HOW DOES WAGE INEQUALITY AFFECT THE LABOR MOVEMENT?*

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Abstract

This paper provides the first causal evidence on how occupational wage inequality affects the labor movement, using three complementary research designs: a vignette experiment with union organizers, an information intervention during the 2023 Writers Guild of America strike, and a natural experiment following a Wisconsin reform that increased wage inequality among public school teachers. Across all studies, we find that occupational inequality undermines union strength, through multiple channels. First, workers with high individual bargaining power are more likely to withdraw support in unequal environments, preferring individual over collective bargaining. Second, union organizers strategically respond to inequality in ways that may preserve membership but limit redistribution. For instance, they shift away from campaigning on wages and choose smaller, more homogeneous bargaining units. Taken together, our findings highlight the potential for "inequality traps", where rising inequality erodes the very institutions designed to counteract it.

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1 Introduction

The negative correlation between inequality and unionization rates in the U.S. has been extensively documented (Freeman, 1980; DiNardo et al., 1996; Card, 2001). Farber et al. (2021) further provide causal evidence that declining unionization rates since the 1960s have contributed to the rise in income inequality. The other direction of causality — namely, the impact of inequality on the labor movement — has also been theorized (Hirsch, 1982; Acemoglu et al., 2001), but never empirically tested.[1]

Both intra-occupation and intra-workplace inequality have risen substantially in the U.S. over recent decades.[2] This rising inequality among workers who could share the same union representation may challenge unions' ability to attract, retain, and mobilize members. Indeed, workers with high individual bargaining power may prefer to negotiate individually and incur costs (e.g., retraining, switching firms) rather than bargain collectively if it entails redistribution (Acemoglu et al., 2001). Even when most workers favor collective representation, pay differentials may undermine their ability to coalesce around common bargaining priorities. Further, the dynamics of union support in high-inequality environments could alter the very objectives of labor organizations. For instance, if high earners become less receptive to traditional union messaging on wage compression, labor organizers might strategically pivot their focus toward non-wage amenities. At the same time, coworker inequality could also increase union support by galvanizing lower-income workers who stand to benefit from redistribution, or by mobilizing workers concerned with fairness or income security regardless of their own earnings position.

This paper provides the first empirical evidence on how rising occupational wage inequality affects worker support for collective bargaining and changes union organizers' strategies, such as where they campaign, whom they target, and what they demand.

An ideal research design would feature exogenous variation in inequality alongside detailed

[1] We note that Hirsch (1982) includes an empirical section. It estimates a simultaneous equations model using 1970 industry-level data to study the joint determination of unionism and earnings dispersion. While suggestive, the analysis does not rely on exogenous variation in inequality to tease apart the direction of causality.

[2] Between 1980-2015, within-occupation inequality accounts for 62% of the growth in U.S. earnings inequality, while the between-occupation component accounts for 38% (Appendix Figure A.1). Relatedly, Hoffmann et al. (2020) uses a regression-based approach with additional worker-level controls and conclude that occupational differences play a secondary role in rising inequality in the U.S. Over the same period, within-workplace inequality accounts for approximately one-third of the increase, according to Song et al. (2019).

documentation of the labor movement's response. While such a design cannot be directly implemented — inequality itself cannot be randomly assigned — we identify three research settings that achieve its tall order.

Our first setting is a survey experiment with labor organizers. We employ a vignette design presenting organizers with hypothetical firms that have the same internal wage structure but operate under varying degrees of labor market inequality. Specifically, we keep average market wages constant across vignettes but vary wage dispersion. This mimics a technological change that raises the market wages of some workers while lowering those of others, similar to the shock in Acemoglu et al. (2001). Organizers are asked to make *incentivized* strategic decisions (e.g., how to spend organizing budgets) based on their predictions about union support. Through multiple outreach channels, we collect responses from nearly 200 organizers representing 26 unions, 14 industries, and 36 U.S. states. We find that organizers anticipate substantially lower union support in more unequal environments. Given limited resources (and incentive-compatible choices), they would direct organizing resources toward more equal environments. Should they pursue a union drive, they would use strategies to mitigate the impact of inequality on union support. For instance, they are 23.6 percentage points (pp), or 25%, less likely to disclose information about market wages in environments where workers face unequal market wages, in line with the hypothesis that worker cohesion strengthens union support. Inequality also shapes campaign focus: in more unequal environments, organizers are more likely to build their campaigns around non-wage amenities at the expense of wage demands. Finally, in more unequal environments, organizers are 14.8pp (168%) more likely to target smaller bargaining units that separate workers with different market wages rather than a single firm-level union. The latter two patterns highlight the trade-off facing organizers in high-inequality environments: preserving cohesion through smaller units of similar workers and focusing on less divisive (non-wage) demands may increase the chances of union representation, but it may also reduce the union's bargaining strength and ability to push for wage compression.

We corroborate our experimental findings with national-level evidence in U.S. administrative data. Using data on private-sector contracts from the Office of Labor-Management Standards (OLMS) from 2002-2022, as well as Federal Mediation and Conciliation Service data on bargaining units from 2015-2021, we find that unions operating in more unequal industries are less likely to

negotiate rigid pay scales, more likely to emphasize non-wage amenities over wage demands in their contracts, and represent smaller bargaining units as a share of establishment employment. Further, an analysis of AFL-CIO News content from 1955-1996 reveals a striking trend: as national income inequality rose sharply, unions' focus on pay-related issues declined from over half of all articles in the early 1970s to one-third in the 1990s. While these correlational patterns do not establish causality, they are consistent with our experimental evidence on the numerous ways organizing approaches can respond to inequality, with the potential to exacerbate inequality.

While our first setting captures organizers' perspectives, our second setting — an experiment with Hollywood screenwriters during the 2023 Writers Guild of America (WGA) strike — provides direct evidence on how workers' union support is impacted by inequality. Leveraging the insight that people typically underestimate pay inequality (Hauser and Norton, 2017; Cullen and Perez-Truglia, 2022; Stantcheva, 2024; Jäger et al., 2024), we experimentally vary writers' exposure to information about pay inequality and test whether raising awareness about inequality affects high-stakes expressions of support for the WGA. In a baseline survey of 400 WGA members, we first establish that perceived inequality in Hollywood is substantially more modest than actual levels, setting the stage for our experimental intervention.

To make pay inequality salient, we construct a pay report on the median and mean pay rates by gender and distribute it to WGA members 100 days into the strike, a critical juncture when studios resumed negotiations with the Guild. To measure union support, we ask respondents: "Do most writers think WGA demands meet the needs of all members?"[3] By randomizing whether this question appears before or after the pay report, we can discern whether pay disclosure impacts writers' responses. We find that only 9% of respondents who have not seen our pay report do not believe that WGA demands meet the needs of all members, compared to 23% of those who have (difference p-value < 0.001). This shift is driven by respondents with more writing credits — our proxy for productivity: the share indicating demands do not meet all members' needs jumps by 24pp (p-value < 0.001) among high-credit writers, versus 1pp (p-value $= 0.890$) among low-credit writers. This heterogeneity corroborates the economic channel conjectured by Acemoglu et al. (2001), whereby high earners prefer to bargain individually if the earnings disparity between

[3]This indirect question enables respondents to signal dissent or solidarity without explicitly revealing their own stance, allowing for plausible deniability. See Section 4.3.2 for details.

themselves and the median voter is sufficiently large.

Our third setting leverages a natural experiment following a Wisconsin reform that increased wage inequality among public school teachers. We combine this natural experiment with administrative data on union revenue per teacher and individual-level dues payments to study how rising inequality shapes union revenue.

In 2011, Wisconsin's Act 10 changed the rules governing public-sector unions. First, the reform prohibited collective bargaining over pay scales, which had been used to set teachers' pay based on experience and education. This left districts free to adjust teacher pay individually without union consent, leading to a sharp rise in wage inequality among Wisconsin teachers. Key to our design is that the shock to pay dispersion was driven by the level of competition for teachers in their commuting zones (CZs), while average pay remained fixed by pre-determined budgets. Using the Herfindahl-Hirshman Index (HHI) to measure local labor market concentration of public schools, we confirm that pay dispersion among teachers with the same education and experience ("position") grew substantially more in below-median-HHI (more competitive) areas. Between 2011 and 2016, the within-position standard deviation in pay rose by 22% in low-HHI districts, while it declined by 5% in high-HHI districts, despite no pre-reform differences in wage inequality, levels or growth, as well as no post-reform differences in wage growth. We can thus use this setting to isolate the effect of inequality on union support.

We find that while districts present parallel trends in union revenues per teacher pre-reform, districts with low-HHI (larger inequality increases) saw significantly larger declines in union contributions after the reform took effect. Three years later, the gap in union revenues between high and low inequality shock districts has reached 64% (p-value = 0.004). We also examine individual choices to pay union dues after the reform. Consistent with the economic channel found in our Hollywood study, the relative drop in union support in districts with larger inequality shocks is driven by teachers whose wages grew the most under flexible pay.

Together, these research designs provide the first causal evidence that occupational wage inequality can undermine the labor movement. We highlight key mechanisms through which union strength erodes. First, workers with higher individual bargaining power disproportionately withdraw their support for unions in high-inequality environments. Organizers, in turn, try to mediate lower support in high-inequality environments by shifting campaign focus away from wages and by

targeting smaller bargaining units. While these strategic moves may shore up unions' institutional viability, they can also come at the expense of effective wage compression. Additionally, organizers faced with resource constraints divert resources away from high-inequality environments, even though those environments could benefit more from union intervention. These mechanisms create the potential for "inequality traps," whereby collective bargaining, typically a counterforce against inequality, becomes increasingly difficult as occupational wage gaps widen.

This paper builds on a longstanding literature examining the role of unions in shaping pay structures and pay disparities. Empirically, this literature has documented the existence of a union pay premium (in the range of 0.1−0.4 log points) and debated unions' contribution to wage compression (Freeman, 1980; Card, 2001; DiNardo and Lee, 2004; Lee and Mas, 2012; Biasi and Sarsons, 2022; Fortin et al., 2021; Farber et al., 2021; Baker et al., 2024; Dodini et al., 2024; Lagos, 2024; Jäger et al., 2024). We complement this literature by providing experimental evidence on a reverse link (increased inequality impedes collective bargaining) as well as the underlying mechanisms. We show that high-productivity individuals (or individuals with high outside options) predominantly drive reduced support for unions in high-inequality environments. This is consistent with empirical findings that unions compress pay, such that high earners stand to gain more when wage dispersion rises, and that support for unions is inversely correlated with one's position in the intra-firm wage distribution (Farber and Saks, 1980). It also aligns with the theory in Acemoglu et al. (2001), in which rising outside options for skilled workers (under skill-biased technical change) weaken their incentives to join the unionized sector. Additionally, we find that, anticipating lower support, union organizers are reluctant to invest resources in high-inequality environments, further reducing the chances of union representation. This result adds to a largely correlational literature examining the characteristics of unionized workers over time and how worker preferences shape the success of union drives (Farber, 1989; Defreitas, 1993; Gerstel and Clawson, 2001). Finally, the result on organizer strategies complements the theory and empirical finding in Taschereau-Dumouchel (2020) on firm strategies: to prevent unionization, non-union firms over-hire high-skill workers, who are more likely to vote against the union.

This paper further contributes to an interdisciplinary literature on the political economy of unions, recently surveyed in Kaplan and Naidu (2024). Much of this literature examines unions' external political influence, but fewer papers zoom into unions' internal organization and strategic

decision-making, how they shape unionization and bargaining outcomes, and how they are shaped by the economic environment.[4] The one organizing strategy extensively discussed in the economics literature is the decision of unions to strike (see Card (1991) for a review and Massenkoff and Wilmers (2024) for recent causal evidence of strikes on wages), but many other strategies remain underexplored. Bronfenbrenner and Juravich (1995) and Bronfenbrenner and Hickey (2004) pioneered descriptive research on a wide range of organizing strategies, explaining how tactics that encourage rank-and-file participation increase the chances of union drive success. With the notable exception of studies from Kate Bronfenbrenner and her co-authors, we are the first to use the direct voices of organizers at scale. We leverage this opportunity to elicit how inequality shifts a broad range of organizing strategies, such as which issues to prioritize, what information to circulate among workers, or how to allocate limited resources across workplaces. Consistent with Kremer and Olken (2009), our evidence suggests that unions adapt to more unequal environments in ways that may not directly serve their members (e.g., withholding information about outside options) but help ensure the sustainability of the labor movement.

Finally, we contribute to a large and growing literature on the labor market consequences of pay transparency (see Cullen, 2024, for a review). Our second experiment leverages differences in perceptions of inequality and a pay information treatment to proxy for what is empirically hard to implement: randomizing inequality. Several papers have found that revealing pay disparities among coworkers can have unintended consequences, such as dampened morale or increased dissatisfaction (Breza et al., 2018; Card et al., 2012). Our paper identifies another unintended consequence: pay transparency often increases workers' perception of wage dispersion, accentuating the tradeoff between individual and collective bargaining, especially for high-productivity workers.

Section 2 introduces a conceptual framework illustrating how labor market inequality can undermine collective bargaining, and relates it to each of our three empirical settings. Section 3 presents our vignette experiment with professional labor organizers. Section 4 presents our information-provision experiment during the 2023 Hollywood writers' strike. Section 5 presents our natural experiment with teachers' unions under Wisconsin's Act 10. Section 6 concludes.

[4]External evidence focuses on effects on voting (Feigenbaum et al., 2018; Kuziemko et al., 2023; Yan, 2024), campaign finance (Matzat and Schmeißer, 2023), lobbying (Johnson, 2020; Dodini et al., 2024), and intra-party bargaining (Gethin et al., 2022). One exception focusing on internal organization is Boudreau et al. (2024), which looks at how union leaders influence and mobilize workers.

2 Conceptual Framework

We minimally adapt the model in Acemoglu et al. (2001) to illustrate how inequality in individual bargaining power between members (or potential members) of a union could weaken the ability of unions to negotiate compressed pay, as well as to attract and retain members.[5]

Consider workers in the same occupation, who could potentially be part of the same union. After workers join a workplace, denoted C for Current, they discover whether they are high-productivity or low-productivity workers, with probability $\phi < \frac{1}{2}$ of being high-productivity. High-productivity workers produce $y_h^C = \eta$, while low-productivity workers produce $y_l^C = \alpha,\ 0 < \alpha < \eta$ in their current employment. Workers also have an outside option (denoted as O): high-productivity workers can earn $y_h^O = A\eta$, $A > 1$, after paying a cost $\overline{e} > 0$ to move to their outside option,[6] while low-productivity workers would earn $y_l^O = 0$ if they exit their current employer.

Firms compete by offering wage contracts that take the following linear form, $w^C(y^C) = \gamma + \beta y^C,\ (\beta \geq 0, \gamma \geq 0)$, where γ is the fixed component paid to all workers in the firm regardless of their productivity, and β is multiplicative with productivity, thus governing the degree of pay inequality between high- and low-productivity workers.

A union is defined as a coalition of workers that imposes a wage contract upon the firm, subject to a zero-profit condition. The wage schedule is determined by pure majority voting among all union members. Each worker votes to maximize their own rent from the other type, after observing both their own productivity and that of their co-workers.[7]

The timing of actions proceeds as follows: workers realize their productivity after choosing employment at workplace C but before they decide whether to unionize or not. If there is a union, unionized workers vote over the wage policy. The firm decides whether to accept the contract offer or not. If it accepts the offer, it is committed to paying the contracted wage to all workers who stay.

[5] While the source of inequality in the original model in Acemoglu et al. (2001) is skill-biased technical change, it need not be limited to a technology shock. Indeed, we show how the model can reflect other sources of inequality in each of our settings and yield predictions for our empirical findings. Another significant deviation is that we do not consider upstream decisions to invest in education. Relatedly, Boeri and Burda (2009) model the preferences of workers with observable skill for individual vs. collective bargaining, highlighting matching frictions that induce preferences for collective bargaining.

[6] This switching cost can be interpreted as paying a firm-specific training cost.

[7] In Acemoglu et al. (2001), a union of this nature is called a rent-seeking union. Note that our rent-seeking union votes on cross-subsidization of members; workers already have full bargaining power and extract all rents from the employer, i.e. worker-firm bargaining is outside the scope of this model. A model of societal inequality and unionization could layer in rent-extraction through nested bargaining between workers and firms.

Workers can switch to their outside options by paying switching cost $\overline{e}$. Finally, production and consumption take place.

In the absence of unions, all workers are paid their marginal product: $w_h^C = \eta, w_l^C = \alpha$. High-productivity workers will leave for their outside option if $A\eta - \eta \geq \overline{e}$. We consider an individual's bargaining power to rise as this "no-quitting" condition increasingly binds, either because an individual's outside option rises, or their switching costs fall.

Assume all firms employ a continuum of workers with mass at least ϵ. Then, prior to the unionization decision, the law of large numbers implies that workplace C will employ a fraction ϕ of high-productivity workers, with the remaining being low-productivity. Because $\phi < \frac{1}{2}$, majority voting among union members favors low-productivity workers. The median union member, who has low productivity, will use their voting power to extract rents from high-productivity workers. The problem of the median voter is:

$$\max_{\gamma,\beta}\{\gamma + \beta\alpha\}, \text{ s.t.} \tag{1}$$

$$\gamma + \beta\eta \geq A\eta - \overline{e} \qquad \text{No quitting of high-productivity workers condition} \tag{2}$$

$$\pi = -\gamma + [1-\beta]Ey^C \geq 0 \qquad \text{Firm's non-negative profit condition} \tag{3}$$

The unique equilibrium is characterized by the following: there exists a threshold $\eta^* = \frac{\overline{e}}{A-1}$, such that: For $\eta > \eta^*$, firms are not unionized and pay $w^C(\eta) = \eta, w^C(\alpha) = \alpha$. For $\eta \leq \eta^*$, firms are unionized. The union imposes a wage contract with $\beta^* = 1 - \frac{\overline{e}-(A-1)\eta}{(1-\phi)(\eta-\alpha)} \leq 1$, and $\gamma^* = (1-\beta^*)[\phi\eta + (1-\phi)\alpha]$. For $\eta > \eta^*$, high-productivity workers leave for their outside option; otherwise, no quitting occurs.

We consider two scenarios that differ in the extent of inequality in outside options for high-productivity ($A\eta$) versus low-productivity (0) workers: a more competitive (or skill-biased) marketplace characterized by A, and a less competitive (or skill-biased) marketplace characterized by A', where $A > A'$. Wage inequality is exacerbated when A rises through several channels: failure to reach agreement on a pay scale (eliminating all cross-subsidization across high- and low-productivity workers) and exit of workers from unionized workplaces. Even agreed-upon pay scales exhibit less wage compression. To see this, note that β^* is increasing in A. When β^* exceeds 1, unions are unsustainable.

Note the underlying reason for unequal outside options is not crucial for assessing the impact of the inequality; the framework can incorporate unproductive reasons why one worker might experience stronger outside options than others, e.g., lower switching costs.[8]

We now describe the three empirical settings that we study through the lens of this model. In each setting, we focus on a shock to A, which exacerbates inequality in the bargaining power of workers. In our organizer vignette experiment, respondents are asked to compare two workplaces, one with $A > 0$ (unequal outside options for workers) and another with $A = 0$ (equal outside options for workers), with an additive scalar adjustment to equalize average outside options across workplaces.[9] Our model predicts that workers with high individual outside options relative to their coworkers' face stronger incentives to exit a unionizing workplace. An experienced labor organizer may weigh the limitations this places on worker solidarity against their aspiration to unionize in an unequal environment. They may also use other tools at their disposal (outside the model), such as shifting the focus away from pay (or pay transparency) to reduce the salience of individual bargaining power, or to form smaller bargaining units to relax the constraints imposed by high outside option workers.

In our experiment with Hollywood writers, we collect pay information from writers, then experimentally share it in the form of a pay report. For most workers, this amounts to showing that the true value of dispersion in individual outside options exceeds the perceived value, i.e., $(A\eta - 0)_{\text{truth}} > (A\eta - 0)_{\text{perceived}}$. Thus, our model predicts high-productivity (or high outside option) workers facing higher A_{truth} are increasingly opposed to union demands to redistribute earnings.

Finally, in the Wisconsin public schools context, we study a reform that newly introduces individual negotiation for teachers within the public school system. We compare outcomes for teachers in more competitive, low-HHI CZs vs. less competitive, high-HHI CZs; the reasoning is that there is greater wage dispersion in outside options when competing schools are also newly able to individually bargain. In essence, high-productivity teachers will experience a large shock to A in competitive CZs, and a much smaller shock A' in less competitive CZs, where $A > A'$. Our model

[8] To see this, notice that an unproductive additive shock to inequality would be akin to adjusting the relative switching costs $\overline{e}$, and lower relative switching cost for high types affects their no-quitting condition similarly to higher A.

[9] In other words, both low and high-productivity workers receive $\frac{A\eta}{2}$ in the equal workplace, and 0 and $A\eta$ in the unequal workplace, respectively, where $\overline{e}$ can fall between $\frac{A\eta}{2}$ and $A\eta$.

predicts that the wage gap between high- and low-productivity teachers grows more in the more competitive environment, making unionization more difficult as teachers with greater bargaining power are more likely to oppose the collective pay scale that the union is fighting to reinstate.

3 Study I: Organizer Survey

Our goal is to understand, from the viewpoint of professional organizers, whether inequality in the individual bargaining power of workers undermines their ability to unionize and, if so, whether organizers adapt their strategies to mediate the relationship between inequality and union support. We run a vignette experiment where professional labor organizers are presented with two hypothetical workplaces. Across vignettes, we randomize one aspect of the workplace: the dispersion in workers' individual outside options, which corresponds to the key theoretical parameter A. After reading about the workplace, organizers are asked to predict workers' support for a union, and to make strategic campaign choices. We randomize the order of the scenarios to ensure that responses are not systematically biased by experimenter demand or salience effects. Finally, we show organizers the two workplaces side-by-side and ask them to make an incentive-compatible choice about where to allocate campaign resources. We state that a donation will be made on their behalf to an organization campaigning in the workplace most similar to the one they select.

3.1 Recruitment

We collected contact information of 2,380 union organizers in the U.S. and Canada in summer 2024 across three channels. First, we collected the email addresses of 1,680 organizers from websites of over 500 national and local organizations spanning all branches of the ten largest U.S. unions. Second, Professor Kate Bronfenbrenner, the Director of Labor Education Research at Cornell University's School of Industrial and Labor Relations, provided us with a list of 433 publicly available emails she collected from the organizers of 32 unions. Finally, in fall 2024, we contacted 267 organizers on LinkedIn who listed "Union Organizer" as a current or former job title. Responses were collected via both email and LinkedIn through January 2025, with participants offered a $30 gift card as an incentive.

Our sample contains 182 respondents who reported a valid email in the survey.[10] Of these, 49% came from our online collection, 34% from Professor Bronfenbrenner's list, and 17% from LinkedIn outreach. Respondents represent a wide array of backgrounds, spanning 26 unions, 14 industries, 36 U.S. states, and 3 Canadian provinces (96% are U.S.-based). We show the most common unions, industries, and states in Appendix Table A.1, as well as individual organizers' characteristics. Most respondents are deeply embedded in the labor movement and bring substantial campaign experience—often across multiple unions—, indicating that their views are shaped by considerable time in the field: the median respondent reports 7 years of organizing experience and 66% of respondents have lead organizing experience.[11]

3.2 Survey Design

Methodology We conduct a vignette experiment where experienced organizers are randomly presented with one of two hypothetical workplaces, which have different levels of dispersion in workers' outside options but are otherwise identical. The difference between the low- and high-dispersion scenarios simulates a technological shock (à la Acemoglu et al., 2001) that increases some workers' market wages and decreases others'. To zero in on a shock to dispersion in outside options (driven by a shock to A in our model), we keep both average market wage levels and the internal wage structure unchanged. We then ask organizers to predict workers' support for a union and to make strategic choices about their organizing approach. We next present the second hypothetical scenario (whichever they did not see first) and ask organizers again about their expected worker support and strategic choices. We randomize the order of scenarios to prevent systematic bias from scenario sequencing and find similar results regardless of whether organizers saw the equal or unequal environment first (Appendix A.2).

Finally, we present organizers with an incentivized choice of which workplace to allocate scarce resources toward. We truthfully assert that we will make a significant donation to a union campaign at a workplace similar to the one they select. We interpret their responses as evidence of how union

[10] We show that our results replicate with the unrestricted sample of respondents (N = 221), including those who did not leave a valid email at the end of the survey, in Appendix A.1.

[11] Lead organizers primarily exist to assist non-union workers in forming chapters of locals, usually by leading them in their efforts. They work directly for the union and are responsible for directing campaign strategies, overseeing campaign executions and training other organizers.

organizers react to rising occupational inequality in the labor market.[12]

Vignette Design We present each organizer with two scenarios, shown in Figure I, randomizing which one they see first. Both scenarios, described as Factory A and Factory B, have three types of workers: Quality Control, Metal Worker, and Pipefitter. We select these occupations because they require similar levels of general human capital but are sufficiently specialized that workers cannot easily switch between them. To anchor organizers to a real-life workplace, both vignettes specify that some workers have expressed interest in unionization, but the firm is hostile to unions. We also specify that all positions share an identical internal wage of $40/hour, reflecting commonly compressed internal wages (Hazell et al., 2022). We specify that work hours are unpredictable (a non-wage amenity), and the employer refuses to sign an "Open to All" pledge.[13]

The key distinction between the two scenarios lies in the structure of market wages: all workers in Factory A face identical market wages of $48/hour, while workers in Factory B have different outside options based on their occupations, simulating a market demand shock that advantages one group (Pipefitters) and disadvantages another (Quality Controller). A third group (Metal Worker) faces the same outside option in the unequal scenario and equal scenario; however, their peers (Pipefitters and Quality Controllers) face outside options that are ~2 standard deviations higher or lower, respectively, according to the distribution of firm wages within narrow position titles standardized by ADP.[14] By designing a symmetric shock for Pipefitters and Quality Controllers, we hold constant the average markdown between internal and market wages. For the rest of the paper, we term Factory A the *equal environment* and Factory B the *unequal environment*. We also term Pipefitters *high outside option* workers, Quality Control workers *medium outside option* workers, and Metal Workers *low outside option* workers.[15] We include the full survey tool in Appendix Section D.1.

[12]While we also collected data on strategies from organizers' latest campaigns, our sample is not weighted to represent the U.S. union landscape. Hence, one cannot use these responses to make inferences about the current prevalence of various organizing strategies in field union campaigns.

[13]The "Open to All" pledge is a commitment made by businesses, organizations, and individuals to ensure that everyone is welcome and treated fairly, regardless of their race, ethnicity, national origin, sex, sexual orientation, gender identity, immigration status, religion, or disability.

[14]We use data from Cullen et al. (2025) to calculate the standard deviation in wages of a labor market narrowly defined by 10,000 standardized position titles.

[15]While we use direct language about outside options and inequality to describe the scenarios in this paper, our subjects did not see these terms at any point during the study.

3.3 Inequality and Perceived Union Support

Our first goal is to cleanly identify how organizers across different unions and industries conceive of the directional relationship between labor market inequality and union support. To do so, we elicit organizers' predictions about union support as well as their beliefs about worker mobilization in each environment.

Survey Questions First, we instruct organizers to assume that all workers are informed about the market wage information. Then we ask them to predict wage demands: "What hourly wage increase would each of the following groups demand for themselves in order to ratify the CBA?". Second, we ask about workers' alignment on those wage demands: "How easy would it be for all workers to agree on pay scale demands? This means Pipefitters agree with the demands Quality Controllers make, and vice versa." Third, we assess the role of worker exit for outside options: "What share of each of the following groups at Factory A/B do you think will apply for a job elsewhere during the union campaign?" Last, we ask them to predict the share of workers that would vote to ratify a union contract in each scenario: "Please share your best guess: After all the details are hammered out, what percent of workers at Factory A/B would you expect to proactively vote yes to ratify a contract?". In the following paragraph, we start with the answer to this last question, then unpack the reasons for this answer.

Results We find that organizers predict the equal environment to be an easier win for the union: the median predicted share of workers voting to ratify a contract in the equal environment is 9pp higher (13%, p-value < 0.001) than in the unequal environment.

Figure II dives into factors driving organizers' belief that support would be higher in the equal environment, starting with their expectations about workers' hourly wage demands. Panel A shows that despite identical average market wages across environments, the unequal environment features wage demands that are both more dispersed and higher on average. In the equal environment, expected wage demands for each group (shown under the y-axis headers) are all near the average market wage ($48) and within 1% of each other. By contrast, in the unequal environment, high outside option workers demand an additional $6.0 while low outside option workers demand $4.3 less (both p-value < 0.001). This means that the highest wage demand is 24% higher than the

lower one, substantially larger than the 1% difference in the equal environment (difference p-value < 0.001). Next, we examine how organizers expect labor market inequality to impact union members' ability to agree on a pay scale. Implicitly, this measures whether workers believe higher outside options for their peers justify higher demands, and vice versa. While 37% of organizers say they would find it difficult to bring workers to agree on a pay scale in the equal environment, a striking 84% say so in the unequal environment. Taken together, these first two results highlight that market wage inequality not only raises some individual wage expectations, but also undermines the internal cohesion necessary for collective bargaining—making it harder for organizers to unify workers around shared demands.

Panel B of Figure II examines organizers' beliefs about workers seeking employment elsewhere, as high turnover poses a threat to unions by disrupting campaign momentum and continuity (Simms et al., 2018).[16] In the equal environment (numbers under y-axis headers), organizers expect around 20% of workers in each specialty to apply for jobs elsewhere. The unequal environment is markedly different: high outside option workers become much more likely to seek alternative employment (+12.5pp, p-value < 0.001), low outside option workers become substantially less likely to do so (-7.2pp, p-value < 0.001), and medium outside option workers saw minimal change (+1.6pp, p-value $= 0.074$). These numbers translate into a 2.3pp (11%) increase in overall departures. This pattern underscores a critical challenge facing union organizers under rising inequality: the increased departures among high outside option workers are only partially offset by greater retention among low outside option workers, creating higher turnover rates that could undermine union strength.

3.4 Inequality and Organizing Strategies

We next ask organizers what campaign strategies they would implement in each environment, including what pay information to disclose, which issues to prioritize, and how large the bargaining unit should be. We select these specific strategies because they have important implications for union strength and the effectiveness of worker representation. First, many workers turn to unions for greater pay transparency, and disclosure of market pay can directly confer bargaining power to

[16] According to Amazon Labor Union organizer Justine Medina, "The faster the turnover is, the harder it is to organize." (Brown, 2023). Union efforts at Amazon were undermined by higher turnover, both because Amazon challenged authorization cards signed by former employees and because turnover can make it more difficult to generate and retain support (Herrera, 2021).

workers (Jäger et al., 2024; Roussille, 2024).[17] Second, organizers' decision to make a topic the focal issue of a campaign sets expectations about what the contract will accomplish. For example, if a union focuses on pay during its organizing drive, then workers will expect wage demands to be more front and center in contract negotiations than if the focus is on non-wage amenities.[18] Finally, the size of bargaining units affects union strength: a union's threat to withhold labor depends on the collective value of its membership. Mishel (1986) confirms empirically that unions have more bargaining power when they have higher coverage of a workplace and are less fragmented.

Survey Questions First, on pay transparency, we describe: "In the absence of more information, workers generally think that everyone earns what they do for similar work. You have the option to share the pay data you collected with workers. Would you share this pay information with workers?" Respondents choose among three options: publish during the campaign, publish after the campaign, or never publish. Second, we elicit issue priorities. After showing market wages, we inform organizers that hours are unpredictable at both factories and that the employer refuses to sign an "Open to All" business pledge (a commitment to maintaining a welcoming and safe environment for people). We ask: "To maximize support for the union, which of the following issues would be better to focus on during the campaign? Raising Pay, Predictable Hours, or "Open to All" pledge." Finally, on bargaining unit size, we ask "Would you advise separate bargaining units for these three groups of workers?" This means that, even within a single factory, each worker group would be represented separately, and a strike would pause work for a minority of the firm's workforce.

Results Figure III shows how labor market inequality shapes the way organizers approach campaigns. Under the y-axis headers are average responses to each question in the equal environment, while the regression coefficient shows the change in responses when moving to the unequal environment. First, we find that, in the equal environment, almost all organizers (94.5%) would

[17]For example, both the New York Times Tech Guild and the American Federation of Teachers emphasize pay transparency as a union benefit. Quoting organizers the New York Times article says: "It's easy to feel overwhelmed and powerless when you're not sure whether you're being paid fairly. Sharing salary data with each other, and having conversations around that data, can build solidarity as you form a union."

[18]This is exemplified by organizing guidelines published by the Communications Workers of America, which coach organizers that the first bargaining proposals should focus on the central issues that motivated the campaign. Additionally, Bronfenbrenner and Juravich (1995) note that campaign success depends both on which issues organizers emphasize and how they plan for initial contract negotiations.

publish the market wage information during the campaign, with only 2.2% publishing the data after the campaign and 3.3% never publishing. In contrast, in the unequal environment, organizers are 23.6pp less likely to publish the information during the campaign. Instead, respondents are 10.4pp more likely to publish the data only after the campaign and 13.2pp more likely to never publish the data. This strategic withholding occurs even though high and medium outside option workers could learn that their market wages exceed internal wages. Since workers can use information on outside options to negotiate higher pay (Jäger et al., 2024), the union's decision to withhold this data may improve chances of campaign success but at the potential expense of the individual bargaining power of the majority of workers. In other words, organizers respond to inequality by prioritizing collective institutional viability over the interests of some individual members, echoing the model of Kremer and Olken (2009), in which unions that do not implement workers' optimal organizing strategies are more successful. In addition to vignettes, we also ask organizers how they gathered and shared pay information in their most recent campaigns.[19] 86% of organizers report collecting relevant pay information, but only 35% of those who collected it say that they published the data.[20] Aligned with vignette experiment results, organizers working in industries with above-average levels of pay inequality are 16pp (p-value=0.034) less likely to report that pay was the most important campaign issue.[21]

Second, we find that, in the unequal environment, organizers are 10.4pp less likely to focus on pay and 9.9pp more likely to focus on predictable hours. This suggests that when dispersed outside options make pay a more divisive topic, organizers may shift their campaign focus toward non-wage amenities. This helps maintain worker solidarity but hinders unions' ability to secure wage compression precisely when such efforts are most needed for counteracting rising inequality.

Finally, we find that, in the unequal environment, organizers are 14.8pp (168%) more likely to recommend establishing separate bargaining units (vs. 8.8% in the equal environment). In

[19] 58% of most recent campaigns focused on forming a new union, while 42% were within an existing union (Appendix Table A.1).

[20] Open-ended responses reveal that organizers gathered pay data using a combination of accessing pay stubs, directly asking workers, and referencing pay scales or contracts from comparable unions. Among those who chose to disclose pay data, organizers most commonly report sharing market rates or rates at other unions, while some shared average establishment wages by group or position.

[21] We classify more unequal industries (2-digit NAICS) as those with above average national industry-level p90/p50 ratio from the OEWS in 2023. We use industry (rather than occupation) because organizers report the industry in which they are most active and typically work across many occupations.

unequal environments, smaller bargaining units of similar workers may improve the chance of union formation, but at the cost of reduced firm-level union strength, which is commonly associated with the size of the bargaining unit.

Collectively, these results highlight the tradeoffs faced by organizers under rising inequality: they seek to maintain worker cohesion through reduced transparency, more focus on unifying (non-wage) themes, and smaller bargaining units. However, these moves could ultimately undercut the union's overall strength and effectiveness in counteracting rising inequality.

3.5 Inequality and Resource Allocation Across Firms

Finally, we seek to understand how inequality affects the overall efficacy of organizing efforts by shaping how organizers allocate scarce resources across different settings.

Survey Question After presenting both factory scenarios and collecting responses on strategies and predicted union support, we ask organizers one final question about the vignettes, now shown to them side-by-side: "With limited resources, which factory would you attempt to organize?" We elicit truthful responses using the following incentive-compatible language: "We will direct a significant donation to an organization (not participating in this survey) focused on organizing a workplace closest to Factory A or Factory B, based on the answers we receive." We also follow up with an open-ended question about why they made their selection.

Results In their response to the open-ended question, organizers who opt to organize Factory A often emphasize solidarity: "3 groups dealing with same pay and scheduling issues makes alignment on goals easier", "Easier to achieve and maintain solidarity among workers", "There is less chance for infighting in such a scenario." For organizers who opt to organize Factory B, reasons include: "2/3 are paid well below market rate and low wages could be a point of agitation", "Pipefitters are severely underpaid and we could build a campaign out of activists from that group", "It might be the harder of the two, but ultimately probably more worthwhile."

While these quotes are anecdotal, aggregate responses provide a clear picture: 67% of organizers would attempt to organize the equal rather than the unequal environment. This is consistent with their perception that workers in the equal environment are more supportive of unions, outweighing

the view that combating inequality in the unequal environment may be "more worthwhile." Thus, inequality influences not only existing unions' strategic choices but also the formation of new unions. This result points to the decline in union density as a potentially self-reinforcing process: higher inequality reduces the chance that labor organizers direct their resources toward a workplace. In turn, this decline in union representation exacerbates inequality (Farber et al., 2021).

3.6 U.S. Evidence on Union Strategies

Although our sample of organizers spans a wide range of industries, unions, and geographic areas, it is not necessarily representative. We supplement our analysis with national-level evidence on the relationship between organizers' strategies and inequality, which echoes the patterns observed in our survey. Using a cross-section of U.S. industries over the past two decades, we find that unions operating in more unequal industries are less likely to negotiate rigid pay scales, focus less on wage demands in contracts, and form smaller bargaining units.

To shed light on these correlations, we draw on union contracts from the Office of Labor-Management Standards (OLMS) Online Disclosure Room database. The database contains 3007 private-sector contracts. To match the availability of ACS data used to estimate wage ratios, we focus on 602 contracts with a start year between 2002-2022, of which 451 contain valid industry and state information.[22] We define a fixed pay scale as one that explicitly sets pay levels for each position and level of experience. Using this definition, we classify each contract based on whether it includes such a scale. Then we break contracts into 100-word segments and assign textual topics for each segment using the Anchored Correlation Explanation (CorEx) model (Gallagher et al., 2017), following the approach in Sockin (2022).[23] To track bargaining unit sizes, we draw on Collective Bargaining Notice (F-7) data from the Federal Mediation and Conciliation Service (FMCS), which covers 79,822 establishment-level bargaining units between 2015-2021 and contains information

[22]These numbers were pulled on July 13, 2024. The OLMS database is dynamically updated, so these numbers would be somewhat different if pulled on a different day. We exclude all contracts with missing start years in the database.

[23]CorEx is a semi-supervised topic model that allows the researcher to input topic-specific "anchor words" guiding the model to identify coherent topics of interest. We find the numbers of news segments each year that discuss "pay-related", "benefits-related", and "(working) conditions-related" topics and calculate the relative shares of each topic. We implement the model with 10 topics (3 main and 7 residuals) and anchor strength 5. The anchor words are "pay, salary, wage, pay raise, wage increase" for pay, "benefits, insurance, pension, retirement, vacation" for benefits, and "hours, safety, workplace, injury, hazards" for conditions. The anchor words are initialization inputs to the model and are not meant to be exhaustive for each topic.

on both the size of the bargaining unit and the size of the establishment. For each unit, we calculate a "coverage rate" equal to the unit size divided by the establishment size.

Panel A of Figure IV shows that unions in more unequal environments (measured using log p90-p50 wage ratio within industry × region × 3-year cells) are less likely to include fixed pay scales in their contracts.[24] Panel B shows such unions allocate a smaller share of contract content to wage demands. Panel C shows such unions form bargaining units that cover a lower share of workers at the same establishment. These results echo the responses of the organizers in our survey, who shy away from wage demands, target smaller bargaining units, and predict less agreement over a pay scale in the more unequal environment. To account for the possibility that wage ratios are affected by union presence, Appendix Figure A.6 replicates Figure IV using CPS-based wage ratios among nonunion workers and find similar patterns.

Additionally, we explore the negative relationship between inequality and unions' campaign focus over time. We collect and analyze text from the AFL-CIO News, the official newspaper of the national AFL-CIO union federation between 1955 and 1996. It served to inform union members nationwide about recent union activities, contract negotiations, strikes, and organizing campaigns. It also reported on political developments of union interest and contained editorials and opinion pieces reflecting views of the federation (University of Maryland Libraries, 2024).[25] We classify topics for news segments using the CorEx model with the same anchor words and anchor strength (both parameter inputs for the CorEx model) as in our contract analysis. Panel A of Appendix Figure A.7 plots the "pay-related" topic share in the AFL-CIO news alongside national income inequality measures in the U.S. (the top 10% income share and the Gini coefficient from Farber et al. (2021)). We find a clear negative relationship: the "pay-related" topic share steadily declined from over half in the early 1970s to just over a third in the 1990s, while income inequality rose sharply. Panel B plots how topic shares evolved for all three categories. The decline in pay-related content was accompanied by limited changes in the benefits-related coverage (e.g., insurance or pension) and a rapid rise on working conditions (e.g., safety, hours, etc.). This is consistent with our survey-based findings that union activities focus more on non-wage amenities in more unequal

[24] While we mainly focus on within-occupation inequality in this paper, this cross-sectional analysis instead exploits within-industry inequality because industry (but not occupation) information is available in most union data.

[25] AFL-CIO News has been widely used by labor historians in archival research (Holloway, 1979; Minchin, 2017; Sheehan, 2024). To our knowledge, we are the first to analyze its text quantitatively.

work environments.

In sum, the patterns we observe between inequality and union strategies in our survey also emerge in administrative datasets spanning the broader U.S. economy. While we cannot make causal statements, the correlations in administrative datasets are consistent with the experimental findings from our survey.

4 Study II: Experimental Evidence on the Impact of Occupational Inequality on Union Support

The organizer survey underscores the negative effects of inequality on union support from the perspective of labor organizers. In this section, we directly test whether workers reduce their union support when pay inequality becomes salient. To do so, we compile and experimentally reveal a pay report that highlights pay disparities to Hollywood writers during their 2023 strike. For the vast majority of workers, this report reveals larger-than-expected gaps between individually and collectively negotiated pay. In essence, we shock workers' perceptions of the distance between their individual pay and that of the median voter.

4.1 Institutional Background

Similar to other industry-wide unions, the West and East Writers Guilds of America (collectively the WGA) are two guilds that represent over 11,500 film, television, and radio writers (Koblin and Barnes, 2023). The WGA primarily serves to negotiate contracts with the Alliance of Motion Picture and Television Producers, hereafter referred to as the Studios. As such, the Guild has significant influence in the wage-setting process through negotiation of the Minimum Basic Agreement (MBA). The MBA sets position-level pay floors, guaranteeing that Guild members earn at least the agreed-upon minimum for their work.

In May of 2023, the WGA's multi-year contract with the Studios ended, and terms for the subsequent three years were to be negotiated. The WGA went on strike from May 2 to September 27 (148 days) and ratified the new contract on October 9. A central goal of the strike was the renegotiation of position minimums. The WGA demanded a 6% raise to all minimums in the

first year of the three-year contract, followed by 5% raises for the remaining two years. They also negotiated over residuals (the component of compensation tied to project sales or ratings), employment duration guarantees, and the use of artificial intelligence. We fielded our baseline survey from June 15 to June 30, 2023, when WGA members were in their 6th and 7th weeks of the strike.

This setting has two key advantages that allow us to experimentally measure the effect of inequality on union support. First, evidence suggests there is scope for pay information to shift writers' beliefs. Historically, pay disclosures — whether released or leaked — in the entertainment industry have generated news coverage about the unexpected degree of inequality (Copeland, 2014; Robb, 2021). Moreover, as described in Section 4.2.3, our survey confirms that writers anchor their belief about the typical wage in their occupation on their own paycheck. As a result, providing truthful pay information increases perceived inequality for most subjects — a phenomenon studied in several other contexts (Cullen and Perez-Truglia, 2022; Hauser and Norton, 2017; Jäger et al., 2024; Stantcheva, 2024). Second, this setting presents a unique opportunity to measure high-stakes support. The terms of the contract negotiations were well-known and widely publicized, including to the general public, which enabled writers to form informed opinions about their union and its role in their labor market.[26] Moreover, the WGA made public statements condemning the Alliance of Motion Picture and Television Producers (AMPTP) for leaking negotiation details (Kilkenny and Goldberg, 2023) and warned writers that any information they communicated to reporters or researchers could affect sensitive matters at the negotiating table. The union also used writers' voices to rally public support through social media and news channels (Rice, 2023; Fitzgerald, 2023; Nierman, 2023), recognizing that public sentiment influenced their bargaining power.[27] In this context, expressing negative opinions about the union to a team of researchers at highly visible institutions could reasonably be expected to carry real costs for the union.

Of course, our strike setting also comes with its limitations. First and foremost, we were careful

[26] In addition to receiving extensive coverage from industry publications like *Deadline* (Patten and Robb, 2023), updates on the strike, negotiations, and deal were reported on by national media, including but not limited to the *New York Times* (Barnes and Koblin, 2023) and *NPR* (del Barco, 2023). A U.S. consumer survey in July 2023 found that 60% of respondents reported being aware of issues in the WGA and concurrent SAG-AFTRA (Actors) strikes (Rottenberg, 2023).

[27] In August 2023, following polling results that showed high public support for unions, the AFL-CIO put out a press release expressing that "with this unprecedented level of support, working people in unions are prepared to organize like never before" (AFL-CIO, 2023).

not to intervene in the outcome of the strike. Below, we discuss how these contextual considerations shaped our design choices.

4.2 Baseline Survey

4.2.1 Baseline Survey: Recruitment

We recruited current Hollywood writers, targeting all WGA members through their publicly listed emails (WGA, 2023).[28] Our contact list included 5,244 WGA writers ("contacts") whom we invited to participate in our study between June 15 and June 23, 2023, closing our survey on June 30. By that time, we had received 400 complete responses, or 7.6% of WGA contacts.[29] Using individual data from IMDb (IMDb, 2023), we link 4,373 WGA contacts to an IMDb profile, or 83% of the 5,244 total contacts. In Columns (1)-(2) of Appendix Table B.1, we compare them to the 334 survey respondents we can also link to IMDb (84% of 400 complete responses) on observable characteristics. Our respondents are comparable to the overall pool of contacts: both groups are 64% male[30] and have approximately 80% of credits from writing. Both groups are similarly experienced in terms of total credits (~39), while respondents are slightly less experienced in terms of earliest credit year.[31]

4.2.2 Baseline Survey: Design

Our baseline survey tests whether writers underestimate pay dispersion, such that information can meaningfully alter their perceptions of inequality. We also elicit whether subjects value pay information but have difficulty accessing it themselves by gauging their interest in a pay report. Additionally, we collect salary and detailed work information from individuals, which we later use

[28] We focus on WGA members because they were subject to incentive-compatible questioning in the context of their high-stakes strike. We also recruited directors and non-Guild writers. Key findings from the baseline survey replicate with the sample of all 1,048 writers and directors (Appendix B.1).

[29] 11.7% completed some fraction of the survey. This response rate is similar to studies in related contexts, e.g., Bursztyn et al. (2021); Cullen et al. (2023).

[30] Respondents self-report their gender at the end of the survey. However, to classify contacts (and later, follow-up respondents), we use data from the U.S. Social Security Administration which reports gender distributions of first names following Adukia et al. (2023). We analyze first names given to individuals born between 1920 and 2010, classifying a name as female if women comprise more than 50% of all people with that name during this period. We are able to classify the first names of 97% of contacts.

[31] In the creative arts, credits are used to acknowledge those who participated in the production and often shown at the end of movies. This Wikipedia entry provides details on the WGA screenwriting credit system.

to create the pay report we share in the follow-up survey.

To tailor questions to respondents' current careers, we begin by asking detailed questions to determine their narrowly defined position title (referred to as [Own Position Title]). Since union contracts list all position titles and their corresponding minimum, we can easily determine the full set of possible position titles. We first ask respondents if they work in writing, directing, producing, or acting.[32] For writers, we next gather information on whether they work primarily in television or film. If they primarily work in television, we prompt them to indicate which of seven titles (e.g., "Staff Writer" or "Co-executive Producer") is most relevant for their income. If they primarily work in film, we ask whether low- or high-budget films are a larger source of income. We additionally ask each respondent which type of studio, either "streaming services" or "traditional studios," provides a larger source of income (referred to as [Own Type of Studio]).

4.2.3 Baseline Survey: Pay Information and Beliefs

Survey Questions We collect compensation information using industry-specific language by asking what respondents earn as a percentage above the union minimum. Specifically, we ask: "What percent above the MBA minimum do you typically earn as a [Own Position Title] at [Own Type of Studio]?" Respondents report their pay rate using a drop-down menu that allows them to report earning below, at, or above the minimum in 1% increments up to 100%.

We frame pay in relation to one's relevant minimum because it enables pay comparisons across contract types (e.g., weekly vs. episodic television) and across position titles. Additionally, minimums are well-known to writers; they are a focal point of the MBA and contract negotiations, and the WGA publishes a detailed "Schedule of Minimums" communicating them to members (WGA, 2023).

We next measure whether subjects anchor their beliefs about others' pay rates to their own, a well-documented phenomenon that leads to systematic underestimation of inequality (Hauser and Norton, 2017; Jäger et al., 2024; Cullen and Perez-Truglia, 2022). We ask: "What percent above the MBA minimum do you think a typical [Own Position] in the Guild earns from [Own Contract

[32]Respondents who do not report working in writing or directing do not complete the survey. Results including directors are presented in Appendix B.1. For those who reported working in both writing and directing, they only see survey questions for either of these positions. We prioritize writing or directing for a given respondent based on the source of their contact information (e.g., if the contact source suggests they are a writer, and they indicate they are both a writer and director, they see questions about writing).

Unit] at a [Own Type of Studio] in the first half of 2023?", where [Own Contract Unit] can be one week in the writers' room, one episode, or one feature-length script depending on the respondent's reported largest source of income. We then ask about their confidence in their answer.

Results The median reported pay rate of WGA members is 6.5% above the minimum, while the mean is 20.8% above. The median writer perceives a mere 3pp gap between their own pay rate (as percent above the minimum) and that of the "typical" writer in the same position. In reality, the gap between a writer's pay rate and that of the typical writer in their position is almost three times as large. A typical writer's pay rate is 8pp away from the median earnings in their position, 5pp from the mode, and 12pp from the mean.[33] Figure B.1 visualizes how writers anchor on their own pay rate in their predictions of typical pay. In essence, members anchor on their own pay rate and underestimate the pay gap between themselves and other workers.[34] In addition, only 13% of respondents report being confident in their answer about typical pay.

4.2.4 Baseline Survey: Demand and Uses for a Pay Report

Survey Questions We present respondents with an example of what a pay report could look like (Appendix Figure B.2 Panel A).[35] We then ask, on a 5-point scale: "Do you think we should create such report?" We align respondents' incentive to answer truthfully by reminding them that we would use their responses to decide whether to produce and circulate such a report.[36] We also measure willingness to pay (WTP) for the report following the incentive-compatible BDM

[33]The gap is similarly large if we instead compare to the typical writer across all positions rather than within-position. In this case, the typical writer's earnings is 6.5pp away from the median, 6.5pp from the mode, and 20.8pp from the mean.

[34]While they underestimate earnings gaps, they do not systematically under- or overestimate pay rate levels: just as many writers over-guess (37%) as under-guess (39%) the earnings of the typical writer in their position, with a median error of 0 percentage points.

[35]We focus here on results for a pay report for all writers in the same position, but we display two types of such "example" reports: one showing aggregate pay distributions and one showing pay distributions split by gender (Appendix Figure B.2 Panel B). We randomize which example respondents see first. See Appendix Figure B.4 for our main results using only responses from those who see the aggregate pay report first and Appendix Figure B.5 for results using the split pay report.

[36]We consider"Yes, I would value it significantly" or "Yes, I would be interested to see it" as affirmative interest when we report a binary measure of this question. The incentive compatible language states: "We are considering producing a report pertaining to writers' & directors' career negotiations at every level. Particularly during this historic renegotiation, we want to understand how providing currently inaccessible information may affect you for better or worse. We will use answers to this 10-minute survey to decide whether to pursue this project and whether to send you the report."

procedure (Becker et al., 1964). We ask respondents to decide on 5 binary options between receiving the pay report and a financial reward, stating that we will randomly select a preferred option to fulfill for 10 participants if the report is produced.[37]

After eliciting interest in the report, we ask respondents: "How would you use the report if it were published? Select all that apply." This question is intended to investigate how pay information might impact respondents' actions. We present five potential uses (e.g., contract negotiation, labor organizing) and allow for write-ins.

Results Figure V Panel A documents high demand for pay transparency: 87% of respondents express interests in a pay report (left panel), with an average WTP of $937 (right panel). Specifically, 32% are not willing to pay more than $12.50 and 52% are not willing to pay more than $87.50, while 27% are willing to pay at least $1,000. This heterogeneity is consistent with pay information being high-value for some respondents (e.g., those expecting to negotiate soon) but not others. In prior work, Cullen and Perez-Truglia (2022) find that one quarter of workers are willing to pay more than one week's earnings for information about their co-workers' pay. Panel B shows how respondents declare they would use the pay report. After informational reasons (80% would use the report "to know where they stand in the pay distribution"), the second most common answer is individual negotiation: 70% would use the report to negotiate their future contract (and 22% would use it to renegotiate their current contract). Only 33% would use it for labor organizing. In other words, writers are interested in their relative standing and mostly for individual negotiations.

4.2.5 Baseline Survey: Frictions to Pay Information Access

Survey Questions Given high demand for greater pay transparency, we seek to understand what frictions writers face in accessing pay information. In particular, we document writers' reluctance to ask for this information. We mention that we are considering petitioning the Guild for pay data that would help us produce the pay report and ask respondents if we can include their expressed interests in our petition.[38] For half the subjects, we name the recipient of the petition as their Studio

[37] The 5 choices are between the pay report and $25, $150, $500, $2,000, and $6,000. We set WTP inside each bin to the bin's mid-point and set the top bin to $6,000, following Andersen et al. (2006).

[38] Specifically, their answer to the previous question about how much they would value the pay report along with their name; see Questions 12 and 18 in our survey instrument in Appendix D.2.

to establish a baseline willingness to request pay information from a third, arguably adversarial, party.[39]

Results Figure V shows that private willingness to pay (Panel A) does not imply public willingness to petition for the report (Panel C). While 87% of respondents privately indicate interest in the report, only 34% (38%) are willing to make their request public to the Guild (Studios). Notably, non-WGA writers — who face fewer potential repercussions from publicly requesting pay data — are substantially more willing to do so: 53% from the Guild and 56% from the Studios (Appendix Figure B.7). This points to one plausible source of friction: writers, in particular WGA members, are reluctant to ask the Guild or Studios for pay information. Further, our evidence suggests that the Guild and Studios are not providing adequate pay information to workers — as discussed above, 80% of WGA members declare they would use a pay report to know where they stand in the distribution. This plausible reluctance to share information is consistent with the fact that members may use the report to individually negotiate their contracts, potentially raising costs for Studios and detracting from collective negotiations.

4.3 Follow-up Survey

Our baseline survey shows that WGA members over-anchor their beliefs about others' pay on their own pay, underestimating the gap between their own pay rate and the typical pay rate. Writers also value and would make use of pay information but face frictions accessing it from unions or employers. This creates an opportunity for us to make pay differences salient to writers and test how it changes their reported union support.

4.3.1 Follow-up Survey: Recruitment

On August 11, approximately 100 days into the strike and six weeks after sending the baseline survey, we sent a follow-up survey to 5,177 WGA members (all members for whom we had

[39]Both the Studios and Guilds have access to detailed pay data. Indeed, in the process of collecting dues, which are a percentage of earnings, the Guilds typically require members to report all gross earnings, including base salary, overtime, residuals, deferments, percentage compensation, completion of assignment, vacation and holiday pay, profit participation, and fees of all kinds. Studios collect this information directly as contractors. However, neither the Studios nor the Guild publish pay reports beyond aggregate data.

contact information, or about 40% of total membership).[40] Three considerations shaped our recruitment strategy: avoiding interference with the ongoing strike, maintaining internal validity without contaminating our control group, and ensuring that all writers with publicly available emails received our pay report link. Hence, this follow-up was purposefully overly simple: it only contained a a summary of our baseline results and a single question, and was deployed for just 48 hours over one weekend.

This yielded 310 complete responses, representing 3% of all WGA members and a 6.5% response rate during the 48-hour window. As shown in Appendix Table B.1 columns (3)-(4), contacts and respondents share similar characteristics across most dimensions, with respondents having a slightly lower proportion of men than contacts (57.5% vs. 63.6%).

4.3.2 Follow-up Survey: Design

Figure VI illustrates the design of our follow-up survey, which aims to measure union support under real stakes and examine how it relates to the salience of pay dispersion among members. In order to discern whether pay disclosure impacts union support, we randomize between asking about union support before (control) vs. after (treatment) respondents see a pay report (Panel A of Figure VI). Panel B shows the pay report itself, which contains the median, mean, and maximum pay levels as percent above the minimum, separately for men (+10% for the median and +25% for the mean) and women (+3% and +14%, respectively), along with standard errors for the means. The disclosed pay information is computed using (self-declared) pay rates among WGA members in our baseline survey.[41]

Our intention with this pay report is to underscore pay *gaps*. We expect the larger-than-expected gap between their own pay and that of others to be the most salient takeaway for our subjects, based on our baseline analysis of pay perceptions and prior research on the perceptions of pay gaps (Breza et al., 2018; Cullen and Perez-Truglia, 2022; Jäger et al., 2024).[42] To emphasize these disparities,

[40] Given our intention of collecting a high-stakes union support measure, we focus on our contacts with a clear WGA affiliation. We identified members through either self-declared status in our baseline survey or public information (i.e., we collected their email from the WGA website so we know they are a member).

[41] We only use pay information from respondents who completed the writer arm of the survey and reported being WGA members.

[42] Recall that our baseline survey shows that respondents systematically underestimate the gap between their own pay and the typical pay by a factor of 2 (distance to median) or 3 (distance to mean).

our report presents all compensation figures relative to the negotiated minimums ("scale").

We survey writers at a critical juncture — more than 100 days into the WGA strike, just as negotiations between the Guild and the studios resumed. The single question we ask is about union support and is phrased as follows: "Do most writers think the WGA demands will meet the needs of all WGA members?". The possible answers were: Almost entirely, Mostly, Somewhat, Mostly not, Not at all , I don't know the WGA demands.

This question was deliberately designed to allow respondents to reveal their own support for the union — or lack thereof — while maintaining plausible deniability. In other words, the question provides space for a strategic response, one that accounts for the high stakes of expressing dissent during an ongoing labor dispute. Indeed, at the time of our survey, any large poll that could be interpreted as reflecting the degree of internal union solidarity carried real potential to influence the negotiations. The question directly echoes the Guild's stated goal, prominently expressed in their slogan that "no segment of the membership would be left behind."[43] Hence, a positive response signals trust in the unions' claims and solidarity with union leaders; a negative response, by contrast, implicitly questions the Guild's leadership.

We acknowledge that the question could also have been interpreted at face value — as a neutral assessment of whether the publicly stated demands are likely to benefit writers across the pay distribution. Under this interpretation, respondents might answer based on their beliefs about how the proposed contract affects not just themselves but also their peers across the wage distribution.

Our theoretical model helps distinguish between these two interpretations. If writers are answering strategically, we expect responses to vary systematically by productivity. In particular, our model predicts that heightened awareness of inequality weakens union support among higher-productivity writers. In contrast, if writers interpret the question purely at face value, we would not expect support to vary meaningfully by productivity. As we describe in the next section, the former prevails.

Finally, we took additional steps to ensure our study would not interact with the strike: we informed WGA leadership of the study before distributing the follow-up survey, proposing to collaborate if they preferred.[44] We waited until after the strike ended before making any results

[43] Quote from Chief WGA Negotiator Ellen Stutzman.

[44] We received no written reply but got a phone call requesting to know the results of the survey when they became available.

public.

4.3.3 Follow-up Survey: Results

Figure VII compares union support by treatment status (whether the respondent answers before vs. after seeing the pay report). Among respondents who answer before seeing the pay report, 9% answered that WGA's demands either "Mostly not" or "Not at all" meet the needs of all members. This figure rose to 23% among those who respond after seeing the pay report — a 156% relative increase.

Figure VIII examines heterogeneity in the treatment effect by individual productivity. We use the number of credits as a proxy for individual productivity.[45] Additionally, we control for differences in gender and tenure between high- and low-productivity respondents. The decline in union support under pay transparency is primarily driven by high-productivity respondents: among those in the treatment group, the belief that the Guild does not represent the interests of all members rose by 23.8pp relative to control, compared to only a 0.9pp increase among low-productivity respondents (DiD p-value = 0.009). This is consistent with Acemoglu et al.'s (2001) theory, in which high types are especially sensitive to their distance to the median voter and their prospects for individual negotiation. Finally, we show there is no significant difference in responses by tenure (p-value = 0.765) or gender (p-value = 0.200).

Media coverage of past and present WGA strikes corroborates our main heterogeneity finding that inequality depresses high-productivity writers' union support the most. Banks (2015) notes "some of the most egregious infighting during [WGA's 2007-2008 strike] came from high-profile writers who felt their needs were not being served." As the 2023 strike continued, *Variety* reported that "WGA began to face stronger internal pressure from a strain of its most highly paid members" (Littleton et al., 2023).

In sum, when we present information revealing larger-than-expected gaps in individually negotiated pay, respondents, especially high-productivity ones, become more willing to express negative views about union demands during the high-stakes strike. This is consistent with our theory, in which high-productivity workers anticipate being on the losing end of redistribution.

[45] The WGA Screen Credits Manual explains: "A writer's credits play an enormous role in determining our position in the motion picture and television industry. Our professional status depends on the quality and number of screenplays, teleplays, or stories that bear our name." Given the nature of our data, we use quantity as a proxy.

5 Study III: Wisconsin's Act 10

While well-suited to our research question, Hollywood unions have some unique features. Their members are more highly skilled than the average U.S. union worker, and they negotiate collectively across multiple employers, resembling industry-level bargaining common in Europe. Further, workers negotiate pay minimums at the position level but are free to individually bargain above those minimums, akin to the U.S. sports industry.[46]

To complement our Hollywood findings, our third study turns to the education sector. As of 2024, teachers make up 2% of the U.S. labor force and have the highest unionization rate of any occupation (BLS, 2025). We examine how quasi-exogenous differences in pay dispersion among public school teachers in Wisconsin — triggered by a 2011 policy reform, Act 10 — affect individual decisions to support the teachers' union.

5.1 Institutional Background

5.1.1 Before Act 10

Prior to 2011, public-sector teachers in Wisconsin enjoyed considerable collective bargaining power but almost no individual bargaining power. The union negotiated a fixed wage schedule that determined pay solely by experience and education, guaranteeing steady pay progression over time without room for individual adjustments (Biasi, 2021; Biasi and Sarsons, 2022). Pay scales also varied little across districts.

5.1.2 After Act 10

The pay setting landscape changed abruptly in March 2011, when Governor Scott Walker signed Act 10 into law.[47] Indeed, Act 10 eliminated collective bargaining over the wage schedule, effectively leaving teachers to negotiate their salaries individually. In response, restoring collective bargaining became a key focus of the union platform.[48]

[46] In our sample of union contracts (Figure IV), only 25% of contracts set minimums only, while 69% contain a full pay scale (another 6% contain neither).

[47] The act, officially a budget repair bill aimed at cutting spending on public employment by $3.6 billion, fundamentally changed the operating conditions for public-sector unions, with the greatest impact on public-school teachers. Other large organizations such as the police force and firefighter unions were exempt.

[48] While initially unsuccessful, this effort was still ongoing in 2024 (Associated Press, 2024).

Act 10 also included additional reforms. It changed union dues collection from opt-out to opt-in, on a yearly basis (Godfrey & Kahn, S.C., 2018). Teachers' unions had to undergo recertification every year by gathering an absolute majority of favorable votes from members in local elections. The reform also required workers to contribute a larger share of their pay toward their pension and healthcare, and required school districts to switch to cheaper healthcare plans. These provisions were implemented uniformly across all districts and workers.

Act 10's provisions came into effect in each district when its pre-existing collective bargaining agreements (CBAs) expired. Due to differences in negotiating calendars, CBAs expired in 2011 for 198 districts (out of 247 in our dataset), in 2012 for 20 districts, and in 2013 for 7 districts (Appendix Figure C.2; Biasi, 2021; Biasi and Sarsons, 2022; Biasi and Sandholtz, 2024), indicating staggered rollout of the policy across districts.

5.2 Research Design

To study the effect of inequality on union support, our research design exploits the heterogeneous impact of Act 10 on pay inequality across commuting zones (CZs). As shown in Section 5.4, CZs with higher labor market competition for public school teachers experience a larger shock to inequality. To interpret this empirical pattern, we begin by discussing the link between labor market structure and post-reform inequality.

The repeal of the uniform pay scale was intended to decentralize bargaining, shifting leverage to individual teachers. However, we argue that this shift in bargaining power was most consequential in CZs with multiple public school employers that could now compete over individual teachers. In such settings, teachers' individual outside options shifted, with highly desired teachers better positioned to negotiate higher salaries following the reform. In contrast, in highly concentrated CZs where a single district may be the only public employer, the de facto individual leverage of teachers remained limited despite the de jure shift to individual bargaining.[49]

Crucially, because district education budgets are determined largely at the state level, the shift in individual bargaining power among teachers in highly competitive districts can lead to greater

[49]Public sector wages are already higher than private sector wages, and exit from the public sector is minimal due to factors like non-transferable benefits and amenity differences.

within-district wage dispersion without altering average wage levels.[50] This is key for our research design: in order to isolate the effect of inequality on union support, we need Act 10 to impact union support differentially across more vs. less competitive labor markets through its effects on inequality rather than, for instance, on wage levels. We validate this empirically in Section 5.4.[51]

This natural experiment, combined with data on union revenue per teacher and teachers' dues payments, allows us to study how rising inequality shapes an organic decision that union members regularly face: paying dues. Moreover, we can observe wages of individual teachers both before and after the era of pay scales. This features allows us to examine heterogeneity in teachers' responses based on their individual bargaining power. We test the hypothesis that teachers with high individual bargaining power are more likely to reduce union support post-Act 10 and, in particular, in highly competitive labor markets where they can best take advantage of their individual bargaining power.

5.3 Data

We combine personnel records of all public-school teachers in Wisconsin with political contribution data, which we use to infer union membership. We also bring in data on union revenues, the expiration dates of district-level CBAs, and the degree of competition in the labor market for teachers.

Personnel data We use data from the PI 1202 All Staff Files from 2010 to 2017, provided by the Wisconsin Department of Public Instruction (WDPI). These files list all employees of the WDPI and its school districts, including all public-school teachers, and contain information on name, gender, birth year, years of experience in Wisconsin public schools, district and school assignment, total salary, and full-time equivalency (FTE) units. Each row represents a position, and 2% of all individuals hold more than one position in a year. We restrict our sample to teachers and aggregate the data at the person-year level, retaining the position with the highest FTE per person per year.[52] Our final dataset includes a total of 90,952 full-time teachers observed between 2009 and 2017,

[50] In the U.S. public education sector, funding is primarily determined by state-imposed formulas (Baron, 2022), resulting in similar average wages across districts and little correlation between average pay and local labor market competitiveness.

[51] Our design rests on several other assumptions, e.g. no pre-trends, Stable Unit Treatment Value Assumption. We spell out and provide evidence on theses assumptions in Section 5.4 as well.

[52] We exclude records with a salary equal to $0 or missing FTE.

with 45,139 teachers observed in 2011.

Union revenues We obtain data on union finances from IRS Form 990 filings, which all tax-exempt organizations, including public-sector unions, are required to submit. These forms report organizations' key financial details, including revenues, expenses, assets, and liabilities. We access a database of digitized Form 990s through the National Center for Charitable Statistics (NCCS) at the Urban Institute (2016). To focus on Wisconsin teachers' unions, we first compile a list of teacher unions from the records of the Wisconsin Employment Relation Commission and match their names to Form 990 filings. We successfully link 52 unions spanning 99 school districts. We calculate revenues per member, defined as total revenues (primarily from dues reported on the filings) divided by the number of teachers in each union's represented districts (based on the staff files). We argue that the decision to pay union dues offers a direct, "vote-with-your-wallet," indicator of support for the union. Specifically, since the union's post-reform campaign centered on reinstating the pay scale, we interpret the decision to pay dues as a tangible expression of support for that objective.

Individual union membership To track which teachers paid union dues in a given year, we follow the procedure proposed by Foy (2024). Starting from 2016, the state chapter of the National Education Association (NEA) began to automatically allocate $19.99 from each member's annual dues to its political action committee (PAC). Similarly, each of the 13 regional chapters of the state union automatically directs another $5 from member dues to its respective PAC. This feature allows us to infer union membership by matching teacher names in the staff files to political contribution records of NEA state and regional PACs. We perform a fuzzy name match between staff teacher records and the Wisconsin Campaign Finance Information System (WCFIS), which tracks political donations to PACs.[53] Following Foy (2024), we treat any teacher appearing in the contribution data as a union member. This decision is supported by two facts: i) The majority of contributions are bunched at $19.99 and $5.00, i.e., amounts that unions automatically deduct from member dues for their PACs (Appendix Figure C.1); ii) it is rare for non-union members to donate to union-affiliated

[53]The WCFIS website can be accessed at https://cfis.wi.gov/Public/Registration.aspx?page=ReceiptList. Before performing the match, we clean the names to account for inconsistencies (e.g., variations in middle initials) and ensure that each name uniquely identifies an individual within a filing period.

PACs. Based on this approach, 47% of teachers were union members in 2016. This data provides us with an individual-level measure of union support in the post-reform period.

Collective bargaining agreements We classify districts based on the expiration date of their CBAs prior to Act 10, which determines when each district (and its union) became subject to the changes introduced by the law. We use the dataset first compiled by Biasi (2021), combining information from multiple sources, including union contracts, districts' employee handbooks, school board meeting minutes, and local news sources.[54] The dataset contains information on 247 of the state's 428 districts, covering approximately 70% of all teachers.

5.4 Econometric Specification

We compare districts that are ex-ante headed toward a large increase in pay inequality when individual bargaining commences (upon their CBA expiration) with those headed toward a modest shock, as a function of local labor market concentration.

We measure labor market concentration for public school teachers using the Herfindahl-Hirschman Index (HHI), calculated based on public school teacher employment in 2011 across districts within each CZ. The index is defined as follows:

$$\text{HHI}_j = \sum_{k:c(k)=c(j)} 10000 * s_j^2$$

where j denotes a district, $c(j)$ denotes the CZ of district j, and s_j is the share of public school teachers in CZ $c(j)$ employed in district j. The HHI ranges from 0 to 10,000.

We measure concentration across public school districts — rather than across individual schools, sectors (public vs. private), or industries (education vs. non-education) — for several reasons: (i) teacher contracts are stipulated with each school district, not with a school, making the district the employer; (ii) private and charter schools tend to pay lower wages than public schools (Taie and

[54] Union contracts generally report the date of the expiration of the agreement. Post-Act 10 school board minutes typically mention whether a contract was set to expire in 2011. The presence of an early version of district employee handbooks is also useful to establish when the post-CBA pay regime was introduced (which typically coincides with the date of the earliest handbook at the latest). When available, the dataset prioritizes information from union contracts, school board minutes, and handbooks. In cases where these documents are unavailable, the records are complemented with information from online local news sources.

Goldring, 2019), and cross-sector mobility is limited due to factors like differences in amenities and non-transferable benefits; (iii) most teachers hold degrees in education, which are primarily useful within the education industry. Naturally, the HHI is higher in rural areas in the northeast of the state (Appendix Figure C.3). However, significant variation also also exists in urban areas, such as between Milwaukee (HHI of 689) and Madison (HHI of 905).

To visualize our event study, we divide CZs into above- and below-median HHI groups, where the mean HHI is 1928 in the above-median districts, vs. 679 in the below-median ones. Table I confirms that districts in low-HHI areas experience strong growth in within-position wage dispersion, while districts in high-HHI areas see little growth. Specifically, between 2011 and 2016, the within-position standard deviation in pay rose by only $97 (or 3%) in high-HHI districts, versus $1,240 in low-HHI districts, an almost 13-fold difference (Table I, columns 2). Henceforth, we refer to districts with below-median HHI as "high inequality shock" districts and districts with above-median HHI as "low inequality shock" districts.

Identifying Assumptions Our design rests on several assumptions. The first is that, in the absence of the reform, union support in high and low inequality shock districts would have followed the same trajectory over time. While this assumption is not directly testable, we provide several pieces of supporting evidence. First, Figure IX shows a lack of different pre-trends: per-member union dues evolved in parallel before the reform. Second, we show that high and low inequality shock districts are comparable along other important dimensions pre-reform. In particular, we find no significant differences in pre-reform wage levels (Table II, Panel (a), Column 1) or wage changes between 2007 and 2011 (Column 2). Teacher characteristics, such as tenure, gender, and share with a Master's degree (Columns 3-5), are similar, and so are district characteristics like locale, population, and political leaning (Panel (b)). Third, high and low inequality shock districts experience similar changes in wage levels post-reform (Panel (a), Column 6). This confirms that the divergence in union support post-reform is not driven by wage levels, but rather by wage dispersion.

A second assumption is the Stable Unit Treatment Value Assumption (SUTVA), which requires no spillover or interference between treated and control units. In our design, SUTVA would be violated if teachers systematically moved between high and low inequality shock districts in response to the policy. Appendix Figure C.4 rules out this possibility: in any given year, fewer than

1% of teachers move out of their district, and this mobility is similar across high and low inequality shock districts at all times, including after the reform.

Finally, a key feature of our setting is the staggered implementation of Act 10 across districts, based on pre-reform contract expiration dates. This alleviates concerns that other events occurring in 2011 may confound our findings. Further, by comparing high and low inequality shock districts, we address concerns that our estimates may be confounded by aspects of Act 10 other than wage dispersion also enacted upon contract expiration.

We compare how union support evolves for districts that are expected to experience a high vs. low shock to pay inequality following Act 10, based on their 2011 HHIs. Specifically, we estimate the following staggered differences-in-differences model via OLS, separately for high and low inequality shock districts:

$$r_{jt} = \sum_{k=-5}^{5} \beta_k \mathbb{1}(t - E_{d(j)} = k) \; + \theta_j + \tau_t + \varepsilon_{jt} \tag{4}$$

where r_{jt} denotes union membership dues per member in district j and year t, and E_d is the expiration year of district d's CBA. θ_j and τ_t contain district and year fixed effects, respectively. We normalize $\beta_0 = 0$, such that β_k represents the change in dues revenues per member k years after CBA expiration. Standard errors are clustered at the district level.

5.5 Results

As shown in Figure IX, estimates of β_k for $k < 0$ are statistically indistinguishable from zero in both high and low inequality shock districts. In contrast, following expiration ($k > 0$), estimates become negative, large, and statistically significant in high inequality shock districts: revenues per member drop by 68% (coefficient = -1.135, p-value < 0.001) two years after expiration and 75% (coefficient = -1.376, p-value = 0.001) three years after. In contrast, the decline is indistinguishable from zero in low-inequality shock districts: 11% (p-value = 0.13) after two years and 12% (p-value = 0.56) after three years. By year three, the gap in union revenues between high and low inequality shock districts has reached 64% (p-value = 0.004). Estimates are robust to additionally controlling for the distribution of teacher position in each district (Appendix Figure C.5). These results indicate that union support, measured by per-teacher membership dues collected, falls only in

districts that experience large inequality shocks. Since the gap in pay dispersion (measured by the within-position standard deviation) between above- and below-median HHI districts grew by 39% post-reform (Table II, column 3, p-value < 0.001), and the difference in union revenue grew by 64% by year three post-reform, we estimate an elasticity of a 1.64% decline in union revenue for a 1% increase in pay dispersion in our setting.

We note that the gap between high- and low-HHI districts gradually widens over time. This may reflect the fact that wages do not adjust overnight following the reform, but rather through a series of renegotiations as teachers learn about their market values and administrators adapt their pay practices to retain and attract talent. In turn, teachers gradually come to better appreciate the inequality among peers and decide each year whether to pay dues to a union campaigning to reinstate the pay scale (PSHRA, 2024).

Heterogeneity by Individual-Level Productivity Next, we study how individual-level union support after Act 10 varies with a teacher's productivity, proxied by their wage gains under individual bargaining. We measure this using the difference between a teacher's wage in 2016 and the average wage for their position.

We estimate the effect of being in a high vs. low inequality shock districts on individual union membership in 2016 (the first year it is available), separately for teachers with above- and below-average wage gains relative to all teachers in the same position and district, calculated as the 2011-2016 changes in the residuals of a regression of wages on position, district, and year fixed effects. Considering relative (rather than absolute) wage gains allows us to compare teachers whose pay would have grown in a similar way absent the reform due to movements along the pay scale while accounting for pre-reform differences in wage increases across the scale.[55] To account for the possibility that other demographic characteristics, namely gender or union tenure, may be differentially correlated with union attachment in high vs. low inequality shock districts and correlated with wage gains, we control for these characteristics and also report their differential effects on the same figure.

The top panel of Figure X shows that, among teachers with above-average wage gains, union

[55] For example, the difference in pay between teachers with a Master's degree and 0-4 years of experience and those with 5-9 years of experience was $8,702 on average, whereas the difference between teachers with 20-24 years and those with 25-29 years was $882.

support is 7.3 percentage points (28%) lower in high inequality shock districts compared to low inequality shock districts. In contrast, union support is only 4.7 percentage points lower in high inequality shock districts for teachers with below-average wage gains (difference p-value < 0.001). For comparison, the central and bottom panels examine heterogeneity by union tenure and gender, respectively. We find no statistically significant differences in the effect of inequality across these groups. For example, being in a high inequality shock district decreases union support by 6.1 and 7.0 percentage points for teachers with above- and below-mean union tenure, respectively (difference p-value = 0.156). Similarly, it decreases union support by 6.2 and 6.5 percentage points for men and women, respectively (difference p-value = 0.699). These results corroborate our findings from Study II that rising pay inequality reduces union support, particularly among workers with high bargaining power, consistent with the economic channel highlighted in Acemoglu et al. (2001). However, our findings highlight another important reality that is not captured by the theory: workers with lower bargaining power (in both Wisconsin and Hollywood) are not galvanized by occupational inequality. While the negative effect of inequality is much more muted among these workers, their reaction does not cross over into positive territory. Perhaps second-order beliefs (peer effects) play a role — if a worker believes their peers are less willing to strike, their own support for organizing may fall. Organizer choices may also play a role, shifting focus away from pay in high inequality environments.

6 Conclusion

This paper provides the first causal evidence on how occupational wage inequality affects the labor movement. Using three complementary research designs — a vignette experiment with union organizers, an information intervention during the 2023 Writers Guild of America strike, and a natural experiment following Wisconsin's Act 10 reform — we document that rising occupational wage inequality significantly undermines union strength through several distinct mechanisms.

Our findings reveal a consistent pattern across diverse settings: workers with high individual bargaining power disproportionately withdraw support for collective action when wage inequality increases. In Hollywood, high-productivity writers exposed to information about pay disparities became 20 percentage points more likely to express doubts about union demands during a high-

stakes strike. In Wisconsin, teachers with above-average wage gains in districts experiencing larger inequality shocks were significantly more likely to stop paying union dues. These results provide strong support for the theoretical predictions of Acemoglu et al. (2001), demonstrating that rising outside options for skilled workers weaken their incentives for collective bargaining.

Beyond workers' response, we show that union organizers adapt to inequality in ways that may preserve institutional viability but potentially undermine redistribution. In environments with greater dispersion in outside options, organizers shift campaign focus away from wage demands toward less divisive non-wage amenities and advocate for smaller bargaining units that separate workers with different outside options. Under budget constraints, the majority of organizers eventually decide to allocate fewer resources to high-inequality environments despite acknowledging greater potential impact there. These strategic responses represent rational adaptations to rising inequality but may reduce unions' ability to compress wages at scale.

Our results offer a fresh perspective on the joint evolution of inequality and unionization in the United States. The negative correlation between these phenomena, documented extensively in prior work (Freeman, 1980; DiNardo et al., 1996; Card, 2001), may reflect not only unions' effect on inequality but also inequality's effect on unions. This suggests the possibility of "inequality traps" — self-reinforcing dynamics where rising wage dispersion erodes the very institution meant to counteract it, making collective action increasingly difficult as occupational wage gaps widen.

Important questions remain for future research. First, within-occupation inequality accounts for a significant share of the growth in labor market inequality, but other forms of societal inequality have also grown, including inequality between workers and employers. Other forms of inequality likely affect labor organization through different channels and are equally deserving of attention. Second, the mechanisms we identify — withdrawal of high-types, strategic adaptation by organizers, and the redirection of resources away from unequal environments — may operate beyond labor markets in other contexts, such as political organizing and civic society.

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Figures and Tables

Figure I: Market Wages

Panel A: Equal Environment (Factory A)

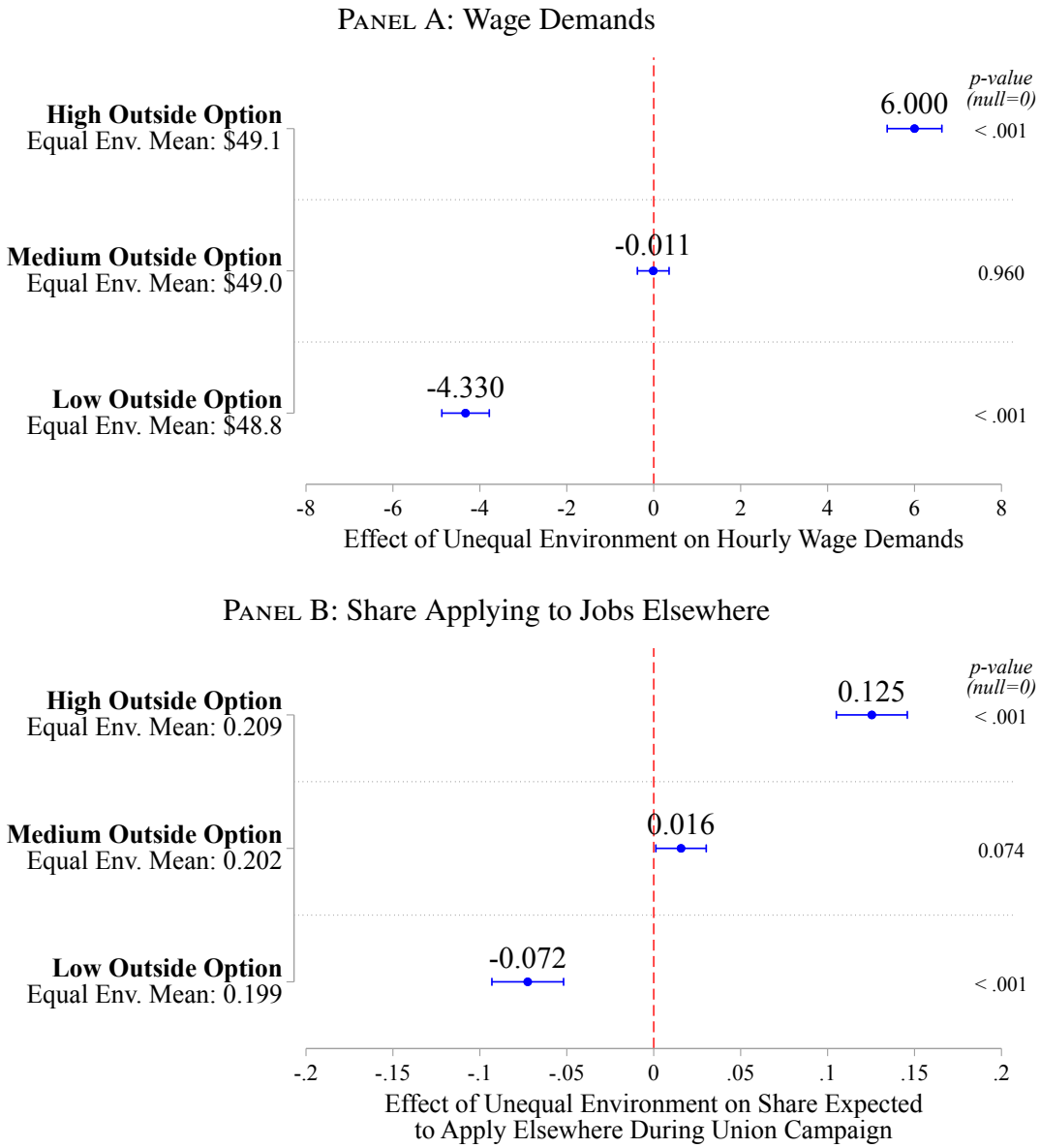
Assignments	Hourly Wage	Research on Market Wage
Quality control (1/3rd)	$40	$48
Metal Worker (1/3rd)	$40	$48
Pipefitter (1/3rd)	$40	$48

Panel B: Unequal Environment (Factory B)

Assignments	Hourly Wage	Research on Market Wage
Quality Control (1/3rd)	$40	$30
Metal Worker (1/3rd)	$40	$48
Pipefitter (1/3rd)	$40	$66

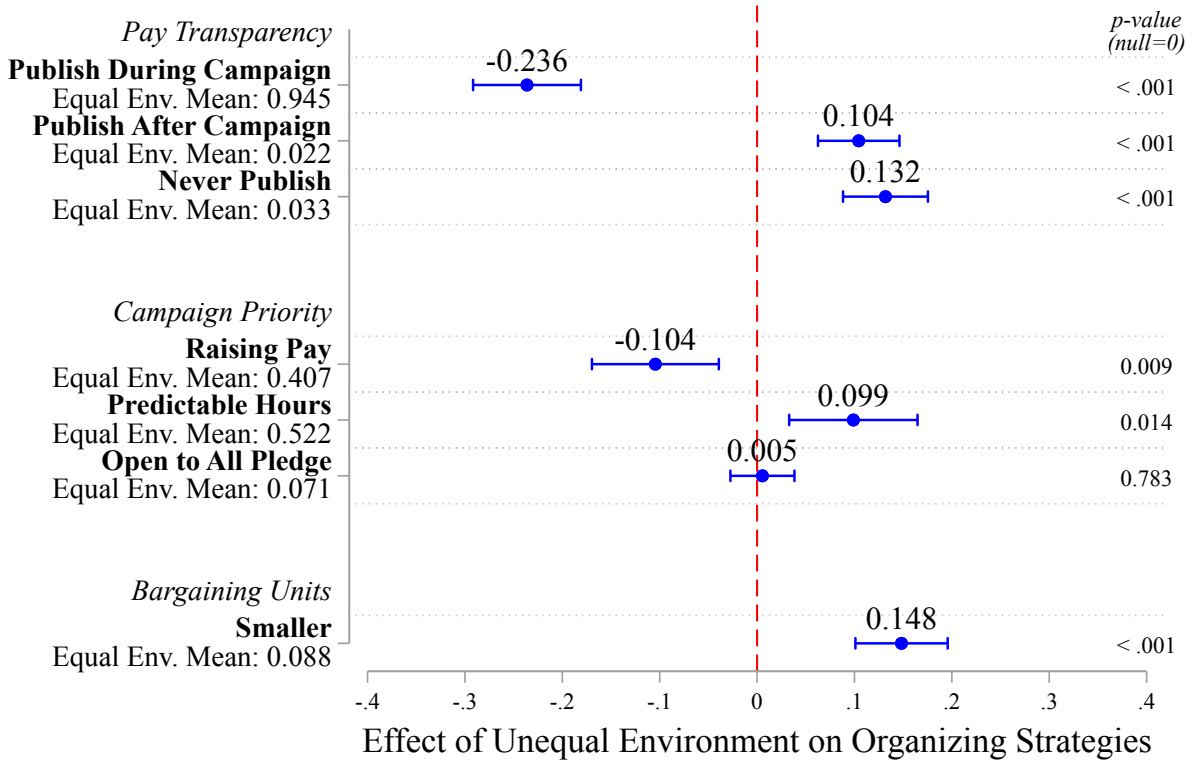
Notes: This figure shows the information on internal and market wages in each vignette from the organizer survey described in Section 3. We randomize the order in which organizers see the two environments. Based on Panel B, we refer to Quality Control workers as having "Low Outside Options," Metal Workers as "Medium Outside Options," and Pipefitters as "High Outside Options." For the full text of the vignette, see Appendix Section D.1.

Figure II: Worker Actions by Outside Option



Notes: This figure shows how predicted worker actions vary across workers with different outside options when market wage inequality increases, from the organizer survey described in Section 3. In Panel A, *Equal Env. Mean* reports the average predicted wage demands by group in the equal environment. In Panel B, *Equal Env. Mean* reports the average share of workers, by group, that organizers expect to apply for jobs elsewhere during the union campaign in the equal environment. Estimates show the effect of moving from the equal environment to the unequal environment on each outcome by group. The market wage for all three groups in the equal environment is $48; in the unequal environment, they are $66 for the high outside option group, $48 for the medium group, and $30 for the low group. Point estimates are shown with 90% confidence intervals, using standard errors clustered at the organizer level. We test the null hypothesis that each coefficient equals zero and report p-values to the right of the plots. Sample size is 182 organizers.

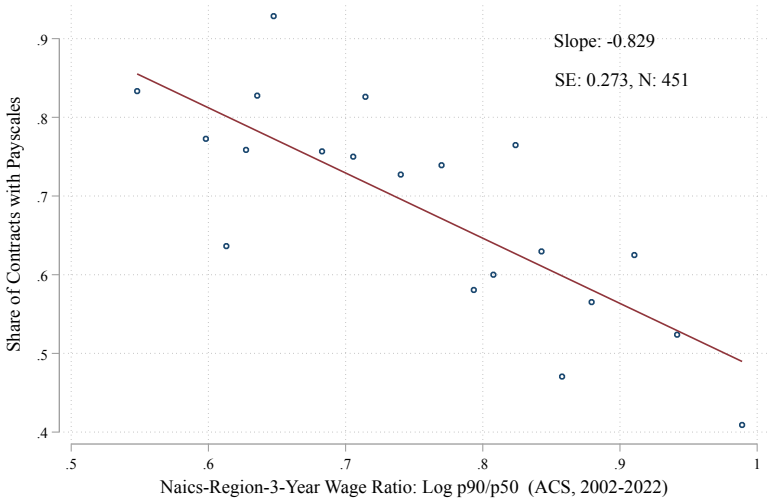
Figure III: Organizing Strategies



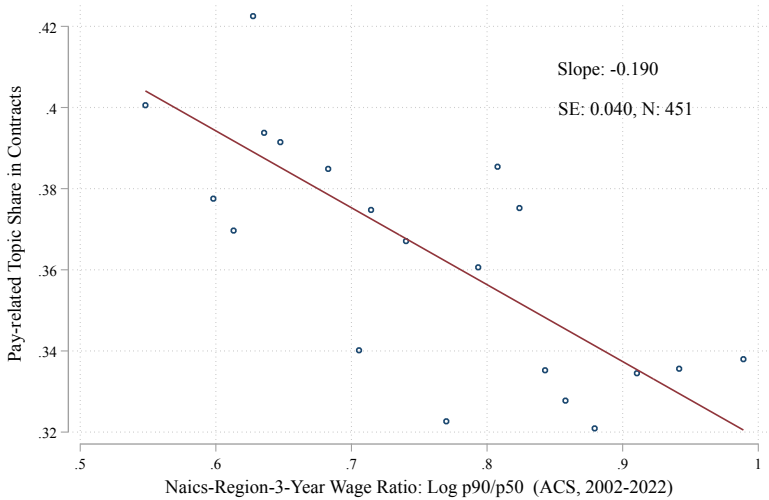
Notes: This figure shows how organizers adapt their campaign strategies when market wage inequality increases, from the organizer survey described in Section 3. Under each outcome specified on the y-axis, *Equal Env. Mean* reports the average outcome in the equal environment, while plotted estimates show the effect of moving from the equal environment to the unequal environment. Specifically, coefficients under header *Pay Transparency* report whether organizers would publish market wage information from Figure I; coefficients under header *Campaign Priority* report which of the three issues organizers would prioritize during the campaign; the coefficient under header *Bargaining Units* reports whether organizers would pursue separate, smaller bargaining units for different worker types. Point estimates are shown with 90% confidence intervals, using standard errors clustered at the organizer level. We test the null hypothesis that each coefficient equals zero and report p-values to the right of the plot. Sample size is 182 organizers.

Figure IV: Cross-sectional Relationships between Industry-Region Inequality and Union Organizing Outcomes

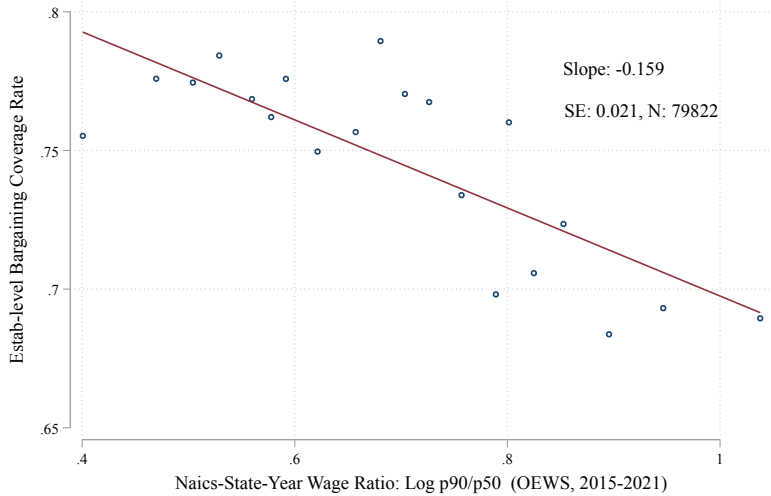
PANEL A: Share of Contracts with Pay Scales



PANEL B: Pay-related Topic Share in Contracts

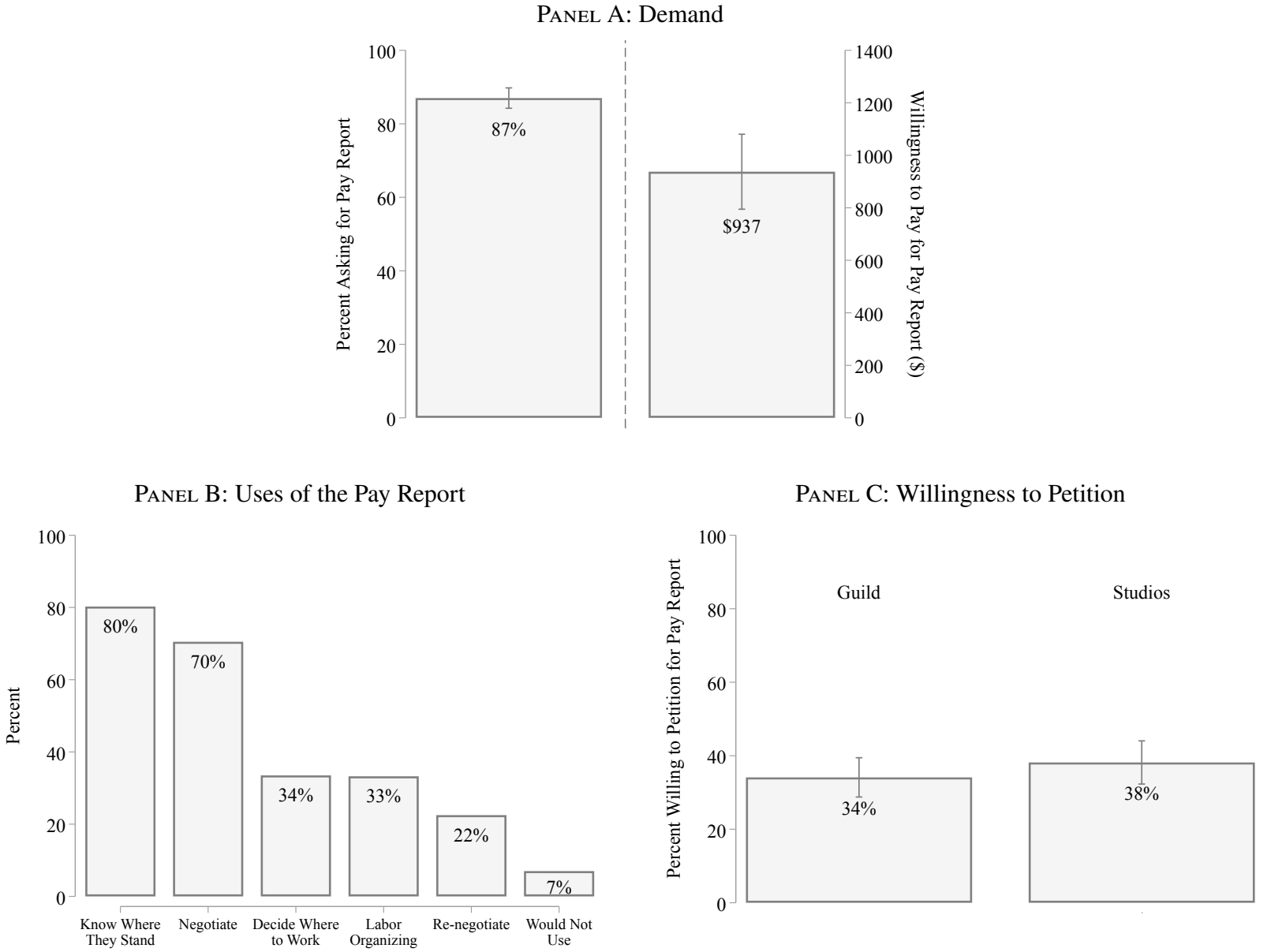


PANEL C: Barganining Unit Size (as Share of Establishment Employment)



Notes: This figure explores cross-sectional relationships between wage inequality and union organizing outcomes. Each panel plots a binscatter of a union outcome against industry-state-year log p90-p50 wage ratios. Panel A shows the pay scale status of 451 contracts between 2002-2022, using data from the Office of Labor-Management Standards (OLMS) Online Public Disclosure Room. We estimate wage ratios using ACS earnings, aggregating at the 2-digit NAICS × BEA region × 3 year to improve precision. Panel B shows the "pay-related" topic share (out of pay, benefits, and conditions) computed using the CorEx model in the same 451 contracts. Panel C shows the size of 79,822 bargaining units as a share of establishment-level employment, using Collective Bargaining Notice (F-7) data from the Federal Mediation and Conciliation Service (FMCS) between 2015-2021. It uses more recent and granular (2-digit NAICS × state × year level) wage ratios from the OWES. Standard errors are twoway clustered at the union and employer levels.

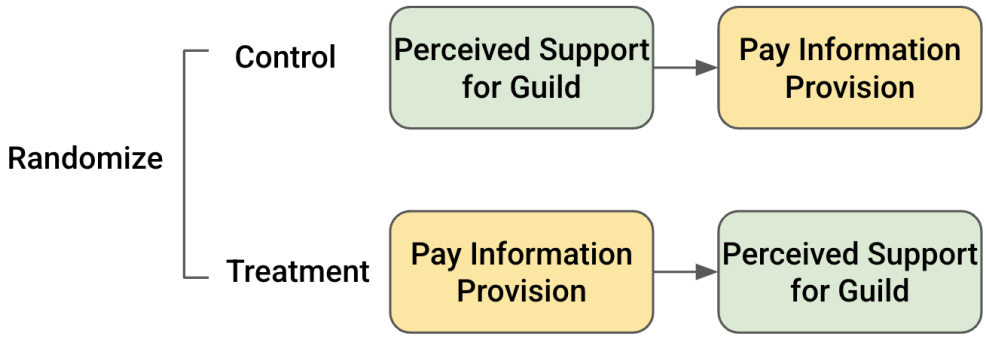
Figure V: Baseline Hollywood Survey: Interest in a Pay Report



Notes: This figure summarizes writers' interest in and demand for a pay report, from the Hollywood experiment described in Section 4. Panel A shows the share of respondents interested in receiving a pay report and their average willingness to pay, elicited using the incentive-compatible BDM procedure (Becker et al., 1964). Panel B shows respondents' intended uses for a pay report; respondents are allowed to select multiple uses. Panel C shows the share of respondents willing to publicly petition for pay data from either the WGA or the Studios. Estimates are shown with 90% confidence intervals. Sample size is 400 WGA members.

Figure VI: Follow-up Survey Pay Report and Design

Panel A: Research Design



Panel B: Pay Report

At present, our responses suggest the following compensation among WGA writers:

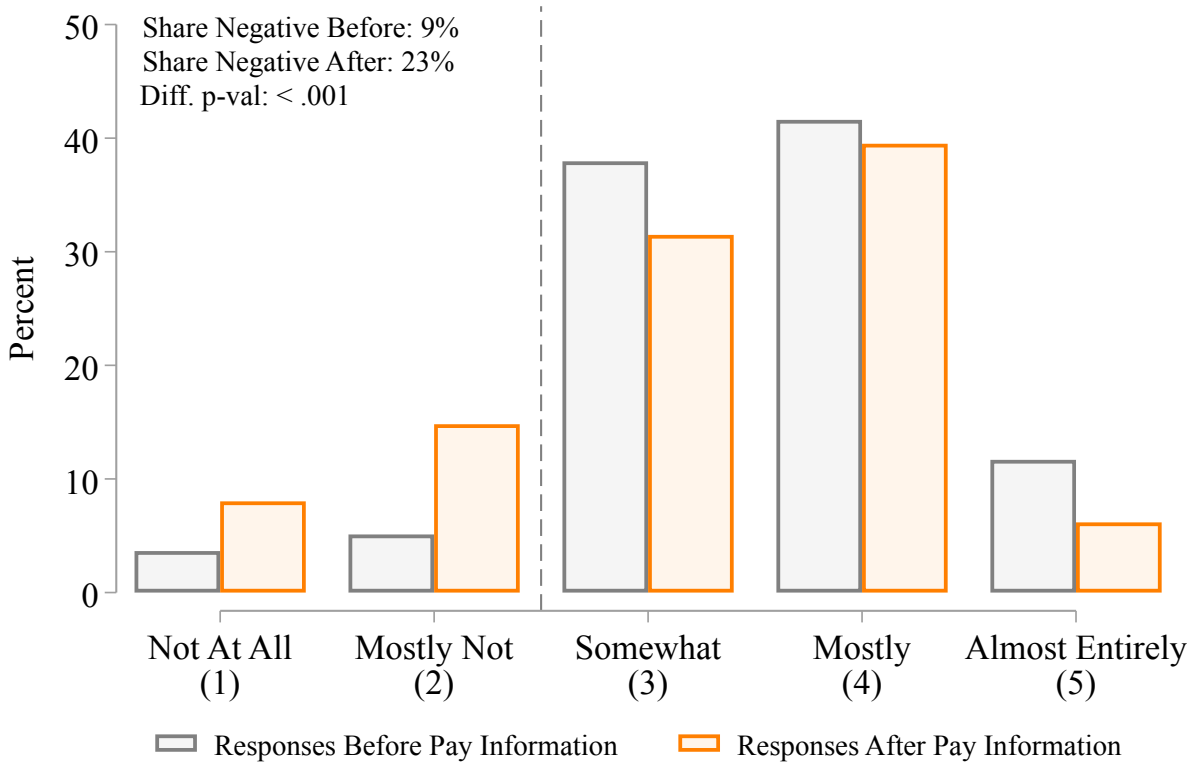
	Male	Female
Median	Scale + 10%	Scale + 3%
Mean	Scale + 25%	Scale + 14%
Maximum	Scale + 100+%	Scale + 100+%

Note: Standard errors on means are 2.2% for men and 2.0% for women.

We expect to add position-level statistics soon.

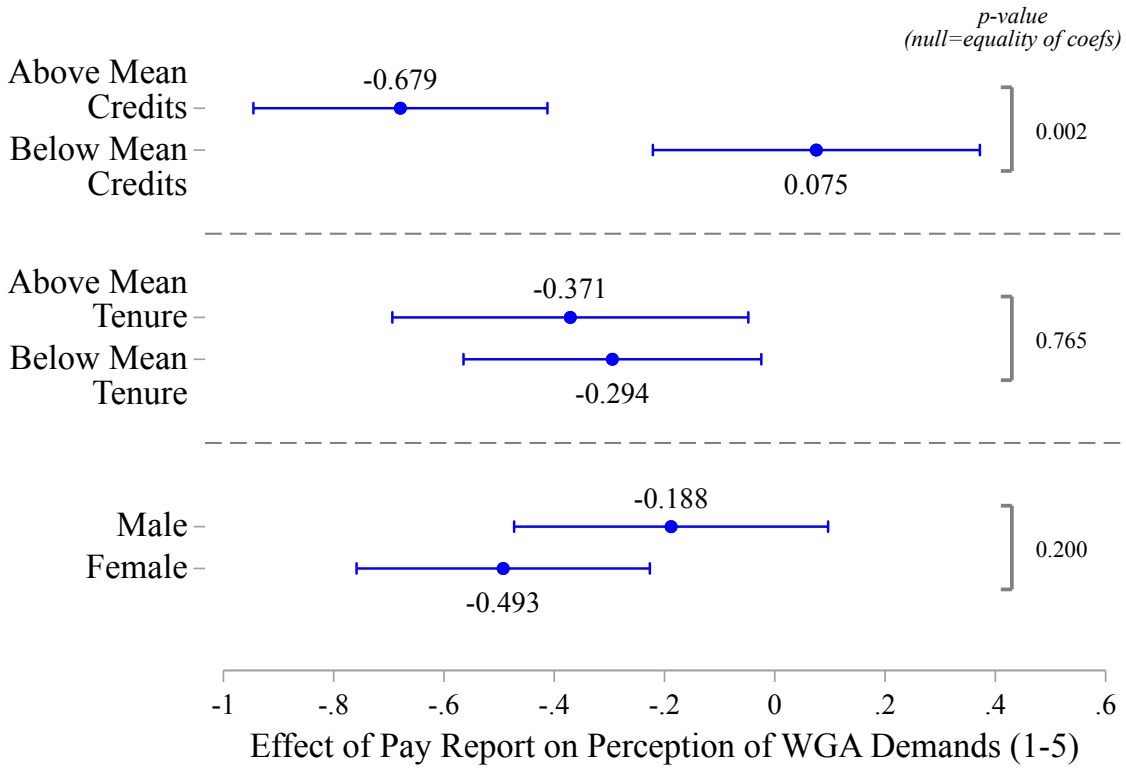
Notes: This figure illustrates the experimental design used to test how pay transparency affects union support among WGA writers, from the Hollywood experiment described in Section 4. Panel A sketches our research design, where we randomize the order in which respondents see pay information and express perceived support for the Guild. *Perceived Support* is measured by asking: "Do most writers think the WGA demands will meet the needs of all WGA members?" Panel B displays the pay report that respondents see in the follow-up (the content of the *Pay Information Provision*). We compute pay statistics based on self-reported pay among WGA members in the baseline survey.

Figure VII: Writers' Perceptions of Whether WGA Demands Serve Everyone



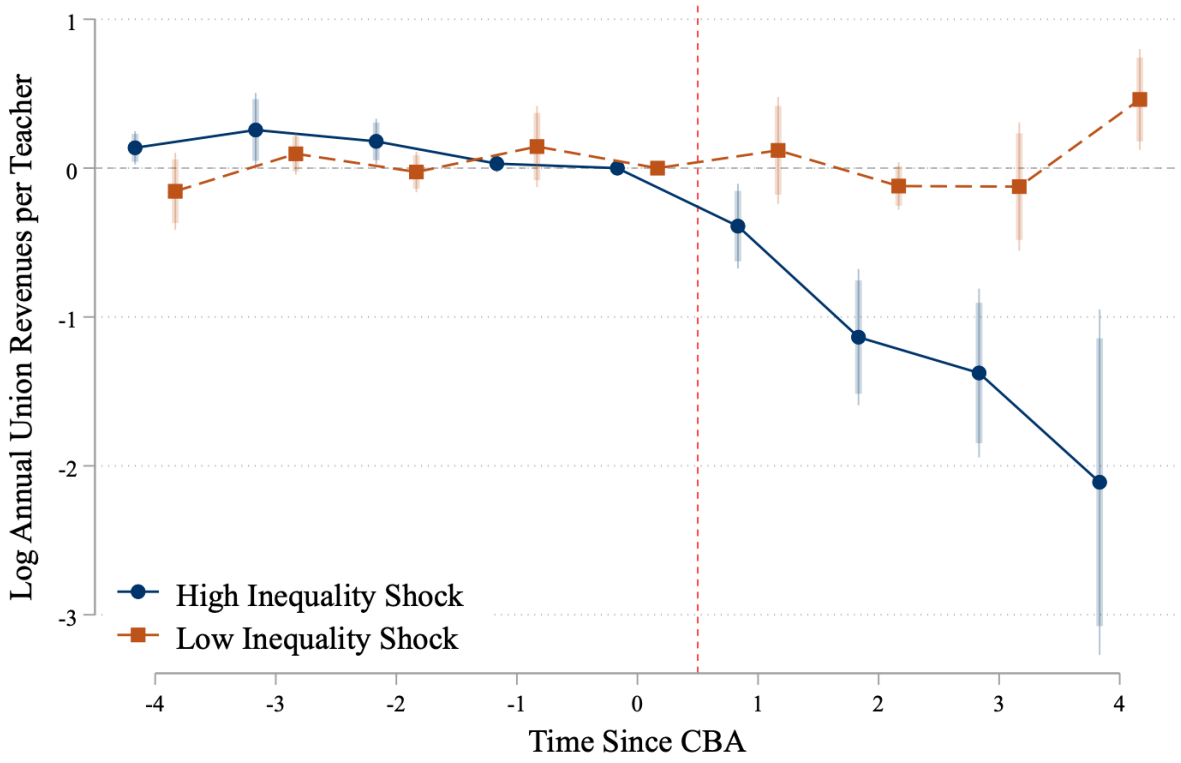
Notes: This figure shows how pay transparency affects writers' perceptions of whether the WGA's demands serve all members, from the Hollywood experiment described in Section 4. On a 5-point scale, respondents answer the question "Do most writers think the WGA demands will meet the needs of all WGA members?" either before (gray bars) or after (orange bars) they saw the pay report in Figure VI. The shares of negative responses (defined as "Mostly not" or "Not at all") before vs. after seeing the pay report are displayed and their difference tested in the top left corner. Sample size is 299 WGA members. Of the 310 responses in our follow-up survey sample, 11 respondents report that they do not know the WGA demands and are excluded from the analysis.

Figure VIII: Heterogeneity in Perception of WGA Demands



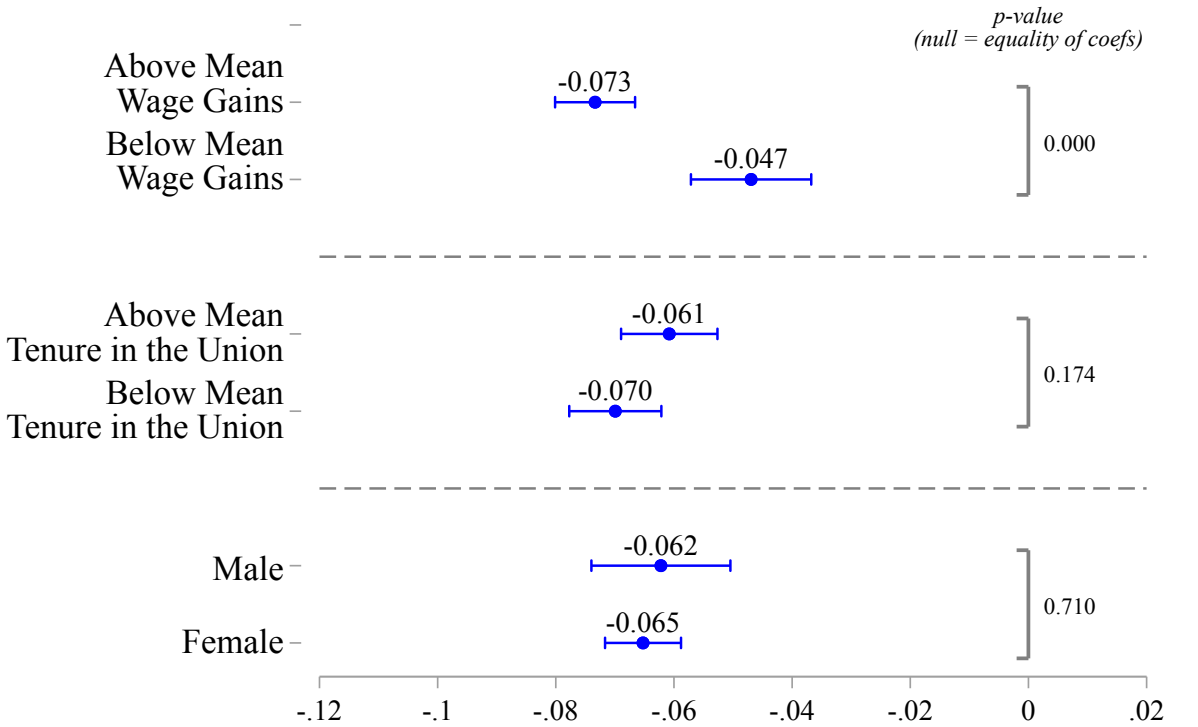
Notes: This figure explores heterogeneity in the effect of the pay report on writers' perceptions of the WGA's demands, from the Hollywood experiment described in Section 4. Coefficients report the effect of having seen the pay report on answers to the question "Do most writers think the WGA demands will meet the needs of all WGA members?", using the 1-5 scale shown in Figure VII (1 = Not at all, 5 = Almost entirely). The sample is 251 WGA members with available credit, experience, and gender data. Respondents are grouped by three characteristics: (1) *Above Mean Credits* vs. *Below Mean Credits* based on average IMDB credits among individuals with the same most recent credit title (e.g., "Story Editor"); (2) *Above Mean Tenure* vs. *Below Mean Tenure*, based on average years since first IMDB credit among individuals with the same most recent credit title; (3) *Male* vs. *Female*, self-reported or otherwise imputed based on first names as described in Section 4.2. Each regression controls for the other two characteristics, out of the three, that are not being tested. Point estimates are shown with 90% confidence intervals, using robust standard errors. We test the null hypothesis that coefficients are equal across groups and report the difference-in-difference p-values to the right of the plot.

Figure IX: Wage Inequality Shocks and Union Revenues



Notes: This figure shows how wage inequality affects union revenues at the school district level, from the Wisconsin study described in Section 5. Estimates represent coefficients β_k from equation (4), which regresses log annual union revenues per teacher on event-year dummies (relative to expiration of collective bargaining agreements) with district and year fixed effects. We display separate coefficients for districts expected to experience a *high inequality shock* (blue series) and those expected to experience a *low inequality shock* (orange series). We classify high/low inequality shock districts based on whether they have a community zone level Herfindahl-Hirschman Index below/above the state median. Estimates are displayed with 90% confidence intervals, using standard errors clustered at the district level.

Figure X: Wage Inequality and Union Membership: Bargaining Power vs. Other Demographics



Notes: This figure explores heterogeneity in the effect of wage inequality on union membership at the teacher level, from the Wisconsin study described in Section 5. Coefficients show the effect on union membership of working in high inequality shock districts, defined as having a community zone level Herfindahl-Hirschman Index below the state median, relative to low inequality shock districts. Respondents are grouped by three characteristics: (1) *Above Average Wage Gains* vs. *Below Average Wage Gains*, based on having above/below district-level median residual in a regression of 2016 salaries on position fixed effects; (2) *Above Average Tenure in the Union* vs. *Below Average Tenure in the Union*, based on having above/below the state median of 13 years of experience; (3) *Male* vs. *Female*. Each regression is estimated using membership data for 2016 and 2017 and controls for the other two characteristics not being tested and year fixed effects. Point estimates are shown with 90% confidence intervals, using robust standard errors. We test the null hypothesis that coefficients are equal across groups and report the difference-in-difference p-values to the right of the plot.

Table I: Wage Inequality and Labor Market Concentration

	Std. dev., 2011	Change in std. dev., 2011-2016
	(1)	(2)
High Inequality Shock	-322.217	1240.268***
	(678.855)	(440.914)
Mean dep. var. control	3101.40	96.98
N (districts)	400	400

Notes: This table reports OLS estimates between actual wage inequality and labor market concentration, which we use to define high/low inequality shock districts, from the Wisconsin study described in Section 5. The dependent variables are the standard deviation of wages within position in 2011, averaged at the district level (Column 1), and the change in this variable between 2011 and 2016 (Column 2). The independent variable *High inequality shock* equals one for districts in commuting zones with a Herfindahl-Hirschman Index below the state median. Positions are defined by district, education, and five-year experience bins. Each observation corresponds to a district and is weighted by the total number of workers. Robust standard errors are reported in parentheses.

Table II: District Characteristics in 2011 and Labor Market Concentration

Panel (a)	2007-11	Characteristics in 2011				2011-16
	Change in salary	Salary	Experience	Share female	Share w/Master's	Change in salary
	(1)	(2)	(3)	(4)	(5)	(6)
High Inequality Shock	281.963	394.177	0.184	-0.009	-0.019	-208.624
	(343.828)	(1234.626)	(0.391)	(0.007)	(0.035)	(445.642)
Mean dep. var. control	8429.99	53634.16	12.52	0.73	0.50	5772.69
N (districts)	418	418	418	418	418	418

Panel (b)	District Characteristics in 2011					
	City	Town	Suburb	Rural	ln(Popul)	Share GOP votes, 2012
	(1)	(2)	(3)	(4)	(5)	(6)
High Inequality Shock	0.082	0.013	-0.058	-0.036	0.323	0.044
	(0.145)	(0.084)	(0.066)	(0.062)	(0.519)	(0.033)
Mean dep. var. control	0.028	0.114	0.251	0.607	8.826	0.464
N (districts)	418	418	418	418	412	416

Notes: This table examines whether labor market concentration is systematically related to observable district characteristics, from the Wisconsin study described in Section 5. Each column reports the OLS estimate of a district characteristic on *High inequality shock*, which equals one for districts in commuting zones with a Herfindahl-Hirschman Index below the state median. In Panel (a), the dependent variables are average district salary change from 2007 to 2011 (Column 1); average district salary in 2011 conditional on position (Column 2); average worker experience in 2011 (Column 3); share of female workers in 2011 (Column 4); share of workers with a Master's degree (Column 5); and the change in average district salary from 2011 to 2016 (Column 6). In Panel (b), the dependent variables are indicators for districts located in a city (Column 1), town (Column 2), suburb (Column 3), or rural area (Column 4); log population (Column 5); and the share of votes for the GOP in the 2012 presidential election at the county level (Column 6). Each observation corresponds to a district and is weighted by the number of workers. Robust standard errors are reported in parentheses.

Online Appendix

A Additional Details on Study I: Organizer Survey

A.1 Unrestricted Sample of Respondents

Our main sample of organizers includes only responses where the organizer left a valid email address at the end of the survey (N=182, Section 3.1). This restriction aims to ensure responses are from real organizers and are from our intended respondents. We investigate the consequences of this restriction and replicate our key results using the unrestricted sample of respondents (N=221). We find a similar gap in the median predicted vote share (8pp, $p<0.001$). The effects of the unequal environment on worker wage demands and exit are virtually identical in both samples (Appendix Figure A.2). Additionally, the effects of the unequal environment on organizing strategies are generally consistent with baseline results for decisions around pay transparency, campaign priorities, and bargaining unit size, although exact magnitudes vary (Appendix Figure A.3). In the unrestricted sample, 69% of respondents prefer to allocate resources to the equal environment, compared to 67% in the restricted sample.

A.2 Robustness to Vignette Order

We present organizers with questions about the equal and unequal environments in a random order. Here, we report results from the main sample separately for those who saw the equal environment first versus those who saw the unequal environment first, in order to confirm that the order in which organizers see vignettes does not drive our results. We find that the median predicted vote share is significantly lower in the unequal environment regardless of order. Those who saw the equal environment first predict 5pp lower support (p-value = 0.036) in the unequal environment, while those who saw the unequal environment first predict a 9pp decline (p-value=0.001). Results about worker demands, worker exit, and organizing strategies are directionally similar to the main results (Figures A.4 and A.5). The coefficients in the sample of respondents who saw the equal environment first are never statistically different from those in the sample of respondents who saw the unequal environment first, with the exception of the effect of the unequal environment on publishing pay

information after the campaign (difference p-value = 0.061). However, we find similar negative effects of the unequal environment on organizers' decision to publish pay information during the campaign: the p-value of the difference in the combined coefficient on publishing pay information *either* after the campaign or never, as opposed to during the campaign, is 0.186. Additionally, the magnitude of the shift in campaign priorities away from raising pay is larger among those who saw the unequal environment first (-14.6pp) than those who saw the equal environment first (-6.5pp), but not statistically different between the two groups (difference p-value = 0.302). Finally, shares choosing to allocate resources to the equal environment are 67% regardless of which vignette was seen first.

A.3 Recruitment Materials

We sent the following message for survey recruitment starting on July 2, 2024:

Dear [first name],

We are surveying labor organizers. As a token of appreciation, we offer $30 to survey takers in the form of a gift card. The goal of the survey is to better understand the barriers unions face when organizing a workplace (link below). We would be super appreciative if you could take 10 minutes to complete this - we don't want to lose your voice!

Here is the link to the survey: [personalized link]

We will share with respondents our aggregate insights. Participation in the survey will be anonymous and answers will be aggregated.

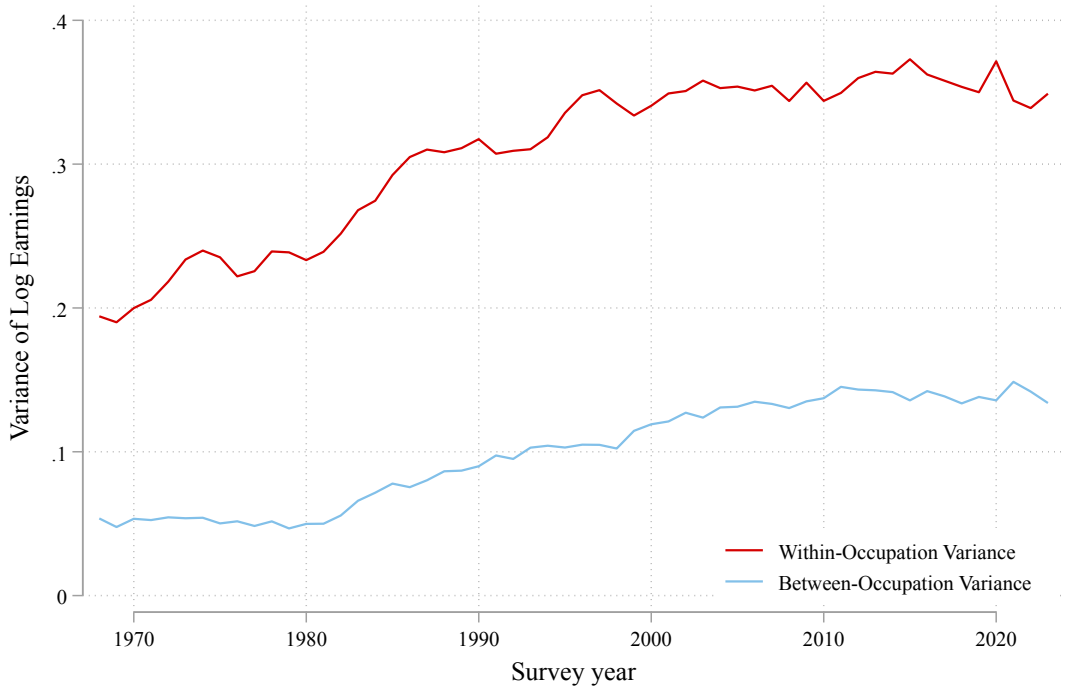
Important note on the project: We do not ask any questions on your strategies related to specific campaigns and we never ask organizers which campaigns they worked on. We take very seriously how important it is to keep organizing tactics at a given workplace private. The research is also not funded by any external grant agency: we are using our personal research fund to compensate organizers for their time.

Table A.1: Organizer Summary Statistics

	(1)
National Unions (%)	
AFL-CIO	23.6
	(3.2)
IATSE	9.3
	(2.2)
SEIU	9.9
	(2.2)
Industry (2-digit NAICS) (%)	
Educational Services	14.8
	(2.6)
Health Care and Social Assistance	14.3
	(2.6)
Transportation and Warehousing	12.1
	(2.4)
State (%)	
CA	11.5
	(2.4)
IL	7.7
	(2.0)
NY	8.2
	(2.0)
Individual Characteristics	
Lead Organizer (%)	66.5
	(3.5)
Average Years Experience	6.66
	(0.26)
Most Recent Organizing Experience	
New Union (vs. Existing) (%)	58.2
	(3.7)
Average Year	2022
	(0.34)
N Organizers	182

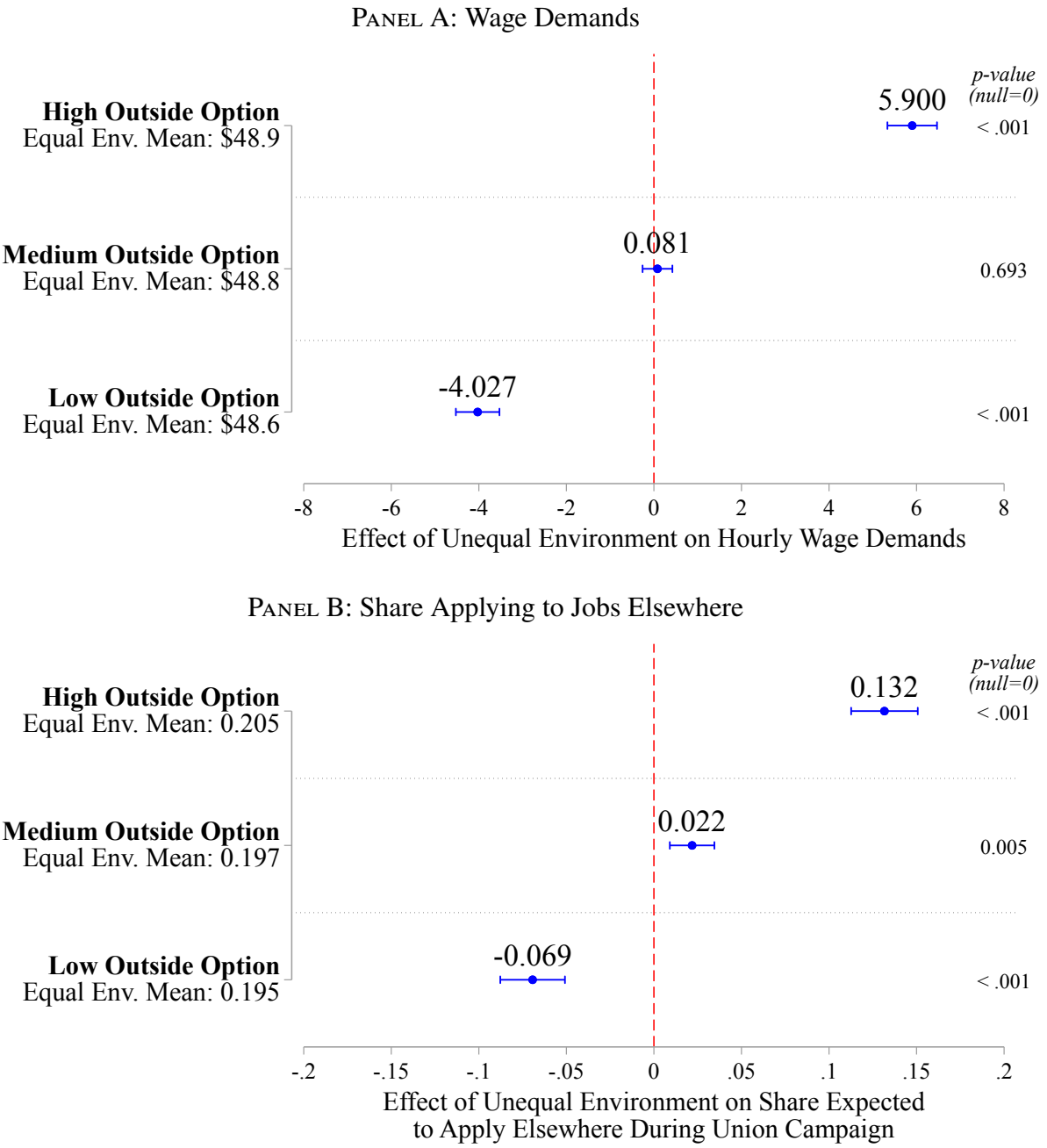
Notes: This table provides summary statistics about our sample of organizers, from the organizer survey described in Section 3. For three categories (union, industry, state), we report the share of organizers in each of the top 3 most common groups. We also report two individual characteristics of organizers: whether they have lead organizing experience and their average years of experience (responses are topcoded at 10 years). Finally, we report two characteristics regarding each organizers' most recent organizing experience: whether they were organizing a new union or an existing one, and the average year of the most recent organizing experience.

Figure A.1: Decomposition of the Variance of Log Annual Earnings within and between Occupations



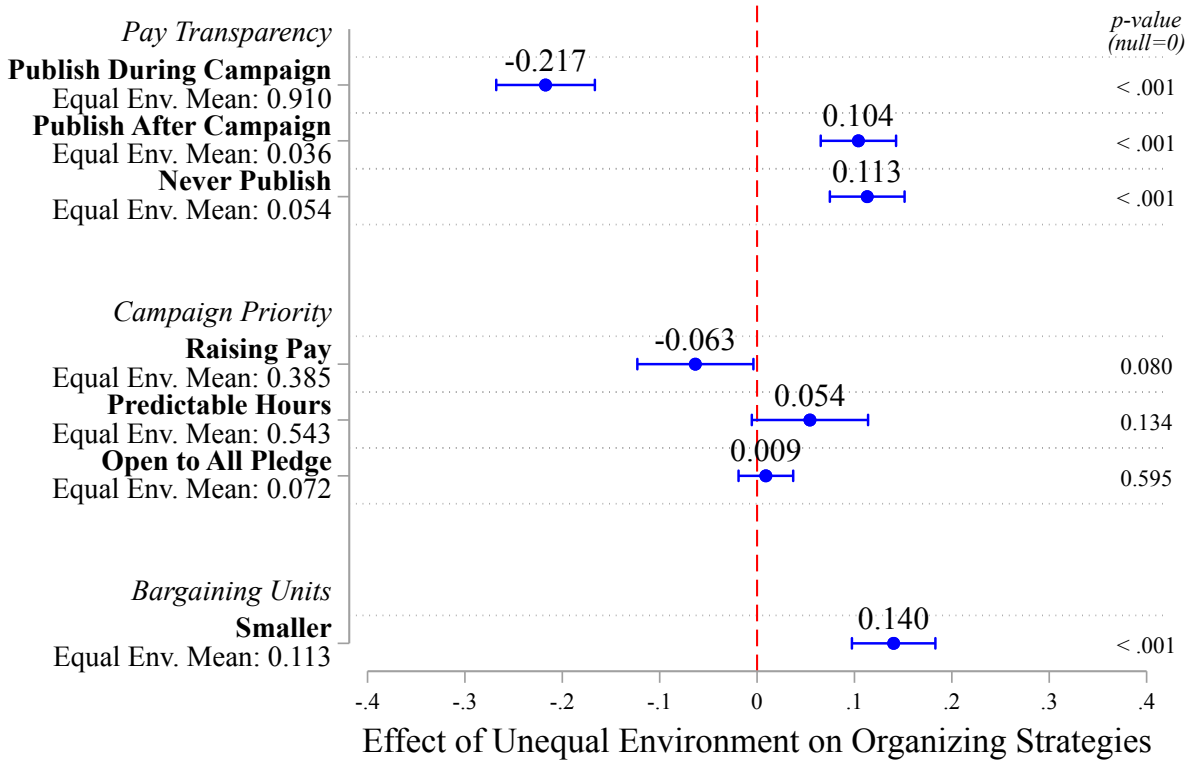
Notes: This figure presents the decomposition of the variance of log annual earnings into within-occupation and between-occupation components, at the 2-digit Standard Occupational Classification (SOC) level. The source is authors' calculations based on microdata from the March Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS). The sample includes full-year non-self-employed civilian male workers with earnings over half the full-time, full-year minimum wage. This earnings threshold is used instead of a full-time filter due to inconsistencies in the reporting of hours over time. Similarly, due to inconsistencies in the handling of top earnings, we winsorize earnings above the 99th percentile.

Figure A.2: Unrestricted Sample of Organizers: Worker Actions by Outside Option



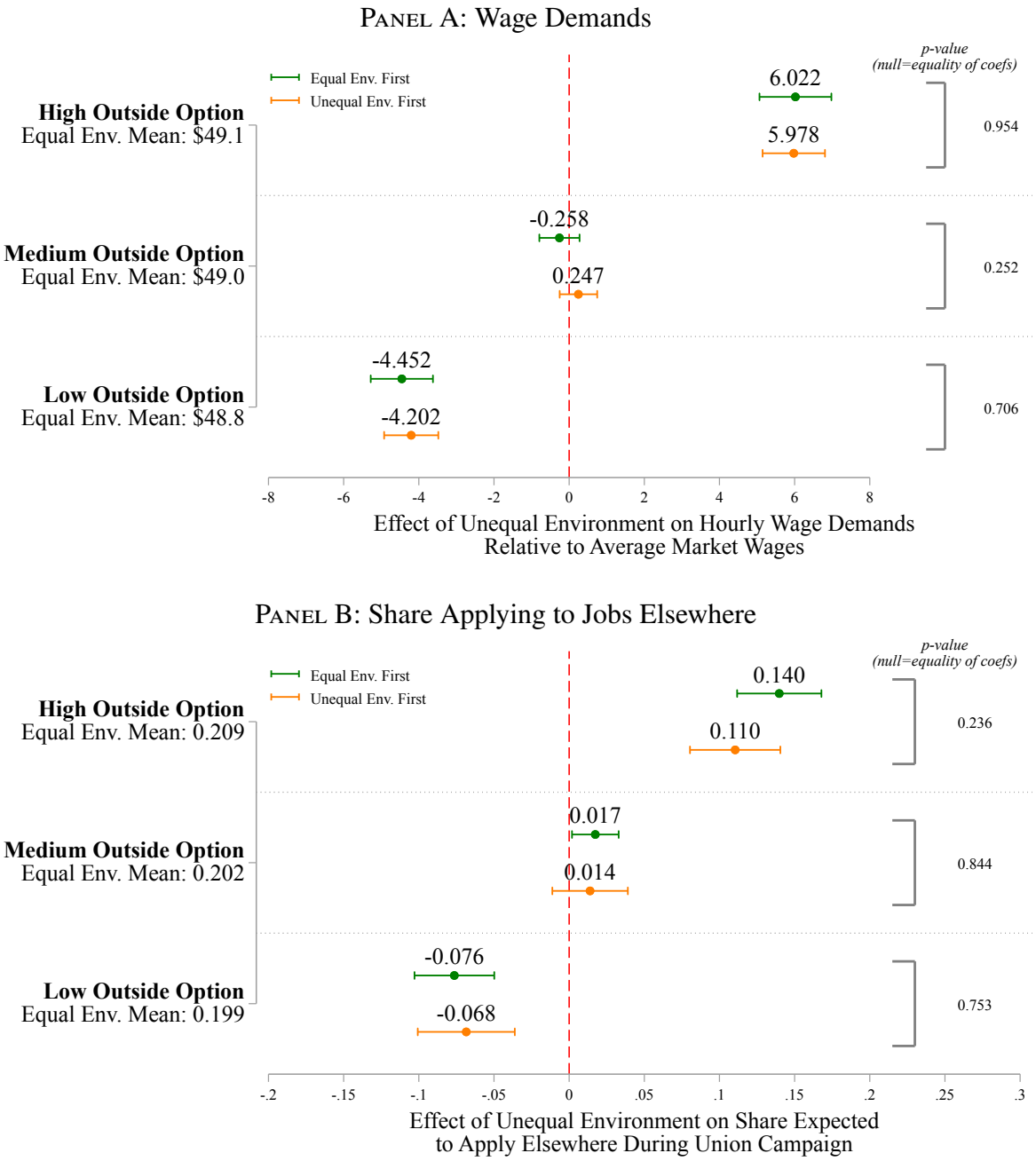
Notes: This figure replicates Figure II using the unrestricted sample of 221 organizers. It shows how predicted worker actions vary across workers with different outside options when market wage inequality increases, from the organizer survey described in Section 3. In Panel A, *Equal Env. Mean* report the average predicted wage demands by group in the equal environment. In Panel B, *Equal Env. Mean* report the average share of workers, by group, that organizers expect to apply for jobs elsewhere during the union campaign in the equal environment. Estimates show the effect of moving from the equal environment to the unequal environment on each outcome by group. Point estimates are shown with 90% confidence intervals, using standard errors clustered at the organizer level. We test the null hypothesis that each coefficient equals zero and report p-values to the right of the plots.

Figure A.3: Unrestricted Sample of Organizers: Organizing Strategies



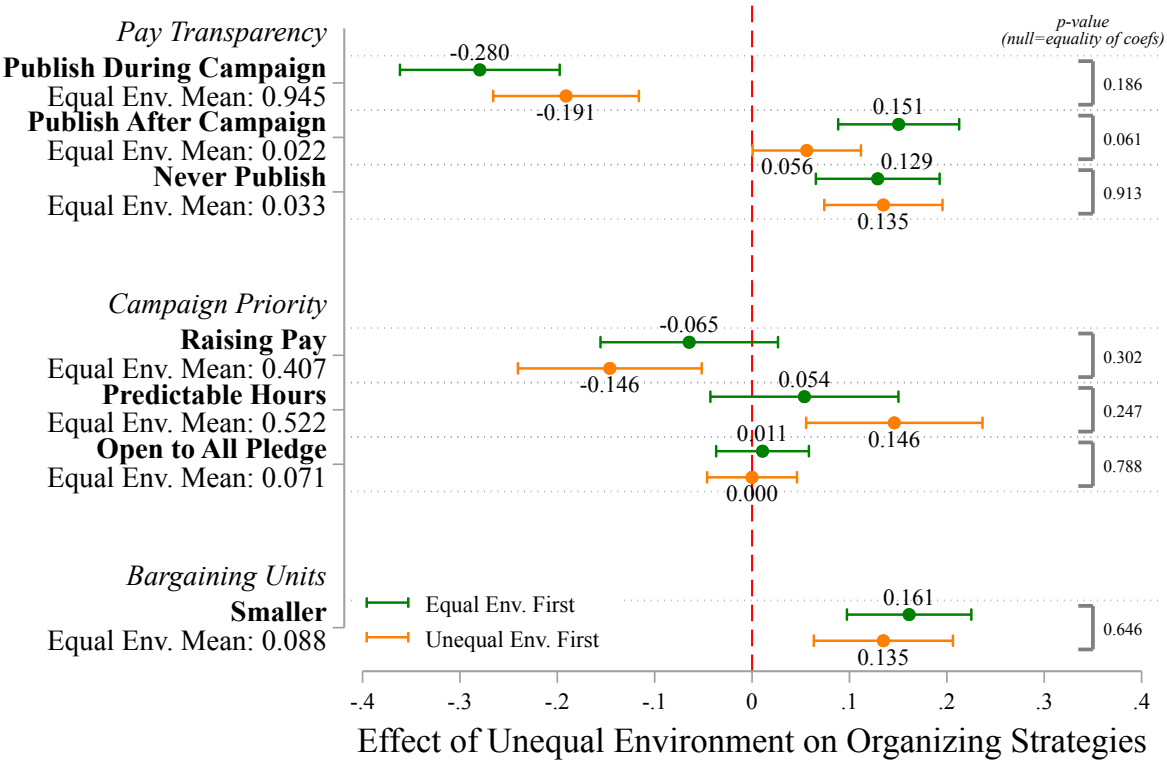
Notes: This figure replicates Figure III using the unrestricted sample of 221 organizers. It shows how organizers adapt their campaign strategies when market wage inequality increases, from the organizer survey described in Section 3. Under each outcome specified on the y-axis, *Equal Env. Mean* reports the average outcome in the equal environment, while plotted estimates show the effect of moving from the equal environment to the unequal environment. Specifically, coefficients under header *Pay Transparency* report whether organizers would publish market wage information from Figure I; coefficients under header *Campaign Priority* report which of the three issues organizers would prioritize during the campaign; the coefficient under header *Bargaining Units* reports whether organizers would pursue separate, smaller bargaining units for different worker types. Point estimates are shown with 90% confidence intervals, using standard errors clustered at the organizer level. We test the null hypothesis that each coefficient equals zero and report p-values to the right of the plot.

Figure A.4: Results by Vignette Order: Worker Actions by Outside Option



Notes: This figure replicates Figure II, split by which vignette organizers see first. It shows how predicted worker actions vary across workers with different outside options when market wage inequality increases, from the organizer survey described in Section 3. In Panel A, *Equal Env. Mean* report the average predicted wage demands by group in the equal environment. In Panel B, *Equal Env. Mean* report the average share of workers, by group, that organizers expect to apply for jobs elsewhere during the union campaign in the equal environment. Estimates show the effect of moving from the equal environment to the unequal environment on each outcome by group, split by vignette order. Point estimates are shown with 90% confidence intervals, using standard errors clustered at the organizer level. We test the null hypothesis that coefficients are equal between the two samples and report p-values to the right of the plots. Sample size is 182 organizers.

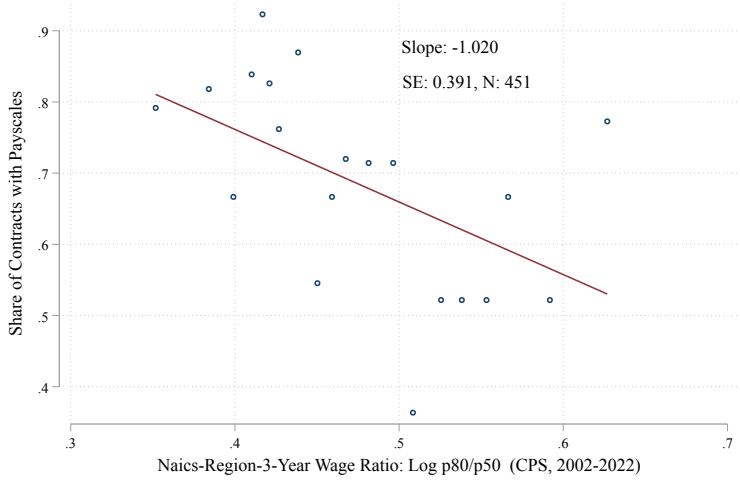
Figure A.5: Results by Vignette Order: Organizing Strategies



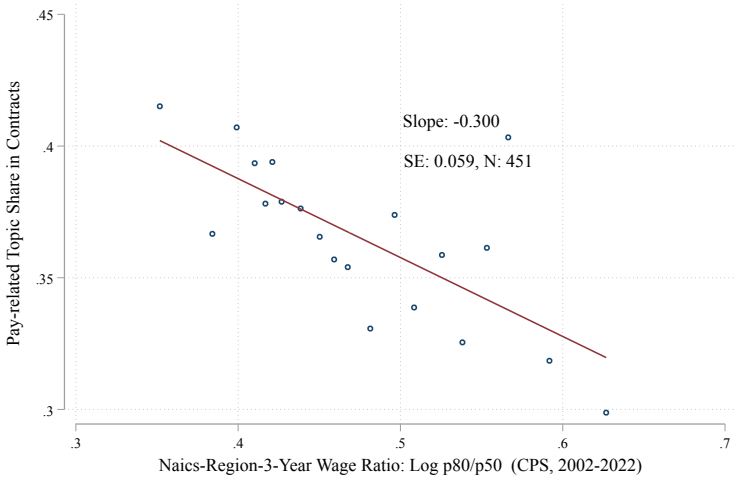
Notes: This figure replicates Figure III, split by which vignette organizers see first. It shows how organizers adapt their campaign strategies when market wage inequality increases, from the organizer survey described in Section 3. Under each outcome specified on the y-axis, *Equal Env. Mean* reports the average outcome in the equal environment, while plotted estimates show the effect of moving from the equal environment to the unequal environment, split by vignette order. Specifically, coefficients under header *Pay Transparency* report whether organizers would publish market wage information from Figure I; coefficients under header *Campaign Priority* report which of the three issues organizers would prioritize during the campaign; the coefficient under header *Bargaining Units* reports whether organizers would pursue separate, smaller bargaining units for different worker types. Point estimates are shown with 90% confidence intervals, using standard errors clustered at the organizer level. We test the null hypothesis that coefficients are equal between the two samples and report p-values to the right of the plots. Sample size is 182 organizers.

Figure A.6: Cross-sectional Relationships between Industry-Region Inequality (among Non-union Workers) and Union Organizing Outcomes

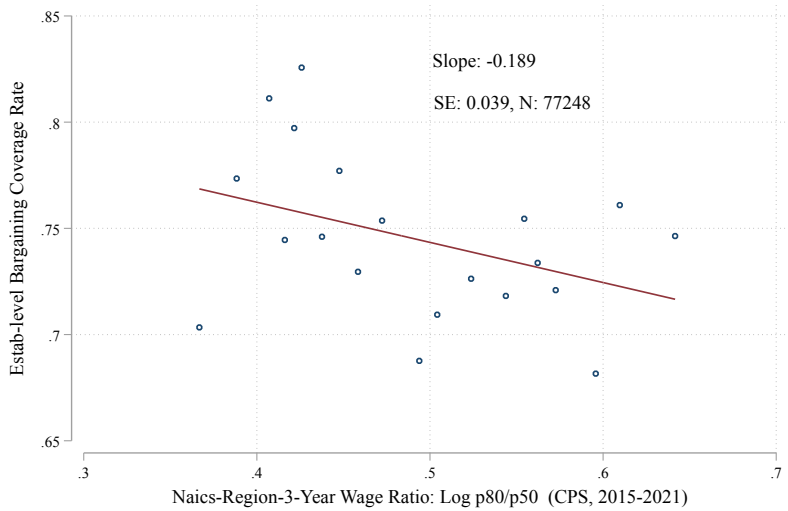
PANEL A: Share of Contracts with Pay Scales



PANEL B: Pay-related Topic Share in Contracts



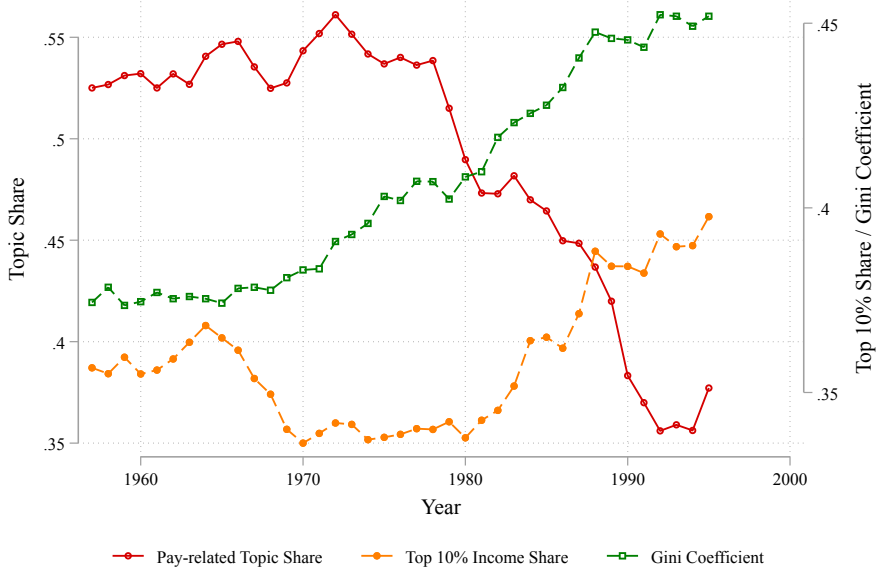
PANEL C: Bargaining Unit Size (as Share of Establishment Employment)



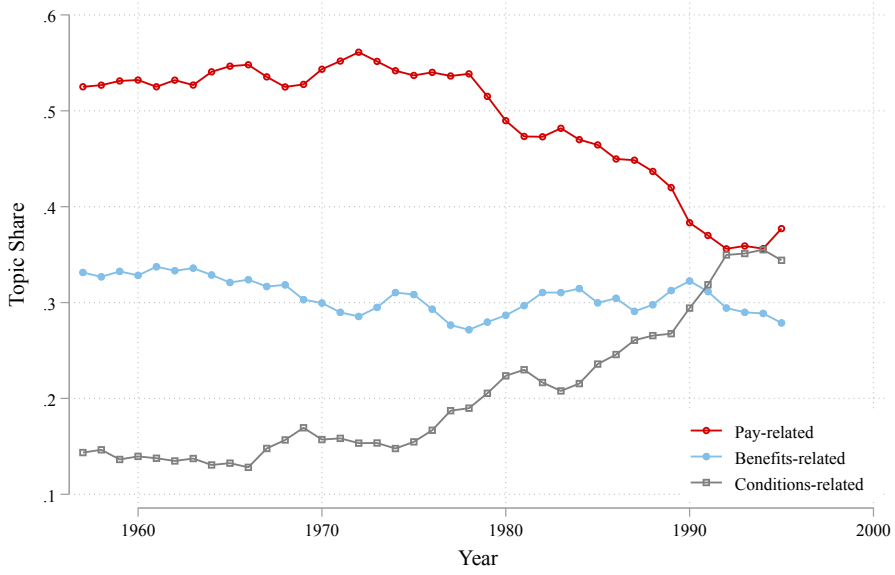
Notes:: Each panel plots a binscatter of a union outcome against industry-state-year wage ratios, similar to Figure IV but using nonunion wages from the CPS and log p80-p50 ratios due to heavy topcoding. Panel A shows the pay scale status of 451 contracts between 2002-2022. Panel B shows the "pay-related" topic share in the same 451 contracts. Panel C shows the size of 79822 bargaining units as a share of establishment-level employment. In Panel C, observations in cells with topcoding rates over 20% are dropped from the analysis. The relationships are overall steeper (due to less variation in the log p80-p50 ratio) and noisier (due to smaller sample sizes). Standard errors are twoway clustered at the union and employer levels.

Figure A.7: Time-series Relationships between Coverage Focus of AFL-CIO News and Aggregate Inequality

PANEL A: Pay-related Topic Share vs. Aggregate Inequality



PANEL B: Topic Shares in AFL-CIO News Segments by Year



Notes: This figure explores how the focus of AFL-CIO news coverage evolved in relation to rising income inequality over the second half of the 20th century. Mirroring Figure 1 of Farber et al. (2021), Panel A plots the "pay-related" topic share in AFL-CIO News segments on union activities over time, juxtaposed against the top 10% income share (from Piketty et al. (2018)) and the Gini coefficient (using Social Security earnings from Kopczuk et al. (2010)). Panel B plots the evolution of topic shares for all three main topics over time. The topic shares are obtained by running the CorEx model, discussed in detail in Section 3.6.

B Additional Details on Study II: Experimental Evidence on the Impact of Inequality in Union Support

B.1 Robustness: Interest in a Pay Report

We examine several alternate measures of interest in a pay report from the baseline survey, building on our baseline measures from Figure V. Our first check considers different definitions of "interest." In Appendix Figure B.3, we more restrictively re-define "asking for a pay report" as those who answer "Yes, I would value it significantly" about the pay report, excluding those who answer "Yes, I would be interested to see it." By this definition, 30% of respondents ask for the pay report.

Second, we check robustness to an alternate type of pay report. In the baseline survey, respondents answer questions about both a gender-split pay report and a combined pay report, in a random order. All main results consider the combined pay report, and here we consider two variations. First, we document interest in the combined pay report only among WGA members who saw the combined pay report before the gender-split pay report (Appendix Figure B.4). Second, we show our measures of interest for the gender-split report (Appendix Figure B.5).

Finally, we show interest in a pay report among the full sample of survey respondents. In the body, we focus on responses from WGA members given the high-stakes nature of the institutional context. However, we also recruited non-WGA writers as well as both members of the Directors Guild of America (DGA) — which represents 19,000 directors and members of the directorial team working in media such as film, television, news, and commercials (Sakoui, 2023) — and non-DGA directors. The DGA contract was up for renegotiation around the same time as the WGA's, and they reached a tentative agreement on June 3 that members ratified on June 23 (DGA, 2023). Our full contact list contained 19,916 writers and/or directors (our "contacts"). We received 1,048 complete responses in total, or 5.3% of all contacts, with 9.0% completing some fraction of the survey. The results are quantitatively very similar to the WGA-only sample, with slightly more willingness to petition, as shown in Appendix Figure B.6.

B.2 Recruitment Materials

We sent the following email for baseline survey recruitment starting on June 15, 2023:

Dear [first name],

We are a team of professors from Harvard, MIT, and UBC, with expertise on negotiation. We are considering producing a report pertaining to writers' & directors' career negotiations at every level. Particularly during this historic renegotiation, we want to understand how providing currently inaccessible information may affect you for better or worse.

We will use answers to this 10-minute survey to decide whether to pursue this project and whether to send you the report. Your responses will remain confidential, unless you indicate otherwise when prompted during the survey.

If you would like to participate, please continue (accessible on mobile) here.

You can alternatively participate by copy-pasting the URL: [link]

We then sent the following recruitment email to writers on August 11, 2023 for the follow-up survey:

Dear [first name],

We are a team of professors from Harvard, MIT, and UBC, with expertise on negotiation. Thank you to those who completed our initial survey on pay in the screenwriting and TV writing industry.

As promised, we are following up with you to share our results and ask one question. Your participation is fully confidential.

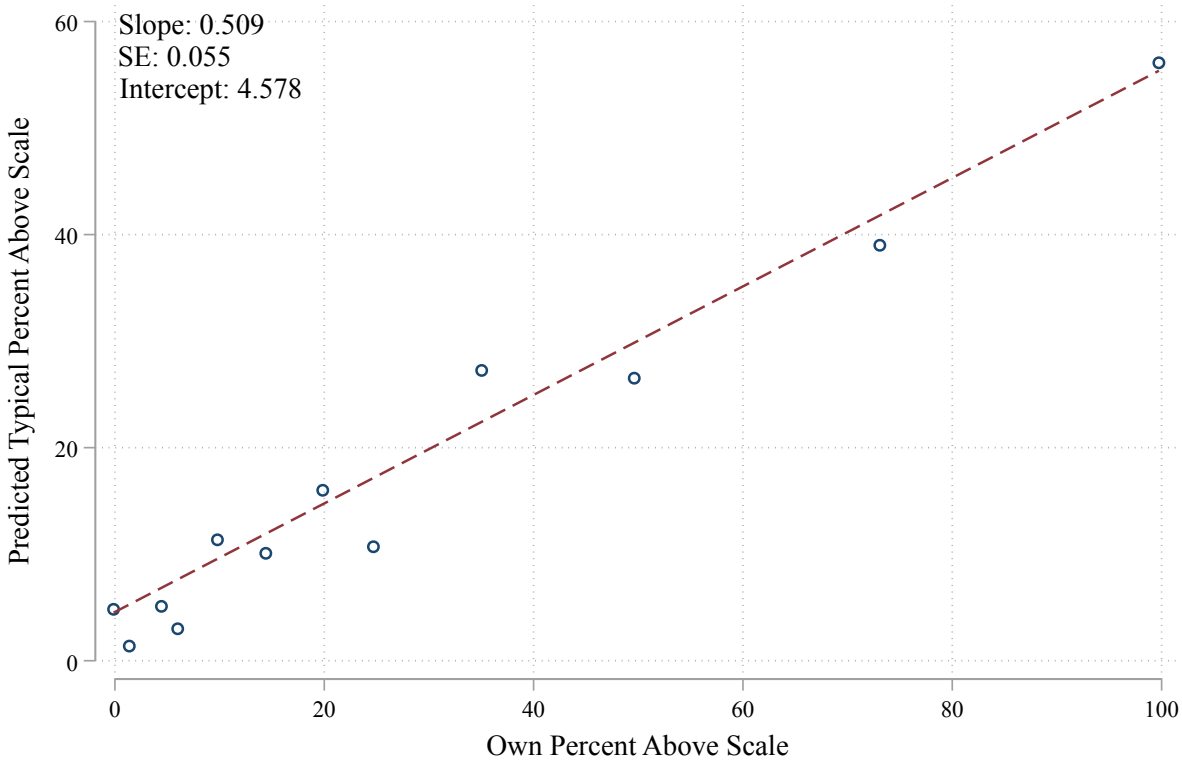
If you'd like to see our results, please continue (accessible on mobile) here. You can also view by copy-pasting the URL to the Harvard Qualtrics platform: [link]

Table B.1: Contact and Respondent Characteristics

	Baseline Survey		Follow-up Survey	
	(1) Contacts	(2) Respondents	(3) Contacts	(4) Respondents
% Male	64.3	64.1	63.6	57.5
	(0.7)	(2.6)	(0.8)	(3.1)
Earliest Credit Year	2005	2007	2005	2007
	(0.2)	(0.6)	(0.2)	(0.7)
Total Credits	38.8	39.5	40.1	38.9
	(1.3)	(7.0)	(1.4)	(6.9)
Credit Type				
% Writing	79.8	83.2	80.4	80.0
	(0.5)	(1.5)	(0.5)	(1.9)
% Directing	12.0	9.0	11.5	12.5
	(0.4)	(1.2)	(0.4)	(1.6)
% Producing	8.2	7.8	8.1	7.5
	(0.3)	(1.0)	(0.3)	(1.1)
Credit Medium				
% TV	80.6	83.5	82.7	82.5
	(0.5)	(1.6)	(0.5)	(1.8)
% Movie	11.5	7.6	10.0	7.5
	(0.4)	(1.0)	(0.3)	(1.1)
Credit Genre				
% Drama	50.8	53.3	51.8	52.4
	(0.6)	(2.2)	(0.6)	(2.5)
% Comedy	45.5	44.5	46.3	46.8
	(0.6)	(2.3)	(0.7)	(2.6)
Total Individuals	5,244	400	4,785	310
Individuals with Credit Data	4,373	334	3,980	261

Notes: This table summarizes characteristics of Writers Guild of America (WGA) members contacted for the baseline and follow-up surveys, as well as those who responded, from the Hollywood experiment described in Section 4. Columns (1)–(2) describe the baseline survey, while Columns (3)–(4) describe the follow-up. Data come from IMDb (2023). Statistics are restricted to individuals successfully linked to the IMDb data. *Total Individuals* reports the total population in each group. *Individuals with Credit Data* indicates how many of them are matched to IMDb data, have complete IMDb information, and have first names that allow gender classification using Social Security Administration data. To obtain *% Male*, we classify first names from the contact list by gender. *Credit Type* breaks down the types of credits (writing, directing, producing), which are not mutually exclusive on a given project. *Credit Medium* shows percentages of credits in television and film, which together compose 87% of all credits. *Credit Genre* shows percentages of credits in the two most common genres: drama and comedy.

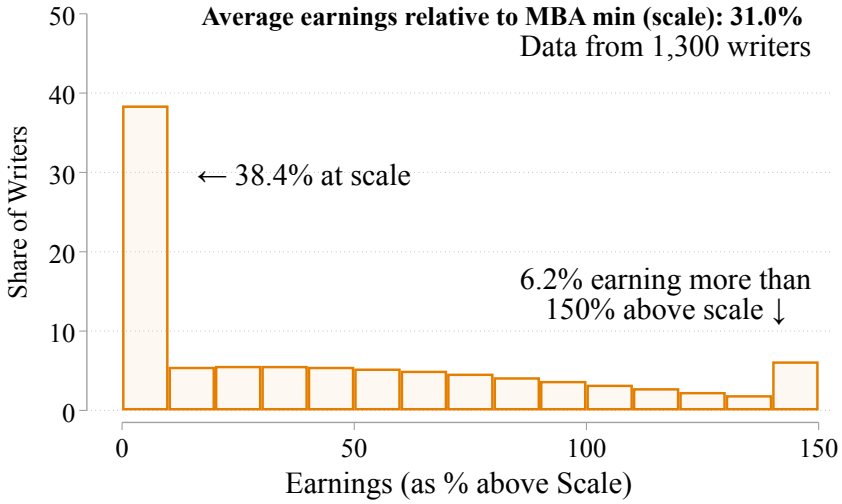
Figure B.1: Own Pay vs. Prediction of Typical Pay



Notes: This figure plots a binscatter of the relationship between a writer's self-reported percent above scale and their prediction of the typical percent above scale for other writers in similar positions, from the Hollywood experiment described in Section 4. Sample size is 400 WGA members.

Figure B.2: Proposed Reports

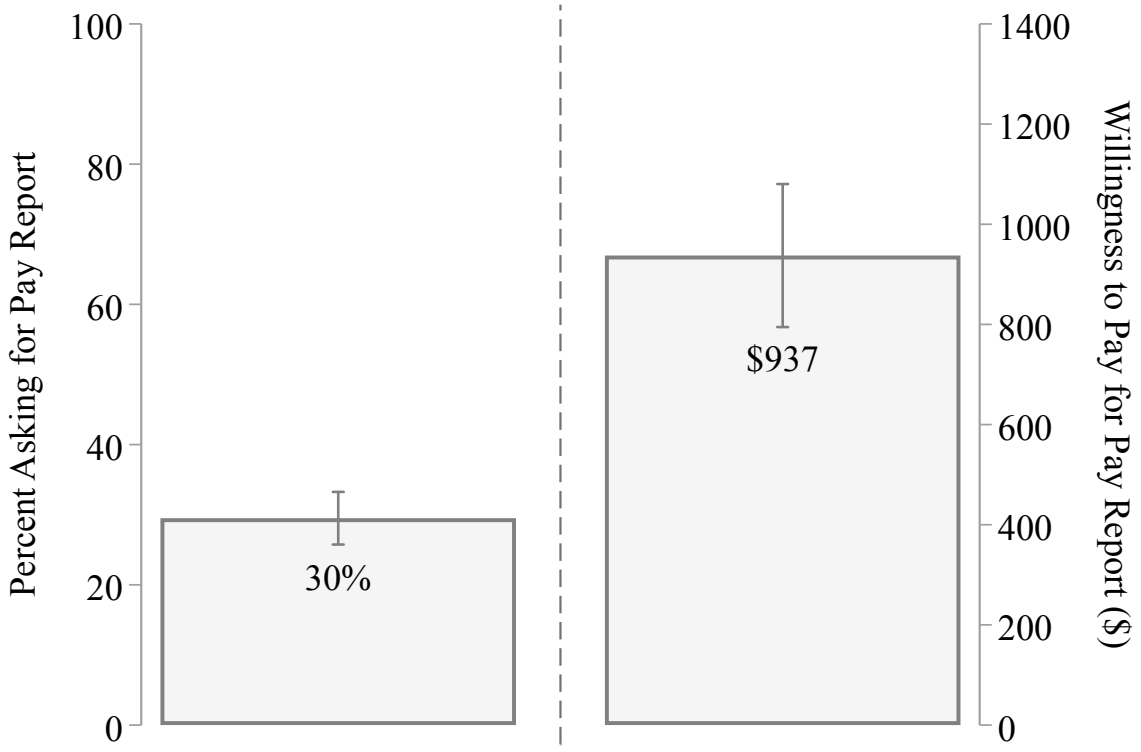
Panel A: (Mock) Overall Report



Panel B: (Mock) Split Pay Report

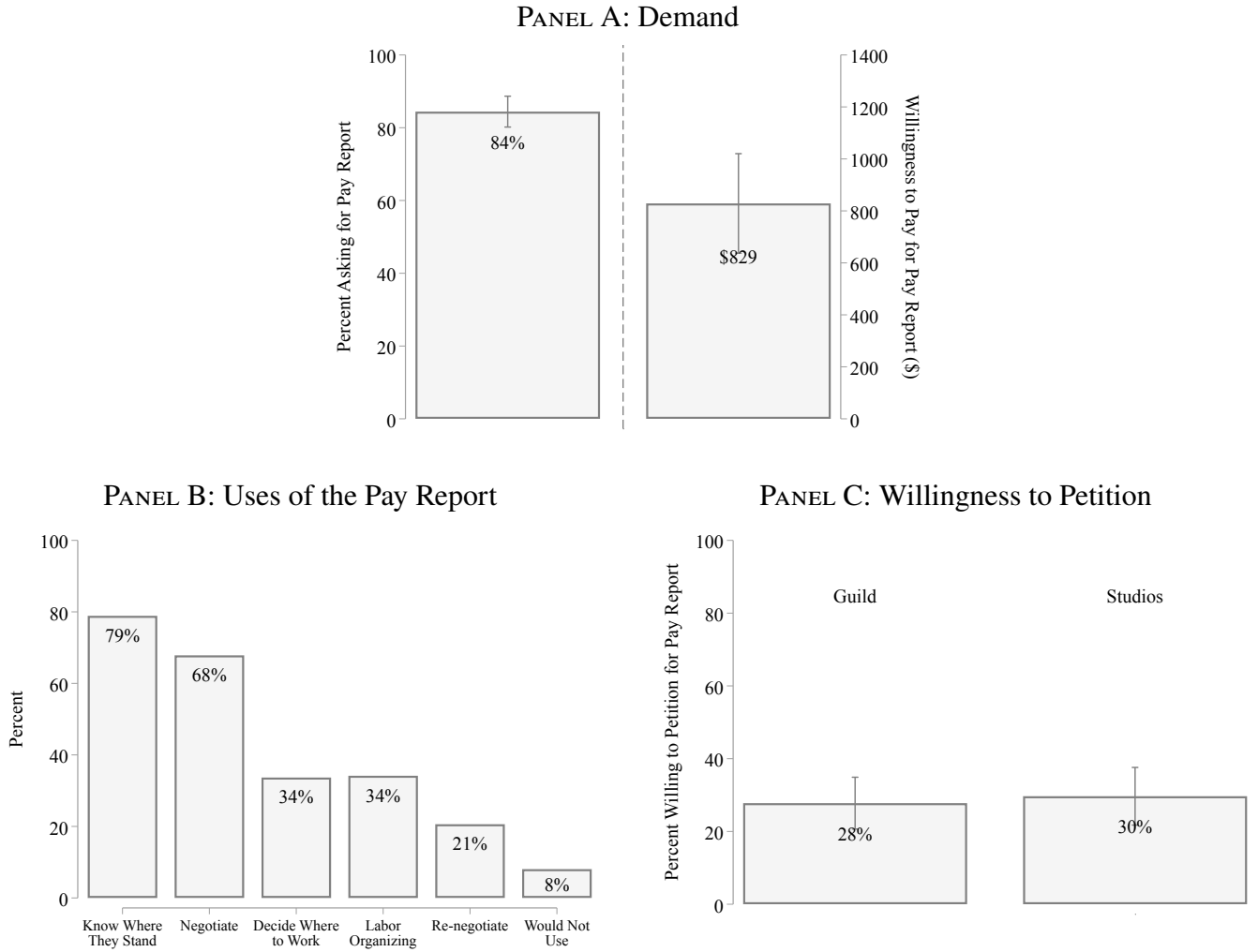
Notes: This figure shows the mock report we included in the baseline survey as an example of what information respondents may receive in the followup, from the Hollywood experiment described in Section 4. This version was shown to film writers; we showed analogous versions to TV writers. The survey included a disclaimer that these reports were made using fake data. For full survey details, see Appendix D.2.

Figure B.3: Baseline Hollywood Survey: Interest in a Pay Report Alternate Measure



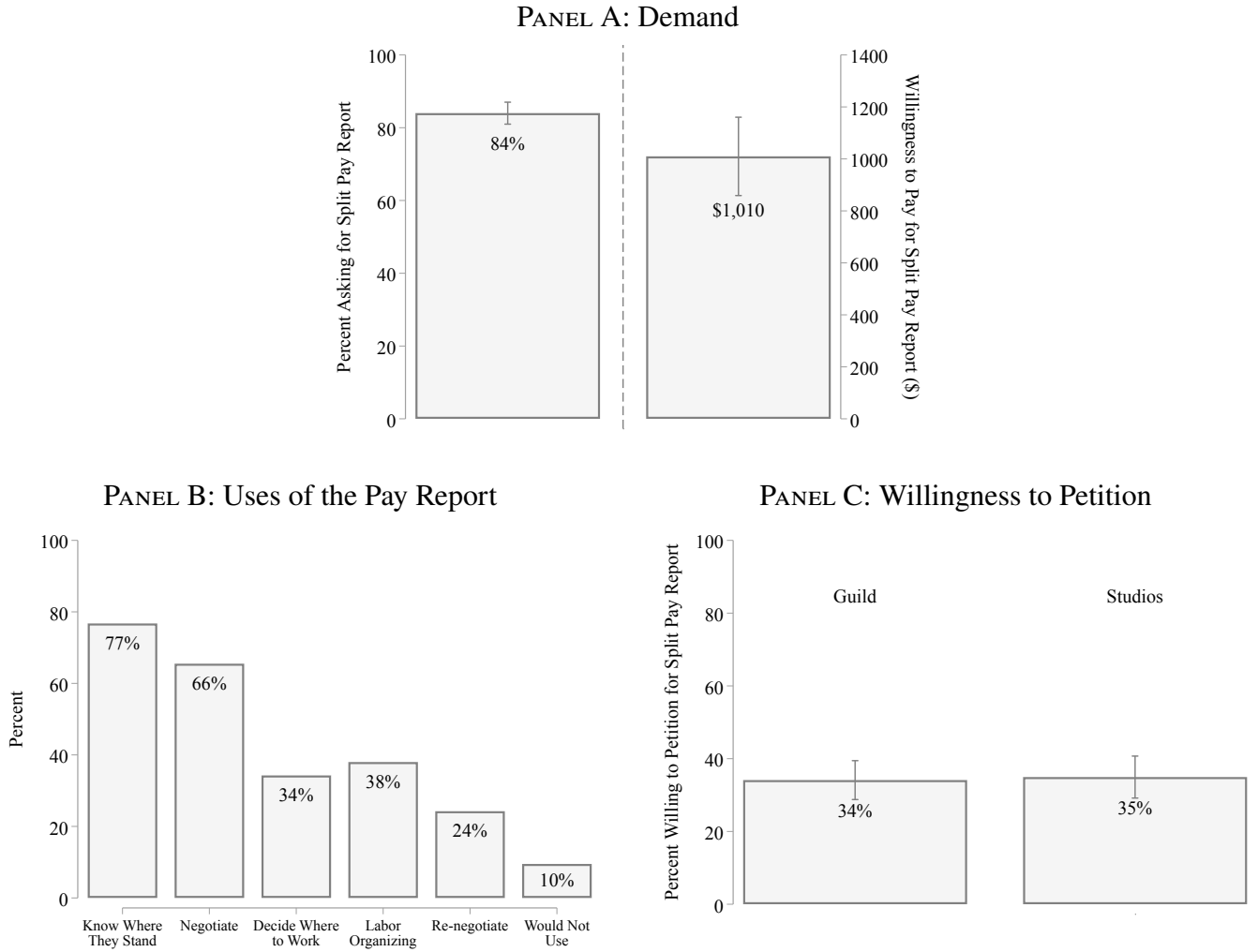
Notes: This figure replicates Panel A of Figure V, redefining private interest as those who answer "Yes, I would value it significantly" to Question 8 in Appendix D. It shows the share of respondents interested in receiving a pay report and their average willingness to pay, from the Hollywood experiment described in Section 4. Estimates are shown with 90% confidence intervals. Sample size is 400 WGA members.

Figure B.4: Baseline Hollywood Survey: Interest in a Pay Report Among Those Who Saw the Overall Pay Report First



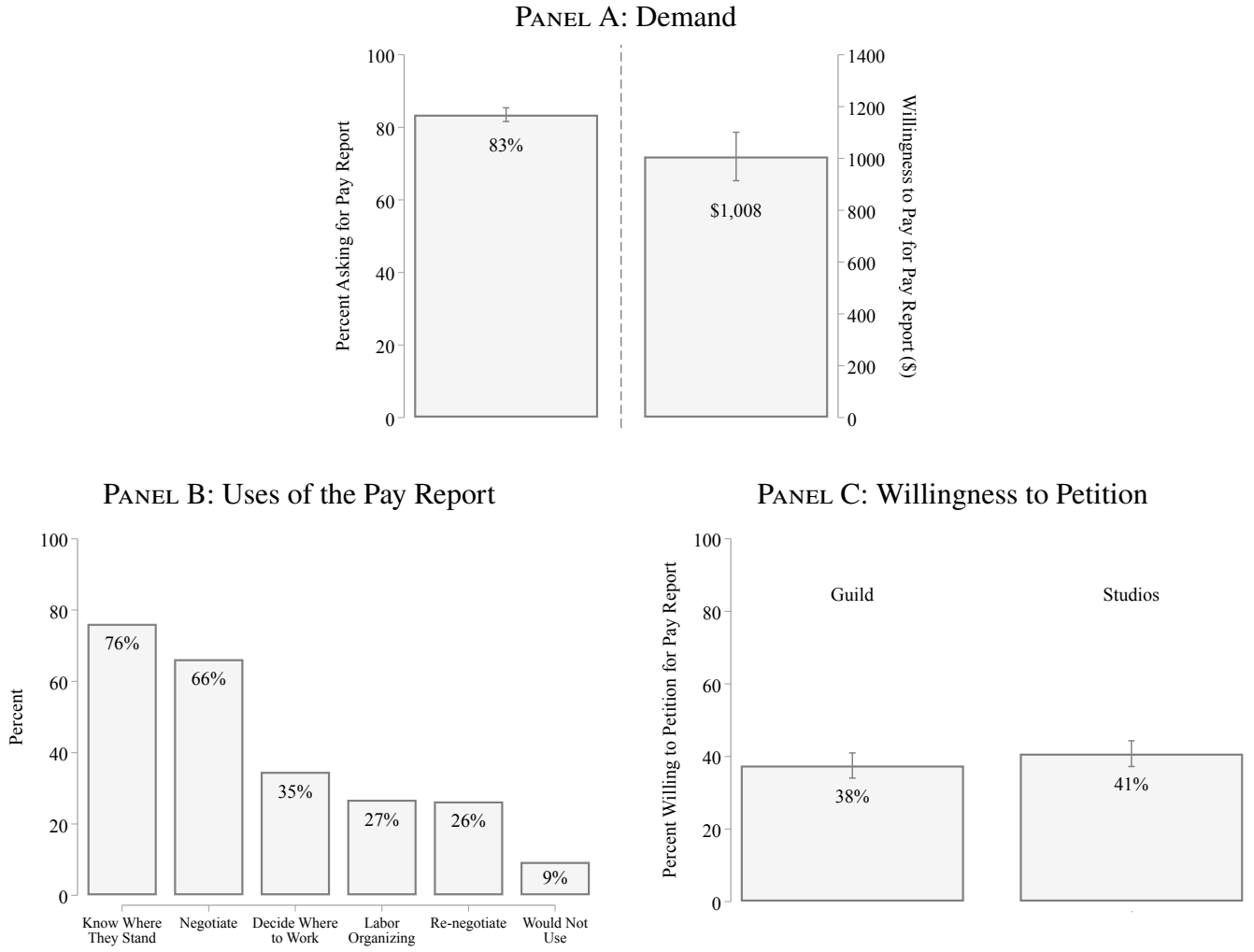
Notes: This figure replicates Figure V, restricting to 199 respondents who see the (mock) overall pay report before the (mock) gender-split report. It summarizes writers' interests and demands for a pay report, from the Hollywood experiment described in Section 4. Panel A shows the share of respondents interested in receiving a pay report and their average willingness to pay. Panel B shows respondents' intended uses for a pay report, allowing multiple selections. Panel C shows the share of respondents willing to publicly petition for pay data from either the WGA or the Studios. Estimates are shown with 90% confidence intervals.

Figure B.5: Baseline Hollywood Survey: Interest in a Gender-Split Pay Report



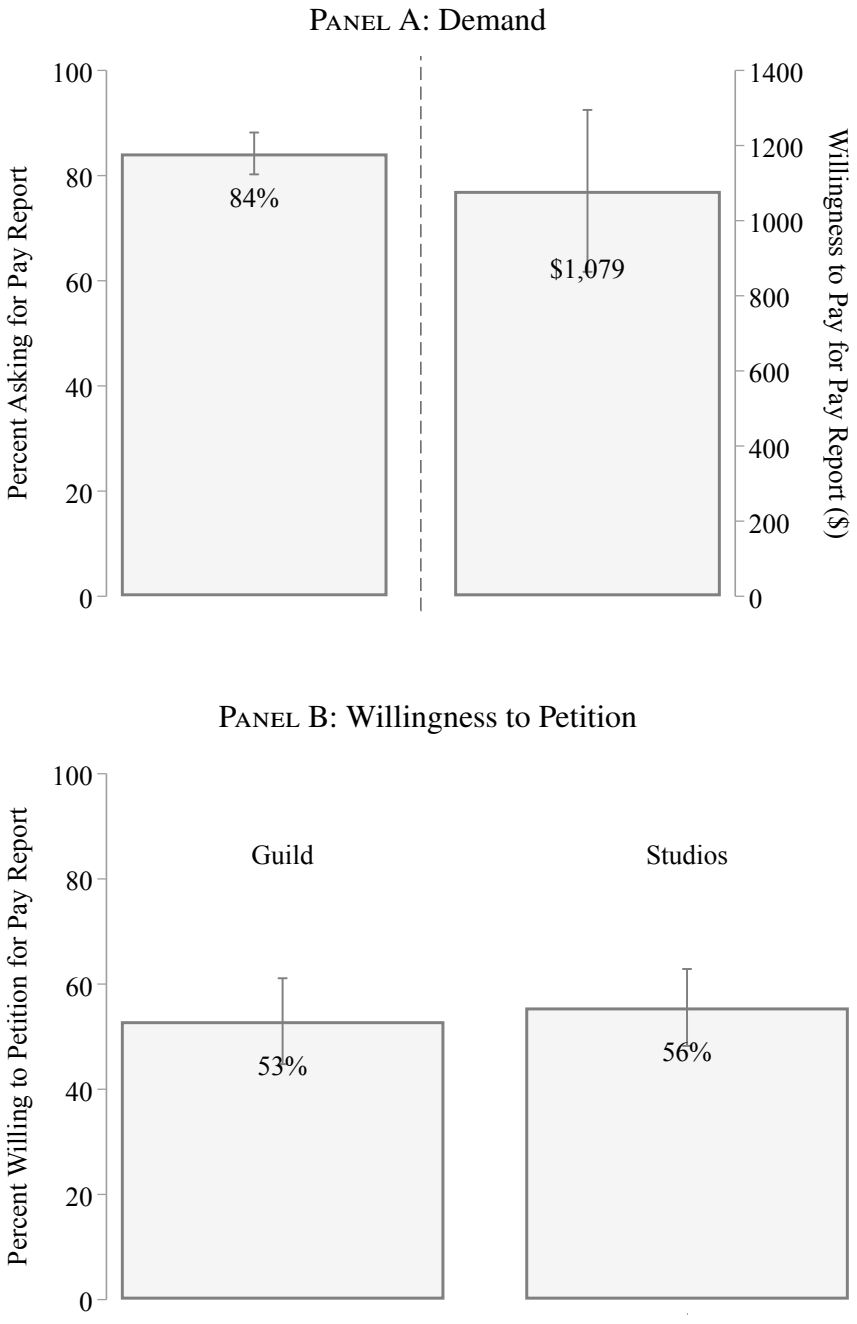
Notes: This figure replicates Figure V using questions regarding the gender-split report. It summarizes writers' interests and demands for a pay report, from the Hollywood experiment described in Section 4. Panel A shows the share of respondents interested in receiving a pay report and their average willingness to pay. Panel B shows respondents' intended uses for a pay report, allowing multiple selections. Panel C shows the share of respondents willing to publicly petition for pay data from either the WGA or the Studios. Estimates are shown with 90% confidence intervals. Sample size is 400 WGA members.

Figure B.6: Baseline Hollywood Survey: Interest in a Pay Report Among All Writers and Directors



Notes: This figure replicates Figure V, expanding the sample to all complete responses, including writers and directors, WGA members and non-WGA members. It summarizes writers' interests and demands for a pay report, from the Hollywood experiment described in Section 4. Panel A shows the share of respondents interested in receiving a pay report and their average willingness to pay. Panel B shows respondents' intended uses for a pay report, allowing multiple selections. Panel C shows the share of respondents willing to publicly petition for pay data from either the WGA or the Studios. Estimates are shown with 90% confidence intervals. Sample size is 1,048 respondents.

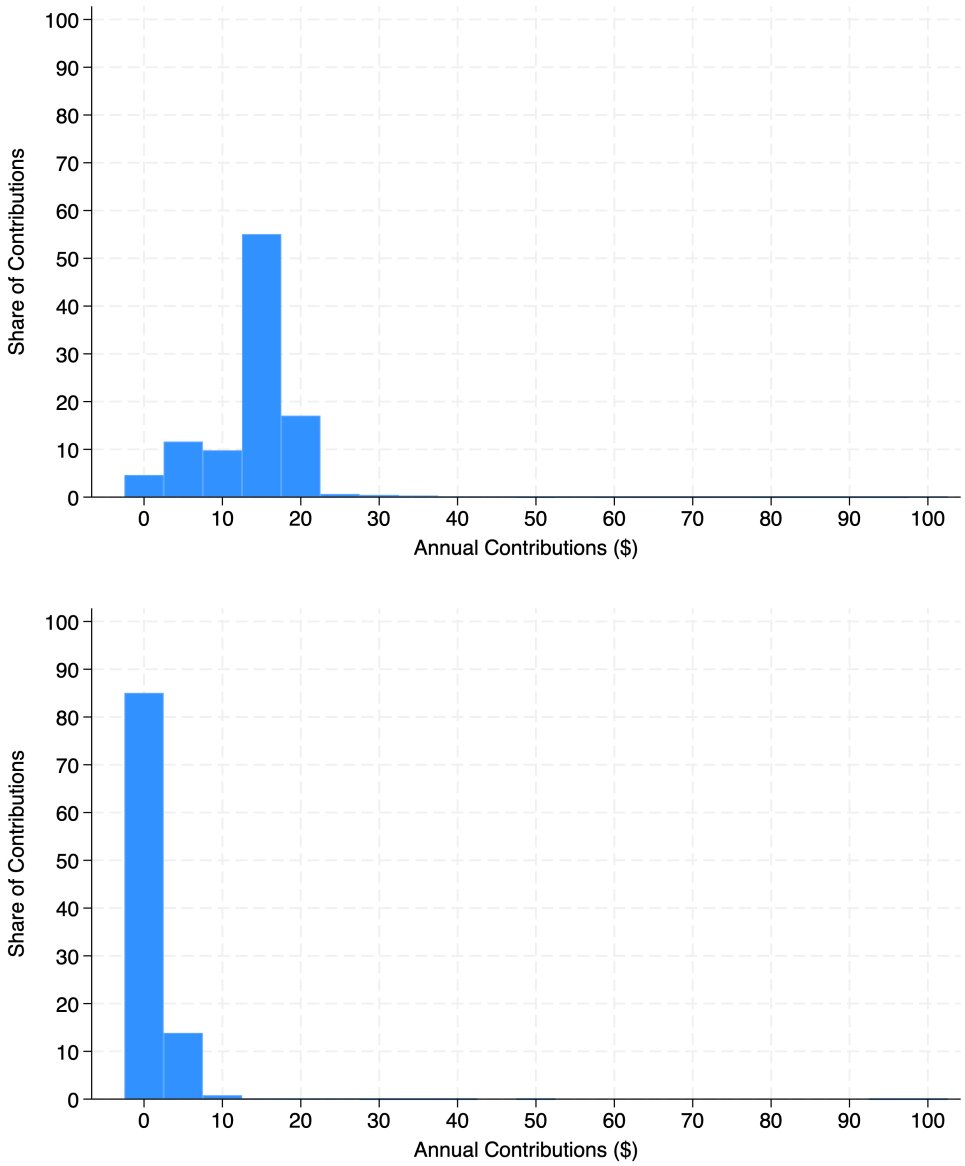
Figure B.7: Interest in a Pay Report Among Non-WGA Writers



Notes: This figure replicates Panels A and C of Figure V among 228 non-WGA writers. It summarizes writers' interests and demands for a pay report, from the Hollywood experiment described in Section 4. Panel A shows the share of respondents interested in receiving a pay report and their average willingness to pay. Panel B shows the share of respondents willing to publicly petition for pay data from either the WGA or the Studios. Estimates are shown with 90% confidence intervals.

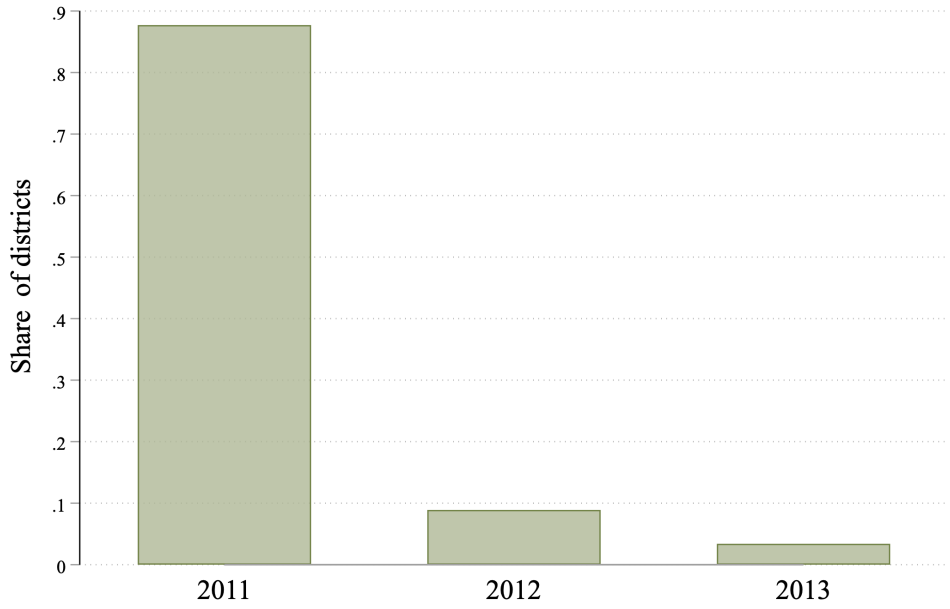
C Additional Details on Study III: Wisconsin's Act 10

Figure C.1: Distribution of Contributions to State and Regional PACs



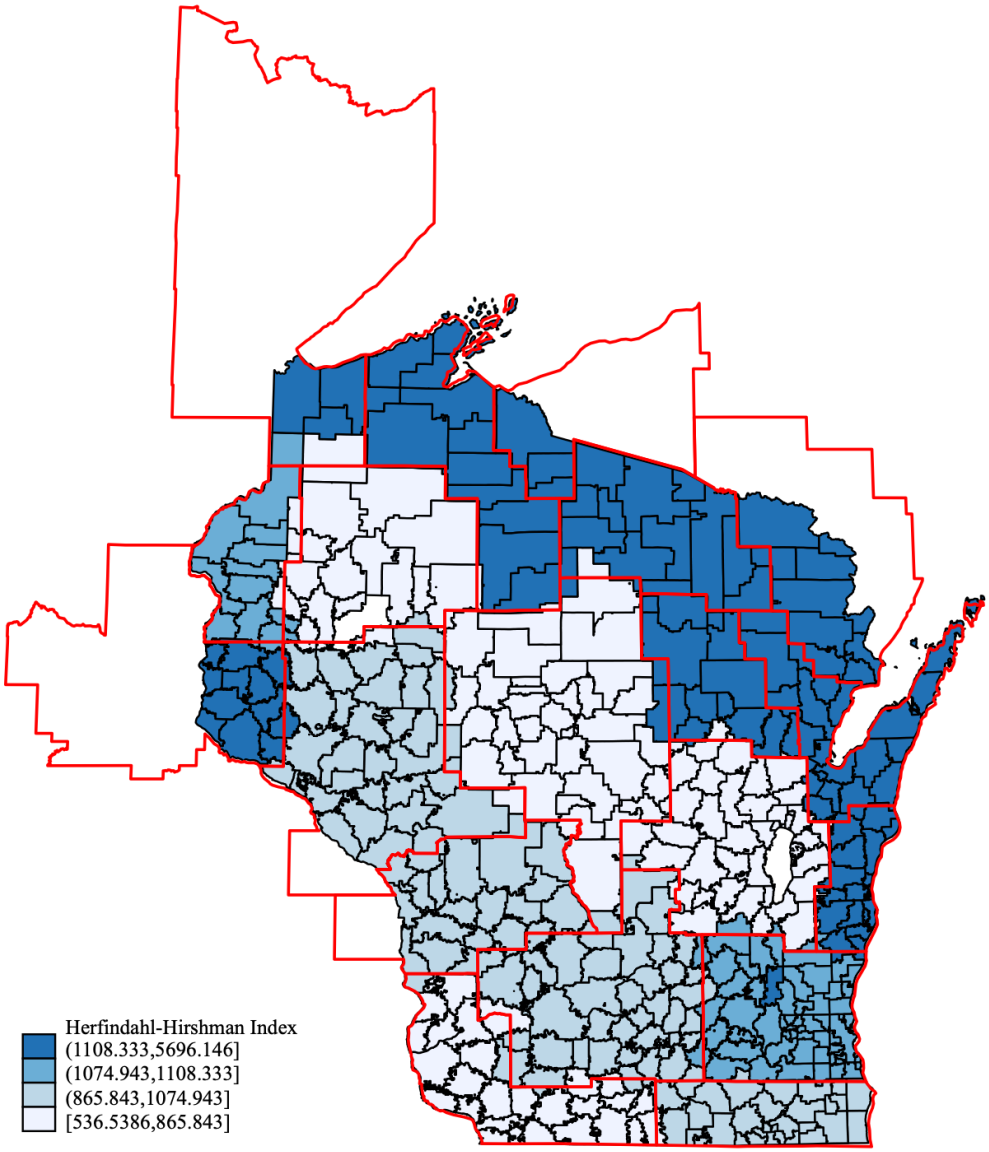
Notes: The figure shows the distribution of annual donations to state political action committees (PACs) (top panel) and regional PACs (bottom panel) in Wisconsin by public-school teachers between 2016 and 2020, from the Wisconsin study described in Section 5.

Figure C.2: Distribution of Wards and Districts by CBA Expiration Dates



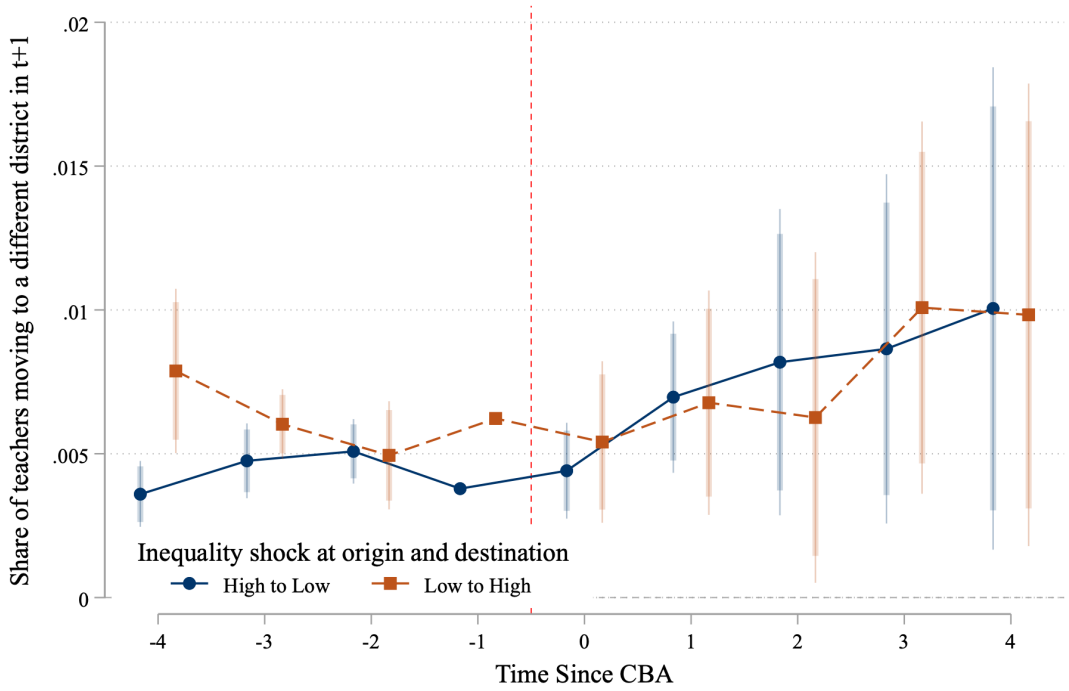
Notes: The figure plots the share of school districts by the year in which their collective bargaining agreements (CBAs) expired, from the Wisconsin study described in Section 5.

Figure C.3: Labor Market Concentration Across Wisconsin School Districts and Commuting Zones



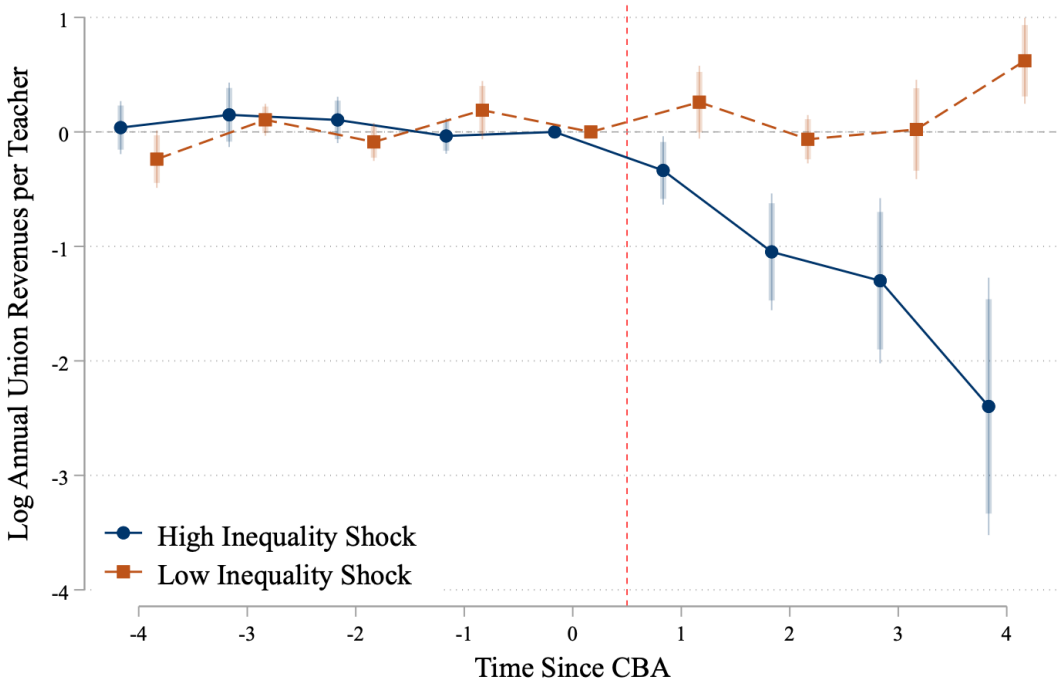
Notes: The map plots the Herfindahl-Hirshman Index (HHI) in teacher employment concentration in 2011, from the Wisconsin study described in Section 5. The HHI is calculated for each commuting zone using the distribution of teachers across school districts within the CZ, with higher values indicating greater concentration. Red lines denote commuting zone boundaries; black lines denote school district boundaries.

Figure C.4: Wage Inequality Shocks and Teacher Sorting Between High-HHI and Low-HHI Districts



Notes: The figure explores whether teacher mobility changes between high and low inequality shock districts in response to wage inequality shocks, from the Wisconsin study described in Section 5. Estimates represent coefficients β_k from a modified version of equation (4) — instead of revenue, we regress *the share of teachers in a district moving to districts of a different inequality shock type* on event-year dummies (relative to expiration of collective bargaining agreements) with district and year fixed effects. Blue series display mobility from districts expected to experience a *high inequality shock* to districts expected to experience a *low inequality shock*, while orange series display mobility in the other direction. We classify high/low inequality shock districts based on whether they have a community zone-level Herfindahl-Hirschman Index below/above the state median. The estimate for the regression constant is added to all coefficients, which are displayed with 90% confidence intervals and using standard errors clustered at the district level.

Figure C.5: Wage Inequality Shocks and Union Revenues - Controlling for Shares of Teachers in Each Position



Notes: This figure replicates IX while additionally controlling for the distribution of teacher positions in each district in 2011. It shows how wage inequality affects union revenues at the school district level, from the Wisconsin study described in Section 5. Estimates represent coefficients β_k from equation (4), which regresses log union revenues per teacher on event-year dummies (relative to expiration of collective bargaining agreements) with district and year fixed effects. We obtain and display separate coefficients for districts expected to experience a *high inequality shock* (blue series) and those expected to experience a *low inequality shock* (orange series). We classify high/low inequality shock districts based on whether they have a community zone-level Herfindahl-Hirschman Index below/above the state median. Estimates are displayed with 90% confidence intervals, using standard errors clustered at the district level.

D Survey Instruments

D.1 Organizer Survey Instrument

Introduction

We are a team of professors studying worker bargaining power. We want to better understand the barriers organizers are facing to unionizing. We are sending this survey to top organizers and former organizers across the U.S. and Canada.

If you decide to participate, we will share with you our aggregated results so you can access insights on strategies used by other unions.

All individual responses will remain anonymous.

This survey takes 10 minutes. As a token of appreciation, we will transfer you $30 (as a gift card).

You can only take this survey once.

Here are more details about the study:

Research details:

- Purpose and procedures: You are being invited to participate in a research survey that seeks to understand the factors that facilitate union organizing. The survey takes about 10 minutes to complete.
- Compensation: You will receive a $30 USD gift card, which will be delivered to you within 10 days of completing the survey.

Confidentiality: Your participation is voluntary. Subjects may decline to answer any or all questions and may decline further participation, at any time, without adverse consequences. Identifiable data linking you to your response (i.e., your email) will be kept in a secure server and will not be made available to anyone other than the researcher. Your email will only be retained for payment purposes and will be deleted following confirmation of payment. De-identified data (meaning that it contains no identifying information about you) may be shared with academic journals as part of their open access policies.

Who to contact with questions or concerns:

Nina Roussille
nroussil@mit.edu

If you feel you have been treated unfairly, or you have questions regarding your rights as a research subject, you may contact the Committee on the Use of Humans as Experimental Subjects at MIT at couhes@mit.edu.

Do you consent to participate?

◯ Yes

◯ No

Eligibility

Q1

Are you, or have you ever been, a union organizer in any capacity?

- ◯ I am currently an organizer
- ◯ I have been an organizer in the past but am not currently one
- ◯ No, I have never been a union organizer

Q2

Condition: Are you, or have you ever been, a union organizer in any capacity? = No, I have never been a union organizer

Are you sure? For the purposes of this study, a union organizer is anyone who has been involved in an effort to organize a workplace or participated in contract renegotiations at a unionized workplace.

- ◯ I am currently an organizer
- ◯ I have been an organizer in the past but am not currently one
- ◯ No, I have never been a union organizer

Vignettes

We are now going to present you with two different hypothetical scenarios. After each scenario, we will ask you a few questions about organizing these workplaces.

Each respondent sees Factory A and Factory B in a randomized order. Each block starts with the Factory A or Factory B introduction, as seen below, and continues with a series of questions that are the same between factories.

Factory A Introduction

Hypothetical scenario: You are trying to get support for the creation of a union at Factory A

Some workers are interested in unionizing, and the employer is known to be hostile to organizers.

To investigate, you've done some research on hourly market pay for workers with similar experience. Workers market rates can vary because local demand for certain skill sets can vary, as well as other reasons. In Factory A, all the workers market rates are approximately $48. But, the firm pays them $40. Each assignment makes up one-third of the factory's workers.

The table below shows pay inside and outside the factory.

Assignments	Hourly Wage	Research on Market Wage
Quality control (1/3rd)	$40	$48
Metal Worker (1/3rd)	$40	$48
Pipefitter (1/3rd)	$40	$48

Factory B Introduction

Hypothetical scenario: You are trying to get support for the creation of a union at Factory B

Some workers are interested in unionizing, and the employer is known to be hostile to organizers.

To investigate, you've done some research on hourly market pay for workers with similar experience. Workers market rates can vary because local demand for certain skill sets can vary, as well as other reasons. In Factory B, the workers market rates are varied but everyone is currently paid the same wage. Each assignment makes up one-third of the factory's workers.

The table below shows pay inside and outside the factory.

Assignments	Hourly Wage	Research on Market Wage
Quality Control (1/3rd)	$40	$30
Metal Worker (1/3rd)	$40	$48
Pipefitter (1/3rd)	$40	$66

Q3

In the absence of more information, workers generally think that everyone earns what they do for similar work. You have the option to share the pay data you collected with workers.

Would you share this pay information with workers?

Order of choices randomly flipped

○ Yes, I would publish the pay information **during** the union campaign

◯ Yes, I would publish the pay information **after** the union campaign

◯ No, I would not publish the pay information

Q4

Now assume all the wage data become known to all workers.

What hourly wage increase (in the first year of the new contract) would each of the following groups demand for themselves in order to ratify the CBA?

	+$0 (no increase)	+$2	+$4	+$6	+$8	+$10	+$12	+$14	+$16	+$18	+$20 or more
Quality Control	○	○	○	○	○	○	○	○	○	○	○
Metal Worker	○	○	○	○	○	○	○	○	○	○	○
Pipefitter	○	○	○	○	○	○	○	○	○	○	○

Q5

How easy would it be for all workers to agree on pay scale demands?

For instance, this would imply that Metal Workers approve of the pay raises demanded by Pipefitters, and vice versa.

◯ Difficult

◯ Somewhat difficult

◯ Somewhat easy

◯ Easy

Q6

What share of each of the following groups at Factory {A/B} do you think will apply for a job elsewhere during the union campaign?

	0	10	20	30	40	50	60	70	80	90	100
Quality Control	▽										
Metal Worker	▽										
Pipefitter	▽										

Q7

What hourly wage increase (in the first year of the new contract) could you reasonably expect the employer to agree on?

	+$0 (no increase)	+$2	+$4	+$6	+$8	+$10	+$12	+$14	+$16	+$18	+$20 or more
Quality Control	○	○	○	○	○	○	○	○	○	○	○
Metal Worker	○	○	○	○	○	○	○	○	○	○	○
Pipefitter	○	○	○	○	○	○	○	○	○	○	○

Q8

Please share your best guess: After all the details are hammered out, what percent of workers at Factory {A/B} would you expect to pro-actively vote yes to ratify a contract?

	0	10	20	30	40	50	60	70	80	90	100
Percent of Workers	▽										

Q9

At this factory, the employer does not provide the workers with predictable hours.

The employer also has thus far refused to sign the Open to All business pledge: a commitment to maintaining a welcoming and safe environment for people — including team members, visitors, customers, vendors and clients — regardless of race, ethnicity, national origin, sex, sexual orientation, gender identity and expression, immigration.

To maximize support for the union, which of the following issues would be better to focus on during the campaign?

Options presented in a randomized order

- ◯ Raising pay
- ◯ Guaranteed predictable hours
- ◯ Signing the Open to All pledge (a commitment to maintaining a welcoming and safe environment)

Q10

Would you advise separate bargaining units for these three groups of workers?

- ◯ Yes
- ◯ No

Factory Comparison

Q11

With limited resources, which factory would you attempt to organize?

We will direct a significant donation to an organization (not participating in this survey) focused on organizing a workplace closest to Factory A or Factory B, based on the answers we receive.

- ◯ Factory A
- ◯ Factory B

Q12

You told us that you would attempt to organize Factory {Q11 ANSWER} before {Q11 UNSELECTED}.

Could you explain your reasoning?

_____

_____

_____

Q13

When asked what you would prioritize (Raising pay, Guaranteed predictable hours, or Signing the Open to All pledge), you told us you would prioritize {Q9 ANSWER, FACTORY A} at A and {Q9 ANSWER, FACTORY B} at B.

Could you explain your reasoning?

_____

_____

_____

Descriptive Questions

Q14

Do you agree with this statement? One central reason workers seek out unions is for greater pay transparency

- ◯ Agree
- ◯ Somewhat agree
- ◯ Somewhat disagree
- ◯ Disagree

Q15

Consider the workplace that you are currently organizing or most recently organized.

Which of the following best describes that organizing effort?

- ◯ Organizing a new union
- ◯ Organizing an existing union

Q16

What was the year in which you most recently tried to organize a workplace?
Choice: FROM Before 1990, 1990 ... TO 2023, 2024

Q17

What was the industry?
Choice: NAICS 2-digit industries descriptions (e.g., Agriculture, Forestry, Fishing and Hunting, Retail Trade)

Condition: Text depends on {Q1 ANSWER} and {Q18 ANSWER}
For the following questions, please consider the {workplace/union} you {currently organize/most recently organized}.

Order of the following 2 sections randomized

Worker Priority

Q18

When thinking about the amenities of the job in the workplace you currently organize or most recently organized, how important was pay to workers?
If helpful, you can think back to any worker survey you ran at the time.

- ◯ The top priority
- ◯ A secondary priority
- ◯ A tertiary priority
- ◯ Not in the top 3 priorities

Campaign Descriptives

Q19

What were the **three main issues** the union focused on during the campaign?

- ◯ Union Recognition
- ◯ Health and Safety/PPE
- ◯ Forced Overtime
- ◯ Wages
- ◯ Respect and Dignity
- ◯ Fairness
- ◯ Health Insurance
- ◯ Pensions

- ◯ Discrimination
- ◯ Too many hours
- ◯ Not enough hours
- ◯ Working Conditions
- ◯ Power
- ◯ Representation
- ◯ Just Cause
- ◯ Grievance
- ◯ Scheduling
- ◯ Contract
- ◯ Service and Product Quality
- ◯ Job Security
- ◯ Staffing
- ◯ Training
- ◯ Technological Change
- ◯ Surveillance
- ◯ Sexual Harassment
- ◯ Broken Promises
- ◯ Employer Behavior
- ◯ Paid Time Off
- ◯ Paid Leave
- ◯ Childcare
- ◯ Pay Transparency
- ◯ Immigrant Rights
- ◯ Promotional Opportunity
- ◯ Voice
- ◯ Tuition
- ◯ Other: _____

Q20

Please rank three main issues you selected from most important (1) to least important (3).
Choices: Issues selected in {*Q19*}

Q21

Condition: Text depends on {*Q15 ANSWER*}

Did you collect pay information relevant to {workers/union members}?

◯ Yes

◯ No

Q22

Condition: {*Q21 ANSWER*} = *Yes*

How do you access pay information?
This could be information about the pay of {workers/union members} or those at similar establishments.

_____

_____

_____

Q23

Condition: {*Q21 ANSWER*} = *Yes*

Did you publish all the anonymized pay data you collected? (eg. report in a newsletter, publish on website, membership-wide email)

◯ Yes

◯ No

Q24

What (if any) pay information did you communicate?

_____

_____

_____

Q25

How many years have you worked as an organizer?
Choice: FROM Less than 1 year, 1 year ... TO 9 years, 10+ years

Q26

Do you have experience as the lead organizer on a campaign?

- ◯ Yes
- ◯ No

Q27

Which country do you have more experience working in?

- ◯ U.S.
- ◯ Canada

Conclusion

Q28

Please share any feedback, comments, or questions here, or let us know if anything in the survey was unclear.

_____

_____

_____

D.2 Hollywood Guilds: Sample Main Survey

Introduction

We are a team of professors from Harvard, MIT, and UBC, with expertise on negotiation. We are considering producing a report pertaining to writers' & directors' career negotiations at every level. Particularly during this historic renegotiation, we want to understand how providing currently inaccessible information may affect you for better or worse.

We will use answers to this 10-minute survey to decide whether to pursue this project and whether to send you the report. All responses will be stored on a secure server and your name will never be released unless you indicate otherwise.

By clicking "Yes" below, you consent to participate in the survey.

Do you want to participate?

Here is some key information about the study:

- We are asking you to take part in a research study because you might be a writer or director, or part of the directing team.
- If you agree to be in this study you will be asked to complete a 10-minute online survey.
- We don't believe there are any risks from participating in this research. All responses will be stored on a secure server and your name will never be released. The study would only use aggregate data.
- We cannot promise any benefits to others from your taking part in this research. However, possible benefits to you include helpful career information.
- Your participation is completely voluntary. You can choose not to participate, or you can agree to participate and change your mind later and your decision will not be held against you. Your refusal to participate will not result in any consequences or any loss of benefits that you are otherwise entitled to receive.
- The identified data collected in this survey and IMDB will be exclusively shared among the co-PIs on the study team.

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC[56] Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598. Taking part in this survey is entirely up to you. If you decide to take part, you may choose to stop filling the survey at any time.

◯ Yes, I want to participate

Introductory Questions

First, we have some questions to determine which report would be most relevant for you.

Q1

Which roles have you worked in? Select all that apply.

□ Writer

□ Director or Directing Team

□ Producer

□ Actor

□ Other

[56] A previous co-author was at UBC hence the UBC IRB language here and in survey recruitment messaging.

Q2

Do you primarily work in TV or film?

- ◯ TV
- ◯ Film

Q3

Which type of studio provides a more important source of income for you?

- ◯ Streaming service
- ◯ Traditional studio

Q4

Condition: If Which roles have you worked in? Select all that apply. = Director or Directing Team

Which type of directing job is most relevant for your income?

- ◯ Director
- ◯ Unit Production Manager
- ◯ First Assistant Director
- ◯ Key Second Assistant Director
- ◯ 2nd Second Assistant Director
- ◯ Additional Second Assistant Director
- ◯ Associate Director

Q5

Condition: If Do you primarily work in TV or film? = TV
And Which roles have you worked in? Select all that apply. = Writer

Which type of writing job title is most relevant for your income?

- ◯ Staff Writer
- ◯ Story Editor
- ◯ Executive Story Editor
- ◯ Co-producer

◯ Producer

◯ Co-executive Producer

◯ Showrunner

Q6

Condition: If Do you primarily work in TV or film? = TV
And Which roles have you worked in? Select all that apply. = Writer

Which type of pay structure for TV writing provides a more important source of income for you?

◯ Weekly

◯ Episodic

Q7

Condition: If Do you primarily work in TV or film? = Film
And Which roles have you worked in? Select all that apply. = Writer

Which type of film provides a more important source of income for you?

◯ Low budget

◯ High budget

Block: {Film Writer/TV Writer/Director}

Conditional on {Q1 ANSWER} and {Q2 ANSWER} there will be different phrasing of the questions based on position, {Film Writer/TV Writer/Director}, and some additional questions for TV Writers and Directors.

As an example, questions Q8-Q27 are phrased in this sample for Film Writers (also referred to as screenwriters), but there were analogous versions for TV writers and directors.

For Film Writers, we use {Q7 ANSWER} for questions about earnings.
For TV Writers, we use a combination of {Q5 ANSWER} and {Q6 ANSWER} for questions about earnings.
For Directors, we use {Q4 ANSWER} for questions about earnings.

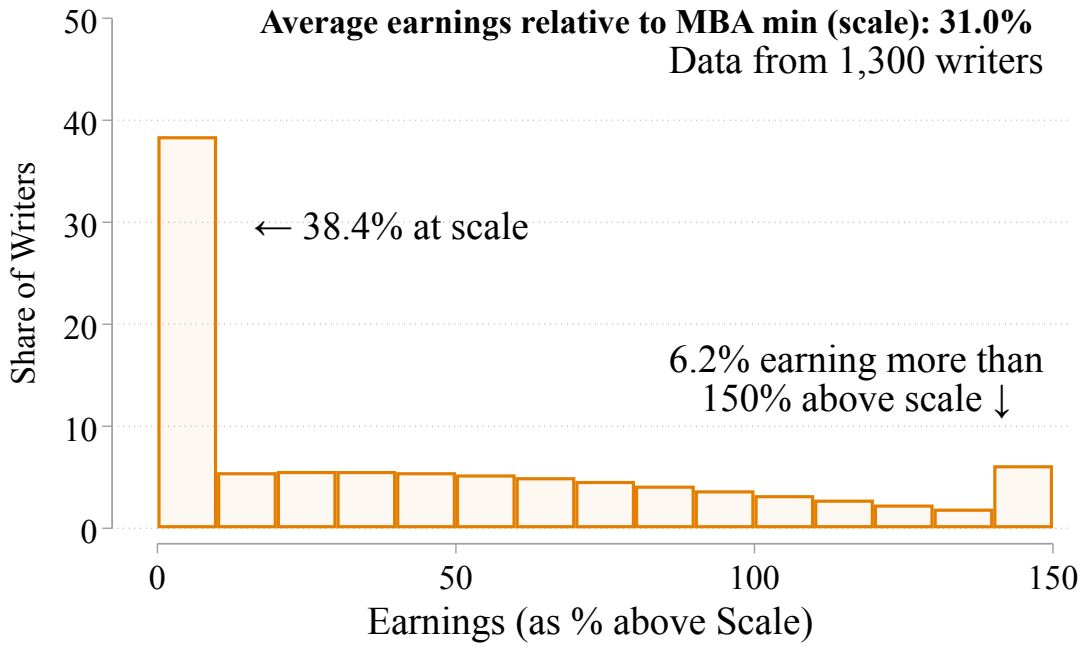
We randomize the order in which the two pay reports (overall vs. split) are displayed. This means half of the sample see questions Q8-Q13 and EQ1-EQ2 first (about the overall report) followed by Q14-Q17 and EQ3-EQ4 (about the split report), and the other half see the opposite order.

Q8

We will ask you about two reports. Please consider the proposed report showing earnings in the screenwriting industry based on screenwriter contracts in the past year.

Here is an example of what we would report about screenwriters:

WGA-Member Compensation Relative to MBA Minimums for {Q7 ANSWER} Screenplays at {Q3 ANSWER}s (2023)



(Note: this example uses fake data.)

Do you think we should create such report? The report would be shared with other screenwriters, and we will use your opinion to decide whether to pursue this project. Your response will be strictly confidential.

- ◯ Yes, I would value it significantly
- ◯ Yes, I would be interested to see it
- ◯ Neutral, I would not pay too much attention.
- ◯ No, I would not be interested in such a report.
- ◯ No, such a report would be harmful to me.

Q9

Instead of creating a report, we could use the same resources to transfer rewards to survey respondents.

Below, we will ask you about 5 hypothetical scenarios. In each scenario, you will be presented a choice between accessing the report on pay OR receiving money.

We will randomly choose 10 survey respondents. If you are one of these 10 lucky respondents, we will randomly select one of your 5 choices to send to you if the report is produced.

As a result, it is in your best interest to respond honestly to these scenarios. Please make your choices below, and at the end of the survey you will find out if you are selected.

Between the following two options in each scenario, which one would you prefer?

	Receive Pay Report	Receive Cash
Pay report or $25 Cash Payment	◯	◯
Pay report or $150 Cash Payment	◯	◯
Pay report or $500 Cash Payment	◯	◯
Pay report or $2000 Cash Payment	◯	◯
Pay report or $6000 Cash Payment	◯	◯

Q10

How would you use the report if it were published? Select all that apply. If a reason is not included, please describe it in the "other" option.

Options presented in a randomized order

- □ To personally know where I stand in the pay distribution
- □ To decide where to work
- □ To negotiate new contracts
- □ To re-negotiate existing contracts
- □ For labor organizing
- □ I wouldn't use it
- □ Other

Q11

Condition: If How would you use the report if it were published? Select all that apply. If a reason is not incl... = I wouldn't use it

For which reasons do you think this information would have limited scope? Select all that apply. If a reason is not included, please describe it in the "other" option.

Options presented in a randomized order

- ☐ I already can access the information about pay that I need
- ☐ Reports like this do not affect compensation or employment
- ☐ The proposed report is missing crucial information (e.g., demographics)
- ☐ Other

Q12

Condition: randomized treatment – half of the sample see a question about Guild, half of the sample see a question about Networks

You previously said {Q8 ANSWER} about a report on overall screenwriter pay distributions.

We are considering sending a petition to the {Guild/Networks} that would ask for the data they have on pay to complement our own pay data collection for the purpose of understanding and reporting on overall pay.

Would you allow us to include your name and private answer above as part of this public petition?

- ◯ Yes
- ◯ No

Q13

Condition: {Q12 ANSWER} = No

What is the main reason why you would refuse to sign this petition?

_____

_____

_____

EQ1 (TV Writers Only)

Condition: only shown one of two bracketed questions

{Which of the position titles below should we produce a report for? So far we have considered gathering data on {Q5 ANSWER}s. But we could produce a similar report for any of the other positions listed below, and we are trying to decide which of these positions the report should cover. The report would be accessible to all. We will use your opinion to decide which reports to create.}

OR

{Which other groups of writers should receive a similar report about their position-level earnings? We will use your opinion to decide which reports to create.}

Select all that apply.

Condition: If Which type of writing job title is most relevant for your income? != Staff Writer

□ Staff writers

Condition: If Which type of writing job title is most relevant for your income? != Story Editor

□ Story editors

Condition: If Which type of writing job title is most relevant for your income? != Executive Story Editor

□ Executive story editors

Condition: If Which type of writing job title is most relevant for your income? != Co-producer

□ Co-producers

Condition: If Which type of writing job title is most relevant for your income? != Producer

□ Producers

Condition: If Which type of writing job title is most relevant for your income? != Co-executive Producer

□ Co-executive producers

Condition: If Which type of writing job title is most relevant for your income? != Showrunner

□ Showrunners

EQ2 (Directors Only)

Condition: only shown one of two bracketed questions

{Which of the position titles below should we produce a report for? So far we have considered gathering data on {Q4 ANSWER}s. But we could produce a similar report for any of the other positions listed below, and we are trying to decide which of these positions the report should cover. The report would be accessible to all. We will use your opinion to decide which reports to create.}

OR

{Which other groups of the directing team should receive a similar report about their position-level earnings? We will use your opinion to decide which reports to create.}

Select all that apply.

Condition: If Which type of directing job is most relevant for your income? != Director

□ Directors

Condition: If Which type of directing job is most relevant for your income? != Unit Production Manager

□ Unit Production Managers

Condition: If Which type of directing job is most relevant for your income? != First Assistant Director

□ First Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != Key Second Assistant Director

□ Key Second Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != 2nd Second Assistant Director

□ 2nd Second Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != Additional Second Assistant Director

□ Additional Second Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != Associate Director

□ Associate Directors

Q14

We would like to ask you the same questions about one alternative report.

We can create a different report displaying pay distributions separately for each gender, using the same data on recent contracts.

Here is an example of what we would report about screenwriters:

WGA-Member Compensation Relative to MBA Minimums for {Q7 ANSWER} Screenplays at {Q3 ANSWER}s (2023)

(Note: this example uses fake data for each graph. To preserve anonymity, we would include non-binary individuals in both distributions.)

Do you think we should create such report? The report would be shared with other screenwriters, and we will use your opinion to decide whether to pursue this project. Your response will be strictly confidential.

- ◯ Yes, I would value it significantly
- ◯ Yes, I would be interested to see it
- ◯ Neutral, I would not pay too much attention.
- ◯ No, I would not be interested in such a report.
- ◯ No, such a report would be harmful to me.

Q15

Below you are presented with 5 more hypothetical scenarios, now about the pay disparities report.

Between the following two options in each scenario, which one would you prefer?

	Receive Pay Report	Receive Cash
Pay report or $25 Cash Payment	◯	◯
Pay report or $150 Cash Payment	◯	◯
Pay report or $500 Cash Payment	◯	◯
Pay report or $2000 Cash Payment	◯	◯
Pay report or $6000 Cash Payment	◯	◯

Q16

How would you use the report if it were published? Select all that apply. If a reason is not included, please describe it in the "other" option.

Options presented in a randomized order

- ☐ To personally know where I stand in the pay distribution
- ☐ To decide where to work
- ☐ To negotiate new contracts
- ☐ To re-negotiate existing contracts
- ☐ For labor organizing
- ☐ I wouldn't use it
- ☐ Other

Q17

Condition: If How would you use the report if it were published? Select all that apply. If a reason is not incl... = I wouldn't use it

For which reasons do you think this information would have limited scope? Select all that apply. If a reason is not included, please describe it in the "other" option.

Options presented in a randomized order

- ☐ I already can access the information about pay that I need
- ☐ Reports like this do not affect compensation or employment
- ☐ The proposed report is missing crucial information
- ☐ It would detract from the purpose of collective bargaining
- ☐ Other

EQ3 (TV Writers Only)

Condition: only shown one of two bracketed questions

{Which of the position titles below should we produce this report on pay disparities for? So far we have considered gathering data on {Q5 ANSWER}. But we could produce a similar report on pay disparities for any of the other positions listed below, and we are trying to decide which of

these positions the report should cover. The report would be accessible to all. We will use your opinion to decide which reports to create.}

OR

{Which other groups of writers should receive a similar report about their position-level earnings? We will use your opinion to decide which reports to create.}

Select all that apply.

Condition: If Which type of writing job title is most relevant for your income? != Staff Writer

□ Staff writers

Condition: If Which type of writing job title is most relevant for your income? != Story Editor

□ Story editors

Condition: If Which type of writing job title is most relevant for your income? != Executive Story Editor

□ Executive story editors

Condition: If Which type of writing job title is most relevant for your income? != Co-producer

□ Co-producers

Condition: If Which type of writing job title is most relevant for your income? != Producer

□ Producers

Condition: If Which type of writing job title is most relevant for your income? != Co-executive Producer

□ Co-executive producers

Condition: If Which type of writing job title is most relevant for your income? != Showrunner

□ Showrunners

EQ4 (Directors Only)

Condition: only shown one of two bracketed questions

{Which of the position titles below should we produce this report on pay disparities for? So far we have considered gathering data on {Q4 ANSWER}. But we could produce a similar report on pay disparities for any of the other positions listed below, and we are trying to decide which of these positions the report should cover. The report would be accessible to all. We will use your opinion to decide which reports to create.}

OR

{Which other groups of the directing team should receive a similar report about their position-level earnings? We will use your opinion to decide which reports to create.}

Select all that apply.

Condition: If Which type of directing job is most relevant for your income? != Director

□ Directors

Condition: If Which type of directing job is most relevant for your income? != Unit Production Manager

□ Unit Production Managers

Condition: If Which type of directing job is most relevant for your income? != First Assistant Director

□ First Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != Key Second Assistant Director

□ Key Second Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != 2nd Second Assistant Director

□ 2nd Second Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != Additional Second Assistant Director

□ Additional Second Assistant Directors

Condition: If Which type of directing job is most relevant for your income? != Associate Director

□ Associate Directors

Q18

Condition: randomized treatment – half of the sample see a question about Guild, half of the sample see a question about Networks

You previously said {Q14 ANSWER} about a report on screenwriter pay distributions by gender.

We are considering sending a petition to the {Guild/Networks} that would ask for the data they have on pay to complement our own pay data collection for the purpose of understanding and reporting on pay disparities.

Would you allow us to include your name and private answer above as part of this public petition?

◯ Yes

◯ No

Q19

Condition: {Q18 ANSWER} = No

What is the main reason why you would refuse to sign this petition?

_____

_____

_____

Q20

What do you think is the most relevant MBA minimum for a typical screenwriter in the Guild writing {Q7 ANSWER} films at {Q3 ANSWER}s in the first half of 2023, in dollars?

$ _____

Q21

What percent above the MBA minimum do you think a typical screenwriter in the Guild writing {Q7 ANSWER} films earns at a {Q3 ANSWER} for one script in the first half of 2023?

Percent above the MBA minimum

Choice: FROM Less than the minimum, 0% more (at the minimum), 1% more, ... TO 100% more

Q22

During your most recent project, do you think you earned a higher, lower, or the same percent above the MBA minimum as the typical screenwriter in the Guild writing {Q7 ANSWER} films working at a {Q3 ANSWER}?

- ◯ Higher
- ◯ The same
- ◯ Lower

Q23

How confident are you in your knowledge of what the typical screenwriter writing for {Q3 ANSWER} in the Guild earns?

- ◯ Not confident at all
- ◯ Slightly confident
- ◯ Somewhat confident
- ◯ Very confident
- ◯ Extremely confident

Q24

What percent above the MBA minimum do you typically earn writing {Q7 ANSWER} films at {Q3 ANSWER}s for one script in 2023?

Percent above the MBA minimum

Choice: FROM Less than the minimum, 0% more (at the minimum), 1% more, ... TO 100% more

Q25

Among screenwriters in the Guild writing {Q7 ANSWER} films working at {Q3 ANSWER}s, do you think women earn a higher, lower, or the same percent above the MBA minimum as men?

- ◯ Higher
- ◯ The same
- ◯ Lower

Q26

Condition: If Among screenwriters in the Guild writing {Q7 ANSWER} films working... = {Lower/Higher}

You said that you think that among {Q7 ANSWER} films, women earn a {Lower/Higher} percent above the MBA minimum than men.

What percent more do {men/women} make than {women/men}?

Percent more

Choice: FROM 1% more – TO 100% more or more

Q27

How confident are you in your knowledge of the differences in pay between men and women screenwriters in the Guild?

- ◯ Not confident at all
- ◯ Slightly confident
- ◯ Somewhat confident
- ◯ Very confident
- ◯ Extremely confident

Concluding Questions

Q28

We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demographics we are considering.

Which, if any, breakdowns would you be interested in seeing? Select all that apply.

- ☐ Gender
- ☐ Race
- ☐ Age
- ☐ LGBTQ+
- ☐ Main genre
- ☐ Networks/streaming services
- ☐ Other
- ☐ None of the above

Q29

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... != None of the above
And Q28 has more than 1 selected options

Please rank the demographics breakdowns you selected above by dragging them from the one you would be most interested in seeing at the top of the list to the one you would be the least interested in seeing at the bottom of the list.

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = Gender

- ☐ Gender

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = Gender

- ☐ Gender

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = Race

- ☐ Race

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = Age

□ Age

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = LGBTQ+

□ LGBTQ+

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = Main genre

□ Main genre

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = Networks/streaming services

□ Networks/streaming services

Condition: If We could include a breakdown of pay by other demographics, e.g., race. Below is a list of the demo... = Other

□ Other

Q30

Condition: If Do you primarily work in TV or film? = TV

Out of all the episodes you've worked on in the last year, for what percent did you receive formal credit? (0% = none, 100% = all)

	0	10	20	30	40	50	60	70	80	90	100
Percent of episodes						▽					

Q31

Condition: If Do you primarily work in TV or film? = Film

Out of all the films you've worked on in the last year, for what percent did you receive formal credit? (0% = none, 100% = all)

	0	10	20	30	40	50	60	70	80	90	100
Percent of films						▽					

Q32

How would a report on true pay distributions by gender compare to the current views of producers & pay-setting executives?

- ◯ It would reveal more pay inequality than they expect
- ◯ It would reveal less pay inequality than they expect
- ◯ It would be the same pay inequality as what they expect

Q33

What is your gender identity?

- ◯ Man
- ◯ Woman
- ◯ Non-binary
- ◯ Other

Q34

How would you describe your race/ethnicity? (Check all that apply)

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ White
- ☐ Hispanic/Latino
- ☐ Other
- ☐ Prefer not to disclose

Q35

Condition: If Which roles have you worked in? Select all that apply. = Writer

Are you a member of the WGA?

- ◯ Yes
- ◯ No

Q36

Condition: If Which roles have you worked in? Select all that apply. = Director or Directing Team

Are you a member of the DGA?

- ◯ Yes
- ◯ No

Q37

Condition: If Are you a member of the WGA? = Yes

Do you hold an official role in the WGA?

- ◯ No
- ◯ Yes, Committee Chair/Vice Chair
- ◯ Yes, Committee Member
- ◯ Yes, Involved but no official position
- ◯ Yes, Prior leadership role
- ◯ Yes, Other

Q38

Condition: If Are you a member of the DGA? = Yes

Do you hold an official role in the DGA?

- ◯ No
- ◯ Yes, Committee Chair/Vice Chair
- ◯ Yes, Committee Member
- ◯ Yes, Involved but no official position
- ◯ Yes, Prior leadership role
- ◯ Yes, Other

Q39

Condition: If Which roles have you worked in? Select all that apply. = Writers

Is the WGA fully forthcoming with their information of value to you?

- ◯ Yes
- ◯ No
- ◯ Not sure

Q40

Condition: If Which roles have you worked in? Select all that apply. = Director or Directing Team

Is the DGA fully forthcoming with their information of value to you?

- ◯ Yes
- ◯ No
- ◯ Not sure

Q40

Condition: If Is the WGA fully forthcoming with their information of value to you? = No
Or Is the DGA fully forthcoming with their information of value to you? = No

What information do they collect that would be useful to make available?

_____
_____
_____

Feedback

Thank you for finishing this survey. Please leave any feedback you have here.

_____
_____
_____

Compensation

Would you prefer a $20 Amazon gift card or a donation of your choice as a token of appreciation for your time?

If you select donation, please specify which organization you would like us to donate to.

- ◯ $20 Amazon gift card
- ◯ $20 donation

Randomization Outcome

Condition: For participants who were not randomly selected

According to the randomization procedure, any hypothetical questions you answered during this survey will remain hypothetical.

Condition: For 10 randomly selected participants

You have been randomly selected among the 10 participants who will have one of their scenarios implemented. We will be in touch once a determination has been made about the report and no later than July 15th.