co-presence and interaction within committees. The two measures therefore capture conceptually distinct dimensions of segregation, and using both provides a more complete picture of how respondents think about the distribution of women across the legislature. A natural parity benchmark for the Lieberman index is the value the index would take if women were distributed proportionally across all committees, which equals the overall female share of MPs.

Figure F3 plots respondents' ideal Lieberman index against their ideal share of female MPs. The scatter plot reveals a clear positive relationship: respondents who prefer a higher share of female MPs also tend to prefer greater within-committee concentration of women. This is consistent with the main finding using the Duncan index, and shows no obvious nonlinearity across the range of ideal female MP shares.

Table F4 reports the regression results using the Lieberman index as the dependent variable, mirroring the specification in the main part. The positive association between preferences for numeric and substantive representation is robust to this alternative measure. As shown in Supplementary E, the ideal-minus-estimated gap is positive for the Lieberman index across all rounds, as it is for the Duncan index, though the magnitude is consistently smaller. A notable difference between the two sets of results concerns the decomposition of variation into between- and within-individual components. For the Duncan index, the positive association between numeric and substantive preferences is driven almost entirely by between-individual differences, with within-individual estimates that are small and statistically insignificant. For the Lieberman index, by contrast, the within-individual estimates are positive and statistically significant (Table F4, columns 5 and 6). We attribute this difference primarily to a mechanical feature of the two indices rather than a substantively distinct pattern of preference updating. The Lieberman index is sensitive to the overall share of female MPs a respondent assigns across committees, because it weights within-committee female proportions by the distribution of female MPs. It therefore inherits within-individual variation in the total number of women a respondent assigns—variation that the Duncan index, which captures only the distributional shape of assignments, does not pick up. Since preferences for the overall share of female MPs shift modestly within individuals across rounds (Supplementary E), the Lieberman index has greater power to detect within-person effects. This interpretation is further supported by the higher variance of the Lieberman index relative to the Duncan index in our sample, which increases statistical power in the within-individual specification.²²

Taken together, the Duncan and Lieberman results paint a consistent picture: respondents who favor a higher share

²²We therefore caution against interpreting the within-individual significance of the Lieberman results as stronger evidence of preference stability relative to the Duncan results. The more defensible reading is that both indices point consistently to a positive relationship between numeric and substantive preferences, while the source of identifying variation differs across the two measures.

of female MPs also favor their broader distribution across policy committees, and this relationship reflects stable individual-level differences in orientation toward gender-equal representation rather than short-term reactions to political events.

Figure F3: Exposure-based inclusion

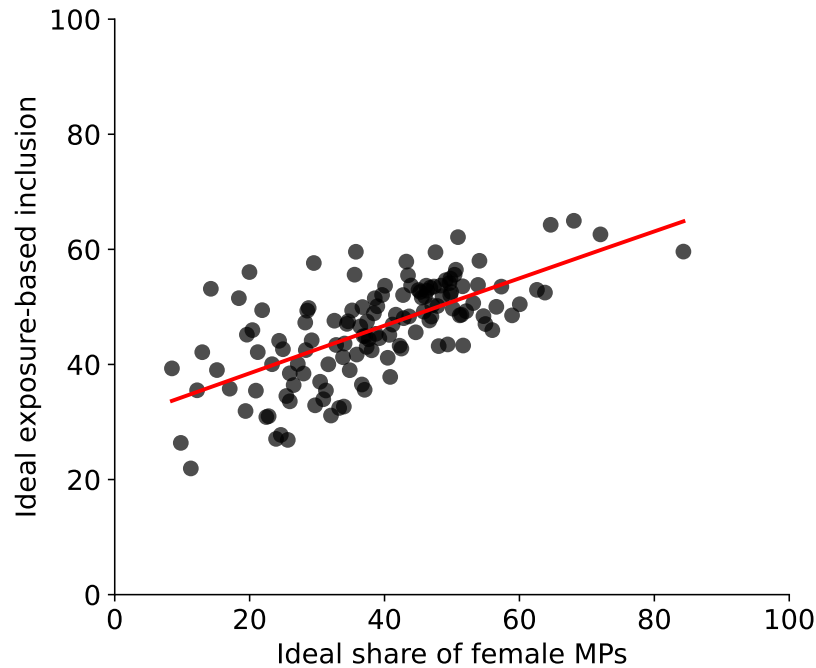


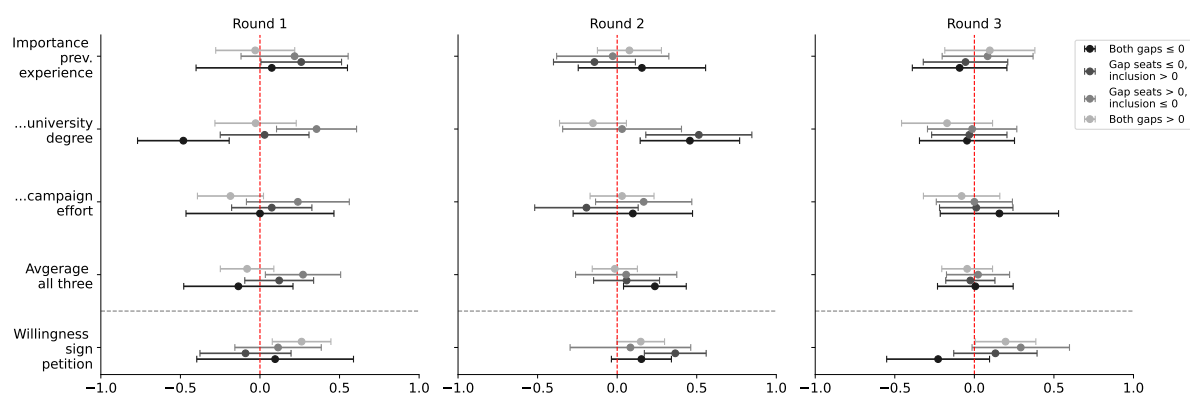
Table F4: Lieberman inclusion index

	Pooled OLS		Between individual variation		Within individual variation	
	Baseline (1)	+ Estimated (2)	Baseline (3)	+ Estimated (4)	Baseline (5)	+ Estimated (6)
Female MPs ^{ideal}	0.419*** (0.036)	0.311*** (0.037)	0.432*** (0.043)	0.308*** (0.043)	0.347*** (0.054)	0.295*** (0.054)
Female MPs ^{estimated}		-0.178*** (0.038)		-0.187*** (0.043)		-0.130** (0.052)
Inclusion ^{estimated}		0.639*** (0.039)		0.650*** (0.048)		0.507*** (0.074)
Survey round FE	Yes	Yes	Yes	Yes	Yes	Yes
Rounds participated	Yes	Yes	Yes	Yes	No	No
N	610	610	397	397	396	396
Individuals	397	397	397	397	184	184
Adj. R ²	0.222	0.539	0.229	0.564	0.583	0.678

Note: Stars indicate statistical significance: *** p < 0.01, ** p < 0.05, * p < 0.1. Heteroskedasticity-robust standard errors in parentheses.

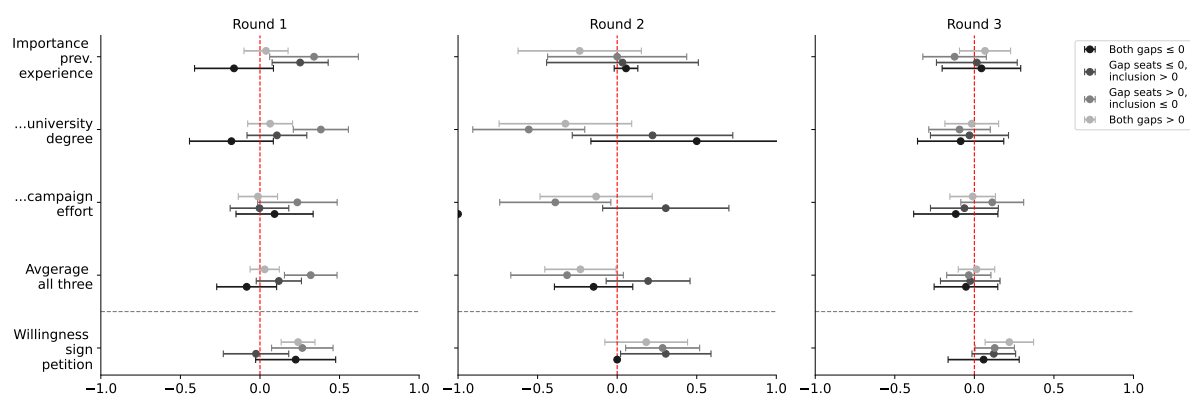
F.4 Treatment effects

Figure F4: Survey experiments: Balanced sample



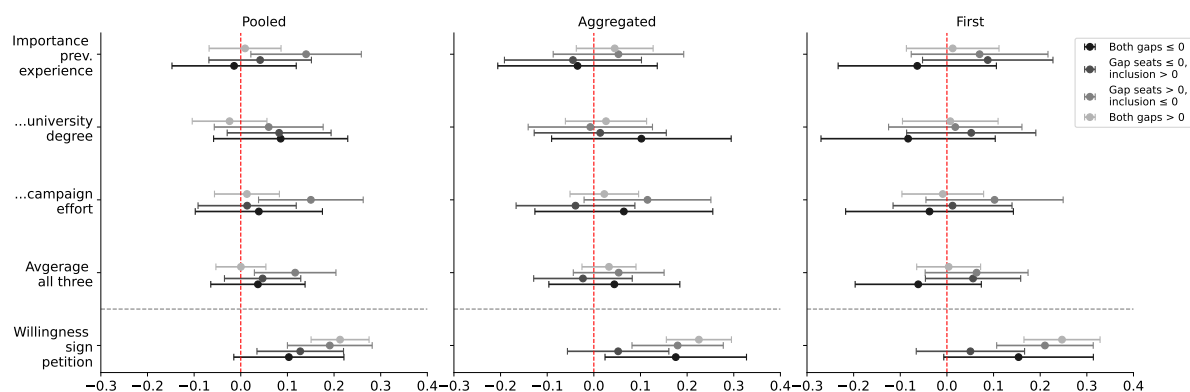
Note: Estimated coefficients from OLS estimation controlling for number of rounds participated, heteroscedasticity robust standard errors, 90% confidence intervals.

Figure F5: Survey experiments: No previous response



Note: Estimated coefficients from OLS estimation controlling for number of rounds participated, heteroscedasticity robust standard errors, 90% confidence intervals.

Figure F6: Survey experiments: Pooled, aggregated, first response data only



Note: Estimated coefficients from OLS estimation controlling for number of rounds participated, heteroscedasticity robust standard errors, 90% confidence intervals.

G Survey Questionnaire

Table G1: Survey questionnaire overview: Rounds 1-3

Round 1		Round 2 & 3
Consent	see Table ??	
Demographics	Year & month of birth, gender, ethnic group, religion, study program, mother-tongue (self & parents), region of birth (self & parents)	Year of birth, gender, ethnic group, religion, mother-tongue, region of birth (self & parents), labor market participation parents
Estimates	Wealth (& income) distribution between poor & rich, males & females	
	Seats between males & females for national parliament and committees	
Ideals	Wealth (& income) distribution between poor & rich, males & females	
	Seats between males & females for national parliament and committees	
Checks	Is ideal fairer?	... more egalitarian, more efficient, beneficial for everyone, beneficial for self?
	Probability of being opposite gender under lottery of nature?	... different religion, optimistic/pessimistic, risk-loving/risk-averse
	Support for equal gender representation in politics.	
	Actual support: {petition donation}	
	Level of support for quota system and why.	
Policy goal	Change in quota: {increasing decreasing constant}	Change in quota: increase, constant, decrease & level.
	Long term perspective (SDG)	... & why?
	Associations with gender quotas	Role for government to achieve goal.
	Know about quota system in Tanzania	Ranking of justifiable and effective affirmative policies
	Peers support for quota	Quota on parliament vs. party lists?
	When will quota become obsolete?	
Gender norms	UNDP's Gender Social Norms Index (GSNI)	
Identity	Masculine vs. feminine, self and others	
Discrimination	Based on gender, ethnicity, religion	
Meritocracy	Importance of university degree, previous experience, effort for {male female} candidate.	
Patronage	Punishment for family relations within parliament: {male female} candidate.	
Parliament	Did & will vote	Did vote
	Trust in parliament	
	Interest in politics	
	Did ideal change with election/presidency change, why?	
	Round 2 only: Internet cut around the election.	
Views	Long-term orientation	
	Liberal vs. conservative	
	Hard work vs. luck	
	Inequality in last and next 5 years.	
Bias	Short version of social desirability index	