I Z A Institute
of Labor Economics

Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

Promoting Women's Leadership: What Works, What Doesn't, and What's Missing

Francesca Bramucci
Ana María Muñoz Boudet
Mariana Viollaz

I Z A Institute of Labor Economics

Initiated by Deutsche Post Foundation

Promoting Women's Leadership: What Works, What Doesn't, and What's Missing

Francesca Bramucci
European University Institute

Ana María Muñoz Boudet
World Bank

Mariana Viollaz
World Bank and IZA

ABSTRACT

Promoting Women's Leadership: What Works, What Doesn't, and What's Missing

Women remain underrepresented in leadership worldwide. Across politics, business, and community organizations, they face barriers limiting access to leadership roles and influence in decision-making. This paper groups these barriers into opportunity, motivation, and capability, and reviews global evidence on interventions to address them. It assesses the effectiveness of these approaches, how descriptive representation (holding a leadership position) translates into substantive representation (influencing decisions), and unintended consequences. Quotas can increase women's descriptive representation when well designed and enforced. Role model interventions may motivate participation, mainly in politics, though evidence is mixed elsewhere. Training, mentorship, and organizational reforms show context specific results, often supporting career progression rather than leadership attainment. Greater numerical representation does not always yield substantive influence. Outcomes depend on institutional context, gender norms, and complementary support. Advancing women's leadership requires strategies that address multiple barriers and further research on how representation translates into real influence.

Corresponding author:
Ana Maria Munoz Boudet
1818 H Street, N.W.
Washington, DC 20433
USA
E-mail: amunozboudet@worldbank.org

1   Introduction

Leadership can be described as the ability to influence others toward a shared understanding of what should be accomplished and how, while guiding and coordinating both individual and collective efforts to achieve those objectives (Yukl, 2013). Yet the opportunity to exercise such influence and authority is far from equally distributed. Across the world, women remain significantly underrepresented in leadership roles whether in politics, the private sector, or community governance. Women currently hold only about one in four parliamentary seats and just over a third of local elected positions for which data are available (IPU and UN Women, 2025). In the public sector, where women often make up close to half of the workforce, their share in top decision-making roles is much lower, averaging around one-third of managers (Hughes et al., 2022). In the private sector, women account for 23% of board members, 6% of CEOs, and 30% of senior and middle managers (World Bank Gender Data Portal, 2025). Fewer than one in four formal firms are women-owned or led, and the share declines sharply as firm size increases. In many countries, entrenched gender norms remain a major obstacle: in Indonesia, Jordan, Pakistan, Nigeria, and the Arab Republic of Egypt, more than 70% of the population believes men make better political and business leaders than women (Haerpfer et al., 2022).

Importantly, numerical representation alone does not guarantee influence. Even when women achieve descriptive representation --i.e., occupying leadership positions-- they may lack substantive representation: the power to influence decision making and outcomes.[2] For instance, women participating in community water project committees in Kenya have limited participation in decision-making due to, among other factors, attitudes about their abilities (Hannah et al., 2021). In Norway, the increased participation of women in corporate boards did not increase female employment, part-time work, or employment of women with children, raising questions about women's ability to influence decision-making (Bertrand et al., 2019). This distinction is critical for understanding what effective leadership equality entails. Substantive representation, therefore, serves as the ultimate benchmark for evaluating the effectiveness of policies promoting women's leadership, as it captures not only presence in leadership roles but also the actual ability to influence policies, priorities, and organizational or political agendas.

This paper reviews the global evidence on policy interventions designed to increase women's participation in leadership roles, both descriptive and substantive. We examine three central questions: How effective are these

---

[2] This can be due to gender dynamics, experience, networks, and other factors. See for example Kathlene (1994).

interventions in increasing women's presence in leadership? Under what conditions does descriptive participation translate into substantive influence? And what unintended consequences can arise?

The analysis builds on three premises. First, increasing the representation of women in leadership roles requires a sufficiently large pool of talented women. Second, the path to leadership is long, and women encounter barriers at every stage of career advancement. These barriers contribute to the well-documented "leaky pipeline" phenomenon, whereby many women exit the trajectory before reaching leadership positions (Goldin, 2021). Third, attaining a leadership role --i.e., the "last mile"-- may entail either the emergence of new barriers or the persistence of previously encountered ones in a more severe form.

Building on these premises, this review examines interventions designed to remove barriers across the entire career ladder. These include gender quotas, exposure to female role models, targeted training programs, anti-discrimination measures, career-support mechanisms, and organizational reforms. Particular attention is given to the evidence on interventions targeting the "last mile," as strategies effective at earlier stages may not translate directly to the challenges women face when approaching leadership positions.

The literature review combined prior knowledge with a systematic search for additional studies. Beyond the authors' familiarity with relevant works, we searched peer-reviewed journals and working papers from World Bank, IZA, and NBER. The search strategy used primary keywords like "women," "gender," and "leadership," complemented by topic-specific terms such as "competition," "negotiation," "quota," and "role model." Papers were selected based on abstracts, with additional studies incorporated through references in other works. Consistent with the review's objectives, we prioritized studies that causally identify the impact of interventions, while also including correlational evidence where causal designs were unavailable, making this distinction explicit. Whenever available, we prioritize evidence from developing contexts.

This review is needed for three main reasons. First, while the literature on women's leadership has extensively documented the barriers women face (Card et al., 2005; Niederle and Vesterlund, 2007; Eckel and Grossman, 2008; Goldin, 2014; Card et al., 2015), evidence on what works to overcome them remains fragmented. Second, there is no systematic synthesis that jointly considers intervention types, effectiveness, translation into substantive representation, and potential unintended effects. Third, evidence on the link between women's leadership and development outcomes is scarce. If indeed promoting women's leadership is not only a matter of equity, but also a driver of improved governance, better outcomes, and stronger business performance, a

systematic approach to potential policy actions and knowledge gaps is needed. In fact, evidence shows that women leaders can bring different perspectives and priorities to decision-making, improving the quality and inclusivity of policies and strategies. In politics, greater female representation has been linked to increased investment in public goods, more transparent and participatory governance, and positive impacts on education, health, gender-based violence prevention, and environmental outcomes (Chattopadhyay and Duflo, 2004; Beaman et al., 2012; Brollo et al., 2016; Bochenkova et al., 2023; Berniell et al., 2025). In business, women's ownership and leadership can further job creation and support economic growth (Hsieh and Klenow, 2009; Chiplunkar and Goldberg, 2024).

By systematically mapping the evidence on interventions to promote women's leadership, this paper contributes to filling a critical knowledge gap. We provide a structured synthesis that not only documents what has been tried and what has worked but also identifies when gains in descriptive representation translate into substantive influence and where unintended effects may arise. In doing so, the paper seeks to inform governments, private sector actors, and development practitioners on how to design policies that can sustainably expand women's voice and decision-making power.[3]

Our analysis indicates that gender quotas are effective at increasing descriptive representation when applied to leadership positions rather than recruitment bodies, provided they are well-designed and enforced. Similarly, political role models have proven successful in promoting women's representation in politics in certain contexts. In contrast, evidence on other approaches, such as role models outside the political sphere, training, mentorship, and organizational reforms, is more fragmented and context-dependent, focusing largely on career advancement rather than on women's actual attainment of leadership roles. Notably, descriptive representation does not always translate into substantive influence, as outcomes depend heavily on institutional design, gender norms, and access to complementary supports. On the other hand, the evidence also shows that some interventions, including role models and training, can promote women's participation in decision making even in the absence of a leadership role. Finally, poorly designed interventions may trigger backlash or unintended consequences, underscoring the need for context-sensitive strategies. Overall, the findings highlight that accelerating women's

---

[3] While the review focuses on policies directly aimed at promoting women's leadership, it does not address broader gender equality interventions such as legal reforms aimed at improving transportation safety, flexible work arrangements, part-time job options, and employer-sponsored on-site childcare, that, although important, fall beyond our immediate scope. Our emphasis is on interventions that explicitly target leadership outcomes, allowing for a more precise analysis of their mechanisms, impacts, and lessons learned.

leadership requires comprehensive approaches that address multiple barriers simultaneously, rather than relying on isolated measures.

The rest of paper proceeds as follows. Section 2 outlines the barriers to women's leadership and proposes a categorization for them. Section 3 identifies and evaluates interventions distinguishing impacts on descriptive and substantive leadership and highlighting unintended consequences: Section 3.1 focuses on gender quotas, Section 3.2 analyzes the influence of role models, Section 3.3 reviews training initiatives, and Section 3.4 examines systemic interventions, including anti-discrimination measures, career-support mechanisms, and organizational reforms. Section 4 concludes.

2   A Three-Dimensional View of Barriers to Women's Leadership

Barriers to women's leadership can be understood through multiple conceptual lenses. This section explores the barriers to women's leadership, organized into three interrelated categories: Capabilities, Opportunity, and Motivation that affect behavior, or the COM-B approach (Michie et al., 2011). This approach provides a clear behavioral model for identifying factors that enable or hinder action. We can define capabilities as woman's ability to take on and be considered for a leadership role. This includes both technical knowledge and essential soft skills, such as negotiation and self-promotion. Motivation captures psychological elements that can influence a woman's desire to lead, such as ambition, confidence, self-perception, and risk and competition aversion. It also reflects the broader context shaping these psychological factors, including the presence of role models, prevailing social norms, and identity formation. Finally, Opportunity encompasses external conditions that either facilitate or restrict women's access to leadership. These factors, often beyond an individual's control, include discrimination, access to networks, and organizational culture or norms. In other words, opportunities are the bridge between women's potential to lead and the actual realization of leadership roles. The approach also relates to Amartya Sen's capabilities approach (Sen, 1999), in particular the focus on the substantive freedoms people have to pursue lives they value, and the expansion of the approach by Kabeer (1999, 2005) on women's empowerment, where empowerment is the interplay between resources, agency, and achievements, namely, a woman's capacity to act and make choices and access resources to achieve her desired outcomes. Both perspectives shed light on the broader structural and normative dimensions that shape leadership outcomes and

highlight the interrelated behavioral components that influence women's ability and willingness to lead, as well as the external conditions that shape these possibilities.

2.1 Capabilities

Gender gaps in human capital, such as education and work experience, can potentially explain disparities in labor market outcomes and career advancement between women and men. However, in most high-income countries and an increasing number of low- and middle-income countries, women now surpass men in educational attainment at all levels, from primary to tertiary education (Blau and Khan, 2017; Bertrand, 2018; Bossavie and Kanninen, 2018). Despite this, women remain underrepresented in higher-paying fields, particularly STEM, and face slower labor market entry and higher exit rates in these areas (Mills and Prag, 2014; Kirkeboen et al., 2016; Hunt, 2016), which in turn reduces their visibility and possibilities for career advancement.

Beyond human capital, differences in negotiation, self-promotion, and strategic vision contribute to a slow progression toward leadership. Men are more likely to initiate negotiations and often achieve more favorable outcomes, which can affect women's earnings and career progression (Card et al., 2015; Biasi and Sarsons, 2022).[4] Women are also less likely to engage in self-promotion, particularly in male-dominated fields, and tend to evaluate their own performance more critically, even when aware of their actual performance and that self-assessments would influence hiring and salary decisions (Murciano-Goroff, 2022; Exley and Kessler, 2022). Evidence also shows that female executives, for example, tend to receive lower evaluations in "envisioning" –i.e., the ability to articulate a compelling strategic direction-- primarily from male peers (Ibarra and Obodaru, 2011).

Behavioral differences in leadership styles further shape advancement opportunities. Women tend to exhibit more communal rather than agentic behaviors in leadership positions, although without clear effects on team performance (Haeckl and Onozaka, 2025).[5] Yet, leadership assessments tend to value traditionally male-coded traits, such as assertiveness and competitiveness, while undervaluing qualities more common among women, such as empathy and collaboration, reinforcing persistent disparities in recognition and access to leadership roles (Babcock et al., 2017; Arceo-Gomez and Campos-Vazquez, 2019).

---

[4] Some studies suggest that the male advantage in negotiation outcomes depends on factors such as experience (Mazei et al., 2015) and the specific context of the negotiation (Bowles et al., 2005; Kugler et al., 2018).
[5] Agentic behaviors are typically associated with assertiveness, independence, and task orientation, whereas communal behaviors emphasize warmth, collaboration, and concern for others.

2.2 Motivation

Aversion to competition and risk is a key psychological factor shaping women's motivation to pursue leadership roles. Research consistently shows that women are less likely than men to engage in competitive environments, which are often central to leadership selection processes (Niederle and Vesterlund, 2007, 2011; Markowsky and Beblo, 2022). This reluctance helps explain women's underrepresentation in leadership, particularly in politics, where competitive contexts reduce women's aspirations (Preece and Stoddard, 2015; Kanthak and Woon, 2015) and also influences educational and career choices (Buser et al., 2014, 2022; Reuben et al., 2024). However, recent evidence shows that when competitiveness is measured in risky environments with appropriate incentives, women perform no worse than men and, in many cases, make more efficient competitive choices (Harrison et al., 2025).

Risk aversion further shapes leadership decisions. Numerous experimental studies show that women, on average, are more risk-averse than men (Eckel and Grossman, 2008). However, managerial experience can narrow these differences, suggesting that selection into leadership or adaptation within roles may mitigate risk gaps (Croson and Gneezy, 2009). Lower ambition and self-confidence also contribute to the gender gap in leadership, with women often underestimating their abilities and being less likely to pursue leadership roles even when their performance warrants it (Fox and Lawless, 2010, 2014; Reuben et al., 2012; Exley et al., 2024).

Stereotypes and identity threats reinforce these psychological barriers. Both men and women tend to underestimate women's competence in male-dominated domains, and exposure to gender-imbalanced environments can impair women's performance and their sense of belonging (Murphy et al., 2007; Bordalo et al., 2019).[6] Similarly, women face social penalties from exhibiting agentic behaviors, typically linked to men, and consequently are deter from entering male-dominated fields. Additionally, women often face hostile environments, including harassment and gendered backlash, which can discourage advancement in politics, academia, and other fields (Olufunke, 2013; Wu, 2018; Guerin and Maharasingam-Shah, 2020; Dupas et al., 2021). Collectively, these psychological and environmental barriers contribute to women's persistent underrepresentation in leadership roles.

---

[6] The simple process of stereotyping women as less capable in leadership roles could potentially cause women in such positions to perform worse, thereby fulfilling the stereotype (Spencer et al., 1999; Inzlicht et al., 2000; Sekaquaptewa et al., 2003).

2.3 Opportunity

Persistent gender discrimination hinders women's access to leadership across economic and political domains. In the labor market, women encounter barriers in recruitment, hiring, performance evaluations, pay, and promotion (e.g., Gaucher et al., 2011; Card et al., 2015; Coffman et al., 2021). These challenges are often more acute in male-dominated sectors (Casad et al., 2021). Female political candidates similarly face discriminatory attitudes that limit their electoral success (Fujiwara et al., 2024; Brown et al., 2025). Discrimination also restricts women's access to finance, limiting their ability to start or scale a business. Loan officers and investors often impose stricter conditions or interpret past performance differently, leading to higher rejection rates, higher interest rates, and less venture capital funding (Muravyev et al., 2009; Herbert et al., 2025).

Implicit biases further undermine women's advancement. Even when women perform equally, stereotypes lead to systematically lower evaluations (De Paola et al., 2018). Bias also affects how credit is attributed within teams, with women being penalized more often, especially when individual contributions are not directly observable (Sarsons et al., 2021). Women are also penalized for self-promotion or assertiveness, as these behaviors violate prescriptive gender norms (Heilman and Parks-Stamm, 2007). The "motherhood penalty" compounds these effects, with mothers judged as less competent and committed than otherwise identical non-mothers (Correll et al., 2007).

Networks and organizational norms further shape opportunities. Women often lack access to influential professional networks and receive less strategic mentoring than men (Ibarra et al., 2010; Garcia-Hernandez et al., 2020). Organizational expectations of long hours and inflexibility also disadvantage women, who still bear a disproportionate share of caregiving (Goldin, 2014; World Bank, 2025).

3 Policy Mechanisms to Advance Women's Leadership

3.1 Gender Quotas

Quotas mandate that a defined share of positions be allocated to underrepresented groups based on gender, ethnicity, or other cleavages, directly addressing Opportunity-related barriers. Gender quotas can be applied to politics, as electoral quotas, which expand women's presence in political bodies; businesses, as board quotas, which promote gender diversity in company boards; and selection committee quotas, which diversify recruitment

bodies instead of leadership positions and can affect women's career progression.[7] Unlike indirect interventions that target barriers to advancement (e.g., training or mentoring), quotas work by design: they assign women to leadership positions, operating on the premise that they are both willing and able to take on leadership roles when structural exclusion is removed. However, as will be discussed below, quotas not always translate into more women occupying leadership positions or having decision making power.

The adoption of gender quotas is shaped by a range of political, social, and institutional dynamics that vary by context. In politics, key drivers of quota adoption include the strength of women's movements, which often provide the initial momentum, especially when they succeed in building cross-partisan coalitions. Women's lobbying efforts are more likely to succeed when influential elites, typically male party leaders and incumbents, see personal or political advantages in supporting quota advocates, suggesting that men can be important allies (Hughes et al., 2017). Favorable political environments, such as post-conflict transitions or broader democratic reforms, can also create openings for institutional innovation, including gender quotas. At both national and international levels, the phenomenon of "contagion" plays a role, as parties, countries, or organizations often follow the lead of others that have already adopted quotas, influenced by normative pressures from international organizations or domestic precedent. How the issue is framed also matters, with advocates more successful when quotas are presented as a corrective to men's disproportionate dominance in leadership instead of as a remedy for women's underrepresentation (Murray, 2014).

In the corporate sector, quota adoption has generally followed a slower and less widespread path, but similar mechanisms appear to be at play. Research suggests that the spread of board quotas is largely driven by a contagion effect, with policies diffusing from one country or organization to another, often catalyzed by political debate or a high-profile advocacy solution (Revillard and Tuffy, 2023).

Obstacles to quota adoption can include weak civil society mobilization, resistance from political elites (particularly in conservative or right-leaning parties), or framing that reinforces negative stereotypes about women's capabilities. Furthermore, the broader citizenship model and political discourse in a given country, i.e., whether it emphasizes group representation or individual merit, can affect the political feasibility of quotas.

---

[7] Electoral quotas take multiple forms, including reserved seats (constitutional or legislative mandates that allocate a fixed share of seats to women), legal candidate quotas (requiring a proportion of female candidates), and voluntary party quotas (internal party rules). In contrast, board and selection committee quotas tend to be more uniform and usually mandate that women occupy a set share of positions.

3.1.1   Effectiveness of Gender Quotas: Impacts on Descriptive Leadership

A substantial body of literature examines whether quotas effectively increase women's representation in political, corporate, and other leadership roles. The evidence shows that well-designed and enforced quotas increase women's representation, especially in politics, community development programs and corporate boards, though effects vary.

In politics, a well-documented intervention is the system of quotas introduced in 1993 for India's local self-government institutions. The law established a one-third gender quota in three tiers –village, block, and districts councils—rotating between elections in a manner that was effectively random. Since then, positions reserved for women has always been occupied by women (Beaman et al., 2009).

When gender quotas are applied to candidate lists, women's representation generally increases, but the extent of this effect depends on the specific design of the policy. Gender quotas in candidate lists for national parliaments substantially raised women's representation in Afghanistan, Argentina, and Rwanda (Dahlerup and Nordlund, 2004; Longman, 2006; Franceschet and Piscopo, 2008), while France achieved only modest short-term gains (Murray, 2010). Evidence on gender quotas in candidate lists for local councils from developed countries shows that, in Spain, quotas raised women's council representation by four percentage points (Bagues and Campa, 2021), and in Italy by two (De Paola et al., 2010). Evidence also shows that stronger institutional design yields larger impacts: Italy's 2012 reform combining quotas with a double-preference voting system –i.e., option of second preference vote for a candidate of a different gender-- raised women's representation by 18 percentage points (Baltrunaite et al., 2019), and France's zipper rule, requiring alternating male and female names on party lists, boosted outcomes by seven (Lassébie, 2020). Weak design, on the other hand, undermines electoral quotas. Parties may relegate women to unwinnable districts or low list positions, limiting the impact of gender quotas in candidate lists on the actual number of female legislators (Esteve-Volart and Bagues, 2012; Casas-Arce and Saiz, 2015). Even when sanctions exist, they may be insufficient, as parties anticipating voter bias may prefer paying fines to risking lower performance (Le Barbanchon et al., 2022).

Evidence from gender quotas in development programs also indicates that such measures can increase women's participation in leadership positions. For example, the National Solidarity Program in Afghanistan and Tuungane, a development initiative in the Democratic Republic of Congo, both saw higher female participation following the introduction of gender quotas in their governance structures (Beath et al., 2013; van der Windt et

al., 2018). Similar results appear when looking at resource management programs at the community level in Nepal and Kenya (Leone, 2019; Hannah et al., 2021).

Board quotas show similar patterns. Norway's pioneering 2003 policy spurred a wave of similar legislation across Europe, and studies generally agree that mandatory board quotas with clear enforcement mechanisms are effective (Bertrand et al., 2019). For instance, France and Italy also saw gains in women's board participation (Comi et al., 2020). On the other hand, Spain's 2007 reform failed due to weak enforcement relying on incentives, such as favorable consideration in public procurement, rather than penalties (Comi et al., 2020).

Quotas in selection committees often produce adverse effects. In France, academic hiring quotas reduced women's recruitment, likely reflecting male backlash (Deschamps, 2024). Experimental evidence echoes this finding: Dominguez (2023) shows female candidates fared worse as the number of women on committees increased, as men's greater influence in female-majority groups worked against them.[8]

Quality of appointed leaders

A common criticism of gender quotas is that they may lower the quality of leadership by reserving positions based on gender rather than merit. However, most evidence shows no decline and often improvements in the qualifications of elected or appointed individuals after quotas are introduced.

In politics, studies from developed countries suggest quotas can raise the average quality of representatives, measured through educational attainment, prior work experience, and re-election rates. In Italy, the implementation of municipal list quotas in the 1990s increased the educational level of elected officials, both because women candidates were on average more educated and fewer low-educated men were elected (Baltrunaite et al., 2014). Moreover, female quota politicians also had lower absenteeism than men or non-quota women (Weeks et al., 2015). In Sweden, the zipper quota raised male politicians' quality in districts where women's representation grew most (Besley et al., 2017). Research from France and Spain, on the other hand, finds little or no effect on the quality of elected officials, measured by previous political experience, educational background and vote shares (Lassébie, 2020; Bagues and Campa, 2021).

---

[8] Causal evidence on how the gender composition of selection committees impacts the recruitment of women shows mixed results. See, for instance, Bagues and Esteve-Volart (2010) and De Paola and Scoppa (2015). These studies analyze variations in women's participation in selection committees without the imposition of a gender quota.

In lower-income contexts, the effects of quotas reveal a more nuanced trajectory. In India, reserved seats in village councils initially coincided with higher rates of corruption, including irregularities in wage payments and procurement processes (Afridi et al., 2017). These results likely reflect an initial learning curve for newly elected women leaders, who gradually improved their performance as they gained experience. Studies show that with time and exposure, female leaders match or outperform their male peers in India (Ban and Rao, 2008; Bardhan et al., 2010; Gajwani and Zhang, 2015).

Evidence from board quotas is mixed but similarly suggests no decline in quality. In Norway, Italy, and France, quotas raised board member quality, often measured through educational attainment (Ahern et al., 2012; Bertrand et al., 2019; Ferrari et al., 2022). In the U.S., by contrast, no significant changes were found (Adams and Ferreira, 2009). While some studies note that newly appointed women were younger and less experienced (Ahern et al., 2012; Ferrari et al., 2022), these changes did not harm firm outcomes. In Italy, quotas even coincided with improved stock market performance, as seen in reduced share price volatility (Ferrari et al., 2022).

3.1.2 Effectiveness of Gender Quotas: Impacts on Substantive Leadership

By altering the gender composition of decision-making bodies, gender quotas have the potential to influence both the types of policies that are prioritized and the effectiveness with which those policies are implemented. Newly appointed leaders may also shape the performance of the political institutions or companies they serve. Moreover, their impact can extend beyond the organizations themselves, contributing to broader societal change by challenging gender norms and expanding women's roles in public life.

Evidence from electoral quotas suggests that changing the gender balance among elected officials can lead to shifts in policy focus, particularly when leaders have autonomy in resource allocation. The most comprehensive insights come from India's local village councils where village leaders wield considerable discretion over public funds. Chattopadhyay and Duflo (2004) found that councils led by women were more likely to invest in infrastructure projects aligned with female priorities, such as water and road development, in the states of Rajasthan and West Bengal. This finding was later confirmed by Beaman et al. (2010), who highlighted the emphasis on water-related investments. Similarly, Bose and Das (2018) found that female leaders influenced the types of public works projects undertaken under the National Rural Employment Guarantee Act (NREGA) program in the state of Uttar Pradesh, with more emphasis on water conservation and harvesting which directly benefited women. Building on this evidence, Ghani et al. (2014) used the state-level variation of the

11

implementation of the gender quota and demonstrated that improvements in local infrastructure under female leadership also translated into tangible economic outcomes, including growth in women's entrepreneurship in traditionally female-dominated sectors.

The evidence from the Indian experience also points to positive impacts on broader development outcomes, beyond women's specific priorities. For instance, Beaman et al. (2006, 2010, 2012) documented improvements in a composite measure of public goods provision, including spending on water, education, transportation, fair-price shops, and public health facilities, as well as greater investments in areas identified as "male priorities" such as irrigation and schools, leading to improvements in educational and health outcomes. Likewise, Bose and Das (2018) found that female leadership led to increases in work demand and in the issuance of job cards under the NREGA program, suggesting wider gains in local economic activity and employment generation.

However, not all studies support the hypothesis of gender-based differences in budget allocation. Ban and Rao (2008) and Bardhan et al. (2010) did not find significant differences using information from South India and a West Bengal village, respectively, suggesting that effects may be region-specific. Further, Ban and Rao (2008) showed that female leaders' performance is hampered by the presence of a large upper caste landowner faction. Consistent with this, Ban and Rao (2009) found that reservations for women and disadvantaged castes in South India exacerbated the power of landowners in village meetings, indicating that political gender quotas might have installed weak leaders.

Descriptive evidence analyzing the impacts of a gender quota in candidate lists for national parliaments shows that elected women legislators in Argentina and Mexico have been more likely to sponsor or co-sponsor bills related to women's rights (Franceschet and Piscopo, 2008; Kerevel and Atkeson, 2013; Barnes and Jones, 2018), and that women elected through quota systems have played a key role in the successful passage of such legislation (Kerevel and Atkeson, 2013). Similarly, a descriptive analysis for Rwanda finds that women's issues have been raised more often since the implementation of a quota that reserved 30% of the Parliament positions to women, resulting on the passing of a major piece of legislation on gender-based violence (Devlin and Elgie, 2008).[9] Expanding this line of inquiry, Chen (2010) and Clayton and Zetterberg (2018) use cross-country data to

---

[9] Women's political participation in Rwanda was already high and increasing before the implementation of the gender quota. This trend is partly explained by the demographic and social transformations that followed the 1994 genocide, which left about 70% of the population female. During and after the conflict, women assumed roles traditionally held by men in the economy and politics and, contrary to common post-conflict patterns, did not relinquish these responsibilities once the war ended (Devlin and Elgie, 2008).

show that increases in women's parliamentary representation due to a gender quota shock are associated with higher government spending on public health and social welfare, highlighting that women political participation can lead to changes in budget allocation in favor of development objectives.[10]

Evidence on the introduction of a gender quota in candidate lists for local councils shows that, in Spain, it did not significantly alter municipal public spending patterns (Bagues and Campa, 2021). However, in France, there was a notable increase in the number of legislative amendments addressing women's and children's issues between 2001 and 2017, although the quotas had no discernible impact on education or business-related legislation (Lippmann, 2022).

At the level of community development programs, the implementation of a gender parity quota in a village development program in the Democratic Republic of Congo resulted in an increase in women occupying leadership positions, but limited women's effective participation in local governance due to low literacy and limited education (van der Windt et al., 2018). Evidence from natural resource management initiatives shows more promising outcomes. In Nepal, a gender quota in executive committees of Community Forest User Groups led to a reduction in firewood collection at the household level (Leone, 2019). These shifts are attributed to women's stronger emphasis on conservation and responsible resource use. In Kenya, qualitative findings from the implementation of a two-thirds gender rule in community water project committees found that while women brought important knowledge, their participation in substantive decision-making was low due to attitudes about their abilities, lack of time due to household duties, and lower educational qualifications (Hannah et al., 2021).

In the corporate sphere, gender quotas on company boards have been introduced with the expectation that more diverse leadership will improve workplace policies and outcomes for women. Yet, the evidence remains inconclusive.[11] In Norway, where board quotas were among the first implemented, there was no observed increase in female employment, part-time work, or employment of women with children (Bertrand et al., 2019). In contrast, Italy's board quota law, prompted a notable shift. A text analysis of companies' reports revealed a

---

[10] The cross-country samples in the Chen (2010) and Clayton and Zetterberg (2018) studies include countries that have adopted reserved seat quotas, candidate list quotas, and voluntary political party quotas.

[11] Accurately assessing the impact of gender quotas on corporate performance is challenging (Pande and Ford, 2011). Corporate boards influence firm outcomes indirectly, mainly through oversight and policy setting, making it difficult to isolate whether observed effects stem from board performance itself, individual directors, management's reaction to the quota, or broader shifts in board dynamics. Moreover, performance measures based on stock market valuation may reflect investors' perceptions of the quota or firms' compliance behavior rather than genuine changes in governance or productivity.

50% increase in references to gender equality, including leadership gaps, pay disparities, and work-family balance issues (Latura and Weeks, 2023). Regarding companies' performance, results are again mixed. Yu and Madison (2021) conducted a systematic review of 20 studies and found that while some showed positive effects, particularly in Italy and France, the majority reported neutral or negative impacts. These average effects, however, conceal important heterogeneities. Adams and Ferreira (2009) found that board diversity had positive effects on company performance in firms with weak governance in the U.S. Still, they could reduce shareholder value in firms with strong governance, suggesting that the impact of quotas may depend on the existing institutional context. Similarly, Bertrand et al. (2019) showed that quotas led to negative average performance effects in Norway, but benefits emerged for firms with weaker shareholder protections.[12] Matsa and Miller's (2011) findings add to the discussion of negative effects on companies' performance. Their study reported that corporate board quotas in Scandinavian companies led to a short-term loss of profits, largely driven by higher labor costs resulting from increased employment, suggesting that companies under the quota may not necessarily perform worse, but may be driven by a different corporate strategy.

Beyond shaping decisions, gender quotas can open space for broader societal change. In India, the implementation of gender quotas in village councils increased women's empowerment at both the household and community levels. A range of studies document positive effects on children's health (Beaman et al., 2006), gender norms (Kalsi, 2017), and educational outcomes for girls (Beaman et al., 2006; Beaman et al., 2012; O'Connell, 2018). Exposure to female leaders has shifted parental aspirations for their children's futures and raised women's willingness to report crimes (Iyer et al., 2012). Women elected under quotas have served as role models, reshaping perceptions of leadership and increasing women's political ambition and representation in subsequent elections (Beaman et al., 2009). Similar results have been found for the gender quota in Taiwan's local councils. Exposure to female political leadership reduced mothers' likelihood of having a third child, empowered married women in household decision-making, and motivated female students to pursue law and political science, fields conducive to political involvement (Chen et al., 2025).

---

[12] Smith (2018) offered several explanations for the variation in firms' outcomes, including differences in company culture, the surrounding socio-political environment, and the metrics used to assess performance. Comi et al. (2020) emphasized the importance of initial conditions. Prior to quota implementation, Italy had significantly fewer women on boards than France or Spain, potentially due to greater social resistance. The quota allowed qualified women who were previously excluded due to bias to access leadership positions.

Similar dynamics have been observed in community-based development and resource management programs. In Afghanistan, Beath et al. (2013) studied the National Solidarity Program and found that gender quotas led to greater female participation in community decision-making, higher engagement in income-generating activities, and more positive attitudes toward women's public involvement. However, these gains were mostly limited to the public sphere; the program did not lead to significant changes in women's control over household income or assets.

3.1.3   Unintended Consequences and Design Considerations of Gender Quotas

Laboratory evidence shows that when quotas are perceived as unfair, they can negatively influence how nonbeneficiaries evaluate the performance of those who benefit. Heilman et al. (1996) demonstrate that perceptions of unfair advantage can bias performance assessments, even when the actual work quality remains unchanged. Although field evidence of such backlash is less common, it does exist. For example, Clayton (2015) studied the effects of a quota policy in Lesotho, where 30% of single-member electoral districts were randomly reserved for women community councilors. The quota successfully increased women's political representation, but it also had unintended negative consequences. In reserved districts, both men and women reported lower political engagement and weaker perceptions of efficacy. This decline was not driven by doubts about women's abilities, since councilors were often rated more effective, but by the perception that quotas were an unnecessary and unfair imposition. Evidence from India shows that the quota encouraged female villagers to attend assemblies and enable them to voice their opinions. However, women had more difficulty exerting influence during village meetings and were less likely to chair these meetings while remaining as likely as men to attend, possibly reflecting villagers' biases in their assessments of female leaders' competence and performance (Beaman et al., 2006). Beaman et al. (2009) show formally that in Indian villages where gender quotas were implemented, men did not adjust their preferences for female leaders in the short to medium run; in fact, their bias worsened. This occurred despite villagers evaluating women leaders as more effective and reversing their stereotyping of men with leadership. These findings support a backlash hypothesis, in which men express resistance to being "forced" to accept a woman leader.

Additionally, gender quotas may fail to provide a substantial incumbency advantage for women in contexts where conservative gender norms prevail. Evidence from the quota system in India shows a low percentage of reelection both in reserved and unreserved areas. Similar results were found in Italy, where quota women were

43% less likely to be re-elected than men or non-quota women (Weeks et al., 2015). In Sweden, O'Brien et al. (2016) found that a 10% increase in female representation due to quotas increased the odds of a woman leading a party list by 50%, although it had no effect on leader retention across election cycles. Lassébie (2020) shows that France's quota reforms did not lead to more women serving as mayors or list leaders. In fact, female politicians were more likely to leave politics after a single term, potentially due to limited opportunities for advancement and persistent societal biases. This higher drop-out rate correlated with local attitudes toward gender roles in society and the labor market.

Importantly, not all challenges faced by quota beneficiaries are caused by the quota system itself. Based on a survey of village-level politicians in India, a study finds that women, regardless of whether they were elected through a quota, are less likely to receive assistance from bureaucrats on policy matters (Purohit, 2024). Only 52.2% of women reported receiving such support, compared to 60.4% of men. This gap appears to stem from bureaucrats' beliefs that women have less political leverage, including weaker connections with higher-level officials and a reduced ability to mobilize constituents when facing administrative obstacles. These findings suggest that gender-based discrimination within bureaucratic structures, not the quota mechanism itself, can hinder the effectiveness of women in political office.

3.2 Role Models

By offering examples to aspire to or emulate, exposure to female leaders can strengthen women's confidence and ambition and reduce aversion to risk and competition, directly addressing motivational barriers and expanding leadership aspirations. The influence of female role models extends beyond women, as they can also challenge and redefine the traits typically associated with leadership for men. In fields where female leaders remain underrepresented, intentionally creating opportunities for women to see and engage with role models can foster women's leadership across different domains. Evidence on whether exposure to role models translates into more women reaching leadership positions and influencing decision-making, however, remains limited to the role of women political leaders.

3.2.1 Effectiveness of Role Models: Impacts on Descriptive Leadership

The implementation of political gender quotas has helped challenge deep-seated gender stereotypes. In India, the quota system which reserved local government seats for women, changed gender stereotypes among women (Deininger et al., 2015, 2022), men (Beaman et al., 2009), and political parties (Bhavnani, 2009). These changes led to long-term shifts in electoral outcomes: women were significantly more likely to run for and win office even after quotas were removed (Beaman et al., 2009; Bhavnani, 2009; Deininger et al., 2015). In villages with reserved seats, women were nearly five times more likely to be elected than those without (Bhavnani, 2009). Evidence from Lesotho also shows that women were more likely to win in districts previously reserved for women representatives. However, this effect was driven by incumbency patterns rather than a role model mechanism (Clayton and Tang, 2018). Role model effects have been documented in developed countries. In Italy, the implementation, and later repeal, of municipal quotas yielded lasting increases in women's political representation. Municipalities previously subject to quotas saw more female candidates, net of the incumbency effect, even after the policy ended (De Paola et al., 2010; Baltrunaite et al., 2019), indicating that the quota impacted first time candidates and had enduring shifts in gender stereotypes on both the supply and demand sides of female leadership.

Beyond political participation, evidence on women's role model effects shows that they can enhance women's aspirations and empowerment. However, evidence on whether such effects translate into greater access to leadership positions or increased influence in decision-making remains scarce. Exposure to female political leaders in India has affected broader indicators of women's empowerment, such as employment, their individual income, and participation in household decision making in the short-and medium term (Deininger et al., 2022). Aspirations among girls and their parents also changed. Girls were more likely to attend school and spend less time on household chores (Beaman et al., 2012; O'Connell, 2018). Parents raised their aspirations for their young daughters. These aspirations encompassed desired educational attainment, marriage age, preferred occupation, and the ambition for their daughter to become a Pradhan (village chief councilor), a position for which seats were reserved (Beaman et al., 2012).

Women as role models also have an influence on students' aspirations and educational achievements. The evidence shows that girls are affected by teacher role models more than boys in secondary and tertiary education and that this exposure to female role models can shape educational choices in ways that open pathways into

male-dominated career fields (Dee 2005, 2007; Bettinger and Long 2005; Carrell et al., 2010; Porter and Serra, 2020; Breda et al., 2020; Löwe et al., 2023). A field experiment in France found that exposing high school students to female scientists had a positive impact on the likelihood that high-achieving girls in their final year of secondary school enroll in selective and male-dominated STEM programs in college (Breda et al., 2020). Similar findings appear in developing country contexts. In Peru, a randomized intervention placed female engineering students in high schools to share their experiences in the field (Agurto et al., 2023). The program led to a higher preference for engineering majors among girls in the top quartile of math ability, with particularly strong effects among those living near the role models' university.

In the workplace, a randomized field experiment in Bangladeshi garment factories demonstrated that workers who were randomly exposed to female supervisors during the trial began to relax their preference for male supervisors. By the end of the trial, they reported being more indifferent to the gender of their supervisor. This effect was primarily driven by male workers, providing evidence that role models have the potential to challenge traditional beliefs held by both women and men (Macchiavello et al., 2020).

Women thought leaders play a powerful role as role models as well, shaping both career aspirations and pathways to innovation. Evidence from developed countries suggests that leadership diversity enhances firms' capacity to innovate, and that female employees are more likely to have their ideas supported in inclusive environments (Hewlett et al., 2013). However, other studies add nuance to this positive relationship. For example, firms with more women directors tend to produce fewer patents when performance falls short of aspirations, but significantly increase patenting when performance exceeds aspirations and organizational slack is available (Smulowitz et al., 2025).[13]

Narratives, whether through media, books, or virtual settings, can also shape aspirations and beliefs. Schier (2020) and Meier et al. (2024) demonstrated that exposing lab experiment participants to stories or videos of successful women in competitive settings increased participation and performance of women in competitive tasks. Likewise, in field experiments in Mexico and Peru, Del Carpio and Guadalupe (2022) showed that including a picture and story of a successful female boot camp graduate substantially increased applications to the training program.

---

[13] Previous research shows that behavioral motives of firm decision-makers to innovate depend on the firm's performance relative to aspirations or goals, both positive and negative (Chen and Miller, 2007).

When direct exposure is not feasible, well-crafted informational messages can help. Cheng et al. (2022) found that communicating upward trends in women pursuing STEM majors or careers (rather than static trends) increased interest in STEM fields among female high school and college students. Sparkman and Walton (2017) explain why: dynamic norms, i.e., messages that highlight behavioral change and suggest continued progress, are more persuasive than static descriptions. In Peru, information messages on timelines and registration procedures and motivation messages to candidates for school managerial positions increased women's application and access to management roles (Avitabile et al., 2025).

3.2.2 Effectiveness of Role Models: Impacts on Substantive Leadership

Whether greater female representation in leadership positions, spurred by exposure to female role models, translates into substantive representation, i.e., women influencing decision making, remains an open question.

Evidence from gender quotas in India shows they influenced patterns of citizen participation in politics, suggesting that that exposure to a female political leader can enhance women's influence in local decision-making even in the absence of formal leadership roles. Evidence from village meetings indicates that, while overall attendance by men and women did not change under reservation, women were more likely to speak when the village council leader was female and more likely to increase participation across multiple issues raised during meetings (Beaman et al., 2010). The increase in women's active participation in village meetings has important policy implications. If female villagers and female leaders share similar preferences, then the distinct policy choices made by women leaders relative to men may, at least in part, reflect the preferences of female constituents. The evidence also shows that the alignment between policy outcomes and women's preferences is more likely to occur when women have the social capital to articulate their views in decision-making spaces such as village meetings (Clayton et al., 2023), suggesting that female role models can spur networks and social capital for women. Also in India, the exposure to role models impacted on women's voice in village governance under the NREGA program, a large public works program that provides beneficiaries the opportunity to select assets to which workers contribute labor. Exposure to a video showcasing the stories of women from nearby communities who successfully demanded assets under the program and how these assets benefitted them, had a positive impact on women's aspirations and asset demands through the participatory process when combined with a brief skills training (Kosec et al., 2024).

Another channel through which female leaders fostered women's political engagement was by recruiting them as political party activists (Goyal, 2023). Greater female participation in party activism increased the likelihood that campaign efforts targeted men and women more equally, thereby reducing the gender gap in partisan contact (citizen–activist interaction). This pathway is particularly significant because party activism often serves as the entry point into politics in India, especially for individuals from non-elite backgrounds (Goyal, 2025). Increased women's interest in political activism through a role model effect also appears in the U.S. Evidence shows that when female politicians receive news coverage, adolescent girls are more likely to express intentions to engage in politics and girls anticipate greater political involvement (Campbell and Wolbrecht, 2006).

3.2.3   Unintended Consequences and Design Considerations of Role Models

Role models do not always yield positive change. In Lesotho, a quota policy for local councilors actually reduced women's interest in politics (Clayton, 2015). In India, Bhalotra et al. (2018) found that when a woman wins a seat in the state legislative assembly, a level where gender quotas are not in place, there is a decline in the entry of new female candidates. This result is driven by states characterized by entrenched gender bias and by male-headed parties, suggesting a backlash effect which can decrease the demand and the supply of new women candidates. In Afghanistan, Beath et al. (2013) found no change in societal attitudes after implementing gender-balanced village development councils likely due to limited project duration or contextual constraints. Even in gender-equal societies, role models may not inspire others. In the U.S., Broockman (2014) found no spillover effects on candidacies in neighboring districts after a woman won a state legislature seat.

An important explanation is the degree of identification with the role model. Inspiration may be muted or even discouraged if the role model is perceived as exceptional or fundamentally different. For example, Swiss university students exposed to prominent female politicians showed no increase in political ambition (Foos and Gilardi, 2020). Lab studies confirm that being exposed to role models with relatable backgrounds reduces implicit self-stereotyping, while dissimilar leaders had quite the opposite effect (Asgari et al., 2012).

Van der Windt et al. (2018) offer another potential explanation, suggesting that the impact of female role models may depend on the type of institution. In their study of community management committees in the Democratic Republic of Congo, they argue that gender quotas in informal, development-driven settings may be less effective than in formal institutions. Lasting change requires that women hold real authority over time—something difficult to achieve in short-term development projects with limited influence over institutional structures.

3.3 Training Programs

Training initiatives aim to improve women's capabilities to enter the labor market and advance their careers. Some interventions, especially in developing countries, act in early stages of the labor trajectory and intend to promote entrance, retention and advancement. Others, more often provided in developed countries, provide training on leadership competencies, acting on the "last mile." Although the available evidence provides insights on the impact of training interventions on women's career advancement or on the skills needed to do it, there is a gap on whether training interventions impact on the probability of becoming a leader. In contrast, the literature has explored the impact of these types of interventions on women's participation in decision making, especially in the context of public provided programs.

3.3.1 Effectiveness of Training Programs: Impacts on Descriptive Leadership

In many developing countries, training programs are provided at the community-level and combine skills development, such as entrepreneurship and financial literacy, with collective savings and microcredit components with the final objectives of improving livelihoods and reducing poverty (Banerjee, 2013; Kapila and Kalia, 2022). A common delivery model is through women-only Self-Help Groups (SHG), which offer women regular opportunities to meet, discuss community issues, and coordinate collective action, thereby fostering conditions conducive to enhancing women's political and public participation, access to information and social capital (Hidrobo et al., 2024).

Numerous studies conducted in India highlight the positive impact of SHG participation on political engagement, particularly in the context of village meetings (Palaniswamy et al., 2019; Sanyal et al., 2019; Deshpande and Khanna, 2021; Prillaman, 2023). For instance, Deshpande and Khanna (2021) find that members from SHG are more likely to attend village meetings and more likely to know the names of local and national political leaders compared to non-member women. A separate study documents that in Kenya, a drought preparedness intervention focused on the empowerment of women at the community level increased women's political awareness (Grillos, 2018). Although not formally examined, increased political engagement and awareness may encourage women to pursue leadership positions.

In the corporate sphere, Leadership Development Programs (LDP) aim to enhance leadership competencies and foster career advancement. Recurring topics in LDP include negotiation skills, network building, influence, change leadership, and effective communication. The literature on non-gender specific LDP report positive

results for employees' career advancement although most studies are correlational or experimental, limiting the generalizability of the results (Avolio et al., 2009; Lacerenza et al., 2017). Empirical evidence on the effectiveness of women-only LDP, however, remains limited.[14] For example, Gardiner et al. (2023) reviewed 12 women's leadership programs primarily implemented in the United States and Australia. The authors concluded that, due to methodological limitations in the studies they examined, the evidence regarding the impact of women's leadership programs is inconclusive.

Some interventions aim to improve specific leadership competencies, such as negotiation skills. Chotiputsilp and Kim (2021) evaluated a field experiment conducted in Thailand where job seekers received a 30-minute negotiation training. Participants who received the training were more likely to report having negotiated their salary compared to a control group. However, while men did not experience increased earnings from the training, women reported earning less. A follow-up survey revealed that women who received training expressed concerns about negative employer perceptions related to negotiation, an effect not observed in men. The authors interpret these results as evidence of women facing backlash when engaging in negotiation because of social norms' violation.

Complementary evidence from earlier stages of the life cycle suggests that negotiation training can have positive and lasting effects when introduced before labor market entry. Ashraf et al. (2020) study a program that taught negotiation as a form of "relational empowerment" to 8th-grade girls in low-income areas of Lusaka, Zambia. The training, which emphasized achieving one's goals while maintaining relationships, initially improved school enrollment rates three years after implementation. Ten years later, girls who received the training had completed 0.27 more years of education and were 6 percentage points more likely to graduate from college, were less likely to marry or initiate sexual activity early, and expressed less traditional gender attitudes (Ashraf et al., 2025). Although this study focused on girls at an early stage of their lives, it highlights that relational empowerment can be a key component of effective negotiation skills.

---

[14] Some scholars argue that leadership development programs (LDP) should be tailored to women, emphasizing women-only settings to foster confidence, skill development, and psychological safety (Ely et al., 2011; Clarke, 2011; Vinnicombe et al., 2013; Debebe et al., 2016). On the other extreme, critiques of women-only LDP argue these programs follow a "fix-the-women" approach, overlooking structural barriers, excluding men from gender discussions, and exposing women to social penalties for behaviors encouraged in such programs (Perriton, 2022; Loumpourdi, 2023; Heilman et al., 2024).

3.3.2 Effectiveness of Training Programs: Impacts on Substantive Leadership

Evidence from women's participation in SHG in India show that it enhances women's involvement in decision-making, even in the absence of a formal leadership position, with training often serving as the main mechanism explaining these effects. SHG participation increases women's political engagement, especially in village meetings (Palaniswamy et al., 2019; Sanyal et al., 2019; Deshpande and Khanna, 2021; Prillaman et al., 2023), facilitates collective responses to community problems (Sanyal, 2009; Cheek et al., 2024), and enhances women's roles in agricultural decision-making (Raghubanthan et al., 2019). Similarly, a drought-preparedness intervention in Kenya increased women's engagement in formal decision-making and improved household-level preparedness (Grillos, 2018). Some studies highlight psychological shifts as the factor driving the results, such as increases in self-efficacy, confidence, and self-sufficiency (Deshpande and Khanna, 2021; Prillaman, 2023; Cheek et al., 2024). Others focus on skill-building, like women's ability to voice concerns in village meetings (Sanyal et al., 2019) and the growing legitimacy of SHG within communities (Cheek and Corbett, 2024). Prillaman et al. (2023) emphasize the power of collective action, citing women's responses to social sanctions, such as organizing door-to-door pickups to ensure group attendance at village meetings despite male opposition.

3.3.3 Unintended Consequences and Design Considerations of Training Programs

Women participating in SHG may face social sanctions. Prillaman et al. (2023) underscore the collective strength of women working together to overcome these sanctions. In India, women participating in SHG reported instances where men forcibly removed them from village meetings or where husbands prohibited their wives from attending. As a solution, these women organized door-to-door pickups before meetings, ensuring all SHG members entered as a cohesive group.

Women-only LDPs may also lead to social sanctions placing the burden of change on women while ignoring the structural and cultural barriers that limit their advancement (Perriton, 2022; Loumpourdi, 2023). Behaviors encouraged in LDP, like assertiveness and self-promotion, may be perceived as violations of gender norms (Heilman et al., 2024). However, rigorous empirical evidence on the effectiveness and negative consequences of women-only LDP remains limited.

Similarly, women who receive negotiation training may face backlash when applying those skills, as negotiating can violate prevailing gender norms. Chotiputsilp and Kim (2021) found that women expressed concerns about being negatively perceived by employers after engaging in negotiation, a consequence not observed among men.

Such results confirm what Bowles et al. (2007) found in a lab experiment. When participants were asked to evaluate fictitious job candidates, based on interview transcripts and videos, women asking for higher compensation were assessed less favorably than men doing the same. Following this experiment, researchers tested strategies to avoid social backlash. For example, using a "supervisor-excuse" which redirect responsibility for the negotiation away from the interviewed to a fictitious team leader improved women's negotiation outcome (Bowles and Babcock, 2013).

Finally, interventions delivered through women-only SHG may result in limited impacts due to presence of barriers not considered by the program design. In India, increases women's access to agriculture-related information increased their participation in some agricultural decisions, but had limited impact on agricultural practices or outcomes, possibly due to financial constraints, social norms, and women's domestic responsibilities (Raghubanthan et al., 2019).

4   Systemic Interventions

Systemic interventions refer to comprehensive changes implemented across an entire system with the goal of fostering an environment conducive to women's leadership. These changes aim to counteract the obstacles women encounter that are beyond their individual control increasing women's opportunities and changing their motivation. Systemic interventions differ from quotas, training, or role-model approaches in that they target the broader institutional and organizational environment rather than individual women. The interventions include measures designed to eliminate all forms of discrimination in the recruitment, selection, and performance evaluation of women. They also aim to balance the unequal access women have to networks by offering leadership programs, mentorship, and networking initiatives. Moreover, these interventions encompass a variety of norms and policies that organizations can adopt to promote gender equality. These include providing job seekers and workers with detailed information to clarify the "rules of the game" at various stages of career advancement, such as recruitment, negotiation, hiring, and promotion. They also involve mandating pay transparency, holding decision-makers like human resources and managers accountable, and setting company-wide goals for gender equality.

4.1 Strategies to Reduce Process Discrimination

4.1.1 Effectiveness of Reducing Process Discrimination: Impacts on Descriptive and Substantive Leadership

Policy makers and researchers have examined a wide range of strategies to mitigate discrimination by targeting both individual and structural sources of bias. Most evidence to date focuses on hiring practices, but few studies allow knowing the effectiveness of interventions in shaping access to leadership roles, where the dynamics of bias may differ from entry-level recruitment, and virtually no evidence links these strategies to substantive leadership outcomes. Moreover, the existing findings present a mixed picture, highlighting both the potential and the limitations of current approaches.

One common approach is the implementation of diversity programs in companies, designed to raise awareness about biases and reduce their influence in decision-making. Despite their popularity, evidence shows that these programs often fall short of their intended goals (Bezrukova et al., 2012). In some cases, they may even backfire, triggering resistance, reinforcing stereotypes, or increasing employee bias-related tensions (Kalev et al., 2006).

In response to these limitations, socio-cognitive debiasing strategies rely on psychological principles to indirectly mitigate bias. These include interventions that promote consciousness-raising, accountability, emotional targeting through perspective-taking, targeting value consistency and self-worth, employing re-categorization, de-categorization, and cross-categorization techniques, as well as expert opinion (Paluck and Green, 2009). For instance, Kawakami et al. (2007) showed that counter-stereotypic association training, such as linking male faces with traits like "sensitive" and female faces with "strong", reduced gender bias in hiring decisions in a lab setting. Although promising, most of these strategies are tested in controlled environments, and their long-term effectiveness remains uncertain.

Another promising avenue focuses on structural changes in decision-making procedures to reduce the impact of bias. One widely cited example is the use of blind evaluations, such as anonymized applications. Goldin and Rouse (2000) demonstrated that blind auditions increased female selection in U.S. orchestras. However, subsequent field studies raise caution. Behaghel et al. (2015), for example, found that anonymizing CVs in French firms reduced call-back rates for minority applicants, likely because it hindered employers' ability to act on pro-diversity preferences.

Alternative structural measures include joint evaluation procedures, which allow evaluators to assess multiple candidates simultaneously, reducing reliance on stereotypical group averages (Bohnet et al., 2016). Similarly, independent assessments by individual reviewers tend to yield more objective outcomes than group deliberations, where dominant voices may distort judgments (Sunstein and Hastie, 2014). Procedural changes, such as shifting from opt-in to opt-out nomination systems, can also influence outcomes. In a lab setting, Erkal et al. (2022) found that women were less likely to volunteer for leadership roles under opt-in conditions, an effect mitigated when candidates were pre-selected and could opt out instead.

Additional effective strategies include the use of standardized skills and cognitive assessments (Bohnet, 2016), the commitment to clear, predefined cross-candidate evaluation criteria (Heilman et al., 2024), and mechanisms to identify individual contributions in group tasks (Heilman and Haynes, 2005). These interventions aim to reduce subjective judgments and increase fairness in selection processes.

4.1.2 Unintended Consequences and Design Considerations of Reducing Process Discrimination

While many interventions are designed to combat bias, some may produce unintended effects that undermine their effectiveness or even reinforce the very stereotypes they aim to eliminate. For example, diversity training can backfire by activating bias and generating animosity among employers or reinforcing stereotypes when it emphasizes group differences or implies that bias is widespread and therefore "normal" (Kalev et al., 2006; Banerjee et al., 2016; Duguid and Thomas-Hunt, 2015; Caleo and Heilman, 2019). Such framing may inadvertently justify biased attitudes instead of challenging them. Even de-biasing strategies grounded in psychological theory, such as perspective-taking or value consistency, offer only short-term gains when tested in laboratory settings, with limited evidence of their long-term impact or real-world applicability. Similarly, anonymization, while intended to reduce bias by removing identifying information, can interfere with positive discrimination efforts. Finally, group-based decision-making can introduce distortions if dominant voices unduly influence the outcome. As discussed in Section 3.2, Domínguez (2023) shows a paradoxical effect of gender quotas in evaluation committees: female candidates fared worse when women held the majority, as men's influence in these groups became more decisive.

4.2 Career Support Mechanisms

4.2.1 Effectiveness of Career Support Mechanisms: Impacts on Descriptive and Substantive Leadership

Mentorship, sponsorship, and networking initiatives aim to support women's career advancement and reduce gender disparities especially in professional environments. These interventions aim to mitigate some of the structural and social barriers women face in climbing the career ladder. The available evidence on the effectiveness of these mechanisms is mixed. While some studies report positive effects on career advancement, there is no evidence that they enable women to access leadership positions or to increase their substantive participation in such roles.

Mentoring programs are one of the most common tools. Defined as professional relationships in which a more experienced individual (mentor) supports a less experienced one (mentee), these programs offer career guidance, coaching, and emotional assistance (Mullen, 1994). While mentoring is not exclusive to women, advocates argue that targeted programs can help level the playing field by providing women with access to support and informal networks typically more available to men (Madsen, 2024).

Despite the prevalence of mentoring programs, evidence of their impact is mixed. Causal evaluations are rare due to the self-selection of participants. One exception is a study by Blau et al. (2020), which evaluated a randomized two-day mentoring workshop for junior female economists in U.S. institutions. The program included small-group discussions, feedback sessions on individual work, and plenary sessions covering various topics, from technical aspects like publishing and grants to broader issues like work-life balance. Participants were more likely to secure tenure-track positions over a follow-up period of up to fourteen years, especially in top institutions. This effect was attributed to increased publications and grant acquisition, though unobservable factors such as improved networks or role models may also have played a role.

Evidence from other settings shows more modest results. For instance, Bakhtiar et al. (2022) evaluated a six-month mentorship program in Ethiopia, where monthly meetings aimed to strengthen novice female entrepreneurs' managerial skills and encourage younger women, often operating informally or aspiring to enter the agribusiness sector, to formalize their businesses and improve their management practices. Causal evidence revealed that the mentees adopted the business practices imparted by their (female) mentors after the program, validating the effectiveness of well-trained mentors as conduits for information transfer, and expanded their businesses. However, implementing these new strategies did not lead to a significant profit increase, possibly

because the adoption of business practices was not of a large enough magnitude to change profits substantially. Similarly, a study in a Kenyan slum found that profits rose for female microentrepreneurs during the mentoring period, but the effect diminished as the mentor-mentee relationships ended, possibly due to the evolving nature of the problems that entrepreneurs face (Brooks et al., 2018). These findings suggest that mentorship can be a useful conduit for transferring practical knowledge, especially when tailored to the local business context, but its effects may be short-lived or context-dependent.

More broadly, evidence from non-experimental studies also suggests positive but small effects. For instance, Kalev et al. (2006), analyzing data from 708 U.S. firms and comparing various affirmative corporate actions over three decades, found that mentoring moderately helped reduce women's social isolation, performing better than diversity training but less effectively than accountability mechanisms such as diversity task forces or affirmative action plans.

Sponsorship programs represent an alternative or complement to mentorship. Sponsors provide advice and actively advocate for their protégés' advancement, leveraging their influence to create visibility and access to opportunities (Ibarra and O'Connor, 2022). Moreover, sponsors have a personal stake in their protégés' success, as their reputation can benefit from their advancement (Hewlett, 2013).

Despite growing interest, causal evidence on sponsorship remains scarce. Most studies are based on qualitative data, such as case studies or interviews (Hewlett, 2013; Foust-Cummings et al., 2011). One lab experiment by Baldiga and Coffman (2018) simulated a sponsorship relationship through a vote of confidence, where sponsors selected protégés instead of random assignment, or by linking the protégé's compensation to the sponsors. While sponsorship increased men's performance and willingness to compete, the same did not hold for women. The authors concluded that feedback on task performance may be more effective for encouraging women than being selected as protégés, though the limitations of lab settings should be kept in mind. For example, a lab setting might overlook significant benefits that could be realized within an organization, such as increased visibility and access to professional networks.

Networking programs also play a key role in professional development, particularly for women in male-dominated fields. These programs often combine networking opportunities with skills training and are designed to build confidence, foster belonging, and facilitate information exchange which can be instrumental for career progression (European Commission, 2024; Madsen, 2024). Beyond career-related benefits, they can offer

emotional and social support (Kram and Isabella, 1985) and help reduce feelings of isolation (Murphy et al., 2007). While there is no causal evidence, observational studies suggest positive impacts. For example, Friedman and Holtom (2002) found that minority employees who joined formal network groups had lower turnover intentions than those who did not.

4.2.2 Unintended Consequences and Design Considerations of Career Support Mechanisms

Despite their popularity and positive intentions, mentoring programs can have unintended and sometimes counterproductive consequences, especially when they are poorly designed or implemented without considering contextual factors. One key aspect of mentorship programs is their limited or short-lived impact. Several studies, including those by Bakhtiar et al. (2022) and Brooks et al. (2018), found that while mentoring can improve knowledge or practices, it does not always translate into better performance or sustained gains. These results suggest that without structural changes or continued support, mentorship alone may not be sufficient to promote lasting advancement.

Another concern relates to the gender composition of mentor-mentee pairs. If the main benefit of mentorship lies in gaining access to influential networks, and if these networks are predominantly male, then having a male mentor may be more advantageous. Ragins and Cotton (1999), analyzing a representative sample from various occupations, found that mentees (both men and women) with male mentors had better promotion and compensation outcomes than those with female mentors. These results suggest that male mentors can provide more career outcomes than female mentors because they have more power in organizations and also point to the mentor's role as a connector or sponsor rather than just a source of psychological support. However, these findings should be interpreted with caution due to methodological limitations, including potential unobserved confounding variables. Program design and setting also matter. Mentorship appears to be more effective in certain environments, such as academia (Blau et al., 2020), than in other sectors.

4.3 Changing Organizational Norms

4.3.1 Effectiveness of Changing Organizational Norms: Impacts on Descriptive and Substantive Leadership

Initiatives to change organizational norms include interventions such as ambiguity reduction, accountability mechanisms, and the establishment of diversity goals. Evidence on their effectiveness in leveling the playing field

in recruitment and negotiation is mixed, and there is little to no evidence linking these interventions to women's access to leadership positions or to their substantive representation.

Reducing ambiguity in job-related or contextual information has emerged as a cost-effective strategy to address gender disparities throughout the recruitment and negotiation processes. At the application stage, clarifying required qualifications increases applications from qualified women, without affecting application rates among men (Coffman et al., 2024). Similarly, adding contextual information, such as indicating how many people have started an application, has been shown to increase women's likelihood of applying more than men's, as demonstrated in a large-scale LinkedIn field experiment (Gee, 2019).

Ambiguity reduction also benefits women during salary negotiations. Bowles et al. (2005) showed in a lab setting that when salary comparison information is made available, gender differences in negotiation outcomes decrease. In a real-world natural experiment, Leibbrandt and List (2015) found that when job postings did not explicitly state that wages were negotiable (a high-ambiguity state), men were more likely to negotiate higher salaries than women. However, this gender gap disappeared when the job offer clearly stated that salaries were negotiable (a low-ambiguity state).

A specific subset of ambiguity-reducing interventions is pay transparency. The evidence on the effectiveness of pay transparency is mixed. Policies that publicize individual-level salaries have consistently reduced gender pay gaps, for example, in Canada (Baker et al., 2023) and the United States (Obloj and Zenger, 2022). However, less informative policies, such as revealing the mean or median pay by occupation and gender and those that place the burden of requesting information on workers, show more varied results. Some countries, like Denmark (Bennedsen et al., 2022) and the UK (Blundell, 2021; Blundell et al., 2025), have reported reductions in the gender pay gap, while studies in Germany, Austria, and the Slovak Republic have found null effects (Seitz and Sinha, 2022; Frimmel et al., 2022; Skoda, 2022). Moreover, transparency measures can sometimes unintentionally constrain wage growth overall by shifting bargaining power toward employers (Cullen and Pakzad-Hurson, 2023). In several cases, apparent reductions in the gender wage gap were driven not by increases in women's wages but by slower wage growth among men (Baker et al., 2023; Blundell et al., 2025).

Accountability mechanisms are another effective strategy to reduce discrimination in organizational decision-making. When human resources or managers are required to justify personnel decisions, bias is less likely to influence outcomes. Experimental studies (Bodenhausen et al., 1994; Levy et al., 1998) and field-based research

(Kalev et al., 2006; Castilla, 2015) support this approach. For example, Castilla (2015) found that introducing accountability and transparency in a company's performance reward system significantly narrowed the gap in performance-based rewards between white U.S.-born men and women, ethnic minorities, and non-U.S.-born employees.

Setting diversity goals is also gaining attention as a voluntary, non-punitive intervention aimed at increasing the representation of women. Unlike quotas, these goals are not legally binding and depend on internal motivation, competitiveness, or reputational incentives (Chilazi and Bohnet, 2021). They can help promote cultural change and signal evolving social norms within organizations. However, evaluating their causal impact is difficult due to potential selection bias: companies that adopt diversity goals may already be more committed to equity. Nevertheless, qualitative evidence and before-after comparisons suggest setting diversity goals could be effective to increase the representation of women (Rattan et al., 2019; Motel, 2016).

4.3.2 Unintended Consequences and Design Considerations of Changing Organizational Norms

While reducing ambiguity and increasing transparency can yield positive outcomes, these strategies also carry unintended consequences. For example, pay transparency, while often effective in narrowing gender gaps, may inadvertently limit wage growth for all employees. By standardizing salaries and making them public, employers may feel less pressure, or have less flexibility, to offer higher pay, especially to top performers (Cullen and Pakzad-Hurson, 2023). In some contexts, the narrowing of the gender pay gap has been driven more by reduced wage growth for men than by salary increases for women (Frimmel et al., 2022; Blundell et al., 2025).

Moreover, diversity goals, if not properly communicated and managed, can trigger skepticism or backlash. When goals are perceived as de facto quotas, they may evoke resistance or the belief that beneficiaries are being chosen for demographic reasons rather than merit. Additionally, when formal goals are achieved without deeper cultural shifts or structural change, they may create the illusion of progress without delivering substantive improvements (Chilazi and Bohnet, 2021).

5   Discussion and Conclusions

Accelerating women's leadership is crucial for several reasons that go beyond the equity and fairness motivations. When qualified women face barriers to reaching top positions, society misses out on the competence they bring, and organizations, institutions, and communities lose the opportunity to have the best person in leadership roles.

This review highlighted both the promise and limitations of existing policy interventions aimed at promoting women's leadership, particularly in developing contexts and for development outcomes. Taken together, the evidence base is still relatively narrow and uneven, with most robust findings concentrated in politics, particularly around gender quotas, and more limited insights available for corporate or community-level interventions. Below, we reflect on the three guiding questions of this paper: the effectiveness of interventions in increasing women's access to leadership positions or descriptive representation, the conditions under which descriptive representation translates into substantive influence, and the unintended consequences that can arise.[15]

Types of interventions and their effectiveness on descriptive representation

The most extensively studied intervention is the introduction of gender quotas, particularly in politics and with a strong focus on the Indian local government quotas programs, and to some extent for corporate boards. When well-designed and enforced, quotas reliably increase women's descriptive representation in elected office, on corporate boards, and within community development programs. However, their effectiveness varies depending on where they are applied: quotas targeting recruitment processes rather than leadership positions may inadvertently stall women's career advancement. Beyond quotas, evidence on role models, training, discrimination-reducing practices, mentorship, sponsorship and networking, and organizational change initiatives is growing but remains more fragmented. Role models can inspire women to seek leadership roles, but this effect is context-dependent and sometimes negative. Training initiatives have demonstrated positive impacts on women's political engagement and decision-making influence at the community level, though the link to formal leadership positions is less clear. Efforts to reduce discrimination, such as blind evaluations or procedural changes, show promise in controlled environments but have limited real-world testing. Mentorship, sponsorship, and networking interventions have yielded modest effects on career advancement, with little evidence that they translate into leadership roles. Similarly, interventions to change organizational norms, such as pay transparency

---

[15] Table A1 summarizes the quantitative findings on women's descriptive and substantive leadership.

or diversity goals, have mixed effects, sometimes improving equity but also risking superficial compliance or backlash.

From descriptive to substantive representation

A central concern is whether women's presence in leadership translates into real influence over decision making. The evidence here is mixed. In politics, female leaders often prioritize different policy areas than male counterparts, suggesting substantive participation, but this pattern is not universal and varies across contexts and electoral cycles. When women in leadership roles are able to exert real influence in decision-making, they often prioritize projects that address women's needs and contribute to broader development outcomes. In community development programs, women leaders' substantive influence is sometimes constrained by education, perceptions of their aptitudes, and time burdens. In the corporate sphere, evidence on whether board quotas enhance substantive decision-making remains inconclusive. These mixed findings underscore that descriptive representation is not sufficient for substantive change. Contextual factors, including gender norms, institutional design, and the availability of complementary supports such as training, play a decisive role in shaping outcomes. Interestingly, certain interventions, such as role models and training, can enhance women's participation in decision-making even in the absence of a leadership role.

Design considerations and unintended consequences

The review also highlights that interventions are not universally beneficial and may generate unintended effects. Quotas and role model policies, particularly in societies with entrenched gender biases, can trigger perceptions of unfair advantage, bias performance evaluations, reduce women's political engagement, or even discourage re-election of female incumbents. Training programs and diversity initiatives may provoke social sanctions or reinforce stereotypes if not carefully designed. Similarly, interventions that emphasize formal compliance, such as diversity goals or pay transparency without broader cultural change, risk creating an illusion of progress without substantive improvement. These findings underscore that achieving substantive participation depends critically on the design of interventions, their enforcement mechanisms, and their adaptation to local contexts, factors that determine whether change is sustainable or provokes backlash.

Implications for future research

Despite advances, significant gaps remain. The evidence base is heavily concentrated on political quotas, in a narrow set of countries, with much less known about other interventions and locations, especially outside the

political domain and in the corporate or civil society sectors. Future studies should broaden geographical coverage and consider diverse contexts to assess the generalizability of findings. More work is also needed to unpack the mechanisms that link descriptive representation to substantive influence, and to identify the conditions under which interventions are most effective. Careful evaluation of potential unintended consequences is essential for designing interventions that promote not just women's presence in leadership but also their meaningful participation and influence.

Future research should move beyond assessing whether women access descriptive and substantive leadership to systematically examine the quality and characteristics of their decision-making across different types of interventions. Evidence from gender quotas in politics, and to a lesser extent in corporate boards, suggests that women sometimes make different decisions than men, prioritizing women's needs and broader development outcomes. However, this evidence is limited both in scope and context. Understanding why women make certain policy choices in some contexts but not others is critical for identifying the mechanisms that translate descriptive representation into substantive influence. Expanding this analysis to all interventions designed to enhance women's leadership would provide valuable insights into how, when, and under what conditions women's participation leads to more effective, inclusive, and development-oriented outcomes.

The evidence reviewed also highlighted that in contexts where gender quotas are in place, limited education can be a barrier to substantive participation. Similarly, gender bias and backlash shape the impacts of most interventions. Building on this, further research should aim to systematize what types of complementary measures, such as training initiatives or strategies to mitigate backlash, enhance effectiveness and under which conditions they do so.

Summing up, accelerating women's leadership across various domains such as the workplace, politics, and community remains a multifaceted challenge due to numerous barriers. While some interventions have shown effectiveness, overall progress remains slow. Comprehensive approaches that simultaneously target multiple barriers at various stages of the pipeline of women leaders and support women entering leadership positions through quotas are needed for sustainable progress. Leadership development does not occur in isolation but depends on access to challenging opportunities as well as recognition and support from key decision-makers. When women are systematically less likely than men to access these opportunities and networks of support, stand-alone interventions cannot fully close the gap.

References

Adams, R. B., and Ferreira, D. 2009. "Women in the boardroom and their impact on governance and performance." *Journal of Financial Economics*, 94(2): 291–309.

Afridi, F., Iversen, V., and Sharan, M.R. 2017. "Women Political Leaders, Corruption, and Learning: Evidence from a Large Public Program in India." *Economic Development and Cultural Change*, 66(1): 1–30.

Agurto, M., Bazan, M., Hari, S., Sarangi, S. (2023). "To inspire and to inform: The Role of Role Models." Unpublished manuscript.

Ahern, K.R., and Dittmar, A.K. 2012. "The Changing of the Boards: The Impact on Firm Valuation of Mandated Female Board Representation." The Quarterly Journal of Economics, 127(1): 137–197.

Arceo-Gomez, E, Campos-Vezquez, R. 2019. "Gender stereotypes: The case of MisProfesores.com in Mexico." *Economics of Education Review*, 72: 55-65.

Asgari, S., Dasgupta, N., Stout, J.G. 2012. "When Do Counterstereotypic Ingroup Members Inspire Versus Deflate? The Effect of Successful Professional Women on Young Women's Leadership Self-Concept." *Personality and Social Psychology Bulletin*, 38(3): 370–383.

Ashraf, N., Bau, N., Low, C., McGinn, K. 2020. "Negotiating a better future: How interpersonal skills facilitate intergenerational investment." *The Quarterly Journal of Economics*, 135(2): 1095–1151.

Ashraf, N., Bau, N., Low, C., Shan, X. 2025. "Then years of relational power: The long-run effects of teaching negotiation skills to adolescent girls." NBER Working Paper 34339.

Avitabile, C., Muñoz Boudet, A.M., David, J.M.V., Lemos, R.F. 2025. "Reducing Gender Gaps in Management: Experimental Evidence from Peru." World Bank Policy Brief.

Avolio, B.J., Reichard, R.J., Hannah, S.T., Walumbwa, F.O., Chan, A. 2009. "A meta-analytic review of leadership impact research: Experimental and quasi-experimental studies." *The Leadership Quarterly*, 20(5): 764–784.

Babcock, L., Recalde, M.P., Vesterlund, L., Weingart, L. 2017. "Gender Differences in Accepting and Receiving Requests for Tasks with Low Promotability." *American Economic Review*, 107(3): 714-747.

Bagues, M., Esteve-Volart, B. 2010. "Can Gender Parity Break the Glass Ceiling? Evidence from a Repeated Randomized Experiment." *Review of Economic Studies*, 77(4): 1301-1328

Bagues, M., Campa, P. 2021. "Can gender quotas in candidate lists empower women? Evidence from a regression discontinuity design." *Journal of Public Economics*, 194, 104315.

Baker, M., Halberstam, Y., Kroft, K., Mas, A., Messacar, D. 2023. "Pay Transparency and the Gender Gap." *American Economic Journal: Applied Economics*, 15(2): 157–183.

Bakhtiar, M.M., Bastian, G., Goldstein, M. 2022. "Business Training and Mentoring: Experimental Evidence from Women-Owned Microenterprises in Ethiopia." *Economic Development and Cultural Change*, 71(1): 151–183.

Baldiga, N.R., Coffman, K.B. 2018. "Laboratory Evidence on the Effects of Sponsorship on the Competitive Preferences of Men and Women." *Management Science*, 64(2): 888–902.

Baltrunaite, A., Bello, P., Casarico, A., andProfeta, P. 2014. "Gender quotas and the quality of politicians." *Journal of Public Economics*, 118: 62–74.

Baltrunaite, A., Casarico, A., Profeta, P., Savio, G. 2019. "Let the voters choose women." *Journal of Public Economics*, 180, 104085.

Ban, R., and Rao, V. 2008. "Tokenism or Agency? The Impact of Women's Reservations on Village Democracies in South India." Economic Development and Cultural Change, 56(3): 501–530.

Ban, R., and Rao, V. 2009. "Is deliberation equitable? Evidence from transcripts of village meetings in South India." Policy Research Working Paper Series 4928, The World Bank.

Banerjee, A.V. 2013. "Microcredit Under the Microscope: What Have We Learned in the Past Two Decades, and What Do We Need to Know?" *Annual Review of Economics*, 5(5): 487–519.

Banerjee, A., Duflo, E., Imbert, C., Pande, R. 2016. "Entry, Exit and Candidate Selection: Evidence from India." Unpublished manuscript.

Bardhan, P.K., Mookherjee, D., and Torrado, M.P. 2010. "Impact of Political Reservations in West Bengal Local Governments on Anti-Poverty Targeting." *Journal of Globalization and Development*, 1(1): 1-38.

Barnes, T.D. and Jones, M.P. 2018. "Women's Representation in Argentine National and Subnational Governments." In L.A. Schwindt-Bayer (Ed.), <u>Gender and Representation in Latin America</u>, Chapter 7: 121-139.

Beaman, L., Duflo, E., Pande, R., Topalova, P. 2006. "Women Politicians, Gender Bias, and Policy-making in Rural India." Background paper for the State of the World's Children Report 2007.

Beaman, L., Chattopadhyay, R., Duflo, E. Pande, R., Topalova, P. 2009. "Powerful Women: Does Exposure Reduce Bias?" *The Quarterly Journal of Economics*, 124(4): 1497–1540.

Beaman, L., Duflo, E., Pande, R., Topalova, P. 2010. "Political reservation and substantive representation: Evidence from Indian village councils." In *India Policy Forum 2010/11:* 159-191. National Council of Applied Economic Research & Brookings Institution New Delhi & Washington, DC.

Beaman, L., Duflo, E., Pande, R., Topalova, P. 2012. "Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India." *Science*, 335(6068): 582–586.

Beath, A., Christia, F., Enikolopov, R. 2013. "Empowering Women through Development Aid: Evidence from a Field Experiment in Afghanistan." *American Political Science Review*, 107(3): 540–557.

Behaghel, L., Crépon, B., Le Barbanchon, T. 2015. "Unintended Effects of Anonymous Résumés." *American Economic Journal: Applied Economics*, 7(3): 1–27.

Bennedsen, M., Simintzi, E., Tsoutsoura, M., Wolfenzon, D. 2022. "Do Firms Respond to Gender Pay Gap Transparency?" *Journal of Finance*, 77(4): 2051–2091.

Berniell, I., Marchionni, M., Pedrazzi, J., Viollaz, M. 2025. "Women Political Leaders as Agents of Environmental Change." IZA Discussion Paper 17920.

Bertrand, M. 2018. "Coase Lecture – The Glass Ceiling." *Economica*, *85*(338): 205–231.

Bertrand, M., Black, S.E., Jensen, S., Lleras-Muney, A. 2019. "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., Folke, O., Persson, T., and Rickne, J. 2017. "Gender Quotas and the Crisis of the Mediocre Man: Theory and Evidence from Sweden." *The American Economic Review*, 107(8): 2204–2242.

Bettinger, E.P., Long, B.T. 2005. "Do Faculty Serve as Role Models? The Impact of Instructor Gender on Female Students." *American Economic Review*, 95(2): 152–157.

Bezrukova, K., Jehn, K.A., Spell, C.S. 2012. "Reviewing Diversity Training: Where We Have Been and Where We Should Go." *Academy of Management Learning & Education*, 11(2): 207–227.

Bhalotra, S., Clots-Figueras, I., Iyer, L. 2018. "Pathbreakers? Women's Electoral Success and Future Political Participation." *The Economic Journal*, 128(613): 1844–1878.

Bhavnani, R.R. 2009. "Do Electoral Quotas Work after They Are Withdrawn? Evidence from a Natural Experiment in India." *The American Political Science Review*, 103(1): 23–35.

Biasi, B., Sarsons, H. 2022. "Flexible Wages, Bargaining, and the Gender Gap." *The Quarterly Journal of Economics*, 137(1): 215–266.

Blau, F.D., Kahn, L.M. 2017. "The Gender Wage Gap: Extent, Trends, and Explanations." *Journal of Economic Literature*, *55*(3): 789–865.

Blau, F.D., Currie, J.M., Croson, R.T.A., Ginther, D.K. 2020. "Can Mentoring Help Female Assistant Professors? Interim Results from a Randomized Trial." *American Economic Review*, 100(2): 348–352.

Blundell, J. 2021. "Wage responses to gender pay gap reporting requirements." CEP Discussion Papers 1750.

Bochenkova, A., Buonanno, P., Galletta, S. 2023. "Fighting violence against women: The role of female political representation." *Journal of Development Economics*, 164, 103140.

Bodenhausen, G., Kramer, G., Süsser, K. 1994. "Happiness and Stereotypic Thinking in Social Judgment." *Journal of Personality and Social Psychology*, 66: 621–632.

Bohnet, I. 2016. "Orchestrating Smarter Evaluation Procedures." In <u>What Works,</u> Harvard University Press, 123–145.

Bordalo, P., Coffman, K., Gennaioli, N., Shleifer, A. 2019. "Beliefs about Gender." *American Economic Review*, 109(3): 739–773.

Bose, N., Das, S. 2018. "Political reservation for women and delivery of public works program." *Review of Development Economics*, 22(1): 203–219.

Bossavie, L., Kanninen, O. 2018. "What Explains the Gender Gap Reversal in Education? Theory and Evidence." Policy Research Working Paper 8303. The World Bank.

Bowles, H.R., Babcock, L., McGinn, K.L. 2005. "Constraints and triggers: Situational mechanics of gender in negotiation." *Journal of Personality and Social Psychology*, 89(6): 951–965.

Bowles, H.R., Babcock, L., Lai, L. 2007. "Social incentives for gender differences in the propensity to initiate negotiations: Sometimes it does hurt to ask." *Organizational Behavior and Human Decision Processes*, 103(1): 84–103.

Bowles, H.R., Babcock, L. 2013. "How Can Women Escape the Compensation Negotiation Dilemma? Relational Accounts Are One Answer." *Psychology of Women Quarterly*, 37(1): 80–96.

Breda, T., Grenet, J., Monnet, M., Van Effenterre, C. 2020. "Do Female Role Models Reduce the Gender Gap in Science? Evidence from French High Schools." IZA Discussion Paper 13163.

Brollo, F., Troiano, U. 2016. "What happens when a woman wins an election? Evidence from close races in Brazil." *Journal of Development Economics*, 122: 28–45.

Broockman, D.E. 2014. "Do female politicians empower women to vote or run for office? A regression discontinuity approach." *Electoral Studies*, 34: 190–204.

Brooks, W., Donovan, K., Johnson, T.R. 2018. "Mentors or Teachers? Microenterprise Training in Kenya." *American Economic Journal: Applied Economics*, 10(4): 196–221.

Brown, R., Mansour, H., O'Connell, S.D., Reeves, J. 2025. "Gender Differences in Political Career Progression." *Journal of Economic Behavior & Organization*, 230.

Buser, T., Niederle, M., Oosterbeek, H. 2014. "Gender, Competitiveness, and Career Choices." *The Quarterly Journal of Economics*, 129(3): 1409–1447.

Buser, T., Peter, N., Wolter, S.C. 2022. "Willingness to compete, gender and career choices along the whole ability distribution." *Experimental Economics*, 25(5): 1299–1326.

Caleo, S., Heilman, M.E. 2019. "What could go wrong? Some unintended consequences of gender bias interventions." *Archives of Scientific Psychology*, 7(1): 71–80.

Campbell, D.E., Wolbrecht, C. 2006. "See Jane Run: Women Politicians as Role Models for Adolescents." *Journal of Politics*, 68(2): 233-247.

Card, D., Cardoso, A., Kline, P. 2015. "Bargaining, Sorting, and the Gender Wage Gap: Quantifying the Impact of Firms on the Relative Pay of Women." *The Quarterly Journal of Economics*, 131(2): 633-686.

Carrell, S.E., Page, M.E., West, J.E. 2010. "Sex and Science: How Professor Gender Perpetuates the Gender Gap." *The Quarterly Journal of Economics*, 125(3): 1101–1144.

Casad, B.J., Franks, J.E., Garasky, C.E., Kittleman, M.M., Roesler, A.C., Hall, D.Y., Petzel, Z.W. 2021. "Gender inequality in academia: Problems and solutions for women faculty in STEM." *Journal of Neuroscience Research*, 99(1), 13–23.

Casas-Arce, P., Saiz, A. 2015. "Women and Power: Unpopular, Unwilling, or Held Back?" *Journal of Political Economy*, 123(3): 641–669.

Castilla, E.J. 2015. "Accounting for the gap: A firm study manipulating organizational accountability and transparency in pay decisions." *Organization Science*, 26(2): 311–333.

Chattopadhyay, R., Duflo, E. 2004. "Women as Policy Makers: Evidence from a Randomized Policy Experiment in India." *Econometrica*, 72(5): 1409–1443.

Cheek, J.Z., Corbett, P.E. 2024. "Public decision making by women's self-help groups and its contributions to women's empowerment: Evidence from West Bengal, India." *World Development Perspectives*, 33, 100549.

Chen, W.R., Miller, K.D. 2007. "Situational and institutional determinants of firms' R&D search intensity." *Strategic Management Journal*, 28(4): 369–381.

Chen, L. 2010. "Do Gender Quotas Influence Women's Representation and Policies?" *The European Journal of Comparative Economics*, 7(1): 13-60.

Chen, Y., Fan, E., Ho, Y., Lee, M., Liu, J. 2025. "The impact of female political leadership on gender attitudes: Evidence from Taiwan's local councils." *Journal of Development Economics*, 174, 103451.

Cheng, L., Hao, M., Xiao, L., Wang, F. 2022. "Join us: Dynamic norms encourage women to pursue STEM." *Current Psychology*, 41(9): 5967–5977.

Chilazi, S., Bohnet, I. 2021. "Behavioral Economics: Promoting Diversity, Equity, and Inclusion Through Goal-Setting." In A. Samson (Ed.) <u>The Behavioral Economics Guide 2021</u>.

Chiplunkar, G., Goldberg, P.K. 2024. "Aggregate implications of barriers to female entrepreneurship." *Econometrica*, 92(6): 1801-1835.

Chotiputsilp, B., Kim, T. 2021. "The Cost of Salary Negotiation: An Experimental Evaluation with Job Seekers in Thailand." Unpublished manuscript.

Clarke, M. 2011. "Advancing women's careers through leadership development programs." *Employee Relations*, 33(5): 498–515.

Clayton, A. 2015. "Women's Political Engagement Under Quota-Mandated Female Representation: Evidence From a Randomized Policy Experiment." *Comparative Political Studies*, 48(3): 333–369.

Clayton, A., Zetterberg, P. 2018. "Quota Shocks: Electoral Gender Quotas and Government Spending Priorities Worldwide." *The Journal of Politics*, 80(3): 916-932.

Clayton, A., Tang, B. 2018. "How women's incumbency affects future elections: Evidence from a policy experiment in Lesotho." *World Development*, 110: 385-393.

Clayton, A., Dulani, B., Kosec, K., Robinson, A. 2023. "Gender, Deliberation, and Natural Resource Governance: Experimental Evidence from Malawi." IFPRI Discussion Paper 2232.

Coffman, K.B., Exley, C.L., Niederle, M. 2021. "The Role of Beliefs in Driving Gender Discrimination." *Management Science*, 67(6): 3551–3569.

Coffman, K.B., Collis, M.R., Kulkarni, L. 2024. Whether to Apply. *Management Science*, 70(7): 4167-4952.

Comi, S., Grasseni, M., Origo, F., Pagani, L. 2020. "Where Women Make a Difference: Gender Quotas and Firms' Performance in Three European Countries." *ILR Review*, 73(3): 768–793.

Correll, S.J., Benard, S., Paik, I. 2007. "Getting a Job: Is There a Motherhood Penalty?" *American Journal of Sociology*, 112(5): 1297–1338.

Croson, R., Gneezy, U. 2009. "Gender Differences in Preferences." *Journal of Economic Literature*, 47(2): 448–474.

Cullen, Z.B., Pakzad-Hurson, B. 2023. "Equilibrium Effects of Pay Transparency." *Econometrica*, 91(3): 765–802.

Dahlerup D., Nordlund, A.T. 2004. "Gender quotas: a key to equality? A case study of Iraq and Afghanistan." *European Political Science*, 3(3): 91–98.

De Paola, M., Scoppa, V., Lombardo, R. 2010. "Can gender quotas break down negative stereotypes? Evidence from changes in electoral rules." *Journal of Public Economics*, 94(5): 344–353.

De Paola, M., Scoppa, V. 2015. "Gender Discrimination and Evaluators' Gender: Evidence from Italian Academia." *Economica*, 82(325): 162-188.

De Paola, M., Gioia, F., Scoppa, V. 2018. "Teamwork, Leadership and Gender." IZA Discussion Paper 11861.

Debebe, G., Anderson, D., Bilimoria, D., Vinnicombe, S.M. 2016. "Women's Leadership Development Programs: Lessons Learned and New Frontiers." *Journal of Management Education*, 40(3): 231–252.

Dee, T.S. 2005. "A Teacher like Me: Does Race, Ethnicity, or Gender Matter?" *The American Economic Review*, 95(2): 158–165.

Dee, T.S. 2007. "Teachers and the Gender Gaps in Student Achievement." *The Journal of Human Resources*, 42(3): 528–554.

Deininger, K., Jin, S., Nagarajan, H.K., Xia, F. 2015. "Does Female Reservation Affect Long-Term Political Outcomes? Evidence from Rural India." *The Journal of Development Studies*, 51(1): 32–49.

Deininger, K., Jin, S., Nagarajan, H.K., Singh, S.K. 2022. "Addressing Declining Female Labor Force Participation in India: Does Political Empowerment Make a Difference?" *Journal of Development Studies*, 58(9): 1772–1790.

Del Carpio, L., Guadalupe, M. 2022. "More Women in Tech? Evidence from a Field Experiment Addressing Social Identity." *Management Science*, 68(5): 3196–3218.

Deschamps, P. 2020. "Gender Quotas in Hiring Committees: A Boon or a Bane for Women?" Management Science, 70(11): 7345-8215.

Deshpande, A., Khanna, S. 2021. "Can weak ties create social capital? Evidence from Self-Help Groups in rural India." *World Development*, 146, 105534.

Devlin, C., Elgie, R. 2008. "The effect of increased women's representation in parliament: the case of Rwanda." *Parliamentary Affairs*, 61(2): 237–254.

Domínguez, J.J. 2023. "Diversified committees in hiring processes: Lab evidence on group dynamics." *Journal of Economic Psychology*, 97, 102644.

Blundell, J., Duchini, E., Simion, S., Turrell, A. 2025. "Pay transparency and gender equality." American Economic Journal: Economic Policy, 17(2): 418-445.

Duguid, M.M., Thomas-Hunt, M.C. 2015. "Condoning stereotyping? How awareness of stereotyping prevalence impacts expression of stereotypes." *Journal of Applied Psychology*, 100(2): 343–359.

Dupas, P., Sasser Modestino, A., Niederle, M., Wolfers, J., The Seminar Dynamics Collective 2021. "Gender and the dynamics of economics seminars." NBER Working Paper 28494.

Eckel, C.C., Grossman, P.J. 2008. Chapter 113 "Men, Women and Risk Aversion: Experimental Evidence." In C. R. Plott & V. L. Smith (Eds.), *Handbook of Experimental Economics Results*, 1:1061–1073.

Ely, R.J., Ibarra, H., Kolb, D.M. 2011. "Taking Gender Into Account: Theory and Design for Women's Leadership Development Programs." *Academy of Management Learning & Education*, 10(3): 474–493.

Erkal, N., Gangadharan, L., Xiao, E. 2022. "Leadership selection: Can changing the default break the glass ceiling?" *The Leadership Quarterly*, 33(2), 101563.

Esteve-Volart, B., Bagues, M. 2012. "Are women pawns in the political game? Evidence from elections to the Spanish Senate." *Journal of Public Economics*, 96(3): 387–399.

European Commission. 2024. "2024 Report on Gender Equality in the EU."

Exley, C.L., Kessler, J.B. 2022. "The Gender Gap in Self-Promotion." *The Quarterly Journal of Economics*, 137(3): 1345–1381.

Exley, C.L., Nielsen, K. 2024. "The Gender Gap in Confidence: Expected but Not Accounted For." *American Economic Review*, 114(3): 851–885.

Ferrari, G., Ferraro, V., Profeta, P., and Pronzato, C. 2022. "Do Board Gender Quotas Matter? Selection, Performance, and Stock Market Effects." *Management Science*, 68(8): 5618–5643.

Foos, F., Gilardi, F. 2020. "Does Exposure to Gender Role Models Increase Women's Political Ambition? A Field Experiment with Politicians." *Journal of Experimental Political Science*, 7(3): 157–166.

Foust-Cummings, H., Dinolfo, S., Kohler, J. 2011. "Sponsoring women to success." Catalyst.

Fox, R.L., Lawless, J.L. 2010. "If Only They'd Ask: Gender, Recruitment, and Political Ambition." *The Journal of Politics*, 72(2): 310–326.

Fox, R.L., Lawless, J.L. 2014. "Uncovering the Origins of the Gender Gap in Political Ambition." *American Political Science Review*, 108(3): 499–519.

Franceschet S., Piscopo, J.M. 2008. "Gender quotas and women's substantive representation: lessons from Argentina." *Politics & Gender*, 4(3): 393–425.

Friedman, R.A., Holtom, B. 2002. "The effects of network groups on minority employee turnover intentions." *Human Resource Management*, 41(4): 405–421.

Frimmel, W., Schmidpeter, B., Wiesinger, R., Winter-Ebmer, R. 2022. "Mandatory wage posting, bargaining and the gender wage gap." Economics Working Papers 2022-02, Department of Economics, Johannes Kepler University Linz, Austria.

Fujiwara, T., Hilbig, H., Raffler, P. 2024. "Biased Party Nominations as a Source of Women's Electoral Underperformance." Unpublished manuscript.

Gajwani, K., and Zhang, X. 2015. "Gender and Public Goods Provision in Tamil Nadu's Village Governments." *The World Bank Economic Review*, 29(2), 234–261.

Garcia-Hernandez, A., Grossman, G., Michelitch, K. 2022. "Gender gap in politician performance and its determinants." Ruhr Economic Papers 972.

Gardiner, A., Chur-Hansen, A., Turnbull, D., Semmler, C. 2023. "Qualitative evaluations of women's leadership programs: A global, multi-sector systematic review." *Australian Journal of Psychology*, 75(1): 1-20.

Gaucher, D., Friesen, J., Kay, A.C. 2011. "Evidence that gendered wording in job advertisements exists and sustains gender inequality." *Journal of Personality and Social Psychology*, 101(1): 109–128.

Gee, L.K. 2019. "The More You Know: Information Effects on Job Application Rates in a Large Field Experiment." *Management Science*, 65(5): 2077–2094.

Ghani, E., Kerr, W.R., O'Connell, S.D. 2014. "Political reservations and women's entrepreneurship in India." *Journal of Development Economics*, 108: 138–153.

Goldin, C. 2014. "A Grand Gender Convergence: Its Last Chapter." *American Economic Review*, 104(4): 1091–1119.

Goldin, C. 2021. Career and Family: Women's Century-Long Journey Toward Equity. Princeton University Press: Princeton NJ.

Goldin, C., Rouse, C. 2000. "Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians." *American Economic Review*, 90(4): 715–741.

Goyal, T. 2023. "Representation from Below: How Women's Grassroots Party Activism Promotes Equal Political Participation." *American Political Science Review*, 118(3): 1415-1430.

Goyal T. 2025. "Local political representation as a pathway to power: A natural experiment in India." *American Journal of Political Science*, 69: 516–530.

Grillos, T. 2018. "Women's participation in environmental decision-making: Quasi-experimental evidence from northern Kenya." *World Development*, 108: 115–130.

Guerin, C., Maharasingam-Shah, E. 2020. "Public Figures, Public Rage. Candidate abuse on social media." Institute for Strategic Dialogue.

Haeckl, S., Onozaka, Y. 2025. "Does Gender Matter for Leaders' Behavior and Effectiveness? Insights from A Field Experiment." UiS Working Papers in Economics and Finance. University of Stavanger.

Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E., Puranen B. 2022. World Values Survey Wave 7 (2017-2022) Cross-National Data-Set. Version: 4.0.0. World Values Survey Association.

Hannah, C., Giroux, S., Krell, N., Lopus, S., McCann, L.E., Zimmer, A., Caylor, K.K., Evans, T.P. 2021. "Has the vision of a gender quota rule been realized for community-based water management committees in Kenya?" *World Development*, 137, 105154.

Harrison, G.W., Ross, D., Todd Swarthout, J. 2025. "Gender, Confidence, and the Mismeasure of Intelligence, Competitiveness and Literacy." *Journal of Political Economy*, Accepted.

Heilman, M.E., McCullough, W.F., Gilbert, D. 1996. "The other side of affirmative action: Reactions of nonbeneficiaries to sex-based preferential selection." *Journal of Applied Psychology*, 81(4): 346–357.

Heilman, M. E., Haynes, M.C. 2005. "No Credit Where Credit Is Due: Attributional Rationalization of Women's Success in Male--Female Teams." *Journal of Applied Psychology*, 90(5): 905–916.

Heilman, M.E., Parks-Stamm, E.J. 2007. "Gender Stereotypes in the Workplace: Obstacles to Women's Career Progress." In S.J. Correll (Ed.), *Social Psychology of Gender*, 24: 47–77. Emerald Group Publishing Limited.

Heilman, M.E., Caleo, S., Manzi, F. 2024. "Women at Work: Pathways from Gender Stereotypes to Gender Bias and Discrimination." *Annual Review of Organizational Psychology and Organizational Behavior*, 11: 165–192.

Herbert, C., Yimfor, E., Tookes, H. 2025. "Financing the next VC-Backed Startup: The role of gender." NBER Working Paper 33943.

Hewlett, S.A. 2013. "Forget a Mentor, Find a Sponsor: The New Way to Fast-Track Your Career." *Harvard Business Review Press*.

Hewlett, S.A., Marshall, M., Sherbin, L. 2013. "How Diversity Can Drive Innovation." *Harvard Business Review*.

Hidrobo, M., Kosek, K., Gartaula, H., Van Campenhout, B., Carrillo, L. (2024). "Making Complementary Agricultural Resources, Technologies, and Services More Gender-responsive." *Global Food Security*, 42, 100778.

Hsieh, C., Klenow, P. 2009. "Misallocation and manufacturing TFP in China and India." *Quarterly Journal of Economics*, 124: 1403–1448.

Hughes, M.M., Paxton, P., Krook, M.L. 2017. "Gender Quotas for Legislatures and Corporate Boards." *Annual Review of Sociology*, 43: 331–52

Hughes, M.M., Finkel, M.K., Howell, B. 2022. Gender Parity in Civil Service (Gen-PaCS) Dataset. Version 1.1. Released November 1. Gender Inequality Research Lab, University of Pittsburgh. https://www.girl.pitt.edu/gen-pacs-data

Hunt, J. 2016. "Why do women leave science and engineering?" *ILR Review*, 69(1): 199-226.

Ibarra, H., Carter, N.M., Silva, C. 2010. "Why Men Still Get More Promotions Than Women." *Harvard Business Review*, 88(9): 80–85.

Ibarra, H., Obodaru, O. 2011. "Women and vision thing." Harvard Business Review.

Ibarra, H., O'Connor, K. (2022). "Designing leadership programs for women that really work." https://herminiaibarra.com/designing-leadership-programs-for-women-that-really-work/

Inzlicht, M., Ben-Zeev, T. 2000. "A Threatening Intellectual Environment: Why Females Are Susceptible to Experiencing Problem-Solving Deficits in the Presence of Males." *Psychological Science*, 11(5): 365–371.

Iyer, L., Mani, A., Mishra, P., Topalova, P. 2012. "The Power of Political Voice: Women's Political Representation and Crime in India." *American Economic Journal: Applied Economics*, 4(4): 165–193.

IPU and UN Women. 2025. "Women in Politics 2025: Situation on 1 January 2025."

Kabeer, N. 1999. "Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment." *Development and Change*, 30(3): 435-464.

Kabeer, N. 2005. "Gender Equality and Women's Empowerment: A Critical Analysis of the Third Millennium Development Goal." *Gender and Development*, 13(1): 13-24.

Kalev, A., Dobbin, F., Kelly, E. 2006. "Best Practices or Best Guesses? Assessing the Efficacy of Corporate Affirmative Action and Diversity Policies." *American Sociological Review*, 71(4): 589–617.

Kalsi, P. 2017. "Seeing is believing- can increasing the number of female leaders reduce sex selection in rural India?" *Journal of Development Economics*, 126: 1–18.

Kanthak, K., Woon, J. 2015. "Women Don't Run? Election Aversion and Candidate Entry." *American Journal of Political Science*, 59(3): 595–612.

Kapila, M., Kalia, P. 2022. "Impact of microcredit on income and employment of self-help group members in Punjab: Does credit size matter?" International Social Science Journal, 72(243): 193–208.

Kathlene, L., 1994. "Power and influence in state legislative policymaking: The interaction of gender and position in committee hearing debates." *American Political Science Review*, 88(3): 560-576.

Kawakami, K., Dovidio, J.F., van Kamp, S. 2007. "The Impact of Counterstereotypic Training and Related Correction Processes on the Application of Stereotypes." *Group Processes & Intergroup Relations*, 10(2): 139–156.

Kerevel, Y.P., Atkeson L.R. 2013. "Explaining the marginalization of women in legislative institutions." *Journal of Politics*, 75(4): 980–992.

Kirkeboen, L.J., Leuven, E., Mogstad, M. 2016. "Field of Study, Earnings, and Self-Selection." *The Quarterly* Journal of Economics, 131(3): 1057–1111.

Kosec, K., Jordan, K., Sudha, N., Raghunathan, K., Soumyajit, R. 2024. "Can role models and skills training increase women's voice in asset selection? Experimental evidence from Odisha, India." IFPRI discussion papers 2314, International Food Policy Research Institute (IFPRI).

Kram, K., Isabella, L. 1985. "Mentoring Alternatives: The Role of Peer Relationships in Career Development." *Academy of Management Journal*, 28: 110–132.

Kugler, K., Reif, J., Kaschner, T., Brodbeck, F. 2018. "Gender Differences in the Initiation of Negotiations: A Meta-Analysis." *Psychological Bulletin*, *144*.

Lacerenza, C.N., Reyes, D.L., Marlow, S.L., Joseph, D.L., Salas, E. 2017. "Leadership training design, delivery, and implementation: A meta-analysis." *Journal of Applied Psychology*, 102(12): 1686–1718.

Lassébie, J. 2020. "Gender quotas and the selection of local politicians: Evidence from French municipal elections." *European Journal of Political Economy*, 62, 101842.

Latura, A., Weeks, A.C. 2023. "Corporate Board Quotas and Gender Equality Policies in the Workplace." *American Journal of Political Science*, 67(3): 606–622.

Le Barbanchon, T., Sauvagnat, J. 2022. "Electoral Competition, Voter bias and Women in Politics." *Journal of the European Economic Association*, 20(1): 352-394.

Leibbrandt, A., List, J.A. 2015. "Do Women Avoid Salary Negotiations? Evidence from a Large-Scale Natural Field Experiment." *Management Science*, 61(9): 2016–2024.

Levy, S.R., Stroessner, S.J., Dweck, C.S. 1998. "Stereotype formation and endorsement: The role of implicit theories." *Journal of Personality and Social Psychology*, 74(6): 1421–1436.

Leone, M. 2019. "Women as decision makers in community forest management: Evidence from Nepal." *Journal of Development Economics*, 138: 180–191.

Lippmann, Q. 2022. "Gender and lawmaking in times of quotas." *Journal of Public Economics*, 207, 104610.

Longman, T. 2006. "Rwanda: achieving equality or serving an authoritarian state?" In G Bauer, HE Britton (Eds) Women in African Parliaments, 133–150. Boulder, CO: Lynne Rienner.

Loumpourdi, M. 2023. "Leadership development programmes: Part of the solution or part of the problem of women's under-representation in leadership?" *Gender in Management: An International Journal*, 38(5): 619–633.

Löwe, M., Rinne, U., Sonnabend, H. 2023. "Gender role models and early-career decisions." *Applied Economics Letters*, 30(11): 1526–1530.

Macchiavello, R., Menzel, A., Rabbani, A., Woodruff, C. 2020. "Challenges of Change: An Experiment Promoting Women to Managerial Roles in the Bangladeshi Garment Sector." NBER Working Paper 27606.

Madsen, S.R. 2024. Handbook of Research on Gender and Leadership: Second Edition. Edward Elgar Publishing Limited.

Markowsky, E., Beblo, M. 2022. "When do we observe a gender gap in competition entry? A meta-analysis of the experimental literature." Journal of Economic Behavior & Organization, 198: 139–163.

Matsa, D., Miller, A. 2011. "A Female Style in Corporate Leadership? Evidence from Quotas." *American Economic Journal: Applied Economics*, 5(3): 136-169.

Mazei, J., Hüffmeier, J., Freund, P.A., Stuhlmacher, A.F., Bilke, L., Hertel, G. 2015. "A meta-analysis on gender differences in negotiation outcomes and their moderators." *Psychological Bulletin*, 141(1): 85–104.

Meier, K., Niessen-Ruenzi, A., Ruenzi, S. 2024. "The Impact of Role Models on Women's Self-Selection into Competitive Environments." *The Quarterly Journal of Finance*, 14(2), 2440001.

Michie, S., van Stralen, M.M., West, R. 2011. "The behaviour change wheel: A new method for characterising and designing behaviour change interventions." *Implementation Science*, *6*(42).

Mills, M., Prag, P. 2014. "Gender inequalities in the school-to-work transition in Europe." Short Statistical Report 4, European Union.

Motel, L. 2016. "Increasing diversity through goal-setting in corporate social responsibility reporting." *Equality, Diversity and Inclusion: An International Journal*, *35*(5/6): 328–349.

Mullen, E.J. 1994. "Framing the mentoring relationship as an information exchange." *Human Resource Management Review*, 4(3): 257–281.

Muravyev, A., Talavera, O., Schäfer, D. 2009. "Entrepreneurs' gender and financial constraints: evidence from international data." *Journal of Comparative Economics*, 37: 270–286.

Murciano-Goroff, R. 2022. "Missing Women in Tech: The Labor Market for Highly Skilled Software Engineers." *Management Science*, 68(5): 3262–3281.

Murphy, M.C., Steele, C.M., Gross, J.J. 2007. "Signaling Threat: How Situational Cues Affect Women in Math, Science, and Engineering Settings." *Psychological Science*, 18(10): 879–885.

Murray R. 2010. Parties, Gender Quotas and Candidate Selection in France. London: Palgrave

Murray R. 2014. "Quotas for men? Reframing gender quotas as a means of improving representation for all." *American Political Science Review*, 108(3): 520–532.

Niederle, M., Vesterlund, L. 2007. "Do Women Shy Away from Competition? Do Men Compete Too Much?" *The Quarterly Journal of Economics*, 122(3): 1067–1101.

Niederle, M., Vesterlund, L. 2011. "Gender and Competition." *Annual Review of Economics*, 3: 601–630.

Obloj, T., Zenger, T. 2022. "The influence of pay transparency on (gender) inequity, inequality and the performance basis of pay." *Nature Human Behaviour*, *6*(5): 646–655.

O'Connell, S.D. 2018. "Political inclusion and educational investment: Estimates from a national policy experiment in India." *Journal of Development Economics*, 135: 478–487.

Olufunke, A.J. 2013. "Violence and women participation in politics: A case study of Ekiti State, Nigeria." *International Journal of Sociology and Anthropology*, 5(1): 26–34.

Palaniswamy, N., Parthasarathy, R., Rao, V. 2019. "Unheard voices: The challenge of inducing women's civic speech." *World Development*, 115: 64–77.

Paluck, E.L., Green, D.P. 2009. "Prejudice Reduction: What Works? A Review and Assessment of Research and Practice." *Annual Review of Psychology*, 60: 339–367.

Pande, R., Ford, D. 2011. "Gender Quotas and Female Leadership." 2012 World Development Report Background Paper, The World Bank.

Perriton, L. 2022. "The problematic persistence of gender reflexivity in women's leadership development." *Journal of Management Development*, 41(5): 335–347.

Porter, C., Serra, D. 2020. "Gender Differences in the Choice of Major: The Importance of Female Role Models." *American Economic Journal: Applied Economics*, 12(3): 226–254.

Preece, J., Stoddard, O. 2015. "Why women don't run: Experimental evidence on gender differences in political competition aversion." *Journal of Economic Behavior & Organization*, 117: 296–308.

Prillaman, S.A. 2023. "Strength in Numbers: How Women's Groups Close India's Political Gender Gap." *American Journal of Political Science*, 67(2): 390–410.

Purohit, B. 2024. "Bureaucratic Discretion Against Female Politicians." Unpublished manuscript.

Raghunathan, K., Kannan, S., Quisumbing, A.R. 2019. "Can women's self-help groups improve access to information, decision-making, and agricultural practices? The Indian case." *Agricultural Economics*, 50(5): 567–580.

Ragins, B.R., Cotton, J.L. 1999. "Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships." *Journal of Applied Psychology*, 84(4): 529–550.

Rattan, A., Chilazi, S., Georgeac, O., Bohnet, I. 2019. "Tackling the Underrepresentation of Women in Media." *Harvard Business Review*.

Reuben, E., Rey-Biel, P., Sapienza, P., and Zingales, L. 2012. "The emergence of male leadership in competitive environments." *Journal of Economic Behavior & Organization*, 83(1): 111–117.

Reuben, E., Sapienza, P., Zingales, L. 2024. "Competitiveness and the Gender Gap Among Young Business Professionals." *Journal of Finance*, 79: 1087-1121.

Revillard, A., Tuffy, Y. 2023. "Gender quotas: An interdisciplinary scoping review." *French Politics*, 21(3): 315–334.

Sanyal, P. 2009. "From Credit to Collective Action: The Role of Microfinance in Promoting Women's Social Capital and Normative Influence." *American Sociological Review*, 74(4): 529–550.

Sanyal, P., Rao, V., Prabhakar, U. 2019. "How Women Talk in Indian Democracy." *Qualitative Sociology*, 42(1): 49–70.

Sarsons, H., Gërxhani, K., Reuben, E., Schram, A. 2021. "Gender Differences in Recognition for Group Work." *Journal of Political Economy*, 129(1): 101-147.

Schier, U.K. 2020. "Female and male role models and competitiveness." *Journal of Economic Behavior & Organization*, 173: 55–67.

Seitz, S., Sinha, S. 2022. "Pay Transparency, Workplace Norms, and Gender Pay Gap: Early Evidence from Germany." Unpublished manuscript.

Sekaquaptewa, D., Thompson, M. 2003. "Solo status, stereotype threat, and performance expectancies: Their effects on women's performance." *Journal of Experimental Social Psychology*, 39(1): 68–74.

Sen, A. 1999. Development as freedom. New York: Knopf

Skoda, S. 2022. "Directing Job Search in Practice: Mandating Pay Information in Job Ads." Unpublished manuscripts.

Smith, N. 2018. "Gender quotas on boards of directors." *IZA World of Labor*, 2018: 7.

Smulowitz, S.J., Smulowitz, M., Cossin, D. 2025. "More risk-averse or more innovative? The effect of women board membership and aspirations on patent activity." *Research Policy*, 54, 105109.

Sparkman, G., Walton, G.M. 2017. "Dynamic Norms Promote Sustainable Behavior, Even if It Is Counternormative." *Psychological Science*, 28(11): 1663–1674.

Spencer, S.J., Steele, C.M., Quinn, D.M. 1999. "Stereotype Threat and Women's Math Performance." *Journal of Experimental Social Psychology*, 35(1): 4–28.

Sunstein, C. R., Hastie, R. 2014. "Wiser: Getting Beyond Groupthink to Make Groups Smarter." Harvard Business Review Press.

van der Windt, P., Humphreys, M., Sanchez de la Sierra, R. 2018. "Gender quotas in development programming: Null results from a field experiment in Congo." *Journal of Development Economics*, 133: 326–345.

Vinnicombe, S., Burke, R.J., Blake-Beard, S. 2013. Handbook of Research on Promoting Women's Careers. Edward Elgar Publishing Limited.

Yu, J.J., Madison, G. 2021. "Gender quotas and company financial performance: A systematic review." *Economic Affairs*, 41(3): 377–390.

Yukl, G.A. 2013. Leadership in Organizations. 8th Edition, Prentice-Hall, Upper Saddle River.

Weeks, A.C., and Baldez, L. 2015. "Quotas and qualifications: The impact of gender quota laws on the qualifications of legislators in the Italian parliament." *European Political Science Review*, 7(1): 119–144.

World Bank. 2025. World Development Indicators. https://databank.worldbank.org/source/world-development-indicators

World Bank Gender Data Portal. 2025. https://genderdata.worldbank.org/en/home

Wu, A.H. 2018. "Gendered language on the economics job market rumors forum." *American Economic Review: Papers Proceedings*, 108:175-179.

Table A1. Quantitative impact of policy interventions on descriptive and substantive women's leadership

Study	Country	Key intervention	Leadership domain	Impact on Leadership
Gender quota				
Beaman et al., 2009	India	Village council gender quotas (1/3 reserved; rotating)	Descriptive	Reserved seats occupied by women mechanically (100%). Subsequent exposure ↓ gender stereotypes of gender roles by 0.17sd (sig), ↑ women's political participation by ~5–9.2 pp (sig).
Chattopadhyay & Duflo, 2004	India	Village council gender quotas (1/3 reserved; rotating)	Substantive	Female-headed councils probability to allocate more spending to water ↑ ~9-14 pp, and to roads -10 to +3pp (sig).
Ban & Rao, 2008	India	Village council gender quotas (1/3 reserved; rotating)	Substantive	No consistent significant differences in public goods provision in some regions; context-dependent.
Bardhan et al., 2010	India	Political reservations	Substantive	Null or mixed effects on targeting and spending.
De Paola et al., 2010	Italy	Municipal electoral quotas	Descriptive	↑ 2 pp women's representation and 3pp likelihood of female mayor elected after quota is over (sig).
Lassébie, 2020	France	Zipper rule on party lists (alternation)	Descriptive	↑ 7 pp women's representation among candidates an in municipal councils (sig). No impact on female mayors.
Chen, 2010	Cross-country	Parliamentary gender quotas	Substantive	1pp increase in female legislators increases government expenditure on health and social welfare to GDP by 0.18 and 0.67 pp (sig).
Kerevel & Atkeson, 2013	Mexico	Candidate list gender quotas	Substantive	Female legislators ~15 pp more likely to sponsor women's rights bills (sig).
Clayton & Zetterberg, 2018	Cross-country	Electoral gender quotas	Substantive	7 pp increase in health spending share (sig).
Weeks & Baldez, 2015	Italy	Gender quota laws	Descriptive / Substantive	Quota women 5% more likely to have local government experience and attend legislative sessions 7% more than men. They are less likely to be re-elected by ~43% in some settings (sig).
Clayton, 2015	Lesotho	Randomly reserved districts for women community councilors (30%)	Descriptive	Quota increased women's representation in reserved districts (sig.) and also in unreserved districts where women won an additional 26% of seats by beating male candidates. Quota associated with lower political engagement measures among citizens (sig).
Casas-Arce & Saiz, 2015	Spain	Candidate quotas	Descriptive	Limited increases in seats in some cases.
Beath et al., 2013	Afghanistan	National Solidarity Program gender quota in community councils	Substantive	Female participation in decision-making bodies ↑ ~16sd; support or women's rights by men ↑ 0.11sd, female mobility ↑ 0.17sd, public meeting attendance ↑ 10sd (sig).
van der Windt et al., 2018	DR Congo	Tuungane program parity quota in community committees	Descriptive / Substantive	Women's share in leadership ↑ ~22 pp (sig); null results for change in speaking time or agenda influence.
Leone, 2019	Nepal	Quota in Community Forest User Group executive committees	Substantive	↓ household firewood collection by ~20% (sig).
Hannah et al., 2021	Kenya	Two-thirds gender rule in community water committees	Descriptive / Substantive	Women's seats ↑ to mandated level (e.g., ~33%); limited measurable change in decision-making share.
Bertrand et al., 2019	Norway	Mandatory corporate board quota (40% women)	Descriptive / Substantive	Women's board share ↑ from ~9% to ~40% (sig); no significant change in female employment or wages.
Comi et al., 2020	France, Italy, Spain	Board quota laws	Descriptive / Substantive	France/Italy: women's board share ↑ ~25–30 pp (sig); Spain (incentive-based) <5 pp (not sig.). No effect of quotas on firm profitability or productivity, except for Italy at 5%.
Latura & Weeks, 2023	Italy	Corporate board quota	Substantive	50% increase references to gender equality in corporate reports (sig).
Ahern & Dittmar, 2012	Norway	Board quota impact on firm valuation	Descriptive / Substantive	Stock price changes to announcement of the law: firms with at least one female director (-0.02%) firms with no female directors (-3.54%) (sig).
Deschamps, 2020	France	Hiring committee gender quotas	Descriptive	Reported reduction in women's recruitment (magnitudes not discussed in the paper).
Domínguez, 2023	Lab experiment	Diversified hiring committees	Descriptive	Female candidates fared worse as female share on committees increased in lab (sig in experiment).

Table A1 (cont.). Quantitative impact of policy interventions on descriptive and substantive women's leadership

Study	Country	Key intervention	Leadership domain	Impact on Leadership
Role models				
Beaman et al., 2009	India	Village council gender quotas (1/3 reserved; rotating)	Descriptive	Effects in never-reserved GPs: Altough few women are elected Pradhans, this number increased from 7% in 1998, to 15% in 2003, and by an additional 2 pp in 2008. Effects in reserved GPs: Gender quota did not lead to a significant incumbency advantage for female leaders, but there is a 5 pp increase in the likelihood of a woman being elected as ward councilor in twice reserved GPs (excluding those where the Pradhan was reelected).
Bhavnani, 2009	India	Village council gender quotas (1/3 reserved; rotating)	Descriptive	Women's chances of winning ward elections in unreserved areas in 2002 are 17.9 pp higher in places with reserved seats in 1997 compared to places without reservation in 1997 (sig.).
Deininger et al., 2015	India	Village council gender quotas (1/3 reserved; rotating)	Substantive	Women are 4 pp more likely to participate in village meetings as a result of gender quotas and the effect persists in areas reserved one or two periods ago (sig.), and 15 pp increase in the likelihood of discussing relevant topics after the reserved period (sig.).
Deininger et al., 2022	India	Village council gender quotas (1/3 reserved; rotating)	Substantive	Increase of women's participation in household decision-making on food, health, and education by 18, 14, and 8 pp, respectively.
Broockman, 2014	United States	Female politicians' electoral wins	Descriptive	The election of additional women in competitive US state legislative elections has no discernible causal effects on other women's political participation at the mass or elite levels.
Training programs				
Raghubanthan et al., 2019	India	Training on agricultural decision-making	Substantive	39 pp (10% increase with respect to control mean) increase in the number of agricultural domains in which the woman has some input into decisions.
Grillos, 2018	Kenya	Drought preparedness + community-level engagement	Substantive	↑ 28-37 pp in the likelihood that women attend community decision-making meetings (sig. under the two estimation methods used); not significant results on the likelihood to speak at those meetings; ↓ 24 pp in the likelihood that women feel that local leaders pay attention to what they think (sig. under one estimation method used). ↑ 37 pp in the likelihood to participate in household decision-making (sig. under one estimation method used).
Reducing Process Discrimination				
Erkal et al., 2022	Lab experiment	Opt-in vs. opt-out nomination system	Descriptive	Women 25-29 pp less likely to volunteer under the Opt-in mechanism than men. The Opt-out mechanisms increases the likelihood that women volunteer for the role in 19 pp with respect to men (sig.).

Notes: Authors' elaboration based on findings reported in the cited papers. The list is limited to studies that assess the impact of policy interventions on women attaining leadership positions (descriptive representation) or participating in decision-making processes without necessarily holding a leadership role (substantive representation). The table was generated with AI assistance, and all entries were reviewed and verified by the authors.