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Gender Differences in Negotiation: Can Interventions Reduce the Gap?

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Abstract

Gender differences in negotiation are seen as contributing to the persistent gender gaps in labor market outcomes. We review the literature on interventions aiming to mute differences in negotiation and assess their effectiveness in reducing the gender pay gap. We present research on initiatives that aspire to increase how often and how women negotiate, as well as institutional changes that ban negotiations, ban requests for employee salary history, and improve wage transparency. Along with reviewing evidence on the effectiveness of these initiatives, we point to unintended consequences that warrant caution at implementation. The review makes clear that initial efforts to push women to negotiate more like men have shifted to alter instead the conditions of the negotiation. This shift results not only from wanting to consider policies that "fix the institutions" rather than "fixing the women," but also from evidence that these interventions are more successful in securing pay equity.

1. INTRODUCTION

Gender differences in negotiation are frequently used to explain the persistent gender gap in compensation, promotion, and occupation (e.g., Greig 2008, Card et al. 2016, Säve-Söderbergh 2019). Considering the potential impact on labor market outcomes, it is no surprise that substantive work has examined differences in how men and women approach negotiations. The overarching conclusion is that there are gender differences in both willingness and ability to negotiate, particularly in environments that have the characteristics of salary negotiations, and that these influence the gender pay gap.[1]

There are many reasons men and women may approach negotiation opportunities differently. They may be entering the negotiation from different vantage points, either because their initial bargaining positions differ or because they want different things from the negotiation. Gender differences in negotiation may emerge even when the negotiation conditions are identical. For example, research has pointed to men and women holding different preferences for risk, altruism, and ambiguity, all of which can affect both the frequency and type of negotiation (e.g., Andreoni & Vesterlund 2001, Borghans et al. 2009, Croson & Gneezy 2009, Niederle 2016). Research has also shown that men are more confident and competitive than women, especially in stereotypically male domains, and have different information on what can be attained through the negotiation; these are also factors that will impact negotiation outcomes (e.g., Niederle & Vesterlund 2007, Cullen & Perez-Truglia 2023a). Differences will also arise if men are more experienced and thus enter the negotiation with greater ability and ease (e.g., Mazei et al. 2015). Finally, societal norms likely differentially impact the way men and women approach negotiation opportunities (e.g., Bowles & Gelfand 2010).

While it is not possible to identify the exact source of men's advantage in labor market negotiations, there is broad agreement that, absent a job that calls for negotiation, individual negotiation differences should not affect compensation and advancement. Recognizing the resulting inequities has therefore led to initiatives that aim to reduce differences in negotiation and/or in the effect such differences have on labor market outcomes. Some initiatives aim to alter individual behavior, changing either how often or how women negotiate; others alter instead the institutional conditions under which negotiations take place. Examples of the latter include directly banning negotiations, banning requests for salary history, and improving wage transparency. We review the literature on each of these initiatives and assess their effectiveness and broader impact. The article expands our 2019 review (published as Recalde & Vesterlund 2022) to include substantial new research conducted in the past few years. Recent policies aiming to change the conditions under which negotiations take place have led to an abundance of new data, and research is increasingly showing that these adoptions are not only motivated by a push for policies that "fix the institutions" rather than "fixing the women" but also by evidence that these initiatives are more effective in equalizing outcomes.

2. INDIVIDUAL-LEVEL INTERVENTIONS

Evidence that men are more able and willing to negotiate in the labor market has given rise to recommendations that women should negotiate more like men. This section reports on research examining initiatives aimed at increasing how often and how women negotiate. We will see that while there is substantial public support for programs that change women's approach to

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[1]For reviews, readers are referred to Stuhlmacher & Walters (1999), Bowles et al. (2005), Bowles & McGinn (2008), Bertrand (2011), Azmat & Petrongolo (2014), Mazei et al. (2015), Kugler et al. (2018), Hernandez-Arenaz & Iriberri (2019), and Bowles et al. (2022).

negotiation, there is limited evidence on the effectiveness of such changes. Rather than revealing the need to fix women, it appears that different societal constraints force men and women to approach negotiation opportunities differently.

2.1. Lean-In Recommendation

Babcock & Laschever (2003) present what is perhaps the most striking finding on gender differences in negotiation frequency. They show in a study of new MBA graduates that 57% of men and only 7% of women negotiate the compensation for their first job, a difference that contributes to men earning 7.6% more than their female classmates. Babcock et al. (2006) explore a broader set of negotiations and examine the frequency by which men and women negotiate. Results reveal that the time between an individual's last and expected future negotiation is a full 8 weeks for women but a mere 3 weeks for men. Again, this points to men negotiating more often than women.[2] Although negotiation in the labor market is of key concern, the limited information on employee and employer characteristics, on the employee-employer match, and on the parties' outside options makes it difficult to determine whether the observed differences in negotiation frequency result from differences in behavior or in negotiation opportunities.[3] Many studies instead rely on controlled experiments and similarly find that men negotiate more often than women.[4]

The finding that both men and women gain from negotiation, and that women are less likely to pursue such opportunities, has been seen as evidence that women are leaving substantial lifetime earnings on the table. This has led to a push for women to negotiate more and to lean in (e.g., Sandberg 2013).

Exley et al. (2020) argue that we are missing an important counterfactual when we extend these results to make the recommendation for women to lean in and negotiate more. We need to know what happens when women ask more. Of course, the recommendation is harmless if "the worst that can happen is you get no for an answer." However, there are many cases in which negotiation is costly, and increased negotiation may worsen the employee's situation.[5]

Exley et al. (2020) design an experiment to examine the effect of increased negotiation. Workers and firms each perform a task and then decide how to split the surplus of their joint efforts. They run two versions of their study: a choice treatment, where workers are offered an initial wage and decide whether they want to accept it or negotiate, and an always treatment, where workers still see an initial wage offer but have to negotiate. Negotiations may last up to 3 minutes and are done via anonymous chat messages. The joint firm-worker surplus is reduced in the event of a bargaining impasse, as the worker and the firm then each secure a payment that is lower than it would have been if the negotiation had not been initiated.

Exley et al.'s (2020) choice treatment shows that women opt out of some negotiations: 34% of the time they take the initial wage offer and do not enter the negotiation. This occurs although negotiations increase wages. In fact, the women who negotiate largely gain from doing so: The vast

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[2]Recent examples include the work of Biasi & Sarsons (2022), who show that male teachers negotiate more often than female teachers, and of Li & Zafar (2023), who show that male more than female college students ask for regrades. Another example is the work of Dreber et al. (2022).

[3]Andersen et al. (2021) examine gender differences in real estate negotiations, a setting where the value of the negotiated item is better assessed.

[4]Readers may consult, for example, Bowles et al. (2005), Small et al. (2007), Kray & Gelfand (2009), Amanatullah & Morris (2010), Kugler et al. (2018), Gago (2020), Maitra et al. (2021), Gihleb et al. (2023).

[5]Negotiations may be costly in the present (e.g., costs of time, disutility from asking) or in the future (e.g., backlash, reputation, future negotiation), or there may be costs from a bargaining impasse that affect future collaboration, generate legal costs, or cause retraction of earlier offers.

majority (74%) secure final wages above the initially offered wage, and a small minority (13%) get lower final wages. Mirroring the standard finding in the field, the authors find that women often avoid negotiations, although initiated negotiations are beneficial.

To determine the counterfactual of increased negotiation, Exley et al. (2020) compare the outcomes women achieve when they avoid some negotiations (choice treatment) to the outcomes they achieve when they always negotiate (always treatment). The treatment where participants always negotiate backfires: There are no additional gains from negotiation, and the share of negotiations that decrease earnings increases from 13% to 33%. Rather than improving women's earnings, the additional negotiations decrease earnings and make women worse off. Results reveal that selection is key to increased negotiations being costly. Women know when it is beneficial to negotiate and use that knowledge to avoid costly negotiations in the choice treatment. Examination of the counterfactual makes clear that the finding that women who enter negotiations gain from doing so does not imply that women should always negotiate.

With the recommendation to lean in being directed at women, Exley et al. (2020) also ask if men are better at deciding when to negotiate. Results confirm that men negotiate more often than women (74% versus 66% of the time) and that men also gain from negotiation. However, comparing the distributions of earnings between the choice and always treatments shows no evidence that mens' decisions are superior to women's. Nonetheless, the authors document a greater push for women to negotiate. Respondents of an online survey were more likely to recommend more frequent salary negotiations for women than for men (75% versus 54%). In fact, participants presented with information about the initial experiment were willing to pay to remove the worker's choice to opt out of the negotiation. This willingness to restrict the choice arises despite an asymmetry in information whereby the paternalistic participant knows only the distribution of initial offered wages, while the worker knows the initial offered wage and whether negotiation is likely to be beneficial. Importantly, this willingness to pay to remove the worker's negotiation choice is more prevalent when faced with a female than a male worker. The study serves as a caution against the blanket recommendation that women should negotiate more.

While Exley et al. (2020) show that women respond optimally to opportunities to engage in negation, they leave open the question of why men and women negotiate at different rates in the labor market. The work by Babcock et al. (2017) presents an important clue as to why there might be gender differences in negotiation frequency. Their study uncovers stark gender differences in work assignments, which are likely to influence the opportunities men and women have for negotiating. Babcock et al. (2017) show that women more than men spend time on work that can be characterized as nonpromotable. While these nonpromotable tasks (NPTs) help the organization, they do not improve the individual's performance evaluation, compensation, or advancement. Using a series of laboratory studies, they find that women more than men are asked to take on NPTs and are more likely to agree to requests to take on NPTs. Importantly, these differences do not result from differences in performance or preferences but rather from the shared expectation that women more often than men will take on these types of tasks.

A study by Gihleb et al. (2023) shows that task assignment can affect both compensation and negotiation. They conduct a laboratory experiment in which participants are assigned the role of manager or employee and then form teams of three. Each team has one manager and two employees, one assigned to a less revenue-generating task (an NPT) and the other to a more revenue-generating task (a promotable task, or PT). The two tasks are randomly assigned and thus are not reflective of any inherent differences in performance. The manager is charged with distributing pay to the two employees. Although randomly assigned to the task, the employee assigned to the NPT is paid substantially less than the employee assigned to the PT. Further,

introducing the option for employees to negotiate pay increases the advantage given to the employee assigned to the more revenue-generating task. Interestingly only employees assigned to the PT are successful in increasing their pay through negotiation. Employees assigned to the NPT see no improvement in pay when attempting to negotiate.

Gihleb et al.'s (2023) findings suggest that men and women who are assigned different work will hold different bargaining positions and will have different returns from entering a negotiation even when they are otherwise similar. Further exacerbating differences is that men and women often are subjected to different societal norms for negotiating. Bowles & Gelfand (2010) show that while women are constrained by a "tight culture" with strong norms for behavior, men instead operate within a "loose culture" and have greater freedom to make decisions based on what they want rather than on what others expect them to do. While it may be acceptable for a man to ask and enter a negotiation, the same action by a woman may result in backlash, a topic we discuss in Section 2.2 when reviewing the literature on gender differences in negotiated outcomes (Bowles et al. 2007, Tinsley et al. 2009).[6]

Gender differences in vantage points or norms can help explain why men negotiate more often than women, and these differences should temper blanket recommendations for women to negotiate more. Increasing the frequency by which women pursue negotiations could leave them worse off.

2.2. Improving Negotiation Skills

The evidence that men hold an advantage when negotiating depends on the setting in which the negotiation takes place (e.g., Barron 2003, Pradel et al. 2005, Dittrich et al. 2014). For example, the gap is less pronounced when it is clear that something is negotiable and what the bargaining range is (Bowles et al. 2005, Small et al. 2007, Rigdon 2012, Leibbrandt & List 2015, Kugler et al. 2018). That is, ambiguity amplifies gender differences. The gap is also sensitive to whether the negotiation activates stereotypes (Kray et al. 2002), with differences increasing when negotiation by women violates gender norms. The response to such stereotypes may result from stereotype threat or from the correct expectation that backlash will be greater toward women who violate gender norms (Bowles et al. 2007, Tinsley et al. 2009).[7] The gender gap in negotiation is also found to be smaller when individuals negotiate on behalf of someone else rather than on behalf of themselves (Bowles et al. 2005, Amanatullah & Morris 2010, Amanatullah & Tinsley 2013) and when negotiation occurs in less competitive environments (Bowles et al. 2005).[8] Finally, the

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[6]For example, Bursztyn et al. (2017) find that single women opt out of negotiations because pursuing career-enhancing actions may decrease their success in the marriage market. Related is also the larger literature on discrimination and differential treatment when bargaining. Ayres (1991, 1995) and Ayres & Siegelman (1995) report on audit studies for car sales, finding that single women are quoted higher prices than single men. Castillo et al. (2013) examine negotiations for taxi rides, finding that statistical discrimination drives gender differences in outcomes. Consistent with statistical discrimination, Busse et al. (2017) find, for buyers who appear uninformed, higher prices for women than for men. However, audit studies instruct buyers on how to negotiate and do not capture differences in negotiation. List (2004) examines free-form negotiations over sports cards and finds that statistical discrimination gives rise to a male advantage. With transactions occurring only 3% of the time, it is however difficult to capture differences in negotiation.

[7]For gender differences in negotiation expectation, readers are referred to Eckel et al. (2008) and Andersen et al. (2018).

[8]As for negotiation, the literature on competition reveals robust differences on the extensive margin (Niederle & Vesterlund 2007) and more context-dependent differences on the intensive margin (Gneezy et al. 2003). Readers are referred to Niederle & Vesterlund (2011) for a review and to Niederle & Vesterlund (2008) on the connection between negotiation and competition.

positional role matters, with the gender gap arising for the party with less power (Dittrich et al. 2014, Exley et al. 2020).[9]

Although the gender gap in negotiation frequency and outcomes varies with the negotiation setting, there is consensus that negotiations in the labor market carry characteristics that are likely to give men an advantage. For example, labor market negotiations are on behalf of oneself, tend to be competitive, and are ambiguous on what may be negotiated.

Interventions aimed at addressing gender differences in negotiation ability have centered on improving women's negotiation skills. Evidence that experience improves negotiated outcomes (e.g., Mazei et al. 2015) has fueled the expectation that negotiation training can reduce the gender gap in compensation. For example, the American Association of University Women has initiated free nationwide negotiation workshops for 10 million women, an effort aimed at helping to "close the gender wage gap, one workshop at a time" (Enwemeka 2016). Although substantial resources are used to improve women's negotiation skills, there is scarce evidence that it reduces gender differences in outcomes.

The work of Stevens et al. (1993) is the classic reference when pointing to the success of negotiation training. The study has 60 MBA students participate in two different negotiation programs. Participants first receive basic negotiation training for 4 hours and then are assessed through knowledge tests and salary negotiation simulations with confederates who provide raises based on the successful use of the instructed negotiation tactics. This first-stage assessment reveals a gender gap in negotiated salaries, which is found to result from men and women setting different negotiation goals. Depending on the treatment, participants are then subjected to one of two negotiation training programs, one emphasizing goal setting and the other augmenting the goal-setting training with general self-management training.[10] While goal-setting training on its own is shown to improve the skills of both men and women, it has no differential gender effect and does not eliminate gender differences in negotiation outcomes. The augmented training does, however, improve skills more for women than for men, closing the gender gap. The authors find that augmented training works by increasing the perceived control women have over negotiation outcomes.

While Stevens et al. (1993) demonstrate that training can affect men and women differently, training effectiveness is assessed in an environment where the response to negotiation is gender neutral. As noted earlier, there is ample evidence that the response to negotiation differs by gender and that women more than men experience backlash. For example, Bowles et al. (2007) report on experiments in which participants evaluate hypothetical job candidates after seeing interview transcripts and videos. The treatments vary candidate gender and whether the candidate asks for higher compensation. Men and women receive similar evaluations absent a salary request, but they are perceived differently when asking for higher compensation, with women being assessed less favorably than men. Further, requesting higher compensation does not affect the willingness to work with a male candidate but reduces willingness to work with a female candidate.

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[9]Other factors may affect gender differences in negotiation, including the sex of negotiating partners (Eckel & Grossman 2001, Solnick 2001, Bowles et al. 2007, Sutter et al. 2009, Hernandez-Arenaz & Iriberri 2018), the framing as a negotiation or as an ask (Small et al. 2007), the communication mode (Bowles 2013, Bowles & Babcock 2013), sharing norms (Hernandez-Arenaz & Iriberri 2023), and the attractiveness of the outside option (Dannals et al. 2021). Arnold & McAuliffe (2021) study gender differences in negotiation among children and document differences at a surprisingly early age: While girls in grade 8 and 9 ask for less from male evaluators than from female evaluators, the requests from boys do not respond to evaluator gender.

[10]The augmented self-management training adds identifying performance obstacles, planning to overcome obstacles, self-monitoring progress, and self-administering rewards. There is no control group receiving no training in the study.

Amanatullah & Morris (2010) show that backlash is anticipated by women. In an experiment that varies whether participants negotiate on behalf of themselves or on behalf of others, the authors ask participants to report the salary threshold above which they think they would be perceived as pushy and would cause the hiring manager to punish them for being too demanding. Results show that women anticipate backlash when negotiating for themselves but not for others. Further, the impact of the anticipated backlash is large when women negotiate on behalf of themselves, causing them to ask for approximately 15% lower wages and to make larger salary concessions than men.

The research on backlash suggests that negotiation training will backfire if it fails to account for variation in the norms individuals face. Bowles & Babcock (2013) and Bear & Babcock (2017) study negotiation tactics that account for gender norms and find that these can be effective in reducing the gender gap in negotiation outcomes. For example, Bowles & Babcock (2013) use prerecorded negotiation scripts to assess whether different negotiation tactics can improve the negotiated outcome and the social assessment of the individual negotiating. They show that softened scripts that emphasize both relational accounts (a concern for the organizational relationship) and include a supervisor excuse for negotiating (e.g., saying that a team leader suggested it) help validate the request (improving both the likelihood the request is granted and the willingness to work with the employee).[11] While relational accounts are effective, it is unclear whether the tactic will be adopted in practice. Mazei et al. (2020) show that women underestimate the effectiveness of relational account scripts and more often select scripts that are either assertive or neutral over those that include relational accounts.

Two recent studies go beyond the use of hypothetical choice experiments and simulated negotiation environments and evaluate the effectiveness of negotiation training on real labor market and education outcomes using field experiments. Chotiputsilp & Kim (2021) study the effect of an intervention that provided negotiation training and salary information to male and female job seekers in Thailand. Ashraf et al. (2020) evaluate the effect of a program that provided girls in Zambia with negotiation skills training.

Chotiputsilp & Kim (2021) recruit 1,335 participants from three popular online job board sites in Thailand where job seekers provide information about their work experience, past salary, and desired salary as well as education and demographic information. Participants are randomized into one of three treatments: control, salary information, and negotiation training. Participants in the control treatment receive no intervention. The salary information treatment provides participants with salary information by displaying the median, 25th, and 75th percentile of the salary distribution for employees in their selected occupation and area of residence. The negotiation training treatment adds to the salary information treatment a module "designed to last 30 minutes, lower psychological barriers that participants have in negotiating their salaries and instill negotiation skills" (Chotiputsilp & Kim 2021). Materials are adapted to the local context but based on "course materials employed by a nonprofit organization that partners with various state and city governments, including New York City" (Chotiputsilp & Kim 2021). The training was administered via videos and interactive quizzes. To evaluate outcomes, the study compares self-reported salary information from online job board sites before and 1 year after the intervention.

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[11]Bear & Babcock (2017) instead study priming techniques that reduce the gender incongruency women experience when negotiating for themselves. They show that primes that bring participants to (*a*) think of situations where the use of assertive and forceful tactics helped them succeed in a negotiation, and (*b*) imagine that they are negotiating on behalf of a close friend, are both effective in reducing the male negotiation advantage. They also show that these types of priming increase women's negotiation-performance aspirations.

Results reveal that, compared to the control group, negotiation training led to a marginally significant 2.2% increase in job seekers' reported salaries. Simply providing information (information treatment) increased reported salaries by 1.8% relative to the control, a response that is not significantly different from zero nor different from the effect seen when training is added to the information treatment. Importantly, the results mask heterogeneity by gender. Negotiation training increased the salaries reported by men by 3.3% relative to the control group, while training did not affect the salaries reported by women. For neither men nor women did negotiation training improve outcomes relative to only providing salary information.[12] Thus, the negotiation intervention was ineffective in helping women achieve higher pay and failed to close the gender gap in reported salaries.[13]

Ashraf et al. (2020) explore the effect of negotiation training on education rather than labor market outcomes. A field experiment with 2,366 eighth-grade girls in Lusaka, Zambia, randomizes girls, within each school, into three treatments: negotiation training, safe space, and control. The negotiation treatment has participants attend six 2-hour training sessions with material similar to that of a modified MBA negotiation class. The safe space treatment consists of the same number of 2-hour sessions but instead has girls play games, work on homework, and spend time with each other.

The study finds that negotiation training increases average school enrollment in grades 10 and 11 by 10% relative to the control treatment. The effect of the safe space treatment is smaller but not significantly different from that of the negotiation or control treatments when looking at overall school enrollment. However, analysis of enrollment in high-quality schools, which prepare girls for college entry exams, reveal no impact of the safe space treatment and a positive impact of the negotiation treatment. The impact on school enrollment grows over time, indicating that benefits accumulate and may spill over to the labor and marriage markets.

Together, these studies suggest that negotiation training programs that are comprehensive enough to increase women's confidence and sense of control over the negotiation may reduce the gender gap in negotiation outcomes.[14] However, the evidence is scarce when examining the extent to which pure negotiation training reduces the gender pay gap. It is evident that successful implementation requires training that is tailored to the norms faced by the individual. Training women to negotiate like men is likely to backfire.

3. INSTITUTIONAL-LEVEL INTERVENTIONS

Gendered norms and differential treatment of men and women limit the success of individual-level attempts to address gender differences in negotiation. Next, we consider whether institutional-level interventions have shown more promise. Several such interventions have been proposed and increasingly adopted in the past decade. We focus on the three most popular ones: directly banning negotiations, banning salary history requests, and increasing wage transparency. While the first

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[12]A significant difference between the training and information treatment is only seen for a subsample of high-earning men (those earning more than the 75th percentile), where training led to a 5% increase in reported salaries (which is significantly different from the outcome of the information treatment). High-earning women were unaffected by either treatment.

[13]Results from a subsample of 208 participants who answered a survey 3 months after the intervention suggest that women's limited response to treatment resulted from negotiation training increasing women's belief that employers would perceive salary negotiations negatively. Note that in using self-reported salary data, it is impossible to determine whether men in the negotiation training treatment earned more because of the intervention or simply reported higher salaries due to treatment.

[14]A recent study by McKelway (2021) examines self-efficacy/confidence training (rather than negotiation skills training) and finds it increases women's self-efficacy and short-run employment.

two initiatives take as given gender differences in negotiation and attempt to remove the effects of such differences, the latter relies instead on evidence that the gender gap in negotiation is more prevalent when the negotiation is ambiguous. These institutional changes aim to directly change the negotiation environment and to indirectly limit the role of gendered norms and expectations.

3.1. Banning Salary Negotiations

Evidence that differences in negotiation skills contribute to the gender wage gap, along with concerns that negotiation skills rather than productivity differences lead to variation in compensation, has led some corporations to simply ban negotiations. For example, Reddit banned negotiations in 2015 with the aim of eliminating the disadvantage women have at the bargaining table. Other companies have followed, and the policy has been noted as an effective way of eliminating wage disparities (Kray 2015). Negotiation bans, however, have their own challenges, as there is a risk associated with leaving it up to management to secure equal pay for men and women.

In studying how task assignment impacts negotiation opportunities and outcomes, the study by Gihleb et al. (2023) also sheds light on the effects of a negotiation ban. The extent to which a negotiation ban is effective in reducing the gender wage gap depends on the potential bias of the manager and on why negotiation is effective in raising compensation. For example, if the decision to negotiate serves as a credible signal on productivity, then employees with high productivity will be those who negotiate. If the productivity distribution of men dominates that of women, then men will negotiate more than women and will secure higher earnings. A negotiation ban in this setting could backfire because men will be seen as more productive on average and generally receive greater compensation than women. Of course, the ban can also backfire if management is biased against women and the negotiation serves to temper such biases.

Gihleb et al.'s (2023) lab experiment investigates the effect of a negotiation ban by comparing two treatments. Workers in one treatment may negotiate with management and in another have no negotiation option. As noted previously, participants are matched in triads, with each triad consisting of one manager and two workers. The triad interacts for five rounds. Personal characteristics like age, gender, and area of study are revealed to the manager. The two workers must in each round perform a task that generates a profit for the manager and a surplus that the manager must distribute between the two workers. One worker is given a high-productivity task and the other a low-productivity task. Uncertainty over the relative productivity ensures variation in subjective assessment of worker effort and allows for negotiations to signal productivity.

Gihleb et al. (2023) find that negotiating only improves compensation for workers who are assigned the more productive task. Hence, negotiations increase inequality between workers who are assigned different tasks. The negotiation ban, however, reduces the relative pay advantage on the high-productivity task. In contrast to the examples provided above, results show decreased inequality when negotiation is banned.

Outside of the laboratory, Biasi & Sarsons (2022) find similar results when studying the impact of a legal reform implemented in Wisconsin in 2011. Prior to the reform, public school teacher salaries were determined by collective bargaining agreements (CBAs) between school districts and teacher unions. After the reform, they could be adjusted in response to individual negotiations. While the transition from collective to individual bargaining is unlikely to fully capture that of a private sector–administered negotiation ban, it nonetheless illustrates how wages change with individual bargaining.

Biasi & Sarsons (2022) find no gender gap in compensation before the reform, and exploiting quasi-random variation across school districts on when CBAs expired they find that flexible pay caused gender differences in compensation to emerge after the reform. Women's wages dropped

by 0.8% relative to men (corresponding to 1.2 years of seniority or 8% of the return to getting a master's degree). The impact is larger for younger and less experienced teachers. Interestingly, the gender gap varies with the gender of the school district superintendent. Flexible pay leads to a gender gap in districts with male superintendents and no differences in pay in school districts with female superintendents.

Since the data used in the study do not contain information about negotiations, the authors conduct a survey of public school teachers in Wisconsin to examine whether gender differences in salary negotiation help explain their findings. Mirroring prior work by Babcock et al. (2006), their results reveal that female teachers are 12–23% less likely than their male colleagues to report having negotiated their pay at various points in their careers; they are also 13% less likely to anticipate negotiating in the future.[15] These differences interact with the gender of the superintendent. Women working under male school district superintendents are less likely to have negotiated pay with their current employer and less likely to plan to negotiate in the future. No gender differences in negotiation propensity are documented under female school district superintendents.

Biasi & Sarsons (2022) cannot directly assess how differences in negotiation impact the gender pay gap after the reform. However, they can rule out gender differences in ability or mobility from playing a role. Consistent with the finding that men more than women use outside offers to negotiate higher pay, they also find that the postreform gender pay gap is larger in commuting zones with many high-quality schools.

In summary, Biasi & Sarsons (2022) show that movement from CBAs to individual negotiations gave rise to a gender pay gap and that this gap is likely linked to men (with male leaders) initiating negotiations more often than women.

It may be questioned whether a negotiation ban is sustainable absent CBAs and whether individual organizations can commit to the ban when other firms engage in negotiation. A ban may not be sustainable when high-quality employees secure attractive outside offers and require retention packages. Moreover, if a ban is not fully upheld, it may result in women believing more than men that negotiation is not an option. With these caveats in mind, the limited evidence to date suggests that corporations wishing to compensate ability, rather than negotiation skill, may benefit from eliminating negotiation, particularly for initial recruits where individual skills have yet to be identified.

3.2. Salary History Ban

An institutional-level intervention that has gained substantial popularity is to ban salary history requests. The motivation behind this ban is to break the path dependency of wages.[16] The thought is that the ban will result in compensation that better reflects the employee's skill and experience rather than locking them into the cumulative effects of prior discriminatory practices.

Salary history bans (or SHBs) have been put in place by numerous US states and local governments and are part of a recently passed EU directive to reduce gender differences in pay. However, a concern in introducing SHB policies has been that the policy could fail or even backfire if employers statistically discriminate against women. Absent information on current salary,

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[15]The survey shows that among those who do not negotiate, women are 31% more likely than men to report that they do not feel comfortable negotiating. Women are also 29% less likely to know their colleagues' salaries and 14% less likely to know someone who negotiated their pay. Biasi & Sarsons (2021) show that differences in both information and confidence help explain the gender gap in negotiation.

[16]Estimates from the United States show that 25% to 50% of potential employees are asked to disclose past salary (e.g., Hall & Krueger 2012, Agan et al. 2020, Barach & Horton 2021, Sinha 2022).

women's wages could be assumed to be low and in turn result in wage offers that are systematically dominated by those of men.[17]

Initial assessments of SHB policies implemented in the United States, however, show that these concerns have not materialized. Estimates of SHB impacts suggest that they have decreased or had no effect on the overall gender gap in pay, sometimes with positive results only seen for subgroups with large initial differences in pay. For example, Hansen & McNichols (2020) examine the response to California's SHB and find no significant change in the aggregate gender pay gap, but they estimate a 2.3 percentage point increase in the female-to-male earnings ratio among those older than 35 and a 4.7 percentage point increase among those with children older than five. While these responses are somewhat smaller when including all states with SHBs (1.09 and 2 percentage points, respectively), the intervention is nonetheless shown to be effective in reducing gender differences in pay. Davis et al. (2022) examine the changes in wages for new hires in the public sector in response to SHBs introduced in 14 US states and find no aggregate effect on the gender pay gap, but they document improved female-to-male earnings in occupations with higher historical gender differences in pay and in occupations where women have been underrepresented. By contrast, Sinha (2022) finds that SHBs implemented across various states in the United States led to a 2 percentage point reduction in the overall gender gap in earnings. While female wages increased, those of men remained unchanged; note, however, that the estimated reduction in the gender pay gap is driven by the private sector response.[18]

Other studies use online job advertisement data to investigate the impact of SHBs implemented in the United States. Bessen et al. (2021) compare data on wage postings by private sector firms in counties in the same commuting zone that are affected and unaffected by SHBs. They find that SHBs led to a 3 percentage point increase in the probability that a job ad would list salary information and to a 4% increase in realized pay among job changers, with larger increases among job-changing women. Before the SHB, job-changing women earned 14.3% less than comparable job-changing men. After the ban, women's average pay increased by 6.4%, causing a 45% reduction in the gender pay gap (see also Sran et al. 2020).

A recent study by Sockin & Sockin (2023) explores the impact of SHBs on both base and variable pay. Using data from an online labor platform, Glassdoor.com, they restrict attention to full-time salaried private sector workers who are not self-employed. The authors show that compared to men, women are less likely to receive variable pay and that they receive lower base pay, lower variable pay, and lower total compensation even after controlling for observable characteristics of workers, industry, occupation, firm, and job title.[19] The study replicates previous findings when looking at the impact of SHBs on base pay; three to four years after SHB legislation came into effect, the gender gap in base pay was reduced by 1.5 percentage points. However, these improvements are not seen in the gender gap in variable pay. If anything, there is a worsening of the gender gap in variable pay with no impact on the gender gap in the likelihood of receiving variable pay.

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[17]The response would be similar to that seen for attempts to reduce discriminatory practices by banning questions on criminal background, where ban-the-box initiatives had the unintended consequence of increasing discrimination against Black men who were, after the reform, assumed to be more likely to have such a history (see, e.g., Doleac & Hansen 2017, Agan & Starr 2018).

[18]Sinha (2022) estimates an increase in the overall gender pay gap in the public sector of 2–3 percentage points. It is challenging to reconcile this with Davis et al.'s (2022) finding of a null effect of SHBs on the gender pay gap for new hires in the public sector. Sinha (2022) also looks at heterogeneity by race and education and shows that improvements in pay are seen for white women only and for young workers, particularly those with low education levels.

[19]Sockin & Sockin (2023) also examine the effect of pay transparency policies.

Taken together, the studies show that initial fears that SHB policies may backfire and increase discrimination were unwarranted: SHBs have instead reduced the gender pay gap, although in some cases only for a subgroup of individuals.[20] In evaluating what may seem like a small response to the policy, it is important to keep in mind that we only expect the response among newly hired employees, thus reducing the short-run aggregate effect and potentially having a larger long-term response (see, e.g., Bessen et al. 2021, Mask 2021, Sockin & Sockin 2023). On the other hand, it is important to keep in mind that SHBs are rarely introduced in isolation. As noted by Sherman et al. (2023), SHBs implemented by US states and localities may have helped close the gender gap in pay because they were accompanied by campaigns advocating for reductions in the gender pay gap. As a potentially attenuating factor, they note that a large fraction of recruitment for new roles occurs within the firm, where the employer already has salary history information. Another contributor to a muted policy response is that potential employees may voluntarily disclose their salary histories, not only undermining the desired impact of the policy but also risking that the ban is adhered to more by some employees than others.

Agan et al. (2020) provide a theoretical examination of SHB policies that incorporates workers' decision to voluntarily disclose salary information and examine the implications this has for the gender pay gap. Using a survey of 504 US adults in the labor force, they classify workers into three types: always disclosers (25%), never disclosers (17%), and policy compliers (58%). They find that men are more likely to always disclose and less likely to comply than women, and that willingness to disclose increases with the proportion of others who do. Cowgill et al. (2023) extend the survey to a larger sample of respondents who answer the survey twice, 1.5 years apart. The results reveal a 6–8 percentage point increase (25–30%) in the share of individuals who voluntarily disclose their salary history without being prompted between the two survey waves.[21] They also find that women more than men feel uncomfortable disclosing their salary, bringing the authors to argue that women experience higher psychological costs of disclosure.[22] This suggests gender differences in voluntary disclosure of past pay under SHBs, a difference that is likely to impact the policy's effectiveness.

Agan et al. (2022) conducted a two-sided audit study to investigate the inference employers make from a candidate's salary history and decision to disclose past pay and explore how this affects hiring and compensation decisions. The researchers posed as firms and hired 256 real recruiters via UpWork to screen fictitious job candidates applying for a software engineering position. Recruiters were not aware that candidates and firms were fictitious. Each recruiter was hired by one firm and evaluated eight job candidates. Across firms, the study randomly varied whether the firm asked candidates about their current or most recent salary. Across candidates, the study randomly varied candidate gender, whether they worked for a high wage–paying firm in the past, and the candidates' disclosure decision (salary could be provided independently of whether the firm asked for current or past pay information).[23]

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[20]SHBs also help scarred workers who enter the labor market during a recession, and more so women than men (see Mask 2021).

[21]Using data from PayScale, Sinha (2022) also finds that SHBs reduced disclosure rates more for women than for men. Before the ban, women more than men were disclosing salary information (i.e., women were more often asked about their past pay and were more likely to disclose when asked).

[22]A total of 48% of men and 54% of women agree with the statement that they feel "fundamentally uncomfortable answering the salary history question when asked by a potential employer." In a nationally representative survey of US workers, Sinha (2022) finds that over 70% of respondents would disclose past pay information only when asked, and among those unwilling to disclose, 30% agree with the statement that they feel uncomfortable talking about salary (and women are 10% more likely than men to agree with the statement).

[23]For other experiments studying the impact of SHBs on bargaining and wages, readers are referred to Khanna (2020) and Barach & Horton (2021). Neither study sheds light on how the response varies by gender.

Agan et al.'s (2022) results are as follows. First, candidates who choose not to disclose their current or past pay are assumed to have lower-than-average quality and less attractive outside options and are therefore given lower salary offers. Second, higher disclosed salaries increase recruiters' beliefs about worker quality and competing offers, but more so about outside options than about worker quality. Third, disclosure by candidates, particularly of high salaries, generates high salary offers but is also associated with lower callback rates. Examining differential responses by gender, the authors find that choosing not to disclose salary information is penalized less for women than for men. This is consistent with women being perceived to have higher disclosure costs than men (Cowgill et al. 2023, Sinha 2022). The study also finds that dollars disclosed by men are discounted relative to other sources of variation in wages, such as variation in pay between and within firms, potentially indicating that men's disclosures are seen as less indicative of actual productivity. Accounting for voluntary salary disclosure, they nonetheless suggest that SHBs decrease the gender pay gap.[24]

The papers discussed so far have primarily focused on studying the impact of policies that simultaneously affect all employers in a given locality. There is a second type of SHBs that has also been studied and implemented: bans voluntarily imposed by employers.[25] Sherman et al. (2023, p. 2924) study an SHB voluntarily adopted by a recruiting company in the United Kingdom to "address disparities in compensation among the women and men that the firm placed." Using placement data from the firm, which specializes in media, technology, and design roles, the authors find that the SHB did not have the intended effect. The wages of men and women decreased after the ban and there was no change in the gender pay gap. This result is similar to that found in a field experiment conducted by the authors in which they varied, in a private mid-sized education institution in the United Kingdom, whether candidates for new staff (nonacademic) roles were asked about their past salary history during the job interview.[26] Interestingly, in this second study the authors find that only 14% of new hires negotiated their pay; thus the possible impact of the SHB was limited.

The decrease in compensation documented by Sherman et al. (2023) raises concerns that SHBs may not only impact the gender gap in pay. Davis et al. (2022) argue that SHBs cause employers to lose an informative productivity signal, and that this in turn can decrease wages. They find that SHBs decreased wages of new hires but increased wages for continuing workers. By contrast, Sran et al. (2020) find that SHBs resulted in a modest increase in worker earnings, and Bessen et al. (2021) find an increase in pay among job changers. Mask (2021) finds that SHBs increased real wages for scarred workers (those who entered the labor market during a recession) and had no impact on nonscarred workers.

Research to date does not confirm initial concerns that SHBs could backfire and increase the gender pay gap. However, evidence that SHBs may instead reduce the gender pay gap is typically only seen for certain subgroups, while the aggregate effect is more limited. The small aggregate effects may in part result from the policy only impacting new hires and from the policy's effectiveness being limited both by voluntary disclosure and by hiring within firms. While the initial

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[24]Agan et al. (2022) conduct a simulation to examine the effect of SHBs on the gender pay gap when accounting for voluntary salary disclosure. Combining data from their two-sided audit study with survey results from Cowgill et al. (2023), they find that SHBs can reduce gender inequality in offered wages conditional on callback.

[25]Examples of firms removing salary questions from their hiring process include Amazon, American Express, Bank of America, Cisco, Google, Starbucks, and Wells Fargo (see Miller 2018, Noguchi 2018).

[26]Unfortunately, candidates asked and not asked about their salary history during interviews had a meeting with an HR representative prior to the main interview where they discussed their past salary history, making it difficult to interpret these findings.

results are promising in terms of reducing the gender pay gap, it is important to better understand when the policy may negatively impact overall compensation.

3.3. Pay Transparency

Pay transparency is another intervention used to reduce gender differences in negotiation. The degree of pay transparency ranges from no information to complete information, from adoption being voluntary to being implemented by law, and from information being revealed only internally to being revealed publicly. Policies include the right to discuss salary, requirements to report gender pay gaps or pay statistics by occupation and gender, disclosure of pay ranges in job postings, and salary information on peers or on the entire wage distribution. While minimal reports on the mean or median gender pay gap can help reveal discriminatory practices, more detailed reporting can help similarly qualified individuals set aligned negotiation expectations and aspirations and thus affect the gender gap in negotiation.[27]

Rules and regulation on pay transparency vary widely by country and region. US private sector reporting has historically been limited to requiring gender pay gap reports to maintain government contracts. However, individual firms are increasingly choosing to reveal part of or the entire wage distribution to their employees, and a number of individual jurisdictions have passed pay transparency legislation.[28] For example, pay ranges are now required for job postings in California, Colorado, Connecticut, Maryland, Nevada, Rhode Island, Washington State, and New York City. Transparency legislation has been more widely adopted in the European Union. With reporting requirements already in place in many member countries, the European Union recently passed a directive to secure reports on gender differences in compensation by large employers in all member countries. The directive also calls for companies, independent of size, to inform new employees of the pay range for their position and to inform existing employees, upon request, about pay in their category of work.[29]

The movement toward greater pay transparency begs the question of whether it works. Does greater transparency affect negotiation and the gender pay gap? And are there unintended consequences that need to be taken into account? We will address these questions first by reporting on a series of experimental studies and then by exploring the response to pay transparency legislation.

As noted earlier, research shows that ambiguity increases the gender gap in negotiated pay. For example, Bowles et al. (2005) find, in a survey of MBAs, that the gender gap in starting salaries is larger in industries with higher ambiguity in compensation. To directly assess the effect of ambiguity on negotiation, they conduct a controlled experiment where participants negotiate the price of

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[27]Evidence from the United Kingdom (Blundell 2021, Duchini et al. 2022) suggests that employees value limited gender pay gaps like they value corporate social responsibility, more so women than men, and that public reports help put pressure on firms to reduce the gap.

[28]While individual companies may adopt pay transparency, it is unclear that broad adoption will follow absent legislation. Cullen & Perez-Truglia (2023b) show that 69% of employees in their study find it unacceptable to ask coworkers about their salaries, and 89% would feel uncomfortable if they had to ask for this information. Moreover, when asked about their willingness to share their personal salary information, 80% preferred to conceal it, with 39% being willing to pay the maximum possible price in the study to conceal their salary. Cullen & Perez-Truglia (2022), on the other hand, find that employees both want information and are willing to pay for it, but that they would prefer the less informative option when given the choice between (*a*) a website providing mean salary by position and unit and (*b*) a website showing salary information at the individual level, where any employee can be looked up. As evidence that individuals value information but value their privacy more, the study shows that the fraction of employees who support the first policy is 65.3%, while those supporting the second policy is a mere 13.3%.

[29]The directive also includes a ban on pay secrecy and on salary history requests.

a good in a buyer-seller environment. Buyers are given the bargaining range in both a high- and a low-ambiguity treatment, with the difference being that a negotiation target is added for the latter. Results show gender differences in negotiation in the high- but not in the low-ambiguity environment. That is, information on the negotiation target eliminates gender differences in negotiated outcomes.

Similarly, Leibbrandt & List (2015) show that gender differences are smaller when the negotiation opportunity is less ambiguous. They conduct a field experiment with 2,422 job seekers where a low-ambiguity treatment states that wages are negotiable, and a high-ambiguity treatment has no such statement. Results show that both the negotiation and the applicant pool are affected by the negotiation ambiguity. While application rates are high in both treatments, the representation of women is higher when applicants are informed that wages are negotiable (i.e., applications decrease for men and increase for women). Examining the effect on negotiation, Leibbrandt & List (2015) classify job applicants into those who initiate negotiations for higher pay, those who signal willingness to work for lower pay, and those who do not initiate negotiations. When negation is ambiguous, men, compared to women, are more likely to initiate negotiations for higher pay and less likely to signal willingness to accept lower wages. However, these gender differences disappear in the low-ambiguity treatment when it is clear that wages are negotiable.

Relatedly, a series of studies examine the effect of providing information on the compensation of others. Major et al. (1984) conduct an experiment where participants choose their compensation after completing survey work for 20 minutes. Participants are given $4 and decide how much to keep as pay, recording their pay and gender on a form that may or may not contain information about others' compensation. A baseline treatment keeps the form blank, while three social information treatments prefill the form making it seem as though the information reflects the compensation chosen by eight previous participants. One treatment shows that four men and four women paid themselves $2 on average. The two other treatments show that either the average pay was $2.50 for men and $1.50 for women or the reverse. Results reveal that men pay themselves nearly twice as much as women when no information is provided; however, the social information treatments cause men to decrease their pay, eliminating the gender gap.[30] That is, Major et al. (1984) find that transparency affects the individual's sense of entitlement and their requests.

Rigdon (2012) expands the analysis to examine the effect of information both on requests and on negotiation outcomes. A modified ultimatum game experiment is conducted, where participants are randomly assigned to the roles of proposer and responder. The game is as follows: Responders first make a cheap-talk pay request, proposers then make an offer, and responders accept or reject the offer. Acceptance implements the agreed-upon offer, while rejection provides zero payoff to both parties.[31] Treatments vary whether participants receive information about the requests and offers of previous participants. A baseline treatment provides no information, another treatment shows participants the distribution of pay requests made by male responders in the baseline treatment, and a third treatment additionally shows the average offer received per pay request. Participants do not know that they only see male responders' requests. The baseline

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[30]A second experiment pays participants $4 and asks them to decide how much time they want to work. Consistent with women asking for lower pay than men, women work longer and complete more and higher-quality work.
[31]The standard ultimatum game limits the interaction to a take-it-or-leave-it offer. Nevertheless, the setting provides insights on why women fare worse in negotiations (Eckel & Grossman 2001, Solnick 2001). Reviewing the literature, Eckel et al. (2008) conclude that women are more egalitarian, expect and ask for less, and are less likely to reach an impasse.

treatment shows that women demand less, are given lower offers, and earn less than men. These differences disappear when compensation information is provided: Providing compensation information increases both the requests by and the offers for women, causing the gender differences to disappear.

Roussille (2022) further studies the impact of gender differences on requested salaries, or what she refers to as the gender ask gap. Of interest is how the ask gap impacts differences in compensation and whether wage transparency impacts these differences. The data used are from Hired.com, an online recruitment platform that matches job applicants with full-time, high-paying engineering jobs in the United States. Job applicants create a profile on the platform that lists qualifications and experience, along with information on the pay they would like to receive. Employers who match with a job candidate must submit a salary bid at the time they contact candidates for an interview. Interviews occur outside of the platform, but salary information is collected on those who are hired.

First, examining differences in salary requests and how these impact the gender pay gap, Roussille (2022) finds that relative to comparable men, women request lower salaries (2.6%), receive lower bids (2.2%), and earn less (1.4%). Importantly the gender pay gap is fully explained by the gap in salary requests. Second, examining the impact of transparency, Roussille (2022) exploits a temporary platform change that made employees more aware of the compensation of others. In 2018, salary requests made for San Francisco jobs were prefilled with the median bid salary offered by firms over the past 12 months to similar candidates. Candidates were informed that the pre-entered request was the median and could edit the number as they wished. Candidates, prior and during the platform change, were also presented a histogram of salaries offered to similar candidates; however, the platform change added information on the median and pre-entered the information on the salary-ask box, which was otherwise left blank. Using an event study design that compares candidates who created profiles before and after the platform change, the author reveals that prefilling the box increased the requests made by women and closed the gender gap in ask salaries, bids, and final pay. Importantly, Hired.com did not announce the platform change even to employers; therefore, the pool of candidates did not change nor did the perceptions of employers, thus capturing a nonexperimental response to higher salary requests by women.[32]

A series of recent studies directly investigate the response to salary transparency legislation.[33] While many studies emphasize the impact on the gender wage gap, other studies explore the broader (often unintended) consequences of the policies.

Considering the variation in legislations and in the initial conditions of the market in which these are adopted, it is perhaps not surprising that the impact on the gender wage gap is mixed. Baker et al. (2023) and Obloj & Zenger (2022) study the response to legislation that makes individual-level salary information public. Both studies investigate the impact of public sector salary disclosure laws on university faculty salaries in North America. Baker et al. (2023) find that the disclosure laws decreased the gender pay gap by 1.2–2 percentage points (20–30% of the pre-reform gap) in Canada, finding larger effects in workplaces that are unionized. Similar results are seen in US data, where Obloj & Zenger (2022) find that transparency legislation reduced the gender pay gap by 2–5.9 percentage points. Additionally, the study shows reduced returns to

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[32] Shedding light on the role of information, the study also explores whether gender differences in salary requests are higher in subsamples in which women have lower access to salary information. Using female representation as an information access proxy (on gendered networks, see Zeltzer 2020, Cullen & Perez-Truglia 2023a), the study shows larger gender differences in salary requests in labor markets where the share of women is smaller and among more experienced candidates, where there are also fewer women.

[33] Cullen (2023) provides a review of pay-transparency policies and of the wide variation in legislation.

performance and promotions, and it documents wage increases for those who were underpaid before the reform (and no change in the wage growth of those who were overpaid based on productivity).

The response to transparency is more mixed when less pay information is revealed (i.e., salary statistics by gender or by gender and occupation). Some studies document reductions in gender wage inequality, while others find no impact. Studies in both Denmark and the United Kingdom point to reductions in the gender pay gap. Bennedsen et al. (2022) study the impact of a Danish law passed in 2006 requiring firms with 35 or more employees to report average salaries by occupation code and gender. The law mandated reports to be made available internally to employees but did not require employers to make their reports public. Comparing firms with 20 to 34 employees unaffected by the policy to those with 35 to 50 employees reveals that transparency legislation reduced the average gender pay gap by 1.9 percentage points.

Duchini et al. (2022) and Blundell (2021) study a similar law introduced in the United Kingdom in 2017. The policy mandates firms with at least 250 employees to publicly report on gender differences (gaps in average hourly wages, bonus pay, the proportion of male and female employees who receive bonus pay, and the gender ratio for each quartile of a company's wage distribution). Reports do not distinguish statistics by occupation or rank and use a broad definition of employee (including part-time and agency workers). Nonetheless, both studies find a reduction in the gender pay gap of around 2 percentage points (14–19%).

Studies of transparency laws in Germany, Austria, and Slovakia, however, do not find improvements in the gender pay gap. In Germany the pay transparency law implemented in 2018 allows workers employed in firms with more than 200 employees to ask their employers for information about the median full-time equivalent monthly earnings of opposite-gender coworkers who do comparable work. Employers must provide this information to those who ask within 3 months, so long as there are six coworkers who perform comparable work (with leeway on what is considered comparable work). Employees cannot reveal the acquired pay information to others, including those working within the same firm. Seitz & Sinha (2022) and Brütt & Yuan (2022) find that the law does not impact the gender pay gap nor wages (with a precisely estimated null effect).

Exploring the limited effect of the German transparency policy, Seitz & Sinha (2022) add a survey module to the German Socio-Economic Panel, implemented in 2019, and find that nearly 50% of respondents were aware of the policy (and men and women were equally aware). However, the incidence of requests was very low: Only 1% of men and 2.7% of women asked for pay information from their employers.[34] Thus it may be that the legal right to request information is not sufficient for providing workers with the information needed for change.[35]

Wage transparency legislation in Austria has also had a limited effect on the gender pay gap. The law has two components. First, it mandates firms with more than 150 employees to produce an internal biannual pay gap report that lists the mean or median salaries by occupation

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[34]Seitz & Sinha (2022) find that over 80% of respondents said they were unlikely to request pay information in the future (with no gender difference). They find that while women are slightly more inclined to request information, they report being less comfortable doing so. Employees also reported reasons for not asking for salary information. Men were more likely to say they would not ask for pay information because they considered their salary to be fair, and women were more likely to report not doing so because it would hurt their image and career opportunities.

[35]Brütt & Yuan (2022) conduct a laboratory experiment to study the impact of wage transparency when information on peer earnings is provided exogenously versus endogenously. They find that exogenously provided information increases earnings relative to a control treatment with no information on peer earnings, but endogenously provided information has no impact. Interestingly, the gender pay gap does not vary significantly depending on the information being provided exogenously or endogenously.

and gender (information in the report is proprietary information). Second, it requires that job advertisements state the minimum wage employers are willing to pay to workers, with the wage at least corresponding to the collective bargaining agreement that applies to the vacancy. Evaluating the impact of the first component of this law, Gulyas et al. (2023) and Böheim & Gust (2021) find no impact of the internal pay reporting requirement on the average gender gap in pay. Frimmel et al. (2022) use public employment vacancy postings to study the impact of the second component of Austria's pay-transparency law, wage posting, and again find a statistically insignificant reduction in the gender gap in earnings, this time along the entire earnings distribution (see also Bamieh & Ziegler 2022). Cullen & Pakzad-Hurson (2023) note that the muted response to Austrian transparency legislation may result from the nearly universal rates of unionization and the very limited room for individual negotiation.

Skoda (2022) evaluates a similar legislation implemented in Slovakia in 2018 that requires the fixed component of pay to be included in job ads and prohibits employers from hiring someone at a rate lower than the one posted. Fines for employer violations are high, up to 100,000 euros. Using data from the major online job search platform and social security records, the study shows that the policy led to a 3% increase in the wages of new hires, driven by an increase in wages among firms that did not post pay prior to the reform. There is, however, no differential effect on the pay of men and women.[36]

The different forms of transparency legislation implemented around the world have shown mixed impact on the gender pay gap. Policies revealing detailed individual-level salaries, such as those implemented in the public sector in Canada and the United States, have unambiguously reduced gender differences in pay. Less informative policies, or policies where information can be endogenously acquired, have had more mixed results, with several initiatives being ineffective in reducing the gender pay gap. Changing transparency, however, does not simply affect negotiation expectations and aspirations; there are many other potential responses that need to be considered. Some of these include potential changes in productivity, job satisfaction, and bargaining power.

A concern frequently noted when discussing the revelation of salary is that this can negatively impact job satisfaction, morale, well-being, and even quit rates (e.g., Luttmer 2005, Card et al. 2012, Mas 2017, Breza et al. 2018, Perez-Truglia 2020). Cullen & Perez-Truglia (2022) conduct a clever field experiment in a large Southeast Asian bank to study whether wage transparency may be demotivating. Junior analysts received information about the compensation of colleagues at their level or at a higher, more senior level. Prior to the intervention, junior analysts were poorly informed about the salary of their senior colleagues and systematically underestimated seniors' compensation. Exogenously varying access to information on compensation by others, the study shows that information on seniors' salary is highly motivating for junior analysts, who upon learning about their salary misperception work harder. By contrast, it is demotivating to learn that peers secure higher-than-expected pay. That is, horizontal wage transparency (information on peers' wages) can be demotivating, while vertical wage transparency (information on seniors' wages) can help to motivate employees as they aspire to advance in the organization.

Further exploring the broader impact of pay transparency, Cullen & Pakzad-Hurson (2023) show that this initiative may shift bargaining power from workers to firms, thus reducing average wages. The study develops a theoretical model of dynamic wage bargaining under incomplete information to study the general equilibrium effects of wage transparency policies. A key insight to the reduction in the workers' bargaining power is that a transparent negotiated pay increase will trigger demands from other employees, causing employers to refuse raising any individual wage

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[36]Studying a similar law, Arnold et al. (2022) provide evidence that the Colorado law on posting pay in job ads increased the wages posted.

to avoid costly renegotiations with others. With the loss in bargaining power, there is a decrease in average wages. The model also predicts that the negative effect of transparency on wages is greater when workers hold individual bargaining power and smaller when workers are unionized or in markets with posted wages.

Cullen & Pakzad-Hurson (2023) test the theoretical predictions of their model by evaluating the impact of policies allowing workers to discuss salary information that were implemented in US states between 2000 and 2016. Consistent with the model, they find that transparency decreased private sector wages by approximately 2%, with smaller effects for occupations with high unionization rates.[37]

Cullen & Pakzad-Hurson's (2023) predictions align well with results seen in the literature. For example, Bennedsen et al. (2022) find that the decrease in the gender pay gap documented in Denmark results from a decrease in the wage growth for men and no change in the wage growth of women. Further, they find that overall pay and productivity decrease, leaving firm profits unchanged.[38] Similarly Duchini et al. (2022) and Blundell (2021) show in the United Kingdom that a decline in men's real wages drives the reduction in the gender pay gap. Again, this reduction in cost is accompanied by suggestive evidence of decreased productivity and no overall impact on firm profits.[39] Frimmel et al. (2022) similarly find in Austria that the insignificant decrease in the gender pay gap results mainly from a decrease in men's real wages.[40] Finally, Baker et al. (2023) find in some specifications that the slower growth of men's salaries drives the decreased gender pay gap in academic salaries in Canada. Thus, the evidence suggests that in contrast to the effect intended, transparency often reduces the gender gap in pay not by improving conditions for women, but rather by worsening them for men.

It will be of interest in future work to explore what gives rise to the slower wage growth for men. While it is compelling to see the evidence as consistent with Cullen & Pakzad-Hurson's (2023) finding that transparency depresses worker bargaining power, it may be of interest to also consider that a similar depressive effect is seen in the study by Major et al. (1984), where information on others' compensation decreased men's entitlement and salary requests (absent any bargaining opportunity).

Providing an excellent overview of the pay transparency literature, Cullen (2023) abstracts from the impact on the gender pay gap and emphasizes the broader impact of the policy. She distinguishes between three types of policies: horizontal, vertical, and cross-firm pay transparency initiatives. Horizontal pay transparency refers to initiatives revealing information about differences in pay between coworkers in the same role (peers), vertical pay transparency sheds light on differences in pay across individuals who have different seniority, and cross-firm pay transparency

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[37]For context, the authors argue that a freeze in nominal wages during the same time period would have generated a comparable decrease in average annual real wages (2.8%). The authors also show that accounting for unionization rates helps reconcile the mixed impact of legislative changes documented in the literature. Readers are referred to Sockin & Sockin (2023) for a study that investigates the impact on the gender gap in base and variable pay of policies that allow workers to discuss salary information. The study shows that the policy led to a reduction in the gender gap in base pay but finds no such impact on variable pay.

[38]Bennedsen et al. (2022) also show that more women are hired and promoted in firms affected by the policy.

[39]Blundell (2021) finds no overall change in stock market returns, and Duchini et al. (2022) find a short-lived drop in firms targeted by the policy. Gamage et al. (2020) conduct a study of wage transparency in the United Kingdom, showing that pay reports in academia reduced the gender pay gap in faculty salaries by 0.62 percentage points (4.38%) via improvements in women's wages.

[40]Frimmel et al. (2022) also find that when workers have high bargaining power (i.e., when jobs are immediately available, when jobs are not immediately filled, and when the firm signals willingness to negotiate and pay more), female wages increase and male wages do not change, leading to a significant reduction in the gender pay gap.

reveals pay differences between firms. In practice, pay transparency initiatives often fall under more than one category. While horizontal pay transparency has been the aim of most pay transparency legislation, Cullen (2023) argues that the latter two are more likely to improve employee outcomes. Although horizontal pay transparency can decrease pay inequality between coworkers, it tends to depress employee motivation, bargaining power, and wage growth. Vertical pay transparency, on the other hand, increases knowledge of compensation associated with advancement, leading to more accurate and optimistic beliefs, which can in turn improve performance. Cross-firm pay transparency, on the other hand, by revealing the compensation in other organizations, can encourage job search, negotiation of higher compensation, and wage competition between firms.

There is substantial variation in the wage transparency interventions that organizations and governments have adopted. While detailed information on wages reduces the gender pay gap, the evidence is more mixed when it comes to less informative policies. The broad interest in this topic is shedding light not only on the intended consequences of these policies but also on the unintended ones. As transparency policies are implemented, it is critical to take both types of consequences into account. It is also important to consider how information is presented and how accessible it is. If legislation solely provides the right to information, it may not be sufficient to change the negotiated outcomes. With recent legislation in both the United States and Europe, we will soon gain a much better understanding of how these policies impact the gender wage gap and overall compensation.

4. CONCLUSION

Men more than women succeed when faced with negotiation opportunities in the labor market. Efforts to reduce the gender pay gap have led to initiatives aiming to reduce gender differences in negotiation or the impact such differences have on outcomes. Growing interest in this topic, along with many recent adoptions of initiatives, has improved the data available to evaluate the effectiveness of these policies.

Reviewing the literature, we focused first on individual-level initiatives that largely aim to change how often and how women negotiate. The evidence shows serious challenges to these types of interventions. Encouraging women to mirror the negotiation behavior of men is likely to backfire, because women face different societal expectations than men. Women who take a more aggressive and confident approach to negotiation may experience backlash. The observed gender differences in negotiation could well reflect that men and women face different conditions when negotiating. Hence, attempts to alter women's behavior could well fail.

An approach that may be more effective in reducing gender differences in outcomes is one that modifies the conditions of the negotiation. Such institutional initiatives are being increasingly adopted both voluntarily and through legislative action. Reviewing the literature on banning negotiation or salary history requests, as well as that on wage transparency, suggests that such institutional initiatives are effective in reducing the gender pay gap; while some effects are small or null, others show a substantial improvement. Research to date suggests that "fix-the-institution" initiatives are more effective in equalizing outcomes than "fix-the-women" interventions.

In embracing institutional design, there are however grounds for cautious and carefully designed adoption. This is because tensions within the individual programs may challenge long-term success and because specific design details can impact both the effectiveness and the unintended consequences of a policy. While initial evidence on banning negotiations or salary history requests shows reduced gender pay gaps, upholding a negotiation ban will be difficult in the presence of retention challenges, just as the effectiveness of SHBs depends on whether voluntary disclosures

can be restricted. Similarly, the effectiveness of transparency legislation likely hinges on the salary information being exogenously provided. Giving employees only the right to request information limits transparency and has proven to be rather ineffective. Further, the adopted institutional design must account for the broader impact of the policy. It is insufficient to assess only the impact on the gender pay gap, as the interventions may have unintended negative consequences. For example, while somewhat mixed, there is concerning evidence of decreased overall wage growth in response to both SHBs and horizontal wage transparency, where the latter may result from reduced employee bargaining power and/or negative effects on worker morale and productivity. By understanding how these institutional interventions impact employee and employer incentives in a general equilibrium sense, we will be able to design policies that help secure equal compensation for equal work, while at the same time reducing the potential negative impacts of such policies.

Cullen (2023) provides an excellent example of efforts to develop effective interventions. Critical insights are gained first by demonstrating that horizontal pay transparency may equalize wages by depressing overall wage growth, and second by showing that vertical and cross-firm transparency policies help address these shortcomings by improving firm competition, employee aspirations, and bargaining power. Growing efforts to secure pay equity will help inform alternative and more effective policies that improve not only equity but also efficiency and employee well-being.

DISCLOSURE STATEMENT

LITERATURE CITED

Agan A, Cowgill B, Gee LK. 2020. Do workers comply with salary history bans? A survey on voluntary disclosure, adverse selection, and unraveling. *AEA Pap. Proc.* 110:215–19

Agan A, Cowgill B, Gee LK. 2022. *Salary history and employer demand: evidence from a two-sided audit*. Work. Pap., Rutgers Univ., New Brunswick, NJ

Agan A, Starr S. 2018. Ban the box, criminal records, and racial discrimination: a field experiment. *Q. J. Econ.* 133:191–235

Amanatullah ET, Morris MW. 2010. Negotiating gender roles: Gender differences in assertive negotiating are mediated by women's fear of backlash and attenuated when negotiating on behalf of others. *J. Pers. Soc. Psychol.* 98:256–67

Amanatullah ET, Tinsley CH. 2013. Punishing female negotiators for asserting too much... or not enough: exploring why advocacy moderates backlash against assertive female negotiators. *Organ. Behav. Hum. Decis. Process.* 120:110–22

Andersen S, Ertac S, Gneezy U, List JA, Maximiano S. 2018. On the cultural basis of gender differences in negotiation. *Exp. Econ.* 21:757–78

Andersen S, Marx J, Nielsen KM, Vesterlund L. 2021. Gender differences in negotiation: evidence from real estate transactions. *Econ. J.* 131:2304–32

Andreoni J, Vesterlund L. 2001. Which is the fair sex? Gender differences in altruism. *Q. J. Econ.* 116:293–312

Arnold D, Quach S, Taska B. 2022. *The impact of pay transparency in job postings on the labor market*. Work. Pap., Univ. Calif., San Diego

Arnold SH, McAuliffe K. 2021. Children show a gender gap in negotiation. *Psychol. Sci.* 32:153–58

Ashraf N, Bau N, Low C, McGinn K. 2020. Negotiating a better future: how interpersonal skills facilitate intergenerational investment. *Q. J. Econ.* 135:1095–151

Ayres I. 1991. Fair driving: gender and race discrimination in retail car negotiations. *Harv. Law Rev.* 104:817–72

Ayres I. 1995. Further evidence of discrimination in new car negotiations and estimates of its cause. *Mich. Law Rev.* 94:109–47

Ayres I, Siegelman P. 1995. Race and gender discrimination in bargaining for a new car. *Am. Econ. Rev.* 85:304–21

Azmat G, Petrongolo B. 2014. Gender and the labor market: What have we learned from field and lab experiments? *Labour Econ.* 30:32–40

Babcock L, Gelfand M, Small D, Stayn H. 2006. Gender differences in the propensity to initiate negotiations. In *Social Psychology and Economics*, ed. MZD De Cremer, JK Murnighan, pp. 239–59. New York: Lawrence Erlbaum

Babcock L, Laschever S. 2003. *Women Don't Ask: Negotiation and the Gender Divide*. Princeton, NJ: Princeton Univ. Press

Babcock L, Recalde MP, Vesterlund L, Weingart L. 2017. Gender differences in accepting and receiving requests for tasks with low promotability. *Am. Econ. Rev.* 107:714–47

Baker M, Halberstam Y, Kroft K, Mas A, Messacar D. 2023. Pay transparency and the gender gap. *Am. Econ. J. Appl. Econ.* 15:157–83

Bamieh O, Ziegler L. 2022. *Can wage transparency alleviate gender sorting in the labor market?* IZA Discuss. Pap. 15363, Inst. Labor Econ., Bonn, Ger.

Barach MA, Horton JJ. 2021. How do employers use compensation history? Evidence from a field experiment. *J. Labor. Econ.* 39:193–218

Barron LA. 2003. Ask and you shall receive? Gender differences in negotiators' beliefs about requests for a higher salary. *Hum. Relat.* 56:635–62

Bear JB, Babcock L. 2017. Negotiating femininity: Gender-relevant primes improve women's economic performance in gender role incongruent negotiations. *Psychol. Women Q.* 41:163–74

Bennedsen M, Simintzi E, Tsoutsoura M, Wolfenzon D. 2022. Do firms respond to gender pay gap transparency? *J. Finance* 77:2051–91

Bertrand M. 2011. New perspectives on gender. In *Handbook of Labor Economics*, Vol. 4A, ed. D Card, O Ashenfelter, pp. 1543–90. Amsterdam: Elsevier

Bessen J, Meng C, Denk E. 2021. *Perpetuating inequality: what salary history bans reveal about wages*. Work. Pap., Boston Univ., Boston, MA

Biasi B, Sarsons H. 2021. Information, confidence, and the gender gap in bargaining. *AEA Pap. Proc.* 111:174–78

Biasi B, Sarsons H. 2022. Flexible wages, bargaining, and the gender gap. *Q. J. Econ.* 137:215–66

Blundell J. 2021. *Wage responses to gender pay gap reporting requirements*. Discuss. Pap. 1750, Cent. Econ. Perform., Lond. Sch. Econ., London

Böheim R, Gust S. 2021. *The Austrian pay transparency law and the gender wage gap*. IZA Discuss. Pap. 14206, Inst. Labor Econ., Bonn, Ger.

Borghans L, Heckman JJ, Golsteyn BH, Meijers H. 2009. Gender differences in risk aversion and ambiguity aversion. *J. Eur. Econ. Assoc.* 7:649–58

Bowles HR. 2013. Psychological perspectives on gender in negotiation. In *The SAGE Handbook of Gender and Psychology*, ed. MK Ryan, NR Branscombe, pp. 465–83. London: SAGE

Bowles HR, Babcock L. 2013. How can women escape the compensation negotiation dilemma? Relational accounts are one answer. *Psychol. Women Q.* 37:80–96

Bowles HR, Babcock L, Lai L. 2007. Social incentives for gender differences in the propensity to initiate negotiations: Sometimes it does hurt to ask. *Organ. Behav. Hum. Decis. Process.* 103:84–103

Bowles HR, Babcock L, McGinn KL. 2005. Constraints and triggers: situational mechanics of gender in negotiation. *J. Pers. Soc. Psychol.* 89:951–65

Bowles HR, Gelfand M. 2010. Status and the evaluation of workplace deviance. *Psychol. Sci.* 21:49–54

Bowles HR, McGinn KL. 2008. Gender in job negotiations: a two-level game. *Negot. J.* 24:393–410

Bowles HR, Thomason B, Macias-Alonso I. 2022. When gender matters in organizational negotiations. *Annu. Rev. Organ. Psychol. Organ. Behav.* 9:199–223

Breza E, Kaur S, Shamdasani Y. 2018. The morale effects of pay inequality. *Q. J. Econ.* 133:611–63

Brütt K, Yuan H. 2022. *Pitfalls of pay transparency: evidence from the lab and the field*. Discuss. Pap. TI 2022-055/I, Tinbergen Inst., Amsterdam

Bursztyn L, Fujiwara T, Pallais A. 2017. "Acting wife": marriage market incentives and labor market investments. *Am. Econ. Rev.* 107:3288–319

Busse MR, Israeli A, Zettelmeyer F. 2017. Repairing the damage: the effect of price knowledge and gender on auto repair price quotes. *J. Mark. Res.* 54:75–95

Card D, Cardoso AR, Kline P. 2016. Bargaining, sorting, and the gender wage gap: quantifying the impact of firms on the relative pay of women. *Q. J. Econ.* 131:633–86

Card D, Mas A, Moretti E, Saez E. 2012. Inequality at work: the effect of peer salaries on job satisfaction. *Am. Econ. Rev.* 102:2981–3003

Castillo M, Petrie R, Torero M, Vesterlund L. 2013. Gender differences in bargaining outcomes: a field experiment on discrimination. *J. Public Econ.* 99:35–48

Chotiputsilp B, Kim T. 2021. *Can negotiation training help close the gender pay gap?* Work. Pap., Erasmus Univ. Rotterdam, Rotterdam, Neth.

Cowgill B, Agan AY, Gee L. 2023. *The gender disclosure gap: Salary history bans unravel when men volunteer their income*. Work. Pap., Columbia Univ., New York

Croson R, Gneezy U. 2009. Gender differences in preferences. *J. Econ. Lit.* 47:448–74

Cullen ZB. 2023. *Is pay transparency good?* NBER Work. Pap. 31060

Cullen ZB, Pakzad-Hurson B. 2023. Equilibrium effects of pay transparency. *Econometrica* 91:765–802

Cullen ZB, Perez-Truglia R. 2022. How much does your boss make? The effects of salary comparisons. *J. Political Econ.* 130:766–822

Cullen ZB, Perez-Truglia R. 2023a. The old boys' club: schmoozing and the gender gap. *Am. Econ. Rev.* In press

Cullen ZB, Perez-Truglia R. 2023b. The salary taboo: privacy norms and the diffusion of information. *J. Public Econ.* 222:104890

Dannals JE, Zlatev JJ, Halevy N, Neale MA. 2021. The dynamics of gender and alternatives in negotiation. *J. Appl. Psychol.* 106:1655–72

Davis J, Ouimet P, Wang X. 2022. Hidden performance: salary history bans and the gender pay gap. *Rev. Corp. Finance Stud.* 11:511–53

Dittrich M, Knabe A, Leipold K. 2014. Gender differences in experimental wage negotiations. *Econ. Inq.* 52:862–73

Doleac JL, Hansen B. 2017. Moving to job opportunities? The effect of "ban the box" on the composition of cities. *Am. Econ. Rev.* 107:556–59

Dreber A, Heikensten E, Säve-Söderbergh J. 2022. Why do women ask for less? *Labour Econ.* 78:102204

Duchini E, Simion S, Turrell A. 2022. *Pay transparency and gender equality*. CAGE Work. Pap. 482, Univ. Warwick, Coventry, UK

Eckel C, De Oliveira AC, Grossman PJ. 2008. Gender and negotiation in the small: Are women (perceived to be) more cooperative than men? *Negot. J.* 24:429–45

Eckel CC, Grossman PJ. 2001. Chivalry and solidarity in ultimatum games. *Econ. Inq.* 39:171–88

Enwemeka Z. 2016. To close the wage gap, Boston hopes salary negotiation workshops will create a culture shift. *WBUR*, Aug 26. **https://www.wbur.org/news/2016/08/26/boston-wage-gap-salary-workshops**

Exley CL, Niederle M, Vesterlund L. 2020. Knowing when to ask: the cost of leaning in. *J. Political Econ.* 128:816–54

Frimmel W, Schmidpeter B, Wiesinger R, Winter-Ebmer R. 2022. *Mandatory wage posting, bargaining and the gender wage gap*. Work. Pap., Johannes Kepler Univ. Linz, Linz, Austria

Gago A. 2020. *Confrontation costs in negotiations: bargaining under the veil of a screen*. Work. Pap., Torcuato Di Tella Univ., Buenos Aires

Gamage DDK, Kavetsos G, Mallick S, Sevilla A. 2020. *Pay transparency initiative and gender pay gap: evidence from research-intensive universities in the UK*. IZA Discuss Pap. 13635, Inst. Labor Econ., Bonn, Ger.

Gihleb R, Landsman R, Vesterlund L. 2023. *The effect of work assignment on compensation and negotiation*. Work. Pap., Univ. Pittsburgh, Pittsburgh, PA

Gneezy U, Niederle M, Rustichini A. 2003. Performance in competitive environments: gender differences. *Q. J. Econ.* 118:1049–74

Greig F. 2008. Propensity to negotiate and career advancement: evidence from an investment bank that women are on a "slow elevator." *Negot. J.* 24:495–508

Gulyas A, Seitz S, Sinha S. 2023. Does pay transparency affect the gender wage gap? Evidence from Austria. *Am. Econ. J. Econ. Policy* 15:236–55

Hall RE, Krueger AB. 2012. Evidence on the incidence of wage posting, wage bargaining, and on-the-job search. *Am. Econ. J. Macroecon.* 4:56–67

Hansen B, McNichols D. 2020. *Information and the persistence of the gender wage gap: early evidence from California's salary history ban*. NBER Work. Pap. 27054

Hernandez-Arenaz I, Iriberri N. 2018. Women ask for less (only from men): evidence from bargaining in the field. *J. Econ. Behav. Organ.* 152:192–214

Hernandez-Arenaz I, Iriberri N. 2019. A review of gender differences in negotiation. In *Oxford Research Encyclopedia of Economics and Finance*. Oxford, UK: Oxford Univ. Press. **https://doi.org/10.1093/acrefore/9780190625979.013.464**

Hernandez-Arenaz I, Iriberri N. 2023. Gender differences in alternating-offer bargaining: an experimental study. *Exp. Econ.* 2023. **https://doi.org/10.1007/s10683-023-09796-9**

Khanna S. 2020. Salary history bans and wage bargaining: experimental evidence. *Labour Econ.* 65:101853

Kray LJ. 2015. The best way to eliminate the gender pay gap? Ban salary negotiations. *Washington Post*, May 21

Kray LJ, Galinsky AD, Thompson L. 2002. Reversing the gender gap in negotiations: an exploration of stereotype regeneration. *Organ. Behav. Hum. Decis. Process.* 87:386–409

Kray LJ, Gelfand MJ. 2009. Relief versus regret: the effect of gender and negotiating norm ambiguity on reactions to having one's first offer accepted. *Soc. Cogn.* 27:418–36

Kugler KG, Reif JA, Kaschner T, Brodbeck FC. 2018. Gender differences in the initiation of negotiations: a meta-analysis. *Psychol. Bull.* 144:198–222

Leibbrandt A, List JA. 2015. Do women avoid salary negotiations? Evidence from a large-scale natural field experiment. *Manag. Sci.* 61:2016–24

Li CH, Zafar B. 2023. Ask and you shall receive? Gender differences in regrades in college. *Am. Econ. J. Econ. Policy* 15:359–94

List JA. 2004. The nature and extent of discrimination in the marketplace: evidence from the field. *Q. J. Econ.* 119:49–89

Luttmer EF. 2005. Neighbors as negatives: relative earnings and well-being. *Q. J. Econ.* 120:963–1002

Maitra P, Neelim A, Tran C. 2021. The role of risk and negotiation in explaining the gender wage gap. *J. Econ. Behav. Organ.* 191:1–27

Major B, McFarlin DB, Gagnon D. 1984. Overworked and underpaid: on the nature of gender differences in personal entitlement. *J. Pers. Soc. Psychol.* 47:1399–412

Mas A. 2017. Does transparency lead to pay compression? *J. Political Econ.* 125:1683–721

Mask J. 2021. *Salary history bans and healing scars from past recessions*. Work. Pap., Temple Univ., Philadelphia, PA

Mazei J, Hüffmeier J, Freund PA, Stuhlmacher AF, Bilke L, Hertel G. 2015. A meta-analysis on gender differences in negotiation outcomes and their moderators. *Psychol. Bull.* 141:85–104

Mazei J, Mertes M, Hüffmeier J. 2020. Strategies aimed at reducing gender differences in negotiation are perceived by women as ineffective. *Sex Roles* 83:580–94

McKelway M. 2021. *Women's employment in India: intra-household and intra-personal constraints*. Work. Pap., Dartmouth, Hanover, NH

Miller CC. 2018. How a common interview question hurts women. *New York Times*, May 1

Niederle M. 2016. Gender. In *The Handbook of Experimental Economics*, ed. JH Kagel, AE Roth, pp. 481–562. Princeton, NJ: Princeton Univ. Press

Niederle M, Vesterlund L. 2007. Do women shy away from competition? Do men compete too much? *Q. J. Econ.* 122:1067–101

Niederle M, Vesterlund L. 2008. Gender differences in competition. *Negot. J.* 24:447–63

Niederle M, Vesterlund L. 2011. Gender and competition. *Annu. Rev. Econ.* 3:601–30

Noguchi Y. 2018. More employers avoid legal minefield by not asking about pay history. *NPR*, May 3

Obloj T, Zenger T. 2022. The influence of pay transparency on (gender) inequity, inequality and the performance basis of pay. *Nat. Hum. Behav.* 6:646–55

Perez-Truglia R. 2020. The effects of income transparency on well-being: evidence from a natural experiment. *Am. Econ. Rev.* 110:1019–54

Pradel DW, Bowles HR, McGinn KL. 2005. When does gender matter in negotiation? *Negotiation* 8:3–5

Recalde MP, Vesterlund L. 2022. Gender differences in negotiation and policy for equalizing outcomes. In *Bargaining: Current Research and Future Directions*, ed. E Karagözoğlu, KB Hyndman, pp. 455–75. New York: Springer

Rigdon ML. 2012. *An experimental investigation of gender differences in wage negotiations*. Work. Pap., Univ. Ariz., Tucson

Roussille N. 2022. *The central role of the ask gap in gender pay inequality*. Work. Pap., Mass. Inst. Technol., Cambridge, MA

Sandberg S. 2013. *Lean In: Women, Work, and the Will to Lead*. New York: Random House

Säve-Söderbergh J. 2019. Gender gaps in salary negotiations: salary requests and starting salaries in the field. *J. Econ. Behav. Organ.* 161:35–51

Seitz S, Sinha S. 2022. *Pay transparency, workplace norms, and gender pay gap: early evidence from Germany*. Work. Pap., Univ. Manch., Manchester, UK

Sherman EL, Brands R, Ku G. 2023. Dropping anchor: a field experiment assessing a salary history ban with archival replication. *Manag. Sci.* 69:2919–32

Sinha S. 2022. US salary history bans—strategic disclosure by job applicants and the gender pay gap. arXiv:2202.03602 [econ.GN]

Skoda S. 2022. *Directing job search in practice: mandating pay information in job ads*. Work. Pap., Univ. Zurich, Zurich, Switz.

Small DA, Gelfand M, Babcock L, Gettman H. 2007. Who goes to the bargaining table? The influence of gender and framing on the initiation of negotiation. *J. Pers. Soc. Psychol.* 93:600–13

Sockin J, Sockin M. 2023. *A pay scale of their own: gender differences in variable pay*. Work. Pap., Univ. Pa., Philadelphia

Solnick SJ. 2001. Gender differences in the ultimatum game. *Econ. Inq.* 39:189–200

Sran G, Vetter F, Walsh M. 2020. *Employer responses to pay history inquiry bans*. Work. Pap., New York Univ., New York

Stevens CK, Bavetta AG, Gist ME. 1993. Gender differences in the acquisition of salary negotiation skills: the role of goals, self-efficacy, and perceived control. *J. Appl. Psychol.* 78:723–35

Stuhlmacher AF, Walters AE. 1999. Gender differences in negotiation outcome: a meta-analysis. *Pers. Psychol.* 52:653–77

Sutter M, Bosman R, Kocher MG, van Winden F. 2009. Gender pairing and bargaining—Beware the same sex! *Exp. Econ.* 12:318–31

Tinsley CH, Cheldelin SI, Schneider AK, Amanatullah ET. 2009. Women at the bargaining table: pitfalls and prospects. *Negot. J.* 25:233–48

Zeltzer D. 2020. Gender homophily in referral networks: consequences for the Medicare physician earnings gap. *Am. Econ. J. Appl. Econ.* 12:169–97