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GENDER DIFFERENCES IN NEGOTIATION AND POLICY FOR IMPROVEMENT

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ABSTRACT

Men more than women succeed when negotiating over labor-market outcomes, and gender differences in negotiation likely contribute to the gender wage gap and to horizontal and vertical segregation in the labor market. We review the evidence on the many initiatives that have been put in place to reduce the effect of gender differences in negotiation. Categorizing these as either ‘fix-the-women’ or ‘fix-the-institutions’ initiatives we find serious challenges to the former. Women do not appear to be broken and encouraging them to negotiate more and differently often backfires. The evidence suggests that ‘fix-the-institution’ initiatives are more effective in reducing gender differences in outcomes. Concerns of adverse effects of banning negotiations or salary history requests have not materialized, and preliminary evidence points to reductions in the gender differences in negotiation outcomes. The strongest evidence on effectiveness in narrowing gender disparities is found for policies that increase transparency. Numerous studies find that gender differences in negotiation diminish when it is clear what to expect from the negotiation and suggest that initiatives which improve transparency are likely to help equalize opportunities at the bargaining table.

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1. Introduction

Gender differences in negotiation are frequently used to explain why men and women advance at different rates (e.g., Bertrand, 2018), why they select different occupations, and secure different compensation (e.g., Blau and Kahn, 2017). Indeed, field evidence is consistent with negotiation differences contributing to the persistent gender wage gap and to men and women holding different occupations and different ranks within occupation (e.g., Greig, 2008; Card, Cardoso, and Kline, 2016; Säve-Söderbergh, 2019).

Considering the potential impact on labor-market outcomes, it is no surprise that substantive work has examined when and why men and women approach negotiation differently. The overarching conclusion is that there are gender differences in both willingness and ability to negotiate, and that these are sensitive to the characteristics of the negotiation (for reviews see Bowles et al. 2005; Bowles and McGinn 2008; Stuhlmacher and Walters 1999; Bertrand 2011; Azmat and Petrongolo 2014; Mazei et al. 2015; Kugler et al. 2018; and Hernandez-Arenaz and Iriberry, 2019a).

The striking finding by Babcock and Laschever (2003), that out of new MBA graduates 57% of men and only 7% of women negotiated the compensation for their first job, is one of many that point to the robust evidence that women less than men pursue negotiations. Although negotiation in the labor market is of key concern, the limited information on the value of the employee-employer match and the parties' outside options challenges inference on gender differences in negotiation.¹ Many studies instead rely on controlled experiments which similarly find that men negotiate more often than women (e.g., Bowles et al. 2005; Small et al 2007; Kray and Gelfand 2009; Amanatullah and Morris, 2010; Kugler et al., 2018; Gihleb et al 2020). The evidence is more mixed when examining the ability to negotiate. While some studies point to female employees securing worse outcomes than male employees (e.g., Dittrich et al., 2014; Barron, 2003), there is substantial evidence that the male advantage depends on the negotiation setting (Pradel et al. 2005).²

¹ See Andersen et al (2018b) for a field study where the value of the negotiated item is better assessed.

² A substantial literature examines if men and women receive differential treatment when bargaining. Ayres (1991, 1995) and Ayres and Siegelman (1995) report on an audit study 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 men. However, audit studies instruct buyers on how to negotiate and do not capture differences in negotiation. List (2004) instead examines free-form negotiations over sports cards and finds that statistical discrimination gives rise to a male advantage. With transactions only occurring 3% of the time, it is however difficult to capture differences in negotiation.

Research points to a number of factors that affect gender differences in negotiation.³ Differences are less pronounced when it is clear that something is negotiable and what the bargaining range is (Bowles et al., 2005; Rigdon, 2012; Kugler et al., 2018; Small et al., 2007; Leibbrandt and List, 2015). That is, *ambiguity* amplifies the difference. Differences also depend on whether the negotiation activates *stereotypes* (Kray et al., 2002), with differences increasing when female negotiation violates gender norms. The response to such stereotypes may result from stereotype threat, or from the correct expectation that backlash is greater toward women who violate gender norms (Bowles et al., 2007; Tinsley et al., 2009).⁴ Gender differences are 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).⁵ Finally, the *positional role* matters with gender differences arising for the party with less power (Dittrich et al., 2014; Exley et al., 2020).⁶

Although gender differences in negotiation vary with the characteristics of the negotiation, there is consensus that the characteristics of labor-market negotiations are largely those that give rise to a gender gap in willingness and ability to negotiate. For example, labor negotiations are generally on behalf of oneself; tend to be competitive; and it is often ambiguous what may be negotiated.

Recognizing that men hold an advantage in labor-market negotiations has led to initiatives that aim to reduce differences in negotiation or in the effect such differences may have on outcomes. Some of these may be characterized as ‘fixing-the-women’ initiatives, whether it be for women to negotiate more or improve their negotiation skills. Others instead center on “fixing-the-institution” and include a direct ban on negotiations, banning requests for salary history, and changing wage transparency. We will review the literature on each of these initiatives and the evidence on their effectiveness.

³ While ultimatum games limit the negotiation interaction to a take-it-or-leave-it offer, the setting nonetheless provides insights on why women fare worse in negotiations (Eckel and 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 fail in reaching an agreement.

⁴ For gender differences in negotiation expectation see also Eckel et al. (2008) and Andersen et al. (2018a).

⁵ As for negotiation, the literature on competition reveals robust differences on the extensive margin (Niederle and Vesterlund 2007) and more context-dependent differences on the intensive margin (Gneezy et al. 2003). See Niederle and Vesterlund (2011) for a review, and Niederle and Vesterlund (2008) for the connection between negotiation and competition.

⁶ Other factors may affect gender differences in negotiation including the sex of negotiating partners (Eckel and Grossman, 2001; Solnick, 2001; Bowles et al., 2007; Sutter et al., 2009; Hernandez-Arenaz and Iriberry, 2018), the framing as a negotiation or an ask (Small et al., 2007), communication mode (Bowles and Babcock 2013; Bowles 2013), and sharing norms (Hernandez-Arenaz and Iriberry 2019b). Differences in preferences, such as risk aversion and fairness concerns, may also play a role (see Croson and Gneezy 2009 and Niederle 2015 for a review). Finally, Bursztyn et al. (2017) find that single women opt out of negotiation because pursuing career enhancing actions may decrease their success in the marriage market.

2. 'Fixing the women'

The finding that men are more able and willing to negotiate in the labor market tempt recommendations that women should mirror their behavior by negotiating more and improving their negotiation skills. While there is substantial public support for such programs, there has until recently been little evidence on their effectiveness. This section reports on research studying these 'fix-the-women' initiatives and their challenges.

2.a. Lean-In Recommendation

The finding that both men and women gain from negotiation and that women are less likely to pursue such opportunities suggests that women are leaving substantial lifetime earnings on the table (Babcock and Laschever, 2003). This has led to a push for women to negotiate more and to lean in (e.g., Sandberg 2013).

Exley, Niederle, and Vesterlund (2020, ENV henceforth) note that in making the recommendation for women to lean in and negotiate more, we are missing the counterfactual. Of course, the recommendation is harmless if the "worst that can happen is that they say no." However, there are many cases where instead negotiation is costly, and it is less clear that negotiating more improves outcomes.⁷

ENV 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 instead 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 had the negotiation not been initiated.

The ENV choice treatment confirms that women don't enter all negotiations: 34% of the time they take the initial wage offer and opt out of the negotiation. This occurs although negotiations increase wages. In fact, there is very little downside to women negotiating: 74% secure final wages above the initially offered wage, and only 13% get a lower final wage. Confirming field evidence, women often avoid negotiations, although negotiations are beneficial.

⁷ Negotiations may be costly immediately (costs of time, disutility from asking); in the future (backlash, reputation, future negotiation); or there may be costs from bargaining impasse (affecting future collaboration, legal costs, or retraction of earlier offers).

To determine the counterfactual of increased negotiation, ENV compares the outcomes women achieve when they avoid some negotiations (choice treatment) to 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 increase to 33%. Rather than improving women’s earnings, the additional negotiations decrease earnings and make women worse off.

ENV shows that selection is key to increased negotiations being costly. Women know when it is beneficial to negotiate and they 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 all women should negotiate.

With the recommendation to lean in being directed at women, ENV also asks if men are better at deciding when to negotiate. Results confirm that men negotiate more often than women (74% vs 66% of the time) and that they too gain from negotiation. However, comparing the distributions of earnings between the ‘choice’ and ‘always’ treatments shows no evidence that their decisions are superior to women’s. Nonetheless, ENV confirms 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 vs 54%). In fact, participants presented with information about the initial ENV experimental design 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 where the ‘paternalistic’ participant only knows 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 ENV study demonstrates that people are willing to pay to remove women’s choice to negotiate, even though women know whether negotiations benefit them, and increased negotiations decrease individual earnings. The study serves as a caution against the blanket recommendation that women should negotiate more.

2.b. Improving Negotiation Skills

Another approach to ‘fixing-women’ is to improve their negotiation skills. Evidence that experience improves negotiated outcomes has fueled the expectation that negotiation training reduces the gender gap in compensation. For example, the American Association of University Women has initiated free nationwide negotiation workshops for 10 million

women to ‘close the pay gap, one workshop at a time’. Although substantial resources are used to improve negotiation skills, there is limited evidence of the impact such training has on salary negotiations, let alone on gender differences in outcomes.⁸

An exception is Stevens et al. (1993) which has 60 MBA students participate in two different negotiation programs. All participants first receive a basic 4-hour negotiation training and are then assessed through knowledge tests and salary-negotiation simulations with confederates who provide raises based on the successful use of negotiation tactics. This first-stage assessment reveals a gender gap in negotiated salaries which is found to result from men and women setting different goals for the negotiation. Participants are then subjected to one of two negotiation training programs: one emphasizing goal setting, and the other augmenting training in goal setting with general self-management training.⁹ A second stage assessment reveals that although goal setting improves the skills of both men and women, it has no differential effect and does not eliminate gender differences in negotiation outcomes. The augmented training does, however, improve skills more for women than men, closing the gender gap. The authors find that augmented training works by increasing the perceived control women have over negotiation outcomes. Confidence is also shown to affect the effectiveness of training.

While Stevens et al. (1993) demonstrates that training can affect men and women differently, training effectiveness is assessed in an environment where the response to negotiation is gender neutral. There is ample evidence that the response to negotiation differs by gender, and that women more than men may experience backlash. For example, Bowles et al. (2007) reports on experiments where participants evaluate hypothetical job candidates after seeing interview transcripts and videos. Treatments vary the candidate’s gender and whether the candidate asks for higher compensation. Results show no gender difference in evaluation in the absence of pay requests, and lower evaluation scores for women who ask for higher compensation than men who do the same. Further, requests for higher compensation decreases willingness to work with female candidates, while there is no effect for male candidates.

Importantly, Amanatullah and Morris (2010) shows 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

⁸ Evidence on the effectiveness of negotiation training on outcomes is mixed (Movius 2008). For gender differences in negotiation performance, Mazei et al (2015) documents that experience reduces gender differences.

⁹ 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.

“punish them for being too demanding.” Results show that women anticipate backlash when negotiating for themselves, but not for others. Further, the anticipated size of this backlash when negotiating for themselves is large with women asking for approximately 15% lower wages and making larger salary concessions than men.

This literature suggests that training programs may backfire if they encourage negotiations that subsequently result in backlash. Bowles and Babcock (2013) and Bear and Babcock (2017) explore negotiation tactics that account for gender norms and find that these can be effective in reducing the gender gap in negotiation outcomes. Bowles and Babcock (2013) show that relational accounts can improve negotiation outcomes for women by reducing social backlash. Relational accounts include techniques such as expressing concerns for organizational relationships and using a ‘supervisor-excuse’ script that validates a negotiation initiation because someone else suggested it.

Bear and Babcock (2017) study priming techniques that reduce the gender incongruity women experience when they negotiate for themselves. They vary whether prior to negotiating participants: (1) think of situations where the use of assertive and forceful tactics helped them succeed in a negotiation, and (2) imagine that they are negotiating on behalf of a close friend. Participants were informed that these tactics improve performance when negotiating on behalf of self. Subjects participate in simulated face-to-face negotiations in a masculine buyer-seller environment. Results show that in the absence of primes, men outperform women. Gender differences, however, disappear with primes. An online study further investigates the effect of primes on negotiation aspirations, and shows in the absence of a prime, women have lower negotiation-performance aspirations than men, while no gender differences arise under primes. Interestingly, the aspirations of men do not change across treatments while the aspirations of women do.

A recent study by Ashraf et al. (2020) explores the effect of negotiation training on education rather than labor-market outcomes. A field experiment with 2,366 grade 8 girls in Lusaka, Zambia randomizes girls into three treatments (within schools): 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.

Ashraf et al. (2020) find 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 and not significantly different from the control or negotiation treatment 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.¹⁰ However, the evidence on the impact of pure negotiation training is more limited, and it is clear that such training needs to account for the potential for backlash. Additional work is needed to understand training effects on salary and promotion negotiations as well as impacts on the gender gap in labor-market outcomes.

3. Fixing Institutions

It has been argued that the first step should not be to fix the women, but rather the institutions in which they work. Several such initiatives seek to restrict negotiations by banning them, eliminating the possibility of inquiring about past salary history, and by making wages within organizations transparent. While the first two initiatives take as given gender differences in negotiation and attempt to remove the effects of such differences, the latter instead relies on the evidence that negotiation differences are more prevalent when the negotiation is ambiguous.

3.a. Banning Salary Negotiations

Evidence that gender differences in negotiation skill 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 directly 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.

Gihleb, Landsman and Vesterlund (2019, henceforth GLV) explores the effects of a negotiation ban. They argue that 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, they show in a simple

¹⁰ A recent study by McKelway (2019) examines self-efficacy/confidence training (rather than negotiation skills training) and finds it increased women's self-efficacy, employment, and income.

theoretical model that if the decision to negotiate serves as a credible signal on productivity, and the productivity distribution of men dominates that of women, then men will negotiate more than women and secure higher earnings. A negotiation ban could back-fire in such a setting as management will perceive men as more productive and pay them more than women. A negotiation ban may similarly backfire if management is biased against women and the negotiation serves to temper such biases.

GLV use a lab experiment to study the effect of a negotiation ban. They investigate manager-selected compensation in a between-subject design. In one treatment workers may negotiate with management and in another there is no negotiation option. 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, and their performance 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.

GLV's negotiation treatment replicates the finding that men negotiate more than women. Further, negotiating only improves compensation for workers who are assigned the more productive task and it does so only for men. Hence, negotiations increase inequality both between and within task and between men and women.

The negotiation ban is, however, shown to reduce inequality and the relative pay advantage of men on the high-productivity task. In contrast to the theoretical example and potentially biased management, GLV shows, consistent with the recent push to ban negotiation, that the ban gives rise to equal compensation for men and women.

It may be questioned whether a negotiation ban is sustainable when other firms engage in negotiation; whether it is advisable in the long run, when high quality employees may secure attractive outside offers and require retention packages; or whether a ban will only be adhered to by female workers. With these caveats in mind, the GLV evidence suggests that corporations who wish to compensate for ability rather than negotiation skill may benefit from eliminating negotiation with initial recruits of unknown ability.

3.b. Salary History Ban

A popular fix-the-institution initiative is to ban salary history requests, and thereby allow employees to break the path dependency of wages.¹¹ Such policies may, however, fail if employers statistically discriminate against women in the same way that they discriminate against Black and Hispanic men as a result of ban-the-box initiatives (see e.g., Agan and Starr 2018; Doleac and Hansen, 2018). Further, it may become practice for workers to voluntarily disclose their salary histories, thus eliminating the impact of the policy.

Agan et al. (2020a) provides a theoretical examination of Salary History Ban (SHB) policies that incorporates workers' decision to voluntarily disclose salary information and examines the implications this has for different types of policy interventions. Using a survey they find that workers can be classified into three types: always disclosers (25%), never disclosers (17%), and policy compliers (58%); that men are more likely to always disclose and less likely to comply than women; and consistent with a contagion story, that willingness to disclose increases with the proportion of others who do.

Despite SHB concerns, empirical estimates point to the policy reducing the gender wage gap.¹² Exploiting variation in US states that have adopted SHB policies, Hansen and McNichols (2020) and Sinha (2019) find a 3-4% point reduction in the gender-pay gap and no impact on labor-force participation or turnover rates.

Experiments have also been used to study the impact of SHBs. Agan et al. (2020b) conduct a field experiment where recruiters evaluate job applications under randomly assigned salary-disclosure conditions. They find that recruiters offer candidates lower salaries when disclosure is banned. This is driven by lower beliefs about outside offers, lower candidate reservation wages, and lower candidate quality. Although the ban increases equality across candidates, gender results are mixed. Disclosure increases the salaries of men more than women, but it also improves the callback rates of women without affecting those of men.¹³

3.c. Transparency

Another class of interventions instead aims to increase pay transparency to reduce gender differences in negotiation. This includes permission to discuss salary information,

¹¹ US estimates suggest that 25 to 50% of potential employees are asked to disclose past salary (Hall and Krueger 2012, Barach and Horton 2020, Agan et al. 2020a).

¹² By April 2019 some form of SHB was implemented in 12 states, 9 cities, and 3 counties in the US (Sinha 2019).

¹³ See also Barach and Horton (2020) which in an online labor-market finds that removing salary history causes employers to search more and evaluate more candidates. As a result, candidates with lower past average wages are more frequently evaluated and hired.

disclosing pay ranges, reporting pay statistics by occupation and gender, and letting candidates know if and when compensation is negotiable. Transparency allows individuals to set similar negotiation expectations, and the hope that this reduces gender differences in negotiation has in part motivated public transparency policies.¹⁴

Indeed, Bowles et al. (2005) shows that gender differences in negotiated outcomes increase with the negotiation's level of ambiguity. They find, in a survey of MBAs, that the gender gap in starting salaries is larger in industries with higher ambiguity in compensation. Similar results are seen in an experiment they conduct where participants negotiate the price of a good in a buyer-seller environment. Buyers are given the bargaining range in both a high- and a low-ambiguity treatment, with the latter adding a negotiation target. Results show gender differences in negotiation in the high- but not in the low-ambiguity environment.

Leibbrandt and List (2015) studies the effect of ambiguity on job applications and salary negotiation decisions. In a field experiment with 2,422 job seekers, they compare the response to low- and high-ambiguity job postings. One treatment states that wages are negotiable and the other has no such statement. Results show higher application rates for men than women in both treatments. However, the reduction of ambiguity decreases applications from men, while it increases applications from women. Job applicants are classified into those that initiate negotiations for higher pay, signal willingness to work for lower pay, and those who do not initiate negotiations. When negotiation is ambiguous, men are more likely to initiate negotiations for higher pay and less likely to signal willingness to accept lower wages than women. However, these gender differences disappear when it is clear that wages are negotiable.

Further evidence on the effect of transparency is seen in work examining the impact of information on the compensation obtained by others. Major et al. (1984) conducts 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. Participants record their pay and gender on a form which may or may not contain information on compensation of others. A baseline treatment keeps the form blank, while three social information treatments pre-fill the form making it seem as though the information reflects the compensation chosen by 8 previous participants. One treatment shows that 4 men and 4 women paid themselves \$2 on average, while the two others show the average pay as \$2.50 for one gender and \$1.50 for the other. Results reveal that men pay themselves nearly

¹⁴ Laws requiring firms to disclose salary statistics by gender and occupation are now in place in numerous countries, including Australia, Austria, Denmark, Finland, Germany, and the UK. The US has also seen a push for increased transparency, e.g., executive orders were signed to prohibit federal contractors from retaliating against employees who discuss their compensation (2014), and to require firms with government contracts to report average salaries by gender (2016).

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.¹⁵

While Major et al. (1984) finds a differential response to ‘transparency,’ it does not examine the effect on negotiation outcomes. Rigdon (2012) fills this gap in the literature by conducting an experiment where participants play a modified ultimatum game where roles as proposers and responders are earned at the beginning of the experiment. The game is as follows: responders first make a cheap-talk pay request, proposers then make a responder offer, and responders accept or reject the offer. Treatments vary whether participants receive information about the outcomes of previous sessions. A baseline treatment provides no social information, another treatment shows participants the distribution of pay requests made by male responders in the baseline treatment, a third treatment additionally shows the average offer received per pay request. Participants do not know that they only see male-responder choices. The baseline treatment shows that women demand less, are given lower offers, and ultimately earn less than men. As in Major et al., these differences disappear when social-information is provided.

The studies above suggest that transparency may help eliminate gender differences in negotiation initiation, salary requests, and negotiation outcomes. However, transparency policies may also affect the morale of workers, the productivity of firms, and the choices of employers.¹⁶ Recent work uses legislation on transparency to estimate the effect on labor-market outcomes. Bennedsen et al. (2019) studies 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. They compare firms with 10 to 34 employees, which did not have to report salaries, to those with 35 to 50 employees who did. Results show that the transparency law reduced the gender pay gap by decreasing the wage growth for men relative to women. More women were hired and promoted as a result of the policy. Productivity, however, decreased as did costs, generating no overall impact on firm profits.

Baker et al. (2019) studies the impact of public-sector salary-disclosure laws in Canada. The authors exploit variation in when and where the law took effect and find that the policy decreased the gender pay gap by 2% points (30%). Cullen and Pakzad-Hurson (2019) examine the effect of pay transparency using data from an online labor-market platform for low-skill work, TaskRabbit. Results show that employers are more likely to equalize pay when workers complete tasks that allow them to learn of the compensation of others, and this is further confirmed in an online experiment. Although the study is not centered around gender differences in negotiation, the authors provide insights for policies seeking

¹⁵ 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, they find that women work longer than men and complete more and higher quality work.

¹⁶ See also Card et al. (2012), Breza et al. (2018), and Mas (2017).

to reduce the gender pay gap. They find that partial transparency policies which allow workers to endogenously choose whether to discuss salary information may backfire and cause the gender pay gap to increase because men and women have differential communication patterns.

4. Conclusion

Men more than women succeed when negotiating over labor-market outcomes, and gender differences in negotiation likely contribute to the gender wage gap and to horizontal and vertical segregation in the labor market. Numerous initiatives have been put in place to reduce the effect of gender differences in negotiation. Our paper reviews recent advances in the literature to evaluate the potential impact of these policies.

Our review makes clear that the literature is still at its infancy and that many questions remain. The evidence points to serious challenges of ‘fix-the-women’ policies. Encouraging women to negotiate more may backfire, because women correctly opt out of costly negotiations. Caution is also warranted when training women to negotiate, as such training, absent other interventions, may cause backlash or lower chances of employment. Women do not appear to be ‘broken’ and policies to fix them may fail.

The evidence on the ‘fix-the-institution’ initiatives suggests that these are more effective in reducing gender disparities in the labor market. Concerns of adverse effects of banning negotiations or salary history requests have not materialized, and the empirical evidence points to reductions in the gender differences in negotiation outcomes. However, the evidence is limited. A full assessment requires an understanding of how these initiatives fare in the long run. The strongest and most consistent evidence to date is seen for increased transparency. Numerous studies confirm that gender differences in negotiation diminish when it is clear what to expect from the negotiation. While wage transparency should not be expected to eliminate all gender differences, the literature points to it as an effective first step organizations and governments can take if they wish to reduce gender differences in labor-market outcomes.

References

- Agan, A., & Starr, S. (2018). Ban the box, criminal records, and racial discrimination: A field experiment. *The Quarterly Journal of Economics*, 133(1), 191–235.
- Agan, A. Y., Cowgill, B., & Gee, L. (2020a). Do Workers Comply with Salary History Bans? A Survey on Voluntary Disclosure, Adverse Selection, and Unraveling. *AEA Papers & Proceedings*.
- Agan, A. Y., Cowgill, B., & Gee, L. (2020b). Salary Disclosure and Hiring: Field Experimental Evidence from a Two-Sided Audit Study.
- Amanatullah, E. T., & Morris, M. W. (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. *Journal of Personality and Social Psychology*, 98(2), 256.
- Amanatullah, E. T., & Tinsley, C. H. (2013). Punishing female negotiators for asserting too much... or not enough: Exploring why advocacy moderates backlash against assertive female negotiators. *Organizational Behavior and Human Decision Processes*, 120(1), 110–122.
- Andersen, S., Ertac, S., Gneezy, U., List, J. A., & Maximiano, S. (2018a). On the cultural basis of gender differences in negotiation. *Experimental Economics*, 21(4), 757–778.
- Andersen, S., Marx, J., Nielsen, K. M., & Vesterlund, L. (2018b). Gender Differences in Negotiation: Evidence from Real Estate Transactions.
- Ashraf, N., Bau, N., Low, C., & McGinn, K. (Forthcoming). Negotiating a better future: How interpersonal skills facilitate inter-generational investment. *Quarterly Journal of Economics*.
- Ayres, I. (1991). Fair driving: Gender and race discrimination in retail car negotiations. *Harvard Law Review*, 817–872.
- Ayres, I. (1995). Further evidence of discrimination in new car negotiations and estimates of its cause. *Michigan Law Review*, 94(1), 109–147.
- Ayres, I., & Siegelman, P. (1995). Race and gender discrimination in bargaining for a new car. *The American Economic Review*, 304–321.
- Azmat, G., & Petrongolo, B. (2014). Gender and the labor market: What have we learned from field and lab experiments? *Labour Economics*, 30, 32–40.
- Babcock, L., & Laschever, S. (2003). *Women Don't Ask: Negotiation and the Gender Divide*. NJ Princeton University Press.
- Baker, M., Halberstam, Y., Kroft, K., Mas, A., & Messacar, D. (2019). Pay Transparency and the Gender Gap. NBER.
- Barach, M. A., & Horton, J. J. (2020). How do employers use compensation history?: Evidence from a field experiment. NBER.
- Barron, L. A. (2003). Ask and you shall receive? Gender differences in negotiators' beliefs about requests for a higher salary. *Human Relations*, 56(6), 635–662.
- Bear, J. B., & Babcock, L. (2017). Negotiating femininity: Gender-relevant primes improve women's economic performance in gender role incongruent negotiations. *Psychology of Women Quarterly*, 41(2), 163–174.
- Bennedsen, M., Simintzi, E., Tsoutsoura, M., & Wolfenzon, D. (2019). Do firms respond to gender pay gap transparency? NBER.
- Bertrand, M. (2011). New perspectives on gender. In *Handbook of labor economics* (Vol. 4, pp. 1543–1590). Elsevier.
- Bertrand, M. (2018). Coase Lecture–The Glass Ceiling. *Economica*, 85(338), 205–231.
- Blau, F. D., & Kahn, L. M. (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature*, 55(3), 789–865.
- Bowles, H. R. (2013). Psychological perspectives on gender in negotiation. *The Sage Handbook of Gender and Psychology*, 465–483.
- Bowles, H. R., & Babcock, L. (2013). How can women escape the compensation negotiation dilemma? Relational accounts are one answer. *Psychology of Women Quarterly*, 37(1), 80–96.

- Bowles, H. R., Babcock, L., & Lai, L. (2007). Social incentives for gender differences in the propensity to initiate negotiations: Sometimes it does hurt to ask. *Organizational Behavior and Human Decision Processes*, 103(1), 84–103.
- Bowles, H. R., Babcock, L., & McGinn, K. L. (2005). Constraints and triggers: Situational mechanics of gender in negotiation. *Journal of Personality and Social Psychology*, 89(6), 951.
- Bowles, H. R., & McGinn, K. L. (2008). Gender in job negotiations: A two-level game. *Negotiation Journal*, 24(4), 393–410.
- Breza, E., Kaur, S., & Shamdassani, Y. (2018). The morale effects of pay inequality. *The Quarterly Journal of Economics*, 133(2), 611–663.
- Bursztyjn, L., Fujiwara, T., & Pallais, A. (2017). “Acting Wife”: Marriage Market Incentives and Labor Market Investments. *American Economic Review*, 107(11), 3288–3319.
- Busse, M. R., Israeli, A., & Zettelmeyer, F. (2017). Repairing the damage: The effect of price knowledge and gender on auto repair price quotes. *Journal of Marketing Research*, 54(1), 75–95.
- Card, D., Cardoso, A. R., & Kline, P. (2016). Bargaining, sorting, and the gender wage gap: Quantifying the impact of firms on the relative pay of women. *The Quarterly Journal of Economics*, 131(2), 633–686.
- Card, D., Mas, A., Moretti, E., & Saez, E. (2012). Inequality at work: The effect of peer salaries on job satisfaction. *American Economic Review*, 102(6), 2981–3003.
- Castillo, M., Petrie, R., Torero, M., & Vesterlund, L. (2013). Gender differences in bargaining outcomes: A field experiment on discrimination. *Journal of Public Economics*, 99, 35–48.
- Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature*, 47(2), 448–474.
- Cullen, Z. B., & Pakzad-Hurson, B. (2019). Equilibrium Effects of Pay Transparency in a Simple Labor Market.
- Dittrich, M., Knabe, A., & Leipold, K. (2014). Gender differences in experimental wage negotiations. *Economic Inquiry*, 52(2), 862–873.
- Doleac, J. L., & Hansen, B. (2017). Moving to Job Opportunities? The Effect of “Ban the Box” on the Composition of Cities. *American Economic Review*, 107(5), 556–559.
- Eckel, C. C., & Grossman, P. J. (2001). Chivalry and solidarity in ultimatum games. *Economic Inquiry*, 39(2), 171–188.
- Eckel, C., De Oliveira, A. C., & Grossman, P. J. (2008). Gender and negotiation in the small: Are women (perceived to be) more cooperative than men? *Negotiation Journal*, 24(4), 429–445.
- Exley, C. L., Niederle, M., & Vesterlund, L. (2020). Knowing when to ask: The cost of leaning-in. *Journal of Political Economy*, 128(3), 816–854.
- Gihleb, R., Landsman, R., & Vesterlund, L. (2020). The Effect of Negotiation on Securing Equal Pay for Equal Work.
- Gneezy, U., Niederle, M., & Rustichini, A. (2003). Performance in competitive environments: Gender differences. *The Quarterly Journal of Economics*, 118(3), 1049–1074.
- Greig, F. (2008). Propensity to negotiate and career advancement: Evidence from an investment bank that women are on a “slow elevator.” *Negotiation Journal*, 24(4), 495–508.
- Hall, R. E., & Krueger, A. B. (2012). Evidence on the incidence of wage posting, wage bargaining, and on-the-job search. *American Economic Journal: Macroeconomics*, 4(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.
- Hernandez-Arenaz, I., & Iriberry, N. (2018). Women ask for less (only from men): Evidence from bargaining in the field. *Journal of Economic Behavior & Organization*, 152, 192–214.
- Hernandez-Arenaz, I., & Iriberry, N. (2019a). A Review of Gender Differences in Negotiation. In *Oxford Research Encyclopedia of Economics and Finance*.

- Hernandez-Arenaz, I., & Iriberry, N. (2019b). Gender Differences in Alternating-Offer Bargaining: An Experimental Study.
- Kray, L. J. (2015, May 21). The best way to eliminate the gender pay gap? Ban salary negotiations. *The Washington Post*. <https://www.washingtonpost.com/posteverything/wp/2015/05/21/the-best-way-to-way-to-eliminate-the-gender-pay-gap-ban-salary-negotiations/>
- Kray, L. J., Galinsky, A. D., & Thompson, L. (2002). Reversing the gender gap in negotiations: An exploration of stereotype regeneration. *Organizational Behavior and Human Decision Processes*, 87(2), 386–409.
- Kray, L. J., & Gelfand, M. J. (2009). Relief versus regret: The effect of gender and negotiating norm ambiguity on reactions to having one's first offer accepted. *Social Cognition*, 27(3), 418–436.
- Kugler, K. G., Reif, J. A., Kaschner, T., & Brodbeck, F. C. (2018). Gender differences in the initiation of negotiations: A meta-analysis. *Psychological Bulletin*, 144(2), 198.
- Leibbrandt, A., & List, J. A. (2015). Do women avoid salary negotiations? Evidence from a large-scale natural field experiment. *Management Science*, 61(9), 2016–2024.
- List, J. A. (2004). The nature and extent of discrimination in the marketplace: Evidence from the field. *The Quarterly Journal of Economics*, 119(1), 49–89.
- Major, B., McFarlin, D. B., & Gagnon, D. (1984). Overworked and underpaid: On the nature of gender differences in personal entitlement. *Journal of Personality and Social Psychology*, 47(6), 1399.
- Mas, A. (2017). Does transparency lead to pay compression? *Journal of Political Economy*, 125(5), 1683–1721.
- Mazei, J., Hüffmeier, J., Freund, P. A., Stuhlmacher, A. F., Bilke, L., & Hertel, G. (2015). A meta-analysis on gender differences in negotiation outcomes and their moderators. *Psychological Bulletin*, 141(1), 85.
- McKelway, M. (2019). Vicious and Virtuous Cycles: Self-Efficacy and Employment of Women in India.
- Movius, H. (2008). The effectiveness of negotiation training. *Negotiation Journal*, 24(4), 509–531.
- Niederle, M. (2015). Gender. In *The Handbook of Experimental Economics* (Vol. 2). Princeton university press.
- Niederle, M., & Vesterlund, L. (2007). Do women shy away from competition? Do men compete too much? *The Quarterly Journal of Economics*, 122(3), 1067–1101.
- Niederle, M., & Vesterlund, L. (2008). Gender differences in competition. *Negotiation Journal*, 24(4), 447–463.
- Niederle, M., & Vesterlund, L. (2011). Gender and competition. *Annual Review of Economics*, 3(1), 601–630.
- Pradel, D. W., Bowles, H. R., & McGinn, K. L. (2005). When does gender matter in negotiations. *Negotiation*, 8(11).
- Rigdon, M. L. (2012). An experimental investigation of gender differences in wage negotiations.
- Sandberg, S. (2013). *Lean In: Women, Work, and the Will to Lead*. Random House.
- Säve-Söderbergh, J. (2019). Gender gaps in salary negotiations: Salary requests and starting salaries in the field. *Journal of Economic Behavior & Organization*, 161, 35–51.
- Sinha, S. (2019). Salary History Ban: Gender Pay Gap and Spillover Effects.
- Small, D. A., Gelfand, M., Babcock, L., & Gettman, H. (2007). Who goes to the bargaining table? The influence of gender and framing on the initiation of negotiation. *Journal of Personality and Social Psychology*, 93(4), 600.
- Solnick, S. J. (2001). Gender differences in the ultimatum game. *Economic Inquiry*, 39(2), 189–200.
- Stevens, C. K., Bavetta, A. G., & Gist, M. E. (1993). Gender differences in the acquisition of salary negotiation skills: The role of goals, self-efficacy, and perceived control. *Journal of Applied Psychology*, 78(5), 723.
- Stuhlmacher, A. F., & Walters, A. E. (1999). Gender differences in negotiation outcome: A meta-analysis. *Personnel Psychology*, 52(3), 653–677.

- Sutter, M., Bosman, R., Kocher, M. G., & van Winden, F. (2009). Gender pairing and bargaining—Beware the same sex! *Experimental Economics*, 12(3), 318–331.
- Tinsley, C. H., Cheldelin, S. I., Schneider, A. K., & Amanatullah, E. T. (2009). Women at the bargaining table: Pitfalls and prospects. *Negotiation Journal*, 25(2), 233–248.