Union Leaders: Experimental Evidence from Myanmar*

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Abstract

Social movements are catalysts for crucial institutional changes. To succeed, they must coordinate members' views (consensus building) and actions (mobilization). We study union leaders within Myanmar's burgeoning labor movement. Union leaders are positively selected on both personality traits that enable them to influence others and ability but earn lower wages. In group discussions about workers' views on an upcoming national minimum wage negotiation, randomly embedded leaders build consensus around the union's preferred policy. In an experiment that mimics individual decision-making in a collective action set-up, leaders increase mobilization through coordination. Leaders empower social movements by building consensus that encourages mobilization.

JEL Classification: [J51, J52, D23, D70, C93]

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1 Introduction

Social movements have been catalysts for many institutional changes: In the 19th century, the eight-hour day movement, in the early 1900s, the suffragettes, in the 1950s, the civil rights movements, and in this century, the green movement (Della Porta and Diani, 2020), to name but a few. To succeed, social movements must coordinate their members' views and collective actions. Coordinating views requires building *consensus* around common objectives and tactics among diverse members. Once a consensus is built, coordinating actions requires *mobilizing* members to participate in activities that have high private costs and uncertain public benefits (Ganz, 2010). But unlike in more commonly studied organizations, such as firms and bureaucracies, monetary incentives, contracts, and hierarchies are often unavailable to align views and to motivate members in social movements.

In the absence of these organizational tools, *leaders* may play critical roles.[1] Economic theory suggests that leaders may act as coordinators in both consensus building and mobilization. For example, leaders may build consensus among a group by providing information about the state of the world or payoffs that coordinates views (Hermalin, 1998; Caillaud and Tirole, 2007; Dewan and Myatt, 2008). They may mobilize group members by communicating that a high-cooperation equilibrium is to be played (Loeper, Steiner and Stewart, 2014). To date, however, empirical evidence on leaders' roles in consensus building and in mobilization outside the lab remains scarce due to measurement and identification challenges. On the measurement side, it is difficult to observe many leaders performing the same task. On the identification side, it is difficult to distinguish if a given individual influences others (i.e., is in fact a leader) or if their behavior is simply a more visible emblem of the underlying group dynamics - a version of the well-known "reflection problem" (Manski, 1993).

This paper provides the first experimental evidence of leaders' roles as coordinators in both members' views (consensus building) and actions (mobilization) using the burgeoning labor movement in Myanmar as our setting. The movement is broadly representative of the struggles in organizing labor in newly industrializing countries (see, e.g., Visser et al. (2019)). We collaborate with the Confederation of Trade Unions in Myanmar (CTUM), the largest confederation of labor unions at the national level, during the months preceding the revision of the national minimum wage. CTUM represented workers' interests in the national minimum wage setting process. In the run-up to the planned May 2020 negotiations, the CTUM organized weekend sessions with workers employed in 17 garment factories with CTUM-affiliated unions to discuss the minimum wage and to gather systematic information

[1] We follow Hermalin (2012) and think of leadership as "...the ability to induce others to follow absent the power to compel or to provide formal contractual incentives...A leader is someone with followers, who follow voluntarily."

on workers' skills and living costs. We helped the CTUM to organize the discussions and to conduct the surveys, which allowed us to embed multiple experiments to examine (1) whether and how union leaders build consensus around the minimum wage level and (2) whether and how they mobilize workers to participate in privately costly activities for the common good. In each factory, the union leadership is structured around an elected union president and executive committee that negotiates with the factory management and coordinates activities with the confederation. Below these formal roles, several typically non-elected line leaders (LLs) organize and voice the concerns of other union members. This allowed us to overcome the measurement challenge by observing several union leaders within the same context. We tackled the identification challenge by implementing multiple experimental designs.

The sessions also provided a unique opportunity to characterize the types of individuals who emerge as leaders in labor movements, adding to our scant understanding of selection into leadership roles in social movements. Further, they enabled us to study leaders' roles in the context of a high-stakes, real-world collective action to influence a policy choice with uncertainty about its success – the CTUM's effort to influence the national minimum-wage level – while avoiding many of the risks associated with mobilization around, for example, factory strikes or street protests.

We present three sets of empirical results. We first document that union leaders are distinct from union members and non-members along key traits that psychologists and organizational sociologists associate with the ability to influence collective outcomes (Judge, Bono, Ilies and Gerhardt, 2002), but that have been less examined within economics. We also find that union leaders stand out on other traits that economists identify as relevant for political selection (Caselli and Morelli, 2004; Dal Bó, Finan, Folke, Persson and Rickne, 2017). Both Presidents and LLs are more extroverted, less neurotic, and more conscientious compared to workers. They have greater grit and locus of control; they also have more work experience. In addition, both presidents and LLs are more altruistic, and presidents have higher Raven Scores. Both presidents and LLs earn substantially less, however, compared to workers, both unconditionally and even more so after controlling for demographics, ability, skills, and personality traits. This suggests that, in this context, leadership roles in the union movement come at significant private costs – a view echoed in workers' and leaders' surveys.

We then present results from two field experiments. In these experiments, we focus on understanding how LLs influence workers' behavior. There are a few justifications for our focus on LLs. First, LLs are tasked by the union to interact with, mobilize, and gather and channel the concerns of the workers. Second, as is evident from their traits, LLs resemble formal leaders. There are also a far greater number of them. We can thus observe the behavior of many leaders who, albeit not (yet) formally elected to leadership positions within

the union, share many of the traits of (and are likely to subsequently become) union leaders.

In experiment (1) on consensus building, we randomly embedded leaders in group discussions about workers' preferred and expected minimum wage levels. In groups with leaders, we randomized whether the leader was from the workers' own or a different factory. This allows us to examine the importance of leaders' *social connections* (Bandiera, Barankay and Rasul, 2009) or their *formal role* (Aghion and Tirole, 1997) in the union in determining their effects. Motivated by the political science literature, we test whether leaders aggregate workers' views and build consensus around the median worker's view (Black, 1958) or whether they align workers' views and build consensus around their unions' views (Lenz, 2012). We find evidence of the latter: leaders increase consensus around their unions' preferred minimum wage levels by 20%. We cannot reject that the effects are the same for own versus external leaders, indicating that leaders' social ties or formal role alone cannot explain the results. We use textual data from discussion transcripts to understand how leaders increase convergence in views among workers and how they impact group dynamics. We find that leaders introduce information to the discussions that helps align workers' views with those of the union. In doing so, they partially crowd out workers' speech. However, we also find that groups with leaders are rated as more active by the field team, and, following the discussions, workers self-reported higher engagement and perception that the group achieved consensus.

In experiment (2) on mobilization, we invited workers to participate in an unannounced survey on living costs. Participation in the survey was a privately costly action that conveyed a public benefit. It was privately costly because it required workers to sacrifice the remainder of their one and only weekend day. It conveyed a public benefit since the CTUM planned to use the data to campaign for its preferred minimum wage level. To mimic the incentives faced by workers when deciding whether to participate in collective actions such as street demonstrations in support of the CTUM's proposed minimum wage level, we induced a strategic complementarity in turnout at the discussion group level.[2] We randomly varied whether workers: (i) were invited to the survey by a leader; (ii) were informed about how many discussion group members were invited by a leader; (iii) were told that a leader would observe their decision to participate. Across discussion groups, we created random variation in how many group members were invited by a leader, so that there was variation in the information provided in arm (ii).

Again, we find that leaders play a coordinating role: Moving from being informed that a leader would invite one group member to being informed that they would invite all but one group member increases attendance by 38%. This indicates that leaders can be key in

[2]We did this by donating to a worker skills training center for each discussion group where all workers attended the survey.

selecting and communicating the equilibrium to be played, which involves, in this case, all workers participating in the survey. In contrast, being invited by a leader alone does not increase attendance. Finally, we find suggestive evidence that observation of the workers' choice by a leader increases attendance, and our results are consistent with a signaling channel of leaders as opposed to a sanctioning one.

Finally, bringing together the two experiments, we explore the potentially important link between coordinating views and coordinating collective actions in the context of social movements. We ask: does conveying the unions' preferences – making clear what the unions are fighting for – and building consensus around these preferences matter for leaders' ability to mobilize workers? We find that among groups with leaders in experiment (1), attendance at the cost-of-living survey is increasing in convergence to the union's wage preference, while there is no correlation between convergence and attendance for groups without leaders. While suggestive, this evidence supports the interpretation that achieving consensus by aligning followers' preferences with those of the movement is instrumental for mobilization.

This research contributes to three strands of literature. First, it contributes to an emerging empirical literature on the determinants of social movements' formation and growth. One stream of this literature focuses on how information about others' participation affects individuals' decisions to participate in protests; it underscores that coordination problems present an important challenge to turnout and emphasizes the importance of coordination devices (mainly, communication technology) (Enikolopov, Makarin and Petrova, 2020; Manacorda and Tesei, 2020; González, 2020).[3] A second stream focuses on how the presence of leaders affects individuals' decisions to participate. Dippel and Heblich (2021) and Cagé, Dagorret, Grosjean and Jha (2022) provide evidence from different historical social movements that exposure to leaders increases participation. We contribute experimental evidence that leaders are an important mechanism to enhance coordination in social movements, both for coordinating members' views and their collective actions; we also provide the first evidence that achieving consensus may be instrumental for mobilization.

Second, it contributes to the literature on leaders' roles in group decision-making and in overcoming collective action problems. A sizable theoretical literature focuses on forms of information provision by leaders that serve to coordinate beliefs and actions (Hermalin, 1998; Caillaud and Tirole, 2007; Dewan and Myatt, 2008; Bolton, Brunnermeier and Veldkamp, 2012; Loeper et al., 2014; Akerlof and Holden, 2016). Empirically, the literature is primarily composed of lab experiments (Potters, Sefton and Vesterlund, 2007; Komai, Gross-

[3]In contrast to other recent papers on this topic, Cantoni, Yang, Yuchtman and Zhang (2019) provide evidence of strategic substitutability in protest turnout in the context of Hong Kong's long-running democracy movement. In these types of settings, even if leaders do not serve a coordinating role, in principle, they may still play important roles through other channels such as social pressure.

man and Deters, 2010; Sahin, Eckel and Komai, 2015). More recently, a limited number of field experiments have studied leadership in real-world settings. Jack and Recalde (2015) show that randomly exposing community members to local elected leaders' leading by example in contributions to a public good increases their contributions through signaling and reciprocity. Englmaier, Grimm, Grothe, Schindler and Schudy (2022) randomly encourage groups in an escape room challenge to choose a leader and find that the leadership encouragement improves groups' performance. Antonakis, d'Adda, Weber and Zehnder (2022) provide experimental evidence that exposure to charisma in a leader's speech – in terms of the speech's style – increases workers' effort relative to workers who listen to a standard speech.[4] We contribute by providing evidence on leaders' personal traits and roles in group decision-making and in overcoming collective action problems from experiments with many different real-world leaders. Our experimental designs and data enable us to provide novel micro-evidence on the mechanisms through which leaders influence outcomes in the context of a burgeoning labor movement's effort to influence a high-stakes policy-setting process.

Third, this paper contributes to a growing literature on industrial relations and labor unions in developing countries (Freeman (2010); Tanaka (2020); Boudreau (2021); Macchiavello, Menzel, Rabbani and Woodruff (2020); Breza, Kaur and Krishnaswamy (2022); Akerlof, Ashraf, Macchiavello and Rabbani (2020); Lin, Tanaka, Minni, Nguyen, Thet and Macchiavello (2019); Corradini, Lagos and Sharma (2023)). We provide the first evidence of union leaders' characteristics and how they compare to workers in the context of Myanmar. We contribute experimental evidence that union leaders play important roles in shaping unions' effectiveness in achieving their objectives.

The remainder of this paper is organized as follows. Section 2 provides institutional background on the CTUM, its role in setting Myanmar's minimum wage, and its member unions. Section 3 describes our research design. Section 4 presents descriptive evidence on leaders' characteristics and how they compare to followers in our setting. Section 5 discusses the design and results of the consensus-building experiment. Section 6 discusses the design and results from the mobilization experiment. Section 7 explores whether there is a link between coordinating views and coordinating collective actions in the context of social movements. Finally, Section 8 concludes.

[4]Grossman and Baldassarri (2012) and Deserranno, Stryjan and Sulaiman (2019) use field experiments to examine how the selection procedure for leaders – formal elections versus less democratic processes – affects the type of leader selected (in the latter) and the effects on groups' performance.

2 Context

2.1 Unions in Myanmar

Unions have been legally allowed in Myanmar since 2011, when the country embarked upon a period of trade liberalization and domestic policy reforms (The Labor Organization Law, 2011). Between 2011-2020, the number of unions grew rapidly. According to the Ministry of Labour, Immigration and Population (MoLIP), as of mid-2020, there were 2,861 registered trade unions.[5] We study unions in Myanmar's export-oriented garment sector, which is the largest exporting industrial sector in Myanmar; as of 2020, approximately 600 factories employed nearly 500,000 workers (Myanmar Garment Manufacturers Association, 2020).

Unions in the garment sector are organized at the factory-level and negotiate with management about a number of issues. In our baseline survey, the most common topics of negotiation, in order, were pay, working conditions, leave, and working hours. Notably, approximately 70% of the respondents reported that the union at their factory had negotiated with management about pay. This, in part, motivates our focus on the national minimum wage. Moreover, Appendix Figure A.1 shows that nearly all workers in our sample reported that their daily base wage was just above the legal minimum wage of MMK 4800, and only 4% reported a base wage below it.[6] This suggests that the minimum wage serves as the reference point in relation to which unions negotiate with management about other components of pay, such as performance incentives. Finally, in previous work, we combined a survey of garment factories conducted for Tanaka (2020) with administrative data on industrial disputes and documented that garment factories with democratically-selected worker representatives were less likely to experience industrial disputes (Lin et al., 2019). We interpret this as motivating evidence that elected worker leaders may contribute to healthier industrial relations in our setting.

Unions' organizational structure and leaders

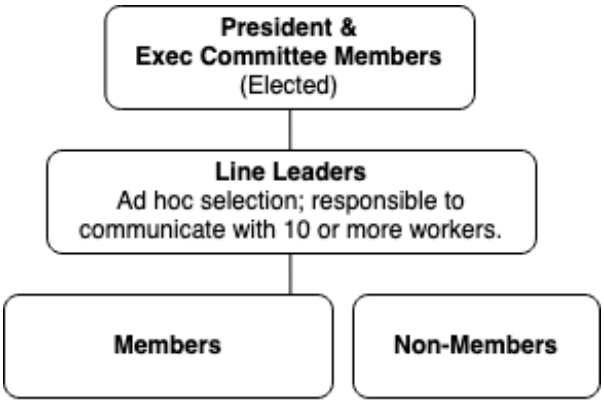
The Myanmar Labor Organization Law (2011) sets the terms required to establish a union officially recognized by the law. According to the Law, any group of 30 or more workers can form a factory-level union. To form a union, members must elect seven leaders who form the union's Executive Team (ET). The president leads the union's ET, which also includes an Executive Committee comprising one secretary, one treasurer, and four other elected

[5] These consist of 2,683 basic organizations, 147 township organizations, 22 state/regional organizations, 8 federations, and 1 confederation.

[6] The daily base wage is the base level of wage for 8 standard hours without reflecting skill premiums, bonuses, and overtime earnings.

members (see Figure 1). The ET members' tasks differ depending on their position, but one of the key tasks is to regularly attend meetings with the factory management. The basic requirements to become a member of the ET are that a worker has worked at the factory for at least six months, is at least 21 years old, and has a valid national identification number. The Law prescribes that elections are held every two years (unless the president resigns, in which case an emergency election is held). There is no term limit on ET members.

Figure 1: Union Organizational Structure



Below the ET, line/team leaders (LLs), play a critical role in facilitating communication with workers.[7] LLs are not elected by union members but are instead recommended by union members, selected by the ET, or self-nominated. Their tasks mostly revolve around communicating with union members as well as recruiting new members.

In our setting, being a union leader is not a paid job. Union leaders are workers in the factories, and evidence from our survey suggests that there are non-trivial costs of becoming a union leader. 70% of presidents and 40% of LLs reported having experienced disadvantages at their factory related to their union activity. Moreover, although the estimates are noisy, Presidents (LLs) seem to face a 29% (20%) wage penalty after controlling for demographics (age, gender, migrant status, education, Raven score, factory tenure, experience), skill measures (average sewing efficiency and skill grade), and personality traits (extraversion, agreeableness, conscientiousness, neuroticism, openness, locus of control, and grit) (Appendix Table A.1).

[7]The CTUM aims to have 1 LL for every 10 workers in unionized factories. In practice, the ratio is smaller; in our sample, the average LL coordinates 33 workers.

The Confederation of Trade Unions in Myanmar (CTUM)

The CTUM is the largest confederation of trade unions in Myanmar. In 2015, the CTUM was officially recognized as the only national-level trade union confederation in Myanmar, marking a significant phase in Myanmar's labor movement. As of late 2019, there were 47 garment factories in Myanmar that had a factory-level basic union affiliated to the CTUM, representing 10% of the garment sector and 58% of unions in the industrial sector affiliated to the CTUM.

2.2 The minimum wage in Myanmar

In conformity with the rapidly changing situation of the economy, Myanmar's statutory minimum wage was scheduled to be reconsidered every two years, according to the Minimum Wage Law (2013). A tripartite National Minimum Wage Committee (NMWC) consisting of representatives from employers' and workers' organizations and from the government was responsible for revising the minimum wage. One of the CTUM's key roles was to represent workers in the NMWC. In the 2018 minimum wage negotiations, for example, the CTUM advocated for a 6600 Myanmar Kyat (MMK) (USD 4.87) minimum wage for an eight-hour workday and mobilized workers to demonstrate in favor of its position. The minimum wage was ultimately increased from MMK 3600 (USD 2.65) to MMK 4800 (USD 3.54) and the next revision was scheduled for May 2020.

The minimum wage is highly relevant for garment workers. Appendix Figure A.1 shows that 59% of workers in our sample reported the legal minimum of MMK 4800 as their daily base wage (not including skill premiums, bonuses, or overtime earnings). Nearly all other workers reported that their daily base wage was just above this amount, and only 4% reported a base wage below it. Turning to daily take-home pay for an 8-hour workday (including base pay, skill premiums, and bonuses), the Figure also shows a dramatic jump up at the legal minimum and that 20% of our sample reported earning between 100-110% of it. In sum, the minimum wage appeared to bind for 20% of our sample, and given its importance in determining base pay, it is plausible that it spilled over to workers earning above this amount (e.g., Autor, Manning and Smith (2016); Derenoncourt, Gérard, Lagos and Montialoux (2021)).

Raising the minimum wage plausibly entails trade-offs for garment workers. We did not collect data on employers' ability to terminate workers. We do, however, have access to administrative data from the MoLIP on all industrial dispute cases negotiated at the Township Conciliation Body during 2016 in Yangon region. Out of 407 cases in the garment sector, termination is by far the leading type of dispute (nearly 60% of disputes), followed

by wages (nearly 20%). We interpret this as supporting evidence that employers can and do terminate workers. This suggests that, in principle, an increase in the minimum wage could put workers in our sample at risk of job loss.

Against this backdrop, the CTUM aimed to enter the 2020 negotiations equipped with evidence on workers' skills, living costs, and views on the national minimum wage.[8] In 2019, it sought a collaboration with our research team in order to collect this evidence, and we agreed to conduct surveys and discussion groups with garment workers. We subsequently produced a joint report with the CTUM on these topics in order to inform its position. While conducting the surveys and discussion groups, we agreed to run field experiments to understand the role of leaders in shaping collective outcomes.

3 Research design

3.1 Sampling

We implemented the field activities with workers employed at garment factories in the Yangon and Bago regions that had a factory-level basic union affiliated with the CTUM from December 2019 to March 2020. We focused on these regions because they are home to the majority of garment factories in Myanmar. At the time, there were 41 garment factories that had a union affiliated with the CTUM in these regions. We planned for around 30-35 unions to participate, and our final list included 28 unions.[9] Unfortunately, due to COVID-19, we had to stop our data collection activities, which we explain below, early; 17 unions fully completed the data collection activities, and 19 unions partially completed them.

Appendix Table A.2 reports summary statistics for the characteristics of the factories in our sample. The average factory size is 1187 workers, and the average union membership rate is 40%. The average number of months the union has been in place at the factory is 29 months, and union presidents' average tenure in the position is 18 months.

Within each factory, we used a sampling protocol that we designed to obtain a sample that was representative of the populations of interest: union leaders (presidents and LLs) and sewing operators (union members and non-members). We focused on sewing operators for two reasons: First, sewing operator is the most common and arguably the most important position type for garment production; in our sample, sewing operators comprise about 68%

[8] Due to COVID-19 and the November 2020 elections, there were delays in the minimum wage negotiations and the minimum wage was not revised in 2020.

[9] The selection of the unions, and their corresponding factories, was done together with the CTUM. The main criteria were strength of the affiliation to the CTUM, location of the factory with respect to the survey location, and time of union foundation at the factory (some factories were just in the process of finalizing the establishment of the union in the factory).

of the garment sector's workers. Second, the CTUM aimed to collect data on workers' skills, which we supported by developing a skill assessment module for sewing operators. Our assessment method relied on a global industrial engineering database that lists each sewing operation required to produce one piece of a given garment and its complexity in terms of the amount of time required to complete the operation. This type of database does not exist for other parts of the garment production process.

We conducted a stratified random selection of around 90 workers per factory; within factory, we stratified by line, union membership, and skill level. We detail our random sampling procedure in Appendix B.1. As we discuss below, for each factory, we started the data collection with union leaders and then continued on to the workers. In total, we invited 18 presidents and 1 secretary (19 factories),[10] all of whom participated. We invited 190 LLs from 19 factories, and 170 participated. For workers, due to COVID-19, we only covered 17 factories. We invited 1511 workers and 916 participated (61% take-up). Among them, we invited 936 union members and 594 participated (63% take-up), and we invited 575 non-union members and 322 participated (56% take-up). Throughout the empirical analysis, we weight observations so that they are representative at the factory level by using probability weights calculated as the total number of workers across factories divided by the number of workers in the specific factory.

3.2 Field activities

We embedded a series of experiments in the survey and discussion process. We preregistered the experiments on the AEA's RCT registry. For each factory, we scheduled two consecutive sessions on Sundays. In each session, we included two factories. The sessions were held on Sundays because it is the only weekday when most workers do not work. We compensated participants for their transportation costs (5000 kyats) and time at the average wage rate of a typical working day (6000 kyats).[11] It is important to underscore that participation in the session is still costly to workers, as they work very long hours and only have one weekend day. Throughout the activities, we only allowed the research staff and the participants to be onsite when the sessions were taking place; in this way, we aimed to limit any actual or perceived influence of the CTUM on participants' behavior and survey responses.

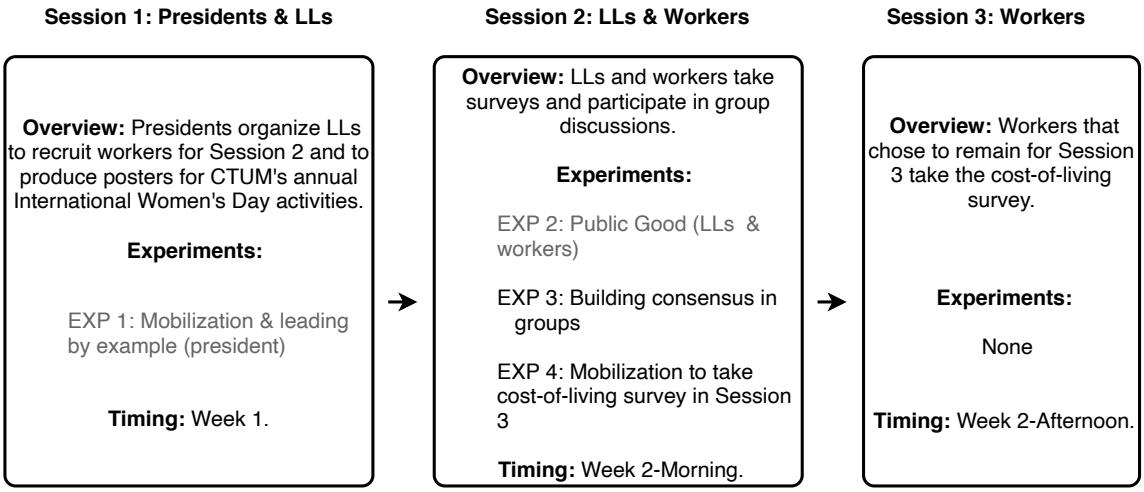
Figure 2 provides an overview of the field activities. In session 1, only presidents and LLs participated. We implemented a survey and a skill assessment as well as a mobilization experiment (EXP 1). The survey covered basic demographic questions as well as information on wages, behavioral characteristics, and psychological traits. The mobilization experiment

[10] One union was replacing its president, and the Secretary stepped in the role ad interim.

[11] When unions preferred to organize communal transportation, we did not reimburse participants.

was about presidents motivating LLs to mobilize workers to attend the session the next Sunday (session 2) and encouraging LLs to produce posters for CTUM's annual International Women's Day activities (March 8, 2020). Given the much more limited number of presidents compared to LLs, the more limited number of LLs compared to workers, and, crucially, the smaller sample sizes than initially planned due to the Covid-19 outbreak, our results for the mobilization experiment (EXP 1) are underpowered compared to those with workers. As such, we present this experiment in the Supplementary Materials.

Figure 2: Overview of field activities



In session 2, which is the main focus of this paper, only LLs and workers participated. In the morning, we implemented a survey, a skill assessment, the public good experiment (EXP 2), and the consensus building experiment on the minimum wage (EXP 3). The public good experiment was designed to test leaders' potential role of leading by example in the provision of a public good, that is sewing machines for CTUM Skills Training Centre (e.g., Jack and Recalde (2015)). The consensus building experiment was designed to test how leaders' participation in group discussions about workers' preferred and expected minimum wage levels influenced the group's consensus around these levels.

After lunch, we conducted the mobilization experiment (EXP 4), in which we invited workers to remain for an additional, unanticipated living cost survey for the rest of the afternoon. The CTUM planned to use the living cost data from the survey to campaign for its preferred minimum wage level. We induced a strategic complementarity in turnout at the discussion group level by donating to a worker skills training center for each full discussion group that attended the survey. In this design, we aimed to mirror the incentives faced by workers when deciding whether to participate in collective actions, such as street

demonstrations in support of the CTUM's proposed minimum wage level, while avoiding experimentally mobilizing them to engage in potentially risky actions.

We do not discuss the public good experiment (EXP 2) in the paper due to very little variation across the treatment arms: only 7% of leaders and 18% of workers donated less than the full endowment amount (regardless of treatment arm). We provide more information on it in the Supplementary Materials.

Finally, we also collected audio and video recordings of some of the main activities. Moreover, the field team completed observation forms while running the different activities. When available, we use the data from these sources in our analyses.

4 Who are the union leaders?

We conceive of leadership in the spirit of Hermalin (2012), which considers one of the essences of leadership to be the ability to induce others to follow absent the power to compel or to provide formal contractual incentives. This suggests that leaders may exhibit particular characteristics that enable them to influence followers. In this section, we explore this possibility by characterizing how union leaders' traits compare to those of non-leaders. To our knowledge, we provide the first systematic evidence comparing the characteristics of labor leaders and workers who are not leaders drawn from the same population.

As economic theories of leadership are largely silent on the question of who becomes a leader (Hermalin, 2012), we first focus on traits that psychologists and organizational sociologists associate with individuals' ability to influence collective outcomes, but that have been typically overlooked within economics. Second, we look at the traits that economists identify as relevant for political selection.

Starting with the psychological and sociological literatures on leadership, a meta-analysis of psychology research on the Big Five Inventory (BFI) personality traits identifies extroversion as the most consistent and highly correlated personality trait with leadership, followed by neuroticism (negative correlation), conscientiousness, and then openness; only agreeableness was not found to be correlated (Judge et al., 2002).[12] The literature also identifies having a strong locus of control (Howell and Avolio, 1993) and grit (Schimschal and Lomas, 2018; Caza and Posner, 2019) as important.[13]

Finally, it emphasizes the importance of individuals' charisma, which is considered as a

[12]We measure the Big Five personality traits following Rammstedt and John (2007).

[13]We measure locus of control using a question from the World Values Survey that asks the respondent to indicate using a 5-point Likert scale how much freedom of choice and control the respondent feels to have over the way her life turns out. We measure grit using several questions developed for this purpose by Duckworth and Quinn (2009).

set of behaviors, for leadership ability (House, 1977; House and Howell, 1992). Following Antonakis, Bastardoz, Jacquart and Shamir (2016) and Antonakis et al. (2022), we define charisma as the ability to transmit information in a symbolic, value-based, and emotional manner.[14] Of the BFI traits, to our knowledge, only extroversion has been shown to be positively correlated with charisma (Crant and Bateman, 2000). In this section, we focus on leaders' traits, but we return to the concept of charisma in Section 5.

Turning to the literature on political selection, it identifies politicians' ability and their honesty or prosociality as key traits (Caselli and Morelli, 2004). Following this literature, we measure ability using Raven scores (Bilker, Hansen, Brensinger, Richard, Gur and Gur, 2012) and educational attainment. We measure prosociality using altruism.[15] We test for evidence of positive or negative selection into leadership on these traits.

4.1 Qualities of union leaders and non-leaders

Appendix Table A.3 reports summary statistics for union presidents, line leaders, union members, and non-union members. We use the following regression specification to compare the characteristics of leaders and non-leaders:

$$Y_{if} = \alpha_0 + \alpha_1 LineLeader_i + \alpha_2 President_i + \gamma_f + \epsilon_{if} \quad (1)$$

where Y_{if} is a characteristic of worker i in factory f. $LineLeader_i$ is an indicator of being a line leader, and $President_i$ is an indicator of being a president. γ_f is a factory fixed effect. Finally, ϵ_{if} is the residual. Due to the limited number of clusters (17 factories), we report p-values calculated using the wild cluster bootstrap-t procedure (Cameron, Gelbach and Miller, 2008).

Table 1 presents the results. Each row reports the result from estimating Equation (1) for the characteristic in the row. Appendix Table A.4 presents the same comparisons for each characteristic, estimated including all other variables in the table except the BFI index as controls.[16] Before discussing the characteristics of interest, we mention some demographic and employment differences. Panel A shows that union leaders are significantly less likely to be female and are significantly older than non-leaders. The gender difference is larger for presidents compared to LLs. There is no difference in migration status. Turning to Panel B, union leaders have, on average, 13 (LLs)-19 (presidents) months longer tenures at their factories and substantially more experience in the garment sector. There is not a significant

[14] Hermalin (2023) formalizes the notion of charisma in an economic model of leadership.

[15] We measure altruism via an incentivized question: the respondent chooses how much to keep for herself or donate to a local orphanage institution, out of an endowment of 1500 kyats.

[16] For the BFI index regression, we omit the BFI measures as control variables.

difference between their wages and those of non-leaders.

Next, we examine leaders' personality traits. Starting with the BFI, we find a pattern of differences that is highly consistent with the psychology literature: Leaders are significantly more extroverted, less neurotic, and more conscientious. Interestingly, LLs, whose primary responsibilities entail communication with workers and recruitment of new union members, are significantly more agreeable, but not presidents. Finally, if anything, leaders are less open compared to non-leaders, especially presidents. Reverse-coding neuroticism and taking the average across index components, we find that leaders score significantly higher than workers. We also find that leaders exhibit significantly greater grit and that presidents exhibit significantly greater locus of control. In sum, we confirm that the leaders in our setting have the personality traits that the psychology literature identifies with individuals in leadership roles.

Turning to leaders' ability and prosociality, beginning with the former, we do not find evidence of selection on ability for LLs. Presidents, however, have significantly higher Raven Scores and more schooling. Further, Appendix Table A.4 shows that presidents are still positively selected on ability after controlling for their other characteristics, so it is not the case that ability is simply correlated with other traits that predict being a union president. The fact that presidents are higher ability suggests positive selection on this trait through union elections, which goes against the theoretical prediction that the individuals with the highest opportunity cost do not enter into union leadership positions (Caselli and Morelli, 2004). Turning to prosociality, we find that leaders are significantly more altruistic. This is inconsistent with the possibility that individuals pursue union leadership positions to extract rents through dishonest means, and it may help to explain why the leaders in our setting are willing to bear the private costs of leadership discussed in Section 2. In sum, the union leaders in our setting are *positively* selected on ability (at least for presidents) and on prosociality, consistent with recent empirical evidence that democratic election of political leaders generates positive selection on ability (Dal Bó et al., 2017).

Despite the evidence of positive selection on a wide range of traits, we note that presidents and LLs earn 12% and 8% less, respectively and unconditionally, compared to non-union workers (Appendix Table A.1). Although the estimates are noisy, the magnitudes are large and comparable to a change in skill grade (8%). The wage penalty increases as we progressively add controls for demographics (which include Raven score), sewing skill levels (average sewing efficiency and skill grade), and personality traits. This evidence underscores that not only being a union leader is not a paid job (they earn their wages by working in the factories as the rest of the workers), but also that they likely face discrimination on behalf of their employers.

Table 1: Differences between Leaders and Workers

	Observations	Worker Mean	Coeff. on Line Leader	Coeff. on President	p-value of diff, cols (3)-(4)
	(1)	(2)	(3)	(4)	(5)
Panel A: Demographics & Ability					
Female	1104	0.967	-0.116	-0.518	0.006
			[0.000]	[0.001]	
Age	1104	25.005	1.859	4.918	0.044
			[0.000]	[0.003]	
Migrant	1104	0.520	-0.046	-0.085	0.728
			[0.286]	[0.435]	
Education(Yrs)	1104	7.754	-0.176	0.799	0.251
			[0.437]	[0.330]	
Raven Score	1104	4.524	-0.085	1.749	0.003
			[0.734]	[0.005]	
Panel B: Employment & Minimum Wage Views					
Months in Factory	1104	29.888	13.010	18.573	0.327
			[0.000]	[0.000]	
Months in Sector	1104	50.621	24.796	28.216	0.784
			[0.000]	[0.013]	
Preferred Min Wage	1104	7504.258	28.294	171.402	0.566
			[0.823]	[0.482]	
Expected Min Wage	1104	6545.961	-140.598	-91.844	0.841
			[0.085]	[0.692]	
Panel C: Personality traits					
Altruism	1104	1268.777	142.460	147.861	0.952
			[0.000]	[0.129]	
Extraversion	1104	3.392	0.244	0.488	0.200
			[0.000]	[0.016]	
Agreeableness	1104	3.862	0.214	0.113	0.700
			[0.004]	[0.603]	
Conscientiousness	1104	3.979	0.225	0.507	0.037
			[0.000]	[0.001]	
Neuroticism	1104	2.665	-0.290	-0.670	0.145
			[0.000]	[0.018]	
Openness	1104	3.001	-0.065	-0.473	0.023
			[0.338]	[0.008]	
BFI Index	1104	2.314	0.182	0.261	0.458
			[0.000]	[0.026]	
Grit	1104	2.571	0.854	1.202	0.015
			[0.000]	[0.000]	
Locus of Control	1104	4.008	0.192	0.349	0.435
			[0.081]	[0.079]	

Notes: Unit of observation is worker. Probability weights used. Controlling for Factory FE.
p-values calculated using the wild cluster bootstrap-t method.

Overall, our evidence is in line with the view of leadership articulated above, which is that it is a phenomenon that exists independent of office or title and that it entails the ability to induce others to voluntarily follow (Hermalin, 2012). We find that union leaders

have distinctive traits: they possess a psychological ability to influence followers and are positively selected on altruism, and, for union presidents, on ability.

4.2 Focus on line leaders

In the second half of this paper, we present two experiments on LLs' roles in coordinating workers' views and their collective actions. There are a couple of reasons why we chose to focus on LLs in these experiments. First, there are many more LLs than presidents; in our sample, there are 170 LLs compared to 18 presidents. As a result, it was feasible to conduct larger experiments with LLs that are better powered, which is especially true given the ex-post smaller sample sizes due to the Covid-19 pandemic. Second, there is a degree of specialization in presidents' and LLs' leadership roles, and it is LLs who coordinate and motivate workers toward the union's goals on a day-to-day basis.[17] We note that LLs do not possess all of the traits that presidents do. As the political economy and the psychology literatures identify these traits as important for leadership ability, this would push against our finding that LLs have effects on group outcomes. We explore the importance of LLs' resemblance to presidents in Section 5.2.2, when examining the mechanisms through which leaders build consensus in groups.

As the rest of the empirical analysis focuses on LLs, we denote them as *leaders* in the remainder of the paper.

5 Consensus-building experiment

To succeed, social movements must coordinate their members' views and their collective actions. We begin by examining leaders' role in coordinating views. It was important for the CTUM to achieve consensus among workers on their preferred and expected minimum wage level, in order for it to determine a credible public position on the planned 2020 minimum wage adjustment and for it to mobilize workers to turn out in support of its position. This need motivated us to conduct an experiment in which we randomized the presence of a union leader in a discussion about what minimum wage levels workers preferred and expected in Myanmar's planned minimum wage adjustment to investigate whether, and if so, how, union leaders build consensus among workers.

[17] Appendix Figure A.2 shows how Presidents and LLs allocate their time differently among various union-related activities. Relative to presidents, LLs spend significantly less of their time communicating with management and meeting with other presidents and significantly more of their time coordinating members, motivating members, and recruiting new members to the union. Panel D of Table A.3 and Appendix Figure A.3 also show that workers seek out LLs for advice and social activities more than they seek out presidents.

Given that LLs are liaisons between elected union leaders (the union presidents and executive committee) and workers, their role entails transmitting information both up and down the chain of command. Political theories of democracy indicate two hypotheses regarding their objectives in the group discussions. One is that the unions aim to reflect the will of workers in the minimum wage negotiations and that LLs, some of whom aspire to hold an elected position in the union, will aim to build consensus around the median worker's view (*aggregating views*, as in Black (1958)).[18] Another is that the unions aim to set the minimum wage themselves and to align workers' views with their own and that line leaders will aim to build consensus around the unions' views (*aligning views*, as in Lenz (2012)). The unions' views may diverge from workers' for many reasons; for example, they may have better information about the economic trade-offs that higher minimum wages may entail or they may place more weight on the concern that a higher minimum wage may adversely impact non-union members because they aim to grow their membership. We do not take a stand on why workers' and the unions' views on the minimum wage may diverge. To assess these possibilities, we test for convergence in workers' preferences and expectations for the minimum wage to those of the median worker and to those of the union; we elaborate on our measures below. We then turn to the question of *how* leaders may build consensus.

5.1 Experimental design

This experiment took place in Session 2, after workers completed the baseline survey. We stratified workers by their factory and union membership and randomly assigned them to one of three types of discussion groups. In the first type of group, we randomly assigned a leader from the same factory to participate in the group's discussion. In the second type, motivated by the possibility that leaders primarily influence workers through their social ties with them (Bandiera et al., 2009), we randomly assigned a leader from a different factory, with whom workers are very unlikely to have social ties, to participate in the group's discussion.[19] The final type of group, with no leader participation, is the control condition.

We report balance tests across the three experimental arms in Appendix Table A.5. While the treatment and control arms are balanced across nearly all tests, there are a few statistical imbalances. When available, we present treatment effects with controls for the baseline value of the outcome variable. We also present results controlling for covariates selected using the post double selection (PDS) lasso (Belloni, Chernozhukov and Hansen,

[18]We asked workers and LLs about their aspirations to become elected union leaders; 13% of workers hold this aspiration, and LLs are 8.4 pp more likely to hold this aspiration (p-value of diff. < 0.05).

[19]We support this assumption with evidence that workers are less likely to have social ties with leaders from other factories in the next subsection.

2014), which allows us to test our results' robustness to the possibility that chance imbalances between the treatment and control groups influence our estimates.

When forming the groups, we randomized the size of discussion groups (including the leaders in the count) to be either 5 or 6 persons; hence, group size is held constant across treatment arms. The field team implemented the randomized assignment during the worker survey. At the end of the worker survey, they provided workers and leaders with cards that identified their discussion group number. Thus, workers and leaders arrived in the group discussion room concurrently. We did not provide leaders with any specific identification or instructions to lead the discussion, hence allowing for naturally-occurring behavior.

The field team explained to discussion groups that they would discuss the minimum wage. It provided a brief background of the minimum wage-setting process and its history in Myanmar and then explained that the CTUM would prepare a proposal for the government on the minimum wage increase and that the CTUM wanted to gather workers' expectations and opinions to help determine its proposal. Finally, the team told groups that they would have 30 minutes to discuss and requested participants to turn off their cell phones (barring a specific need to keep them on). They also provided the prompt to discussion groups in writing. The prompt's full text is displayed in Appendix B.2.

Discussion groups were provided with reporting templates and scrap paper to summarize their groups' opinions, which were placed in the center of the discussion group. At the end of the 30 minutes, groups had 5 minutes to summarize their discussion using the templates. The field team informed groups that the discussion summaries would be shared with the CTUM to help it to prepare its minimum wage proposal. At the end of the group discussion session, workers and leaders participated in a follow-up survey about their group's discussion and about their preferences and beliefs about the minimum wage. We recorded and transcribed the audio from the discussions.[20]

5.2 Results

5.2.1 Main Results

We estimate the effects of leaders' participation on convergence to (1) the preferred minimum wage level and (2) the expected minimum wage level of the median worker in the group as well as of the union. To measure the union's preferred (expected) level, we take the median of the preferred (expected) minimum wage among all union leaders within the factory, that is the president, executive committee and line leaders, measured during the baseline leader

[20]Due to an implementation error in the field, discussions for 35 groups were not recorded; consequently, we have transcripts for 167 out of 202 groups.

survey. In both cases, we measure the absolute deviation in each worker's view from the median worker's (union leader's) before and after the group discussion. For the external leader arm, we use the median of the external factory's union leaders.

We test the effect of having a leader and the effect of having a leader from one's own factory versus from a different factory, by estimating:

$$Y_i = \alpha_0 + \alpha_1 Leader_i + \mathbf{X}_i'\beta + \epsilon_i \tag{2}$$

$$Y_i = \alpha_0 + \alpha_1 OwnLeader_i + \alpha_2 ExternalLeader_i + \mathbf{X}_i'\beta + \epsilon_i \tag{3}$$

where Y_i is the outcome for worker i. $Leader_i$ is an indicator for having a leader participate in your group's discussion; X_i is a vector of strata fixed effects and group size fixed effects; ϵ_i is the residual. Depending on the outcome variable, the analysis is done either at the worker-level or at the discussion group level. For individual-level regressions, we report standard errors clustered by group. For group-level regressions, we report robust standard errors. In equation 3, $OwnLeader_i$ is an indicator for having a leader from your own factory in your group, and $ExternalLeader_i$ is an indicator for having a leader from a different factory in your group. When available, we include a control for the baseline value of the dependent variable. We also present the results using the post double selection (PDS) lasso to select control variables (Belloni et al., 2014).[21]

Table 2 presents the results.[22] Panel A presents the main effect of having a leader participate, while Panel B presents the effects separately for internal and external leaders. Columns (1)-(4) report results for convergence to the median worker's views, and (5)-(8) report results for convergence to the union leaders' views. Beginning with the former, we are unable to reject the null of no convergence to the median worker's preferred (columns (1)-(2)) and expected minimum wage levels (columns (3)-(4)) in either panel. In contrast, leaders' participation causes workers' preferences for the minimum wage to converge to the union's preferred level (columns (5)-(6)). There is a 22% decrease in the average absolute deviation from the union's preferred view ($p<0.001$). Interestingly, this effect is not solely driven by union leaders from workers' own factory, although the effect is qualitatively larger for this group; Panel B shows that leaders from external factories induce convergence to their own union's preferred minimum wage. These results support the hypothesis that, while social ties may matter, they are not the only channel through which leaders influence

[21]The set of potential controls include all variables in Table A.3, as well as management attitude towards union membership, gender preferences for union president and leaders, and overlap in interests with union members, non-union members, and managers. We provide description of these variables in Appendix B.3.

[22]We lose two observations from the follow-up survey (two workers) due to a survey implementation error, hence the total number of observations is 914 instead of 916.

followers.[23] Turning to columns (5)-(6), there is no significant convergence in workers' beliefs to the union's expected level; the point estimates are negative, but they are small and not statistically significant. This is also true when we split by own versus external leader. To further support these results, Appendix Table A.6 shows that there is a 26% reduction in the dispersion of workers' preferred minimum wage levels measured using the within-discussion group standard deviation. There is no evidence of reduced dispersion in expected minimum wage levels using this measure.

These results are inconsistent with leaders primarily playing a role of aggregating workers' views by building consensus around the median worker's view. They are consistent with leaders primarily aligning workers' views with those of the union by building consensus around the union's preferred minimum wage level. The latter is compatible with sociological theories of leadership in social movements, which describe a key role for leaders to build consensus around "the world as it should be" among members (Ganz, 2010). It suggests that leaders need to convey information about the union's preferences – to make clear what the unions are fighting for – in order to mobilize workers to turn out in support of the CTUM's position; an idea we explore further in Section 7.

Why do leaders induce convergence in preferences but not beliefs? Appendix Figure A.4 offers one explanation. It plots the coefficient of variation within each factory in baseline preferences and beliefs and shows that workers, compared to leaders, exhibit a significantly larger variation in preferences but not in beliefs. This suggests that beliefs were more aligned to start with and there was less room for a change in views. Further, Appendix Figure A.2 ranks presidents' and line leaders' time spent on activities according to how presidents spend their time. Compared to presidents, line leaders spend much less time on tasks that may convey insider information about the minimum wage-setting process, such as meetings with management, meetings with leaders in other unions, and going to court. Consequently, the null result on convergence to the union's expected level can also be explained by their more specialized leadership role, which does not lead them to acquire information about the likely outcome of the minimum wage setting process.

[23] Table A.7 shows that workers are almost twice as likely to perceive the presence of a leader from their own factory compared to an external factory (p=0.000), consistent with workers being more likely to have ties with these leaders. Among workers who perceive the presence of a leader, in groups with a leader from the worker's own factory, 50% report having met the leader before, while workers in groups with a leader from an external factory are 31 pp less likely to report having met the leader before.

Table 2: Group Discussions: consensus-building

	Deviation from median worker in discussion group				Deviation from median union leader			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Preference		Belief		Preference		Belief	
Panel A: Leader								
Leader	-83.85	-83.85	142.5	142.5	-266.4**	-266.4***	-11.77	-11.77
	(116.4)	(113.8)	(93.61)	(91.57)	(103.2)	(100.9)	(74.02)	(72.41)
R-squared	0.211	0.186	0.251	0.197	0.330	0.320	0.342	0.311
Control Mean	991.637	991.637	404.697	404.697	1194.103	1194.103	654.399	654.399
Number of obs.	914	914	914	914	914	914	914	914
Panel B: Own versus External LL								
External Leader	3.099	3.099	179.0	179.0	-210.8	-210.8*	49.56	49.56
	(157.4)	(153.9)	(128.5)	(125.6)	(127.8)	(124.9)	(108.5)	(106.0)
Own Leader	-140.1	-140.1	119.0	119.0	-302.3**	-302.3**	-50.92	-50.92
	(136.3)	(133.2)	(107.4)	(105.0)	(120.9)	(118.2)	(80.67)	(78.87)
R-squared	0.213	0.188	0.252	0.200	0.331	0.321	0.344	0.314
Control Mean	991.637	991.637	404.697	404.697	1194.103	1194.103	654.399	654.399
Number of obs.	914	914	914	914	914	914	914	914
p-values								
External=Own:	0.422	0.410	0.671	0.664	0.513	0.503	0.379	0.367
PDS lasso selected controls	N	Y	N	Y	N	Y	N	Y

Notes. Unit of observation is worker. Probability weights used and standard errors clustered at the group level. In Col. 1-4, the dependent variables are the absolute value of the endline minimum wage preference/belief minus the workers' median wage preference/belief at the discussion group level at baseline. In Col. 5-8, the dependent variables are the absolute value of the endline minimum wage preference/belief minus the median of leaders' preferences and beliefs at baseline at the factory level. Stratification FEs included: Factory FEs x Union FEs. Controlling for group size FE. R-squared for columns that applied PDS lasso selected controls are estimated by the correlation between the observed outcome and the predicted outcome.

5.2.2 Mechanisms

In this section, we aim to shed light on the channels through which leaders achieve consensus around their union's preferred minimum wage level. Building on the results in Table 2 on leaders' aligning views, we first consider whether leaders provide information about the state of the world or payoffs that coordinates workers' views (Hermalin, 1998; Caillaud and Tirole, 2007; Dewan and Myatt, 2008). We then explore how leaders' participation affects the dynamics of the groups' discussion.

Next, we consider whether leaders influence workers through their personal traits, which may also affect their communication skills and charisma in the discussion (Dewan and Myatt, 2008; Hermalin, 2023; Antonakis et al., 2022).[24] Finally, we assess whether leaders' formal affiliation with their union or with the CTUM may be perceived by workers to endow them with authority to make decisions on workers' behalf (Aghion and Tirole, 1997).

Information. We provide evidence that leaders' speech in the group discussions provides information that helps align workers' views with those of the union. We combine the transcript data with information on the group's first preferred (expected) minimum wage level entered in the group discussion reporting form. The transcripts do not include speakers' identities, but we asked the transcription company to identify whether there was (1) a confirmed leader, which is a group member who self-identified as a union leader; (2) a possible leader, which is a group member who was not a confirmed leader but who led the discussion and/or explained the questions and answers. Out of 47 (58) internal (external) leader groups, only 4 (1) had confirmed leaders. This is striking because especially for the external leader arm, it suggests that leaders are not directly introducing their formal role in the union to yield influence. Among the remaining leader groups, nearly all, 41 internal/56 external, had a possible leader identified. Control groups were also coded in this way, and 24 of 62 groups had possible leaders.[25]

Among leader groups, we examine whether the speaker who first mentions the first preferred (expected) minimum wage level entered in the group discussion reporting form is coded as a possible or a confirmed leader or as a worker.[26] The share of leaders in groups is

[24] As discussed in Section 4, leaders score higher than workers on extroversion, the psychological trait that has been found to be positively correlated with charisma (Crant and Bateman, 2000).

[25] As one of our goals was to separately identify workers' speech and union leaders' speech, the transcription company was aware of groups' treatment arm. Consequently, while the large difference in the presence of possible leaders between treatment and control groups is consistent with leaders behaving differently from workers, we cannot rule out that the transcribers were influenced by the knowledge of groups' treatment status. For this reason, we do not analyze this variable as an outcome.

[26] In this analysis, we focus on subsamples of discussion groups that have leaders and that satisfy the following criteria: 1) the group reported a preferred (expected) minimum wage level in the group discussion

19.4%. If the first person to introduce the wage level is random, then it should be a possible leader 19.4% of the time. We find that leaders mention the preferred minimum wage first in 39.2% of groups and the expected minimum wage first in 38.4%. In both cases, we reject that leaders and workers are equally likely to mention the minimum wage levels first ($p<0.000$). Evidently, leaders play a role in introducing what are either influential or preferred values of the minimum wage, in line with the results in Table 2 on leaders' aligning views.

We also explore how leader groups' responses to the question prompts on the possible benefits, harms, and heterogeneous effects associated with increasing the minimum wage compare to those of non-leader groups. If leaders introduce new information into the discussion, we expect the content and substance of groups' responses to the prompts to improve relative to non-leader groups. Unfortunately, given the questions were very specific, the textual content of groups' responses is so similar that it is not possible to detect differences across treatment arms; Appendix Figure A.5 displays the most frequent bi- and tri-gram word combinations in the group discussion form responses. However, we test for differences in the number of words input for each prompt and find that leader groups input 23.5% longer responses (Appendix Table A.8, column (1)).[27] Although we cannot show that the more substantive responses are due to information introduced by the leader, this possibility seems most consistent with our other evidence.

Discussion group activity. We examine how the presence of a leader affects the level of activity in the group discussion and workers' actual and perceived engagement. We measure engagement in the discussion in three ways. First, we use the total amount of speech and the amount of speech by workers in the discussion transcripts.[28]

Second, we use the field team's assessment of how active a group discussion is, which we measure using a group-level summary index. Finally, we use several questions about workers' enjoyment of and engagement in the group discussion from the follow-up survey to construct a worker-level summary index of engagement. We construct indexes following Anderson (2008); Appendix B.3 lists the variables included in each index.[29]

reporting form, 2) at least one person mentioned a preferred (expected) minimum wage level in the transcript, and 3) a possible or a confirmed leader was identified in the transcript. 74 (86) groups meet these criteria for preferred (expected) minimum wages.

[27]The percentage variation is 23.5=[exp(0.211) - 1] x 100. Control groups, on average, input between 12-14 words per prompt.

[28]The discussions were capped at 30 minutes plus 5 minutes for writing down answers, so this analysis should be interpreted as the amount of speech holding fixed the maximum discussion duration.

[29]Anderson (2008)'s method entails calculating the average of variables that have each been oriented to be unidirectional, standardized, and weighted by the sum of its row in the inverse variance-covariance matrix calculated using the control group. The weighting maximizes the amount of information captured by the index, as it places less weight on highly correlated outcomes and more on less correlated ones.

Table 3 reports the results. Columns (1)-(2) show that groups with leaders discuss weakly less than groups without leaders; although not statistically significant, their discussions are about 15% shorter; the decline is driven by leaders from workers' own factory (Panel B).[30] Columns (3)-(4) show that workers speak significantly less when a leader is present.[31] This analysis should be interpreted as suggestive, though, as it is possible that speech is misattributed between leaders and workers when coded by the data collection company. The decrease in average worker speech is relatively larger than the decrease in total speech, suggesting that leaders speak more than workers. The fact that leader speech crowds out, as opposed to crowds in, worker speech is consistent with the finding that leaders align instead of aggregate views.

Next, columns (5)-(6) show that the field team rates groups with leaders 0.23 of a standard deviation (sd) higher in terms of having an active discussion ($p<0.01$). The estimated effects for leaders from workers' own factory and from an external factory are similar. Appendix Table A.9 unpacks this result; it shows that groups with leaders have a 6.8 pp lower share of members distracted (control mean is 20.3%) and are 17.3 and 18.4 pp more likely to have a member summarizing opinions and taking notes, respectively, relative to control means of 26.4% and 65.4%. There is no difference in whether a member is actively facilitating the discussion or asking workers' opinions.

Finally, columns (7)-(8) of Table 3 show that leaders' participation increases workers' self-reported engagement by about 0.11 of a sd ($p<0.01$).[32] The estimated effects for leaders from workers' own factory and from an external factory are similar. To provide greater insight into what aspects of worker engagement leaders are influencing, we divide the engagement index into three sub-indexes: enjoyment, achievement of consensus, and participation (Appendix B.3 lists the variables in each sub-index). Appendix Table A.10 presents the results. Columns (1) and (7) show that leaders have small, positive effects on workers' enjoyment ($p=0.067$) and self-reported participation in the discussion ($p=0.203$). The largest effect, by far, is on workers' perception that the group achieved agreement on the preferred and expected minimum wage levels; leaders' participation increases self-reported consensus

[30] The dependent variables are estimated in logs, so the percentage variation is 15.1=[exp(0.141) - 1] x 100.

[31] To prevent a mechanical negative relationship between leaders' presence and workers' speech, we control for the fixed effects of the number of workers, subtracting 1 from the total group size for treatment groups with confirmed/possible leaders.

[32] In interpreting these results, it is helpful to recall that we did not inform workers of the presence of a leader in their group. In the follow-up survey, we asked workers whether a union leader participated in the group discussion. In Appendix Table A.7, we test whether workers in groups with union leaders were more likely to perceive a union leader's presence. We find that workers with leaders in their group were about three times as likely to report the presence of a leader (41 pp increase on a control mean of 22 pp). 74% of workers in internal leader groups detected a leader in their group, while 44% of workers in external leader groups detected a leader in their group.

by 0.3 sd ($p \approx 0.000$) (column 4). In sum, the evidence from the transcripts, the field teams' observations, and workers' self-reports paints a picture of leaders actively engaging and behaving in ways that build consensus around their unions' preferred minimum wage levels, rather than facilitating the discussion to enable workers to communicate more and to reach a consensus. This is consistent with the results in Table 2 on leaders' aligning views. Moreover, the findings that groups with leaders have less and better-organized discussions suggest that these groups may be more efficient in completing the discussion exercise, which would be consistent with Englmaier et al. (2022)'s finding that leaders reduce the amount of time required for teams to complete non-routine tasks.

Table 3: Group Discussions: consensus-building, engagement-related mechanisms

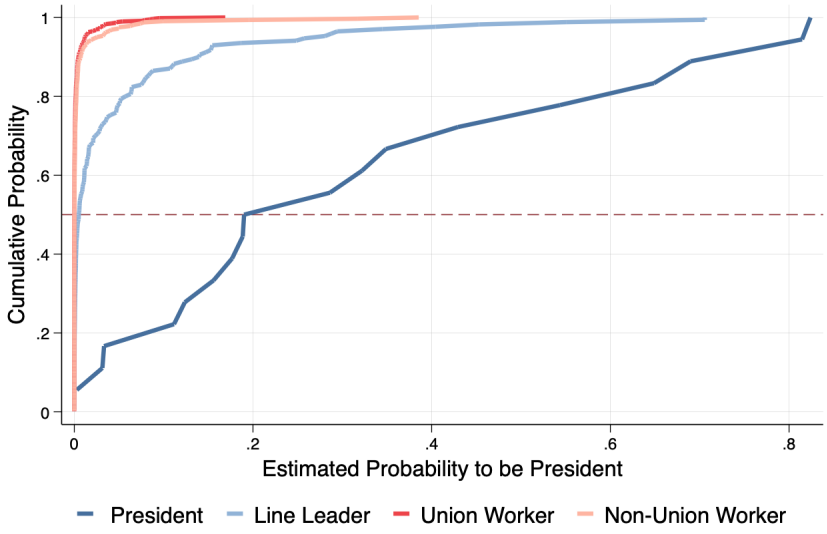
	Log(Total Word Count)		Log(Likely Worker Word Count)		Observed Group Activity		Self-reported Engagement	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Leader								
Leader	-0.141	-0.141	-0.401***	-0.401***	0.234***	0.234***	0.125***	0.114***
	(0.0946)	(0.0891)	(0.125)	(0.117)	(0.0809)	(0.0768)	(0.0438)	(0.0408)
R-squared	0.235	0.229	0.379	0.368	0.352	0.345	0.076	0.126
Panel B: Own versus External LL								
Own Leader	-0.266**	-0.266**	-0.531***	-0.531***	0.265***	0.265***	0.138***	0.123***
	(0.112)	(0.105)	(0.137)	(0.129)	(0.0882)	(0.0835)	(0.0471)	(0.0439)
External Leader	0.0322	0.0322	-0.173	-0.173	0.186*	0.186*	0.106*	0.100*
	(0.111)	(0.104)	(0.140)	(0.132)	(0.111)	(0.105)	(0.0614)	(0.0556)
R-squared	0.271	0.259	0.413	0.406	0.355	0.352	0.077	0.126
Control Mean	1002.175	1002.175	872.674	872.674	-0.086	-0.090	-0.089	-0.039
Number of obs.	167	167	167	167	202	202	914	914
p-values								
Own Leader = External Leader	0.015	0.008	0.010	0.005	0.483	0.457	0.605	0.674
PDS lasso selected controls	N	Y	N	Y	N	Y	N	Y

Notes. Unit of observation is discussion group but in Cols. 7 and 8, where it is worker. Probability weights and robust standard errors used (for Cols. 7 and 8 they are clustered at the group level). Cols. 1-6 control for Factory FEs, and Cols. 7 and 8 control for Factory x Union FEs. Columns (1)-(2) and (5)-(8) also control for size of discussion group. The number of possible workers is systematically lower in Leader groups because leaders are more likely to be identified in these groups. This mechanically reduces the number of words by possible workers in control groups. Therefore, in columns (3)-(4), we control for the fixed effects of the number of possible workers. Control mean shows the average number of words in control group before taking a logarithm (Cols 1-4). Dependent variables are: *Log(Total Word Count)*, the number of words spoken by the group members; *Log(Likely Worker Word Count)*, the number of words spoken by possible workers (= group members who are not identified as a confirmed/possible leader), and *Self-reported Engagement* and *Observed Group Activity* are index variables constructed following the methodology from Anderson (2008). R-squared for columns that applied PDS lasso selected controls are estimated by the correlation between the observed outcome and the predicted outcome.

Leaders' traits and charisma. In Section 4, we show that union presidents and line leaders are systematically different from workers in terms of their traits. By revealed preference, presidents have traits that union members identify as important for their ability to lead. This observation motivates us to consider LLs' resemblance to presidents and whether this

resemblance matters for leaders' efficacy. Figure 3 shows the cumulative distributions of the predicted probabilities of LLs and workers being similar to presidents using a probit model with demographic variables, personality metrics, and psychological metrics. The horizontal dotted line at 0.5 indicates that while LLs in the bottom half of the similarity distribution are indistinguishable from workers, LLs in the top half of the distribution are distinct from workers and more closely resemble presidents.

Figure 3: Workers' and line leaders' similarity to presidents



Notes. This figure shows the cumulative distribution of the probability of a worker being a president estimated by a probit model with demographic controls (gender, age, education, migrant (0/1), months in factory/sector), personality metrics (extraversion, agreeableness, conscientionsness, neuroticism, openness) and psychological metrics (raven score, grit, altruism, choice in life).

We use the predicted similarity to the president reported in Figure 3 as a measure of leader quality.[33] LLs' predicted similarity to the president is positively correlated with an index comprised of several baseline survey questions that measure LLs' effort for the union's activities (coeff. $= 0.312$; p-value < 0.001). It is also positively correlated with LLs' aspirations to become an elected union leader (coeff. $= 0.172$; p-value < 0.05). It is reassuring that our measure of LLs' similarity to the president based on their personal traits strongly correlates with revealed preference measures of LLs' engagement in behaviors and holding of aspirations that position them to advance up the union's hierarchy.

Before examining HTEs by leader similarity, we verify that high- and low-similarity

[33]In our analysis, we construct a binary indicator for whether a LL is above the median in their predicted similarity to the president.

leaders in the same factory have the same information about their union's preferred and expected minimum wage levels and are similar in terms of their social ties with workers.[34] Finally, by focusing on leaders at the same tier of their union's hierarchy, we ensure that high- and low-similarity leaders have the same formal role in their unions.

To begin, we test whether high- and low-similarity leaders behave differently in the discussion, as measured by the research team. Appendix Table A.11 Panel C shows that high-similarity leaders are rated significantly higher in leadership behaviors almost across the board.[35] Hence, our similarity measure based on individuals' traits is predictive of their real-world behaviors. Within factory (Panel B), high-similarity leaders also outperform low-similarity leaders on all measures, although the differences are slightly smaller, and the two measures lose statistical significance. Consistent with high-similarity leaders taking a more active role in the discussion, they are also more likely to be the first speaker to introduce the preferred minimum wage level that appears in the group discussion form (44% compared to 33%), although not for the expected level (40% compared to 37%).

Having established that high-similarity leaders exhibit greater leadership and more actively introduce information about the minimum wage, we test for a role for leader similarity by comparing the effects of high versus low-similarity leaders on convergence to the union's views. High-similarity leaders decrease the deviation from the union's preferred minimum wage level by about 26% compared to about 14% for low-similarity leaders (p-value of diff=0.287, Panel A of Appendix Table A.12). The effect on the "active group" index is also driven by groups with high-similarity leaders (p-value of diff=0.334, Appendix Table A.10, column 12). Interestingly, both types of leaders increase workers' self-reported achievement of consensus, but only high-similarity leaders increase self-reported participation (column (9), Appendix Table A.10). The transcripts also reveal that high-similarity leaders crowd out workers' speech significantly less than low-similarity leaders (column (11)). High-similarity leaders seem to achieve the same or greater alignment with the union's views without trading off workers' participation to the extent that low-similarity leaders do.

[34] In terms of information, Appendix Figure A.6 provides evidence in favor of high- and low-similarity leaders having the same information about their union's preferred and expected minimum wage levels. It plots the average baseline views of high- and low-similarity leaders within the same factory. The points are clustered around the 45-degree line in both subfigures, illustrating that both types hold similar views. High- and low-similarity leaders both also have high rates of engagement and interaction with their union. For example, both high- and low-similarity leaders report attending around 9 meetings in the previous 4 months (p-value of diff=0.818). And while high-similarity leaders report meeting with the union president/secretary/treasurer more often, low-similarity leaders also report meeting with them often (6/5/4 times, respectively). For social ties, the correlation between the similarity measure and the number of times leaders report socializing with union members outside of union activities in the previous 4 months is 0.013.

[35] Our identification strategy relies on within-factory variation, but our measure of leader similarity is absolute; as such, we compare high- and low-similarity leaders' behavior with and without factory FE.

Formal role: The leaders whom we study have no formal authority or responsibility in the context of the group discussion experiment, but it is possible that their affiliation with their union or with the CTUM plays a role in our explaining our results. The results suggest, however, that at a minimum, other mechanisms are also important. For example, we find that high-similarity leaders have qualitatively and in some cases statistically larger effects compared to low-similarity leaders, despite having the same formal role in the union (and despite workers being significantly more likely to perceive the presence of a low-similarity union leader, see Table A.7 column (3)). Further, we might expect that union leaders' formal role might make them more influential on members of their organization. Appendix Table A.12 presents HTEs by union affiliation; the alignment results are qualitatively larger for union members, but we cannot reject that the effects are the same for non-union members ($p = 0.505$). Finally, the transcripts show that leaders rarely invoke their formal authority in the discussions.

5.2.3 Placebo and robustness tests

We conducted a placebo test and several robustness tests for the results. We summarize the findings of these tests here and provide a thorough discussion of them in Appendix C. In our placebo test, we identify "placebo leaders" in control groups who resemble actual leaders. We test whether there is greater convergence to the real leader's view in treatment groups compared to the placebo leader's view in control groups, and we find that there is. In our robustness tests, we show that the results are similar when using the mean of workers' and leaders' views. We show that leaders have effects even conditional on the predicted leader similarity of the workers in their discussion group and that they hold when controlling for the leader or placebo leader similarity. We also show that the results hold if we do not use probability weights in the regressions. As leaders are somewhat more likely than workers to be men (12.9% compared to 3.3%), which is an observable characteristic and affects the group's gender composition, we show that the results are robust to controlling for groups' gender composition. Finally, we provide robustness and placebo tests for our results on leader similarity that support our interpretation that leaders' personal traits matter for their efficacy.

6 Mobilization experiment

Once a social movement achieves consensus around common objectives and tactics, it must coordinate its members' collective actions to accomplish these goals. In the CTUM's case,

once it built consensus around the preferred minimum wage level, it needed to mobilize workers to turn out in support of its position. We next examine leaders' role in this process.

The theoretical literature on leadership identifies three leading channels through which leaders may mobilize workers. First, leaders may motivate them. In our setting, the national minimum wage policy-setting process would result in uncertain public benefits, but it was common to workers' shared experience that their wages crucially affected their livelihoods. As such, a key role for leaders may be to emotionally appeal to workers to exert effort to influence this process (Ganz, 2010; Hermalin, 2023). Second, workers' decision to participate in collective action around the minimum wage has the features of a coordination game among individuals with incomplete information, which often has multiple equilibria. In this sense, a key role for leaders may be to select and to communicate the equilibrium to be played (Dewan and Myatt, 2008; Akerlof and Holden, 2016). Finally, workers may be aware that leaders will know whether they turn out, which may influence them through two distinct channels. First, leaders may act as enforcers, monitoring workers' behavior and determining and enforcing sanctions on free-riders (sanctioning channel, Hermalin (2012). Leaders may also reward good behavior, so workers who aim to increase their involvement or to pursue leadership positions in the union may want to signal their type to the leader (Ganz (2010)).

We designed an experiment in which leaders attempt to increase individual workers' participation in collective action through these different channels. We find that leaders do *not* simply motivate workers to participate. Instead, leaders appear to play an important role in coordinating workers' actions on an equilibrium that provides higher participation. When workers are told leaders will observe their decision, participation increases. The evidence favors a signaling channel as opposed to a sanctioning one: workers who aim to positively signal their type turnout when they know that the leader will observe their decision.

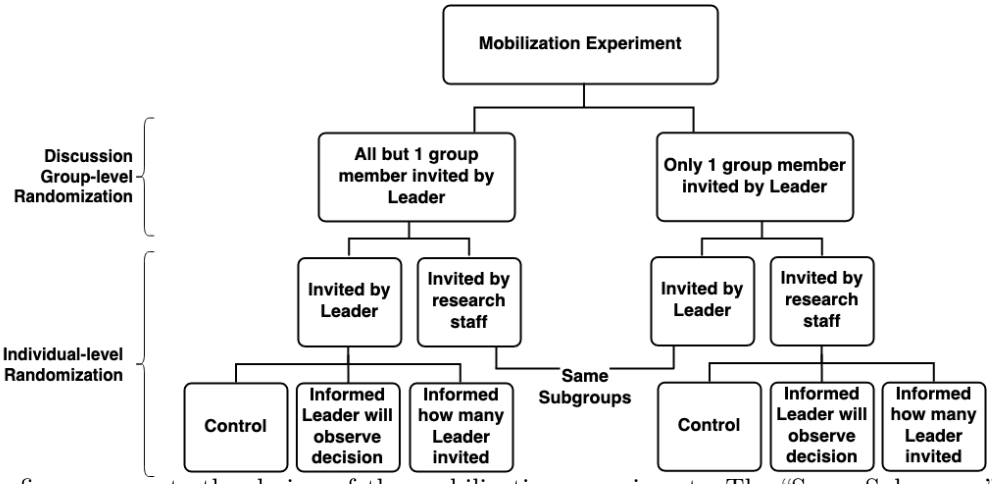
6.1 Experimental design

We aimed to design the experiment to test the channels through which leaders may influence workers' willingness to participate in a high-stakes, real-world collective action to influence the choice of the minimum wage. We faced the empirical challenge, though, that experimentally mobilizing workers to participate in street demonstrations around the minimum wage would subject workers to undue risk. Consequently, we designed the experiment to mirror the incentives that workers face when deciding whether to participate in these types of collective actions while avoiding many of the associated risks.

The experiment entailed three main ingredients. The first ingredient is a costly action: garment workers have a 6-day workweek and often work overtime on the seventh day. Par-

ticipants in the session had agreed to participate in a half-day session on their one weekend day, but in the experiment, we invited them to participate in an *unannounced* cost-of-living survey that required them to stay for the rest of the afternoon. Second, there is a common, public good cause, which is the cost of living survey to inform the CTUM's policy position. Third, we create a strategic complementarity in attendance at the group level by announcing that, for each discussion group where all of its members attend the survey, the research team would donate 8000 kyats (about $5.60) to the CTUM Skills Training Centre.[36] We induced this strategic complementarity to increase the incentives for coordination among workers.

Figure 4: Mobilization Experiment



Notes. This figure presents the design of the mobilization experiment. The "Same Subgroups" branches indicate that the group of workers assigned to the conditions with these branches were assigned to the same subgroups as the conditions with the sub-branches displayed; i.e., to the "Control," "Informed leader will observe decision," or the "Informed how many leader invited" sub-conditions.

The experiment's design follows its theoretical foundations. It entailed a two-level randomization, illustrated in Figure 4. First, we stratified discussion groups by factory and consensus-building treatment arm and then randomized them to high or to low mobilization by the leader. In the former, all but one group member were invited by a leader from the group's factory. In the latter, only one group member was invited by a leader from the group's factory. Within group, we experimentally varied exposure to the three potential leadership channels:

1. **Motivation:** We varied whether workers were invited by a leader versus by the research staff. We provided leaders and research staff with the same invitation script.

2. **Coordination:** We varied whether workers were informed about how many group

[36]The CTUM Skills Training Centre serves all garment workers, not only union members.

members were motivated by the leader.

3. **Observation:** We varied whether workers were informed that the leader would observe their decision to participate.

The experiment was implemented as follows: After workers completed the group discussion and follow-up survey, we provided them with lunch. The field team told workers that they would receive their participation payment after lunch, at which time the session would end and a bus would transport workers back to their factory (the meeting point for workers' sharing transportation).

During lunch, the field team prepared the final experiment. At the end of lunch, the field team informed workers that they would be called into a separate room to sign for their payment and provided them with two paper cards: One that included their number in the order in which they would receive the payment, starting from 1 in each discussion group, and one that was a color-code corresponding to their treatment assignment. Workers were not informed about the meaning of the color coding. The field team also requested that workers turn off their cell phones, barring a critical need to keep it on. In a separate room, the field team informed leaders about the surprise survey session. Among leaders who could stay, the field team randomly assigned two of them to the room where leaders invited workers to stay for the afternoon session and provided them with the invitation script. The rest of the leaders were sent to the room where the survey would take place.

After lunch, the field team called workers by their numbers. When workers entered the payment room, they went to the desk corresponding to the color of their card. Each desk was staffed with a member of the field team, and in the leader motivation treatment arms, a leader. The field team member provided the worker with an envelope containing their payment, the worker signed, and the invitation for the afternoon session corresponding to the desk's treatment arm was made. Appendix Section B.4 provides the scripts for each invitation treatment arm.[37]

The research team carefully planned workers' movement from the discussion room to the payment room and then either directly to the afternoon survey room (if they accepted the invitation) or to the bus (if they did not). We also ensured that there were small amounts of buffer time between workers. These aspects of the design were important in order to prevent information spillovers across workers and were carefully enforced. While they increased the amount of time required to issue the payments, the field team quickly became adept at implementing the procedures. Unfortunately, for the first survey session, which included two factories, the field team ran out of time to complete this experiment. For this reason, the

[37]Note that our implementation ensured that we did not deceive participants.

number of observations drops to 790, resulting in a loss of statistical power.

We report the balance table across the experimental arms in Appendix Table A.13. As our implementation did not involve deception, this resulted in some treatment arms having a lower number of workers as we had to respect the design constraints of the motivation and coordination arms; in particular, in the coordination arm workers were informed about how many workers in their discussion group had been motivated by the leader (i.e. how many were in the motivation arm).[38]

6.2 Results

First, we test for evidence of leaders as motivators and/or as coordinators, by estimating the following model:

$$Y_i = \alpha_0 + \alpha_1 Leader_i + \alpha_2 HighCoord_i + \alpha_3 LowCoord_i + \mathbf{X}_i'\beta + \epsilon_i \tag{4}$$

where Y_i is attendance at the afternoon session for worker i. $Leader_i$ is an indicator for being motivated by the leader, $HighCoord_i$ is an indicator for being informed that you are in a high coordination group, and $LowCoord_i$ is an indicator for being told that you are in a low coordination group. X_i is a vector of strata fixed effects (factory x discussion group) and treatment assignment for the social pressure arm, which we abstract from for the purpose of presentation. Finally, ϵ_i is the residual. We report robust standard errors. As with the previous experiment, we take the same approach to estimating the results using the post double selection (PDS) lasso to select control variables.[39] If a key role for leaders in our setting is to motivate their followers, then we should find that workers invited to participate in the afternoon session by the leader are more likely to attend the session ($\alpha_1 > 0$). If a key role for leaders in our setting is to coordinate their followers, then we should find that workers informed that they are in a high-coordination leader motivation group should be more likely to attend the session compared to those who are informed that they are in a low-coordination leader motivation group ($\alpha_2 > \alpha_3$).

We next test whether motivation and coordination by the leader are complements or substitutes. We estimate the following regression:

[38]Due to our smaller planned sample sizes for each treatment arm, compared to the consensus building experiment, our inability to complete data collection due to COVID-19 is more consequential in this experiment in terms of reducing our statistical power to detect effects.

[39]Potential controls include all variables in Table A.3, as well as management attitude towards union membership, gender preferences for union president and union leaders, and overlap in interests with union members, non-union members and managers. We provide a description of these variables in Appendix B.3.

$$Y_i = \alpha_0 + \alpha_1 Leader_i + \alpha_2 Leader_i * HighCoord_i + \alpha_3 NoLeader_i * HighCoord_i + \alpha_4 Leader * LowCoord_i + \alpha_5 NoLeader_i * LowCoord_i + \mathbf{X}_i'\beta + \epsilon_i \quad (5)$$

where $NoLeader_i$ is an indicator for being invited by the research team (no leader motivation). X_i is a vector of strata fixed effects (factory x discussion group) and treatment assignment for the social pressure arm interacted with $NoLeader_i$ and with $Leader_i$, which we abstract from for the purpose of presentation.

Table 4 presents the results. In all columns, the reference group is workers who are invited by the research staff and are not provided with coordination or social pressure information. Columns (1)-(2) show that motivation by the leader does not affect attendance at the afternoon session; the estimated effect is close to zero and actually slightly negative; in this setting, we do not find evidence of a role for motivation through charismatic leadership. That said, we are pooling all leaders, and it is possible that our main effects mask heterogeneity by leader type. Unfortunately, we cannot explore this possibility, as we do not observe which leader is responsible for inviting a given worker. In any case, the scope for heterogeneity analysis would be limited in this experiment, as there were only two LLs per factory inviting workers. Alternatively, it may be the case that providing leaders with a set script to invite workers narrowed the scope of charismatic leadership.

In contrast, columns (1)-(2) show that high coordination by the leader substantially increases attendance compared to low coordination. Moving from being informed that the leader will invite one group member only to being informed that they will invite all but one group member increases attendance by 13 pp or 38% compared to the control group mean (p=0.093). Evidently, in our setting, leaders do not appear to play a key role as motivators but do appear to play an important coordinating role.

Turning to our test for complementarity or substitution effects, in columns (3)-(4), we see that the effects of moving from low to high coordination by the leader are qualitatively much larger for those who are also motivated by the leader: There is a 22 pp or 65% increase in attendance (p=0.047) compared to an increase of 13 pp or 38% (p=0.234) when not motivated. While motivation by the leader alone may not influence attendance, it does work as a complement to coordination in increasing turnout.

In Appendix Table A.14, we consider the possibility that the nature of a leader's influence may be general or may be specific to their organization by testing for heterogeneous treatment effects by a worker's union affiliation. Consistent with the results from the consensus-building experiment, we do not find strong evidence of organization-specific influence: the differences between union and non-union members are not statistically significant.

Table 4: Mobilization: motivation and coordination

	Attendance at afternoon survey session			
	(1)	(2)	(3)	(4)
	All		by Leader Invitation	
High Coord.	0.0790	0.0822		
	(0.0656)	(0.0582)		
Low Coord.	-0.0514	-0.0515		
	(0.0641)	(0.0563)		
Leader	-0.0135	-0.0136	0.0169	0.0313
	(0.0436)	(0.0384)	(0.0750)	(0.0654)
High Coord., No Leader			0.101	0.101
			(0.114)	(0.0997)
Low Coord., No Leader			-0.0170	-0.0246
			(0.0778)	(0.0668)
High Coord., Leader			0.0735	0.0523
			(0.0777)	(0.0661)
Low Coord., Leader			-0.178	-0.168*
			(0.112)	(0.101)
R-squared	0.332	0.311	0.334	0.329
Control Mean	0.341	0.341	0.341	0.341
Number of obs.	790	790	790	790
p-values				
Low Coord. = High Coord.	0.130	0.078		
No Leader, Low Coord. = High Coord.			0.332	0.234
Leader, Low Coord. = High Coord.			0.043	0.047
PDS lasso selected controls	N	Y	N	Y

Notes. Unit of observation is worker. Probability weights and robust standard errors used. Dependent variable is an indicator for whether worker attends the minimum wage survey. Stratification FEs are included: Factory FEs x Discussion Group FEs. *MDE* is *0.105* for *Invited by Leader*; *0.112* for *Invited by Leader x High Coord* and *Low Coord*; *0.169* for *Invited by Leader x Low Coord* and *High Coord*. MDE is determined from power calculations using planned sample size of 1792 workers, 358 discussion groups, 308 LL, and 28 unions, at a 10% significance level and 80% power. *PDS* indicates that post-double lasso control selection procedure is applied. R-squared for columns that applied PDS lasso selected controls are estimated by the correlation between the observed outcome and the predicted outcome.

We next analyze how being informed that a leader will observe their decision affects workers' attendance at the minimum wage survey in the afternoon. We estimate the following model:

$$Y_i = \alpha_0 + \alpha_1 SocialPressure_i + \mathbf{X}_i'\beta + \epsilon_i \quad (6)$$

where $SocialPressure_i$ is an indicator for being in the social pressure treatment arm. Now, $\mathbf{X}_i'$ is a vector of strata fixed effects and treatment assignments for the motivation and coordination arms.

As discussed above, we identify two potential mechanisms through which observation of the workers' decision by the leader may influence attendance: Leaders acting as judges, sanctioning workers who do not turn out, or workers perceiving that turning out sends a positive signal about their type to the leader. Depending on workers' priors, these mechanisms generate different effects. Under the sanctioning hypothesis, workers with higher priors about their group members' likelihood of attending the session should be more likely to attend when their decision is observed by the leader; in equation 7 below, $\alpha_2 < \alpha_1$. Under the signaling hypothesis, workers with lower priors should be more likely to attend; in this case, $\alpha_2 > \alpha_1$.

$$Y_i = \alpha_0 + \alpha_1 SocialPressure_i \times HighPrior_i + \alpha_2 SocialPressure_i \times LowPrior_i + \alpha_3 HighPrior_i + \mathbf{X}_i'\beta + \epsilon_i \quad (7)$$

As we did not directly measure workers' priors, we use a random forest algorithm to predict them using the control group's characteristics and attendance. We implement the random forest algorithm using the randomForest package in R, which is widely used and implements a standard algorithm. The list of variables includes demographics, personality, employment characteristics, union participation and views, baseline minimum wage views, group discussion mean self-reported engagement (leaving out worker's report) and worker's self-reported engagement, and other group-discussion-related variables. The complete list is in the Supplementary Materials. We use the control group as the training set. Once we have created the random forest model, we apply it to the rest of the sample in order to generate each worker's predicted likelihood of attendance.[40] We use these predicted likelihoods to construct, for each worker, the expected probability that all other workers in their group will attend the session. We then partition the sample at the median into high- and low-predicted priors.

Table 5 presents the results. Columns (1)-(2) show that informing workers that the leader will observe their decision increases attendance by 4.7 pp or about 14% (not statistically significant). Columns (3)-(4) test whether the effect is heterogeneous by union membership.

[40] We grow a forest with 250,000 trees; we use the default settings for other parameters, such as the number of variables to randomly sample at each split for growing trees. We stratify the random sampling of control workers by factory.

As discussed above, we hypothesize that the effects should be larger for union members under both potential channels. Indeed, column (4) shows the effect is entirely driven by union members, for whom the effect is a 20% increase in attendance, while for non-union members, it is small and actually negative. Due to power limitations, however, we are unable to reject that these effects are the same (p=0.196).

Table 5: Mobilization: social pressure

	Base		Cov. = Union		Cov. = High Prior	
	(1)	(2)	(3)	(4)	(5)	(6)
Social Pressure	0.0467	0.0467				
	(0.0456)	(0.0401)				
Social Pressure, Cov=1			0.0750	0.0688	-0.0290	-0.0135
			(0.0566)	(0.0495)	(0.0383)	(0.0359)
Social Pressure, Cov=0			-0.0227	-0.0362	0.111***	0.110***
			(0.0759)	(0.0646)	(0.0375)	(0.0381)
R-squared	0.332	0.311	0.336	0.335	0.347	0.328
Control Mean	0.341	0.341	0.341	0.341	0.341	0.341
Number of obs.	790	790	790	790	790	790
p-values						
Social Pressure (Cov=0) = (Cov=1)			0.302	0.196	0.008	0.017
PDS lasso selected controls	N	Y	N	Y	N	Y

Notes. Unit of observation is worker. Probability weights used. Robust standard errors in Columns 1-2 and bootstrap standard errors in Columns 3-4. Dependent variable is an indicator for whether worker attends the minimum wage survey. Stratification FEs are included: Factory FEs x Discussion Group FEs. The *MDE* for Social Pressure is *0.105*. MDE is determined from power calculations using planned sample size of 1792 workers, 358 discussion groups, 308 LL, and 28 unions, at a 10% significance level and 80% power. *PDS* indicates that post-double lasso control selection procedure is applied. R-squared for columns that applied PDS lasso selected controls are estimated by the correlation between the observed outcome and the predicted outcome.

Turning to the potential roles of sanctioning versus signaling, columns (5)-(6) present results for workers with high and low priors, respectively. Among workers with above-median priors about their groupmates' likelihood of attendance, there is no effect, which suggests that sanctioning is not the key channel. In contrast, among workers with below median priors, being told that a leader will observe their decision increases attendance by 11. pp or 32%; there is strong evidence in favor of a signaling mechanism in which workers aim to signal their type to the leader in order to increase their prestige or status with the leader.

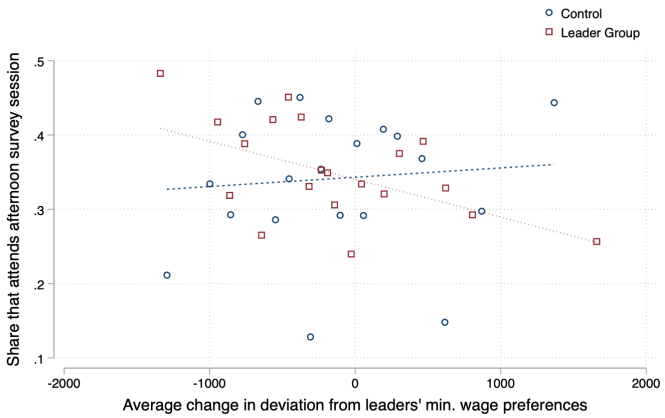
Finally, in columns (7)-(8) of Appendix Table A.14, we further explore the social signaling mechanism. Based on the theory, we expect that the effect of being observed by a leader is strongest for union members with low priors. Indeed, we find that the effect of social pressure is entirely driven by this group (+16 pp), while there is no effect on non-union members with low priors (p-val of difference <0.05).

7 Consensus-building & Mobilization

We have shown that leaders coordinate workers' views around the unions' preferred minimum wage level, i.e., build consensus. We have also shown that leaders coordinate workers towards higher participation, i.e., mobilize workers. In this section, we explore the potentially important link between coordinating views and coordinating collective actions in the context of social movements. In our setting, may conveying the unions' preferences – making clear what the unions are fighting for – and building consensus around these preferences matter for leaders' ability to mobilize workers?

Figure 5 explores the correlation between consensus building and mobilization across our two experimental designs. The figure reports a binned scatterplot of the correlation between the average group-level change in the deviation between workers' view and the union's view and the share of the group that attends the announced afternoon session for the CTUM's cost of living survey.

Figure 5: Average convergence to union minimum wage preference & share mobilized



Notes. Both variables are residualized by factory and group size fixed effects, and the mean of each variable has been added back prior to plotting. The figures are binned scatterplots with group weights applied.

We find that, among groups that were assigned a leader, there is a positive correlation between consensus building achieved in the group discussion in the first experiment and workers' mobilization in the second experiment. Note that positive values for the deviation variable (x-axis) indicate *less* convergence. Among groups that have leaders, mobilization is increasing in consensus building (p=0.077). For groups without leaders, as would be expected, there is no correlation between convergence and attendance (p=0.737).[41] The plot indicates that discussion groups with higher convergence to the leaders' views also experience

[41] There is no correlation with convergence in beliefs, consistent with the experimental results.

higher attendance at the survey session. But, most notably, this pattern only holds for groups that were exposed to a leader during the discussion, while no such evidence is detected in control groups. Albeit suggestive, this striking pattern suggests that consensus-building may play an important role in mobilizing individuals within social movements.

In addition, Appendix Table A.15 provides supporting evidence that exposure to a leader during the group discussions influences workers' participation. In the mobilization experiment, there is a control group that is *not* mobilized by a leader to attend the afternoon session. We use workers in this group for this analysis. While our small sample size limits statistical power, we see that workers who are exposed to a leader during the group discussion are 11 pps more likely to accept the invitation. The effect is large compared to the control group mean, a 33% increase. The effect is similar for leaders from one's own versus an external factory while high-similarity leaders have almost double the effect of low-similarity leaders (although we cannot reject the null of equality).

While these are exploratory exercises, the evidence supports the interpretation that achieving consensus by aligning followers' preferences with those of the movement is instrumental for mobilization. We think that further examining the potential for a *causal* interpretation of the link between alignment of views and mobilization in the context of social movements would be an especially valuable direction for future research. Our evidence indicates that exposure to leaders has an important causal impact in both of these steps.

8 Conclusion

In this paper, we present novel evidence on union leaders in Myanmar's labor movement in the garment sector and how leaders influence workers' views and collective actions in the run-up to a national minimum wage negotiation. It is generally challenging to pinpoint the specific influences of leaders within organizations or movements because their actions are often difficult to observe in sufficient detail and also because it is hard to untangle if influential individuals shape others or just reflect underlying group dynamics. We conducted two field experiments and gathered detailed information on the traits of workers and union leaders at every level of the union hierarchy to examine whether and how union leaders affect the inner workings of labor movements.

We find that union leaders are *positively selected* compared to rank-and-file workers in terms of their personality traits, grit, and locus of control, which psychologists and organizational sociologists link with the ability to influence collective outcomes. They are also positively selected on the two traits that the literature on political selection identifies as key: prosociality, and for the union presidents who are the most selected leaders in our sample,

ability. This evidence adds to our scant understanding of the types of individuals who emerge as leaders in social movements. It suggests that one mechanism through which leaders influence followers is their distinct set of personal characteristics. An interesting avenue for future research is to assess the extent to which this positive selection generalizes to other contexts. It is sometimes argued that union leaders might be negatively selected in terms of ability as lower-ability workers stand to gain more from collective representation.

We provide the first experimental evidence that union leaders play a key role in building consensus among workers around their unions' objectives; they *coordinate views*. We find that leaders build consensus around their unions' preferred minimum wage, as opposed to aggregating workers' preferences. Leaders' personal traits matter in supporting the achievement of alignment, and leaders who more closely resemble the president achieve the same or greater consensus with significantly less crowding out of workers' participation in the discussions. An interesting question for future research is the extent to which our finding of alignment in consensus building generalizes to leaders selected through elections; in principle, elected leaders may face stronger incentives to aggregate views, although political scientists have also argued that voters may adopt politicians' views (Lenz, 2012).

We also present new insights into the channels through which leaders mobilize workers to take privately costly actions for their common good, finding evidence in favor of leaders coordinating workers' equilibrium selection. Hence, in addition to coordinating views, they also *coordinate actions*. Bringing together our findings on coordinating views and collective actions, we document a positive correlation between consensus building and mobilization in a social movement. This suggests that achieving consensus is the first step needed to mobilize individuals. To our knowledge, this is the first time that this potentially important link has been documented, and we think that further probing the connection between consensus building and mobilization in other contexts is an interesting direction for future research.

Overall, this paper highlights the importance of grassroots leadership in the cultivation of collective action in labor movements, as it plays a coordinating role among members. In previous work, we document that garment factories with worker representatives are less likely to experience industrial disputes (Lin et al., 2019), suggesting that they may contribute to healthier industrial relations. Combined with the results from this paper, we think that understanding the role of union leaders in industrial relations more broadly, in terms of management-worker relations, wage inequality, and firms' productivity growth are promising directions for further research.

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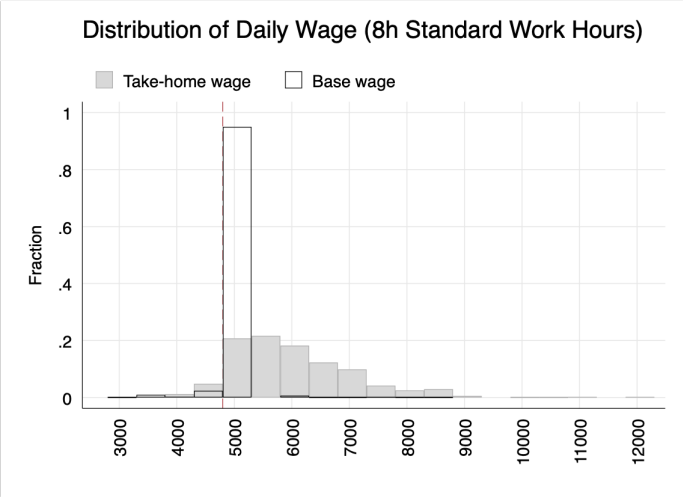
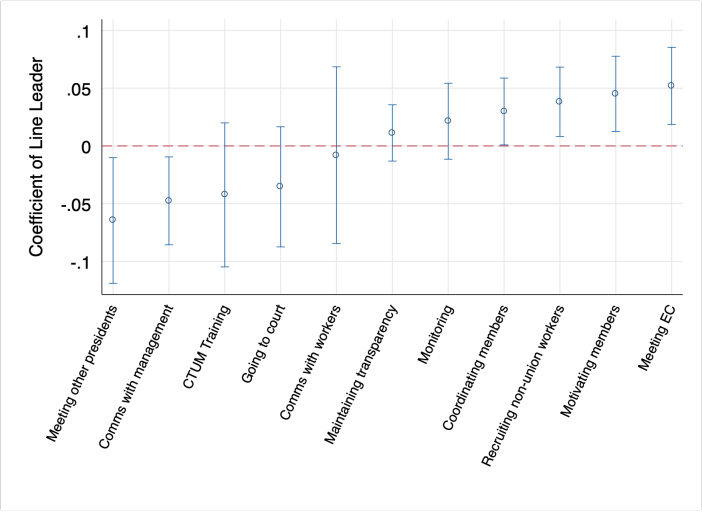
A Appendix A: additional figures and tables

Figure A.1



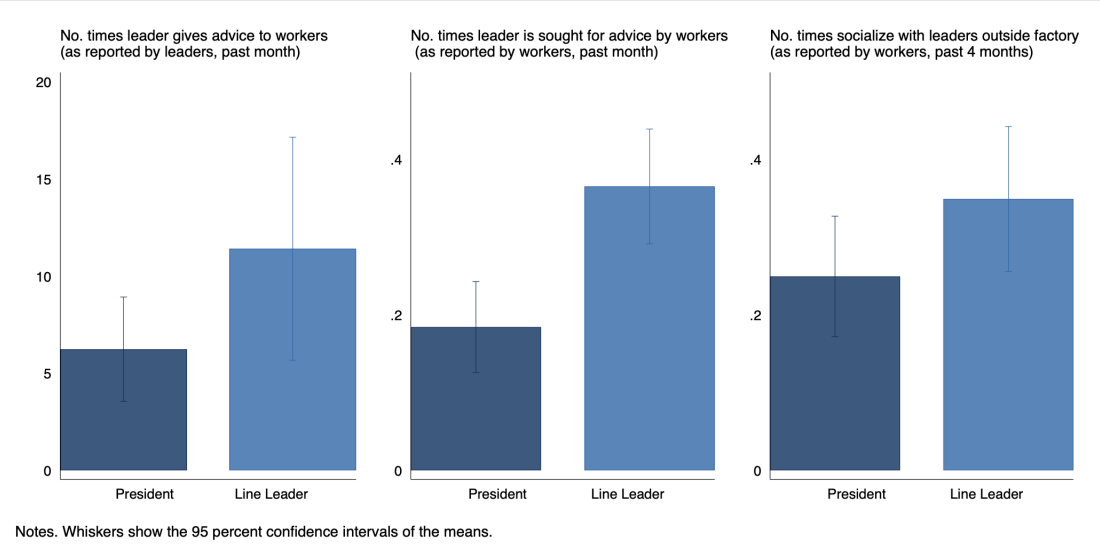
Notes. This figure shows the distributions of daily base wages and daily take-home wage for 8 standard hours for workers in our sample. The transparent bars are the histogram for daily base wage, while the gray bars are the one for daily take-home wage. The vertical line indicates 4800 kyat, the current minimum wage since 2018. The daily base wage is the base level of wage for 8 standard hours without reflecting skill premiums, bonuses, and overtime earnings. We calculate the daily take-home wage, which is defined as the daily wage rate for 8 standard hours including the base wage, skill premiums, and bonuses. It does not include overtime work earnings.

Figure A.2: Time spent on union-related activities



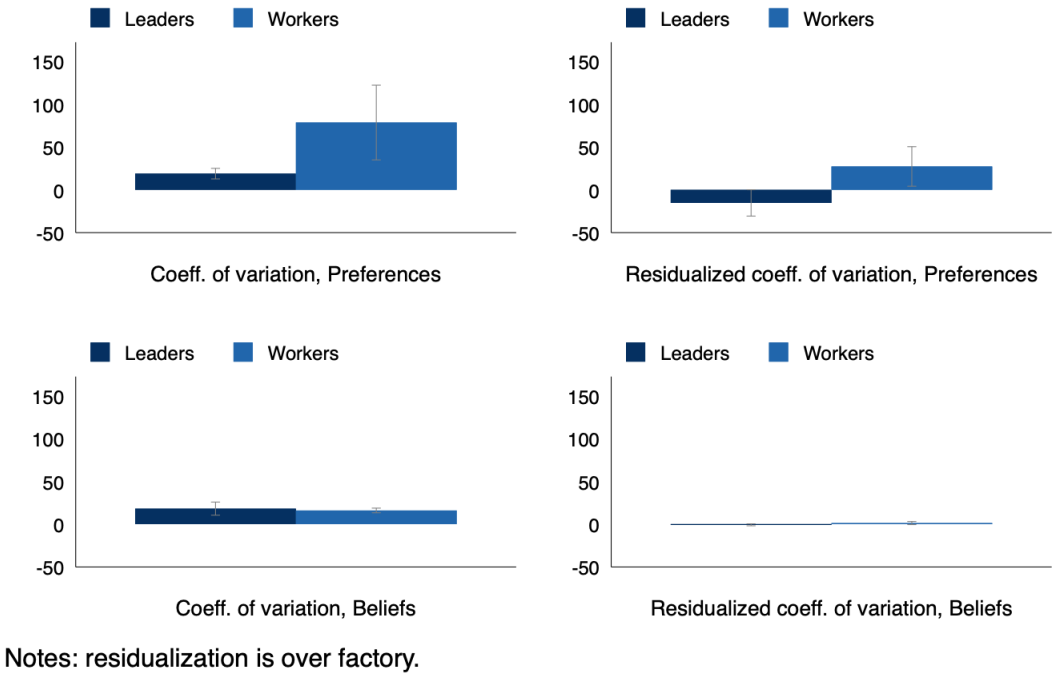
Notes. This figure shows the self-reported time use across different union-related activities for presidents and line leaders. Each measure is divided by the total time dedicated to union activities by each person and the plot shows how line leaders differentially spend their time compared to presidents.

Figure A.3: Presidents and line leaders' contact with workers



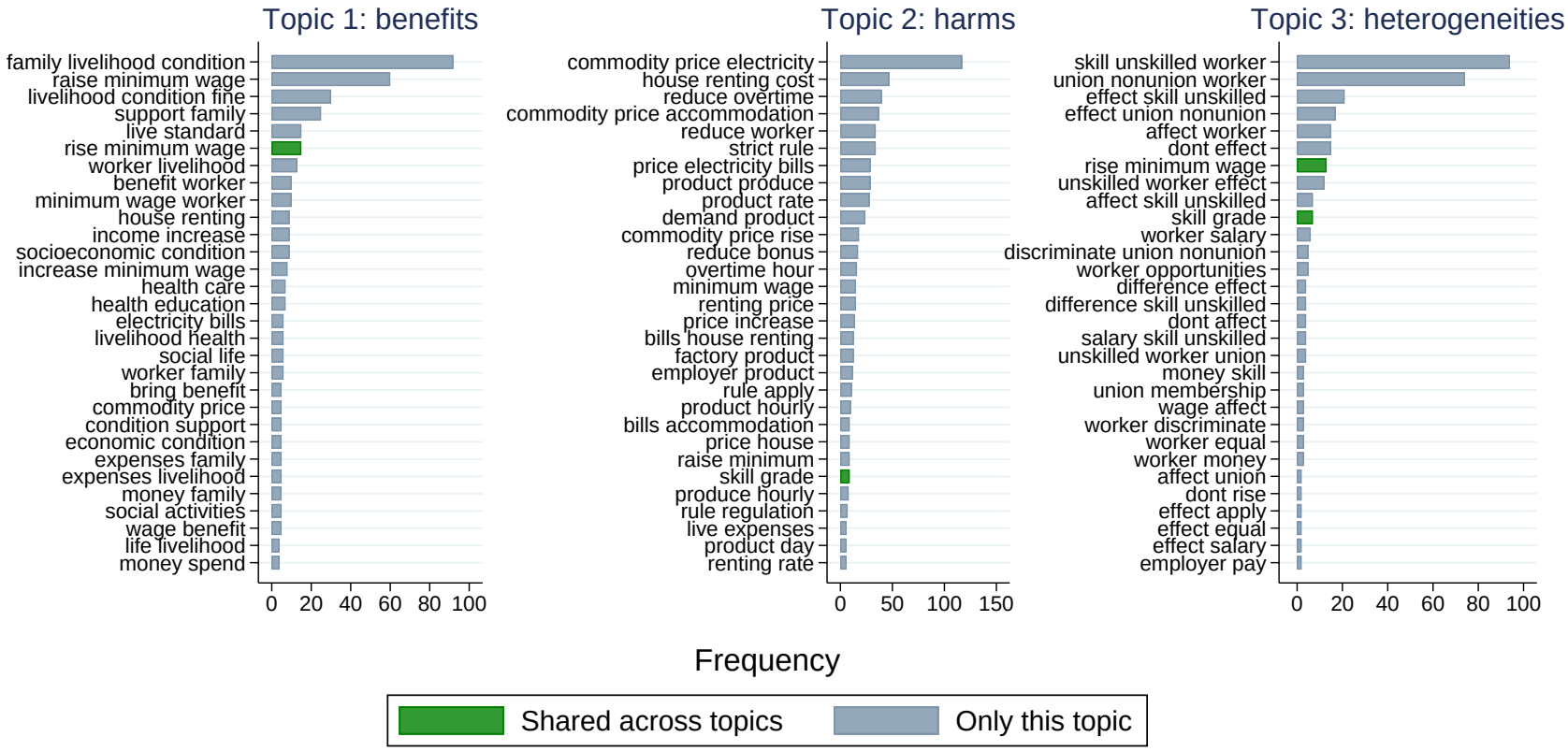
Notes. This figure plots the mean of different self-reported measures of direct contact with workers separately for presidents and line leaders. Whiskers show the 95 percent confidence intervals.

Figure A.4: Coefficient of variation, preferences and beliefs at baseline



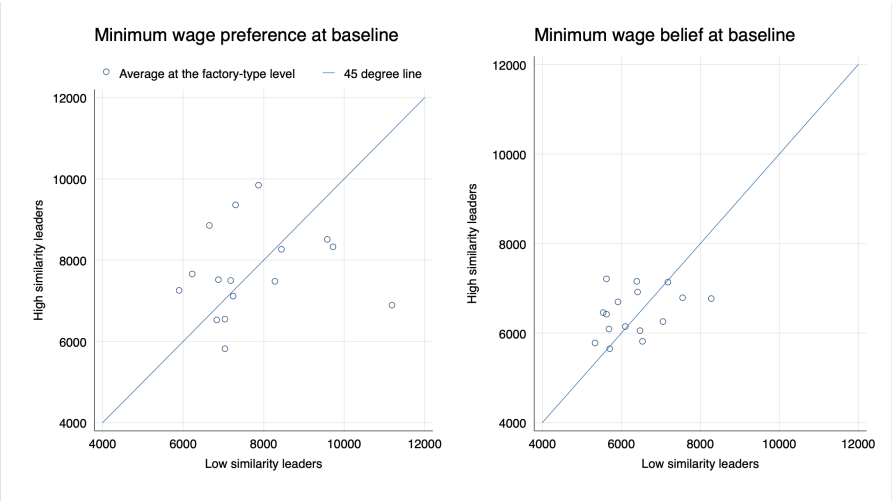
Notes. This figure plots the coefficient of variation in baseline views within factory separately for workers and leaders. Whiskers show the 95 percent confidence intervals, using the variation across factories.

Figure A.5: Common bi- and tri-grams in responses to each discussion prompt



Notes:

Figure A.6: High- and low-similarity leaders' minimum wage views at baseline



Notes. This figure shows the minimum wage preferences and beliefs at baseline for line leaders, averaged at the factory level. The y-axis is for high-similarity leaders and the x-axis is for low-similarity leaders. The 45 degree line is included.

Table A.1: Wages: Presidents, line leaders, union and non-union workers

	Last month income (logs)			
	(1)	(2)	(3)	(4)
President	-0.121	-0.137	-0.145	-0.285
	(0.0886)	(0.122)	(0.127)	(0.277)
Line Leader	-0.0826	-0.107	-0.118	-0.197
	(0.121)	(0.137)	(0.144)	(0.243)
Union Worker	0.0473	0.0449	0.0405	0.0365
	(0.0411)	(0.0413)	(0.0413)	(0.0419)
R-squared	0.096	0.115	0.118	0.134
Number of obs.	771	771	771	771
Demographic controls	No	Yes	Yes	Yes
Skills controls	No	No	Yes	Yes
Personality controls	No	No	No	Yes

Notes. Probability weights and robust standard errors used. Controlling for factory FE. Sample restricted to sewing operators since we could collect data on their skills by developing a skill assessment module for sewing operators. The dependent variable is the last month total income in logs. Demographic controls are gender, age, education, raven score, migrant status, experience in factory and in garment sector. Skills controls are average sewing efficiency and skill grade. Personality controls are the Big Five traits, locus of control and grit.

Table A.2: Factory/Union-level descriptive statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Number of Workers	1187.5	673.3	450.0	2860.0	17
Number of Union Members	505.8	426.0	100.0	1938.0	17
Proportion Unionized	0.4	0.2	0.1	0.8	16
Female Union President	0.5	0.5	0.0	1.0	19
Union set goals (binary)	0.8	0.4	0.0	1.0	18
Union Tenure	29.1	23.7	4.0	87.0	19
Union Tenure President	17.6	15.2	6.0	72.0	17
Firm Tenure President	46.5	37.2	12.0	145.0	18
Firm Tenure LL	40.6	30.4	13.0	119.0	19
Firm Tenure Union W	31.4	22.4	9.1	78.2	17
Firm Tenure Non Union W	22.2	22.1	4.4	95.1	16
Sector Tenure President	76.4	64.0	20.0	246.0	18
Sector Tenure LL	72.8	44.9	25.8	167.6	19
Sector Tenure Union W	50.4	27.5	20.4	116.1	17
Sector Tenure Non Union W	46.3	29.9	16.6	142.8	16

Notes. Unit of observation is factory. The data in this table comes from the pre-sessions held by CTUM with the unions to explain about the intervention. The number of observations can be less than 19 factories as not all the factories had available the information requested. *Union set goals* is an indicator for whether the union has a stated goal. *Union Tenure* is number of months the union has been active at the factory. *Firm Tenure* indicates tenure at the factory (months) while *Sector Tenure* indicates tenure in the garment sector (months).

Table A.3: Summary Statistics

	Presidents	Line Leaders	Union Workers	Non-Union Workers	Total
Panel A: Demographics & Ability					
Female	0.444	0.853	0.963	0.967	0.963
	(0.511)	(0.355)	(0.188)	(0.178)	(0.189)
Age	29.89	26.72	24.75	25.09	24.88
	(6.192)	(6.402)	(5.838)	(6.460)	(6.058)
Migrant	0.444	0.488	0.522	0.518	0.520
	(0.511)	(0.501)	(0.500)	(0.500)	(0.500)
Education (Yrs)	8.500	7.565	7.705	7.854	7.753
	(3.552)	(2.442)	(2.779)	(2.680)	(2.744)
Raven Score	6.333	4.429	4.505	4.853	4.620
	(2.275)	(2.581)	(2.743)	(2.844)	(2.778)
Panel B: Employment & Minimum Wage Views					
Months in Factory	46.50	40.79	33.19	20.60	29.18
	(37.17)	(35.47)	(35.17)	(27.10)	(33.29)
Months in Sector	76.39	73.67	51.63	43.00	49.08
	(63.97)	(57.64)	(48.35)	(50.33)	(49.34)
Min Wage Ideal	7494.4	7635.3	9338.2	7507.3	8719.6
	(763.5)	(2289.1)	(21030.9)	(2150.6)	(17164.7)
Min Wage Guess	6388.9	6352.7	6484.2	6470.7	6478.3
	(1039.2)	(1123.9)	(1198.1)	(1152.9)	(1181.9)
Panel C: Personality Traits					
Grit	3.754	3.412	2.574	2.558	2.579
	(0.592)	(0.541)	(0.484)	(0.534)	(0.511)
Altruism	1405.6	1406.5	1270.7	1235.9	1261.0
	(279.6)	(292.1)	(418.6)	(483.3)	(439.8)
Locus of Control	4.389	4.200	4.028	4.018	4.027
	(0.698)	(1.200)	(1.265)	(1.376)	(1.301)
Extraversion	3.861	3.644	3.378	3.421	3.396
	(0.763)	(0.815)	(0.754)	(0.716)	(0.743)
Agreeableness	3.972	4.065	3.867	3.900	3.880
	(0.977)	(0.765)	(0.770)	(0.831)	(0.791)
Conscientiousness	4.444	4.168	3.901	4.069	3.959
	(0.511)	(0.715)	(0.769)	(0.778)	(0.775)
Neuroticism	2	2.418	2.647	2.675	2.653
	(0.985)	(0.873)	(0.818)	(0.883)	(0.840)
Openness	2.500	2.932	2.956	3.014	2.974
	(0.686)	(0.757)	(0.754)	(0.783)	(0.764)
Panel D: Communication					
Socialized with union members	6.278	2.029	0.884	0.417	0.750
	(9.228)	(3.237)	(1.655)	(1.095)	(1.583)
Consulted by union workers	4.222	6.947	.	.	6.686
	(3.264)	(16.93)	(.)	(.)	(16.15)
Consulted by non-union workers	2	4.106	.	.	3.904
	(2.449)	(12.84)	(.)	(.)	(12.25)
Observations	18	170	594	322	1104

Notes. Unit of observation is worker. The table summarizes basic demographic characteristics by type of worker. *Education* range from 0 (no education) to 15 (Bachelor's degree). *Income* is the self-reported last month's income in Myanmar kyat. *Socialized with union members* is number of times union leaders and members met other union members for social activities in the past 4 months. *Consulted by union/non-union workers* is number of times union leaders were consulted about issues at the factory in the past month. *Altruism* is amount donated to local orphanage out of an initial endowment of 1500kyats. Probability weights used for the workers columns.

Table A.4: Differences between Leaders and Workers, with controls

	Observations	Worker Mean	Coeff. on Line Leader	Coeff. on President	p-value of diff, cols (3)-(4)
	(1)	(2)	(3)	(4)	(5)
Panel A: Demographics & Ability					
Female	1104	0.967	-0.137	-0.564	0.004
			[0.000]	[0.001]	
Age	1104	25.005	0.029	2.691	0.074
			[0.961]	[0.077]	
Migrant	1104	0.520	-0.011	0.061	0.574
			[0.854]	[0.647]	
Education(Yrs)	1104	7.754	0.147	0.785	0.462
			[0.604]	[0.380]	
Raven Score	1104	4.524	0.126	1.637	0.022
			[0.680]	[0.021]	
Panel B: Employment & Minimum Wage Views					
Months in Factory	1104	29.888	2.646	5.320	0.645
			[0.390]	[0.406]	
Months in Sector	1104	50.621	13.540	8.939	0.615
			[0.000]	[0.353]	
Preferred Min Wage	1104	7504.258	73.261	199.725	0.628
			[0.647]	[0.517]	
Expected Min Wage	1104	6545.961	-209.817	-424.591	0.330
			[0.029]	[0.078]	
Panel C: Personality Traits					
Altruism	1104	1268.777	206.231	323.952	0.322
			[0.000]	[0.019]	
Extraversion	1104	3.392	0.230	0.481	0.244
			[0.009]	[0.038]	
Agreeableness	1104	3.862	0.319	0.102	0.442
			[0.000]	[0.701]	
Conscientiousness	1104	3.979	0.328	0.565	0.142
			[0.000]	[0.003]	
Neuroticism	1104	2.665	-0.277	-0.729	0.063
			[0.004]	[0.006]	
Openness	1104	3.001	-0.068	-0.426	0.064
			[0.436]	[0.033]	
Grit	1104	2.571	0.930	1.424	0.003
			[0.000]	[0.000]	
Locus of Control	1104	4.008	0.188	0.366	0.464
			[0.205]	[0.186]	
BFI Index	1104	2.314	0.341	0.468	0.728
			[0.637]	[0.902]	

Notes: Unit of observation is worker. Probability weights used. All regressions include factory FE. With the exception of the BFI Index, each regression controls for all other variables included in the table. The BFI Index regression controls for all non-BFI variables in the table. p-values calculated using the wild cluster bootstrap-t method.

Table A.5: Balance table: Consensus-building experiment

	(1)	(2)	(3)	(4)	(5)
	Mean / (SE)			**Difference in means / (p-value)**	
Variable	Control	Own LL	External LL	Diff Own-Control	Diff External-Control
Gender	1.022	1.033	1.061	0.005	0.025
	(0.148)	(0.178)	(0.239)	(0.659)	(0.160)
Age	25.737	23.929	24.552	-1.494***	-1.129**
	(6.440)	(5.556)	(5.792)	(0.000)	(0.037)
Education (Yrs)	7.627	7.969	7.675	0.327	-0.031
	(2.660)	(2.855)	(2.740)	(0.140)	(0.895)
Literacy	2.071	2.083	2.113	0.012	0.039
	(0.330)	(0.349)	(0.411)	(0.629)	(0.199)
Raven Score	4.376	4.895	4.654	0.457**	0.318
	(2.763)	(2.806)	(2.746)	(0.033)	(0.234)
Months in Factory	29.840	27.547	29.747	-0.521	0.150
	(33.458)	(30.497)	(36.326)	(0.801)	(0.943)
Months in Sector	52.257	42.634	50.913	-6.076**	2.010
	(50.759)	(43.124)	(53.266)	(0.038)	(0.626)
Min. Wage Belief	6,559.065	6,379.549	6,419.871	-114.294	-29.482
	(994.636)	(1,049.948)	(1,009.601)	(0.122)	(0.677)
Min. Wage Preference	7,523.598	7,248.997	7,295.476	-187.479	-116.892
	(1,557.759)	(1,514.251)	(1,540.256)	(0.108)	(0.350)
Absolute diff., worker and median leader min. wage preference	1,250.879	1,202.637	1,148.038	-71.460	-91.643
	(1,175.237)	(1,019.361)	(1,058.054)	(0.445)	(0.294)
Absolute diff., worker and median leader min. wage belief	741.400	719.938	900.127	-43.216	194.681**
	(800.409)	(803.475)	(910.828)	(0.532)	(0.019)
Grade	2.477	2.733	2.662	0.042	-0.110
	(1.403)	(1.416)	(1.479)	(0.563)	(0.235)
Last Month Income	242720.156	234366.094	234317.453	-3,114.145	-1,774.809
	(39,172.082)	(38,648.496)	(37,231.320)	(0.153)	(0.448)
Observations	425	284	206	709	631

Notes. Probability weights and standard errors clustered at the group level used. Controlling for factory FE x union status.

Table A.6: Group Discussions: standard deviation in views, group level

	SD(Min. Wage Preferences)			SD(Min. Wage Beliefs)		
	(1)	(2)	(3)	(4)	(5)	(6)
Leader	-186.1*			48.19		
	(110.3)			(63.04)		
External Leader		-214.8			71.88	
		(137.1)			(78.66)	
Own Leader		-167.7			32.92	
		(122.3)			(69.93)	
Leader, High Similarity			-250.3**			40.24
			(120.9)			(72.14)
Leader, Low Similarity			-119.2			55.96
			(137.2)			(73.40)
R-squared	0.171	0.172	0.177	0.227	0.228	0.227
Control Mean	724.933	724.933	724.933	265.858	265.858	265.858
Number of obs.	202	202	202	202	202	202
p-values						
External = Own:		0.726			0.615	
High Similarity = Low Similarity:			0.325			0.828

Notes. Probability weights and robust standard errors used. Controlling for factory and group size FE. Regression at the group level. The dependent variable is the standard deviation in workers' minimum wage preferences (beliefs) at the group level in follow up. Preferences and beliefs are winsorized at 5 and 95 percent.

Table A.7: Workers' awareness of a leader's participation in the group discussion

	Was there a LL in your discussion group?			
	(1)	(2)	(3)	(4)
Leader	0.409***			
	(0.0523)			
External Leader		0.222***		
		(0.0642)		
Own Leader		0.523***		
		(0.0574)		
Leader, High Similarity			0.323***	
			(0.0626)	
Leader, Low Similarity			0.487***	
			(0.0616)	
External Leader, Union				0.188**
				(0.0768)
Own Leader, Union				0.549***
				(0.0672)
External Leader, Non-Union				0.280***
				(0.0831)
Own Leader, Non-Union				0.473***
				(0.0721)
R-squared	0.2828	0.3288	0.2968	0.3323
Control Mean	0.215	0.215	0.215	0.215
Number of obs.	746	746	746	746
p-values				
External = Own:		0.000		
High Similarity= Low Similarity:			0.013	
External, Union = Own, Union:				0.000
External, Non-Union = Own, Non-Union:				0.047
External, Union =External, Non-Union:				0.344
Own, Union = Own, Non-Union:				0.337

Notes. Unit of observation is worker. Probability weights used and standard errors clustered at the group level. Dependent variable is the worker's belief about the presence of a union line leader or an EC member in their group. Stratification FEs are included: Factory FEs x Union FEs. Controlling for group size FEs. The sample size in this regression is smaller than the full worker sample (n=914) because 18% of workers incorrectly reported that they were line leaders in the follow-up survey and were not asked this question. In the Supplementary Materials, we report balance tests for the subset of workers with non-missing data for this question.

Table A.8: Word counts of responses to question prompts in group discussion experiment

	Log(Total Words)			Log(Topic 1: Benefit)			Log(Topic 2: Harm)			Log(Topic 3: Heterogeneity)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Leader Group	0.211**			0.203			0.183			0.231		
	(0.106)			(0.128)			(0.139)			(0.161)		
Own Leader Group		0.272**			0.241*			0.180			0.489***	
		(0.110)			(0.133)			(0.145)			(0.167)	
External Leader Group		0.116			0.144			0.188			-0.170	
		(0.124)			(0.154)			(0.168)			(0.216)	
Leader Group, High Similarity			0.236**			0.212			0.228			0.224
			(0.117)			(0.143)			(0.152)			(0.185)
Leader Group, Low Similarity			0.187			0.193			0.139			0.238
			(0.115)			(0.140)			(0.153)			(0.191)
R-squared	0.178	0.191	0.179	0.092	0.095	0.092	0.127	0.127	0.129	0.187	0.244	0.187
Control Mean	36.949	36.949	36.949	11.951	11.951	11.951	13.580	13.580	13.580	11.419	11.419	11.419
Number of obs.	202	202	202	202	202	202	202	202	202	202	202	202
p-values												
P-val: Own LL= External LL		0.110			0.433			0.958			0.002	
P-val: High Quality=Low Quality			0.601			0.876			0.478			0.941

Notes. Unit of observation is discussion group. Probability weights and robust standard errors used. Dependent variables are the number of words written in group discussion form as the group's answers to each of the following questions: (1) How do you think that a minimum wage increase may benefit workers? (*Topic 1: Benefit*); (2) How do you think that a minimum wage increase may harm workers? (*Topic 2: Harm*); (3) Do you think it will affect different groups of workers, for example, skilled versus unskilled, union members versus non-members, differently? (*Topic 3: Heterogeneity*). Stratification FEs are Factory FEs. Fixed effect of the number of group members is also controlled. Control mean shows the average number of words in control group before taking a logarithm.

Table A.9: Group behavior, as assessed by research staff

	Observed Group Activity (1)	Share engaged (2)	Share distracted (3)	Active facilitation (4)	Asking opinions (5)	Summarizing opinions (6)	Taking notes (7)
Panel A: Leader							
Leader	0.234***	0.0262	-0.0681**	-0.00180	-0.0135	0.173***	0.184***
	(0.0809)	(0.0268)	(0.0277)	(0.0615)	(0.0618)	(0.0562)	(0.0551)
R-squared	0.352	0.177	0.202	0.220	0.309	0.337	0.300
Panel B: Own vs. External Leader							
Own Leader	0.265***	0.0424	-0.110***	-0.0164	0.0327	0.186***	0.141**
	(0.0882)	(0.0291)	(0.0282)	(0.0689)	(0.0682)	(0.0671)	(0.0596)
External Leader	0.186*	0.00102	-0.00365	0.0210	-0.0852	0.153**	0.249***
	(0.111)	(0.0352)	(0.0362)	(0.0821)	(0.0816)	(0.0704)	(0.0788)
R-squared	0.355	0.184	0.248	0.221	0.318	0.338	0.310
p-values							
Own Leader = External Leader	0.483	0.234	0.001	0.661	0.151	0.683	0.182
Panel C: High vs. Low Similarity Leader							
Leader Group, High Similarity (50th)	0.285***	-0.00196	-0.0572*	0.0313	0.0752	0.186***	0.245***
	(0.0869)	(0.0315)	(0.0313)	(0.0694)	(0.0725)	(0.0649)	(0.0636)
Leader Group, Low Similarity	0.184*	0.0537*	-0.0787**	-0.0341	-0.100	0.161**	0.124*
	(0.105)	(0.0304)	(0.0325)	(0.0791)	(0.0724)	(0.0704)	(0.0686)
R-squared	0.356	0.190	0.204	0.224	0.330	0.337	0.312
Control Group Mean	-0.090	0.819	0.203	0.721	0.464	0.264	0.654
Number of obs.	202	202	202	202	202	202	202
p-values							
High Similarity = Low Similarity	0.334	0.085	0.501	0.431	0.025	0.744	0.113

Notes. Unit of observation is discussion group. Probability weights and robust standard errors used. Dependent variables are: *Observed Group Activity*, the index variable constructed following the methodology from Anderson (2008) using the variables in cols. 2-7; *ShareEngaged*, the share of workers within a group that are engaged in the discussion; *ShareDistracted*, the share of workers within a group that are distracted during the discussion; *ActiveFacilitation*, an indicator for whether someone is actively facilitating the group; *AskingOpinions*, an indicator for whether someone is active others' opinions; *SummarizingOpinions*, an indicator for whether someone is summarizing opinions in the group; *TakingNotes*, an indicator for whether someone is taking notes in the group. Two members of the field team rated each group, and we average their observations in the analysis. Stratification FEs are Factory FEs. Controlling for group size FEs.

Table A.10: Engagement in Group Discussions

	Enjoyment			Achievement of Consensus			Participation			Log(Total Word Count)	Log(Likely Worker Word Count)	Observed Group Activity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Leader	0.0901*			0.308***			0.0892					
	(0.0512)			(0.0821)			(0.0698)					
Own Leader		0.114**			0.348***			0.0531				
		(0.0562)			(0.0879)			(0.0729)				
External Leader		0.0530			0.245**			0.145				
		(0.0659)			(0.119)			(0.103)				
Leader, High Similarity			0.0934			0.301***			0.172**	0.0101	-0.220*	0.285***
			(0.0610)			(0.0967)			(0.0869)	(0.103)	(0.124)	(0.0869)
Leader, Low Similarity			0.0868			0.314***			0.00796	-0.282**	-0.565***	0.184*
			(0.0608)			(0.100)			(0.0820)	(0.117)	(0.153)	(0.105)
R-squared	0.062	0.064	0.063	0.099	0.100	0.099	0.069	0.071	0.075	0.268	0.409	0.356
Control Mean	-0.039	-0.039	-0.039	-0.126	-0.126	-0.126	-0.019	-0.019	-0.019	1002.175	872.674	-0.090
Number of obs.	914	914	914	914	914	914	914	914	914	167	167	202
p-values												
External = Own:		0.349			0.400			0.374				
High Similarity= Low Similarity:			0.921			0.903			0.092	0.019	0.011	0.334

Notes. Unit of observation is worker in all columns. The first three outcome variables are indexes of the following self-reported survey measures of participants' engagement. *Enjoyment* includes interest and enjoyment of the discussion as well whether the respondent perceived it to be worthwhile (*Group Interested*, *Group Enjoy*, *Group Unease* [reverse]), and *Group Waste* [reverse]. *Agreement* includes group consensus on minimum wage preferences and prediction (*Group Agree Ideal* and *Group Agree Prediction*). *Participation* includes freedom to express views(*Group Express Ideas*), and active participation by all members (*Group All Participate*). The index variables are constructed following the methodology from Anderson (2008). Probability weights and standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs).

Table A.11: Leader Behavior without control group, as assessed by research staff

	Speaking (1)	Listening (2)	Consensus building (3)	Conflict resolution (4)	Leadership (5)
Panel A: Own vs. External Leader					
Own Leader	0.116	-0.625**	-0.376	-0.526	0.101
	(0.368)	(0.313)	(0.349)	(0.386)	(0.396)
R-squared	0.188	0.235	0.343	0.301	0.178
External Leader Group Mean	4.517	4.969	4.119	3.313	4.419
Panel B: High vs. Low Similarity Leader, with factory (stratification) FE					
High Similarity Leader	0.728**	0.439	0.594*	0.351	0.547
	(0.333)	(0.296)	(0.299)	(0.373)	(0.351)
R-squared	0.228	0.216	0.359	0.293	0.201
Low Similarity Leader Group Mean	4.241	4.517	3.777	3.135	4.336
Panel C: High vs. Low Similarity Leader, without factory (stratification) FE					
High Similarity Leader	0.859***	0.536**	0.700**	0.336	0.584*
	(0.306)	(0.269)	(0.325)	(0.393)	(0.322)
R-squared	0.071	0.058	0.044	0.028	0.045
Low Similarity Leader Group Mean	4.241	4.517	3.777	3.135	4.336
Number of obs.	119	119	119	117	118

Notes. Unit of observation is discussion group. Probability weights and robust standard errors used. The dependent variables are: *Speaking*, assessing the extent of LL speaking; *Listening*, assessing the extent of LL listening; *ConsensusBuilding*, assessing the extent of LL engaged in consesus building; *ConflictResolution*, assessing the extent of LL engaged in conflict resolution; and *Leadership*, assessing the extent of LL showing leadership. All dependent variables are measured on a Likert scale 1-7 separately by two members of the research staff and the average is taken. Missing observations in Cols. 4 and 5 are due to data entry errors. In Panels A and B, Stratification FEs are Factory FEs. Controlling for group size FEs.

Table A.12: Group discussion: heterogeneity by leader similarity and union membership

	Deviation from Union Preference		Deviation from Union Belief	
	(1)	(2)	(3)	(4)
Leader, High Similarity	-312.3***		-26.82	
	(116.0)		(89.37)	
Leader, Low Similarity	-171.9		-3.302	
	(124.6)		(92.60)	
Leader, Union		-298.4**		6.091
		(116.2)		(84.77)
Leader, Non-Union		-199.9		-48.62
		(138.5)		(91.12)
R-squared	0.317	0.330	0.337	0.342
Number of obs.	914	914	914	914
Control Mean	1194.103		654.399	
Control Mean Union		1249.430		635.370
Control Mean Non-Union		1094.850		688.534
p-values				
High Similarity= Low Similarity:	0.287		0.830	
Leader Union = Leader Non-Union:		0.505		0.571

Notes. Unit of observation is worker in all columns. The dependent variables represent the deviation from the factory median of baseline leaders' views and preferences respectively. The variable *Leader, High Similarity* is a binary variable equal to 1 if the estimated probability of a line leader having similar attributes to president is above the median. The probabilities are estimated for each worker based on a probit model, which includes demographics (gender, age, education, migrant(0/1), months in factory/sector), personality metrics (extraversion, agreeableness, conscientionsness, neuroticism, openness) and psychological metrics (raven, score, grit, altruism, choice in life). Probability weights and standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs).

Table A.13: Balance table: Mobilization, Coordination, and Social Pressure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Difference in means / (p-value)			
Variable	LL	LL & Info Least	LL & Info Most	LL & Social Pressure	Social Pressure	Info Least	Info Most
Gender	-0.047	0.136	-0.138	-0.033	-0.012	-0.010	-0.000
	(0.567)	(0.273)	(0.242)	(0.697)	(0.756)	(0.759)	()
Age	-2.938**	3.277*	-0.001	-1.206	-0.050	0.488	10.000
	(0.039)	(0.085)	(1.000)	(0.329)	(0.967)	(0.696)	(0.226)
Education (Yrs)	-0.333	-0.143	0.398	-0.140	-0.065	-0.566	-2.000*
	(0.636)	(0.888)	(0.783)	(0.851)	(0.917)	(0.430)	(0.056)
Literacy	-0.005	0.211	-0.073	-0.043	-0.103	-0.075	-0.000
	(0.945)	(0.197)	(0.640)	(0.478)	(0.219)	(0.351)	()
Raven Score	-0.472	-0.798	0.331	0.690	-0.590	0.005	-3.000***
	(0.555)	(0.413)	(0.767)	(0.365)	(0.334)	(0.995)	(0.005)
Months in Factory	-5.990	8.601	16.928	2.884	-7.121	-4.760	1.500
	(0.292)	(0.528)	(0.170)	(0.492)	(0.111)	(0.400)	(0.889)
Months in Sector	-13.323	19.169	8.184	1.083	4.158	-1.715	13.500
	(0.160)	(0.221)	(0.654)	(0.888)	(0.595)	(0.860)	(0.558)
Min. Wage Belief	-326.645	-184.356	-178.740	-18.578	-105.972	106.890	-100.000
	(0.170)	(0.558)	(0.701)	(0.938)	(0.613)	(0.664)	(0.331)
Min. Wage Preference	138.246	-3.007	999.967	231.909	238.446	256.884	600.000
	(0.643)	(0.995)	(0.155)	(0.467)	(0.484)	(0.437)	(0.331)
Absolute diff., worker and median leader min. wage preference	-22.023	70.980	151.183	-338.627	230.178	147.029	-600.000
	(0.935)	(0.746)	(0.833)	(0.165)	(0.330)	(0.419)	(0.331)
Absolute diff., worker and median leader min. wage belief	-277.539	-140.638	-386.913	-155.202	10.771	10.885	-100.000
	(0.161)	(0.458)	(0.290)	(0.416)	(0.954)	(0.938)	(0.331)
Grade	0.129	-0.472	-0.151	0.115	-0.175	0.014	0.000
	(0.645)	(0.295)	(0.779)	(0.627)	(0.441)	(0.950)	()
Last Month Income	-12242.940	6,238.098	-1,156.007	-12952.256*	-6,105.475	-5,149.977	-9,000.000
	(0.222)	(0.518)	(0.914)	(0.082)	(0.423)	(0.215)	(0.381)
Observations	257	145	214	251	254	228	161

Notes. Probability weights and robust standard errors used. Controlling for factory FE x discussion group FE. Showing the difference in means and p-values in parenthesis.

Table A.14: Mobilization: union heterogeneity

	Attendance at afternoon survey session			
	(1)	(2)	(3)	(4)
High Coord., Union	0.0589	0.0321		
	(0.0795)	(0.0688)		
Low Coord., Union	-0.0293	-0.0449		
	(0.0809)	(0.0705)		
High Coord., Non-Union	0.112	0.129		
	(0.0956)	(0.0823)		
Low Coord., Non-Union	-0.0916	-0.0821		
	(0.0954)	(0.0827)		
Leader, Union	0.0174	0.0197		
	(0.0540)	(0.0471)		
Leader, Non-Union	-0.0768	-0.0688		
	(0.0675)	(0.0584)		
Social Pressure* High Prior, Union			0.00475	0.000104
			(0.0471)	(0.0465)
Social Pressure* Low Prior, Union			0.159***	0.157***
			(0.0450)	(0.0449)
Social Pressure* High Prior, Non-Union			-0.145***	-0.142**
			(0.0561)	(0.0561)
Social Pressure* Low Prior, Non-Union			0.00925	-0.0166
			(0.0615)	(0.0577)
R-squared	0.336	0.335	0.365	0.001
Control Mean	0.341	0.341	0.341	0.341
Number of obs.	790	790	790	790
p-values				
Union, Low Coord. = High Coord.	0.395	0.396		
Non Union, Low Coord. = High Coord.	0.088	0.039		
Union: Social Pressure Low Prior = Social Pressure High Prior			0.017	0.014
Non Union: Social Pressure Low Prior = Social Pressure High Prior			0.056	0.112
PDS lasso selected controls	N	Y	N	Y

Notes. Unit of observation is worker. Probability weights and robust standard errors used. Dependent variable is an indicator for whether worker attends the minimum wage survey. Stratification FEs are included: Factory FEs x Discussion Group FEs. *PDS* indicates that post-double lasso control selection procedure is applied. R-squared for columns that applied PDS lasso selected controls are estimated by the correlation between the observed outcome and the predicted outcome.

Table A.15: Unannounced survey attendance results

	Attendance Survey					
	(1)	(2)	(3)	(4)	(5)	(6)
Leader	0.114		0.114			
	(0.0981)		(0.0868)			
Own Leader		0.114		0.114		
		(0.109)		(0.0954)		
External Leader		0.113		0.113		
		(0.112)		(0.0979)		
Leader, High Similarity					0.135	
					(0.0941)	
Leader, Low Similarity					0.0788	
					(0.123)	
Leader, Union						0.00904
						(0.130)
Leader, Non-Union						0.319**
						(0.129)
R-squared	0.415	0.415	0.391	0.391	0.412	0.431
Control Mean	0.341	0.341	0.341	0.341	0.341	
Control Mean Union						0.320
Control Mean Non-Union						0.385
Number of obs.	117	117	117	117	117	117
p-values						
Own Leader = External Leader		0.995		0.994		
High Similarity= Low Similarity					0.650	
Leader Union = Leader Non-Union						0.089
PDS lasso selected controls	N	N	Y	Y	N	N

Notes. Unit of observation is worker in all columns. We only keep the workers that are in the control group in the mobilization experiment. No controls are selected for Col.3 and Col.4. R-squared for columns that applied PDS lasso selected controls are estimated by the correlation between the observed outcome and the predicted outcome. Probability weights and standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs).

B Appendix B: field implementation

B.1 Protocol for random sampling of workers who were not union leaders

We used a random sampling protocol that we designed to obtain a sample that was representative of the target population: sewing operators in the targeted factories, including union members and non-union members. It entailed three stages. First, the CTUM convened the presidents and secretaries of the 28 garment basic unions for an introduction meeting. During the meeting, the CTUM explained the research, requested the unions' participation, and introduced the survey team. Union leaders also completed (1) a factory information form about the factory's sewing lines, their sizes, and their union membership rate and (2) a union information form about the union's organizational structure. Leaders were informed in advance that the survey team would request this information.

Second, the research team matched LLs and EC members to sewing lines and stratified sewing lines by their quartile in the distribution across lines of the share of workers on the line unionized. We then implemented a stratified random selection of up to 11 sewing lines; in factories with fewer than 11 LLs and EC members, the research team selected a number of lines equal to the total number of LLs and EC members. We prioritized LLs, only selecting EC members in factories with fewer than 11 LLs. In factories with fewer than 11 sewing lines, we selected the minimum of {Number of sewing lines, Number of LLs + EC members}. In factories with greater than 50 workers per line, we randomly selected the front or back half of the line to participate. When when factories were >80% unionized (<20% unionized), we slightly oversampled lines from bottom (top) quartile unionization rate. This was to ensure adequate representation of non-union (union) members in field activities. We excluded sewing lines if the president was the only union leader on the line, although in practice, this was rare.

Third, for each randomly selected line, if it had a LL on it, we assigned the LL to make a complete list of workers on the line, including their union membership status and skill level (higher/low). If a line had multiple LLs, we randomly selected one to make the list. If a line had no LLs, we selected the LL from the nearest non-randomly selected line and broke ties using random selection. We also invited these LLs to participate in the field activities.

LLs brought the lists of workers to their union's first session, which we describe in Section 3.2 of the paper. At this stage, the survey team conducted a stratified random selection of around 90 workers per factory; within factory, we stratified by line, union membership, and skill level.

B.2 Consensus-building experiment: Discussion prompt provided to groups

At the beginning of the consensus-building experiment, after discussion groups were seated together, the field team explained the prompt below, which they also provided to discussion groups in writing.

> *We are now starting discussion about minimum wage. Please turn off your phones. The last time the government set the minimum wage was in March 2018. At that time, the government set it at K4800 for an eight-hour work day. The government will announce a new minimum wage in 2020. The CTUM will prepare a proposal for the government on the minimum wage increase. The CTUM wants to gather workers' expectations and opinions to help determine its proposal. For 30 minutes, we would like for you to please discuss the following questions:*
> *(i) How do you think that a minimum wage increase may benefit workers? How do you think that a minimum wage increase may harm workers? Do you think it will affect different groups of workers, for example, skilled versus unskilled, union members versus non-members, differently?*
> *(ii) In 2020, at what level do you think the government will set the new minimum wage for an eight-hour work day?*
> *(iii) In your opinion, what would be the ideal minimum wage level for an eight-hour work day?*
> *Your summary will be provided to the CTUM to help it prepare its proposal to the government. We provide some white blank papers so that you can take notes on these papers while you discuss. At the end of the 30 minutes, please take five minutes to summarize the group's opinions about these questions using this sheet.*

B.3 Variable lists

B.3.1 Consensus-building: Active Group Index

- Share of workers seem to be engaged in the group discussion (e.g. telling opinions, listening to other people's opinions, writing down notes);
- Share of workers seem to be distracted or not paying attention to the group discussion (e.g. looking down, chatting about irrelevant topics);
- Indicator for one or more persons who are actively facilitating discussion
- Indicator for one or more persons who are asking other workers' opinions
- Indicator for one or more persons who are summarizing group's opinions
- Indicator for one or more persons who are writing down notes

B.3.2 Consensus-building experiment: Worker Engagement Index

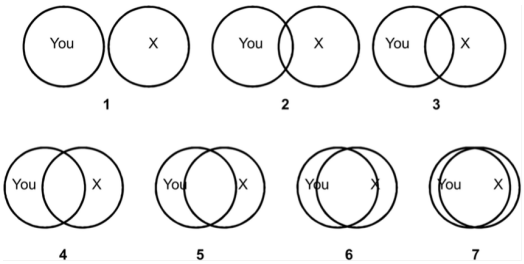
- Enjoyment:
  - The group discussion was interesting, engaging and informative;
  - The group discussion was a waste of my time (reversed score);
  - There were some moments during the discussion when I felt unease and I did not know what to say or do (reversed score);
  - Overall, I enjoyed being part of this group discussion.
- Achievement of consensus:
  - At the end of the discussion, to what extent did your group agree on the prediction of the level of the minimum wage that the government will set?;
  - At the end of the discussion, to what extent did your group agree on the ideal level of the minimum wage that the government should set?.
- Participation:
  - During the group discussion, I felt confident to express my views and opinions;
  - All members of my group actively participated in the discussion.

B.3.3 Post Double Selection Lasso Variables not already included in Table A.3

- Management attitude towards union membership: "How would you describe management's general attitude towards union membership?" Minimum score is 1 = Extremely negative, management may punish workers for union participation. Maximum score is 5 = Very positive, management encourages workers to participate and provides access to factory's facilities to coordinate

- Gender preference for union president (union line leaders): "Overall, who do you think would be a better union president (union line leader), a man or a woman?"

- Overlap in interests with union members, non-members, and managers. Based on the "Adapted Inclusion of Others in Self (IOS) scale" (Aron, McLaughlin-Volpe, Mashek, Lewandowski, Wright and Aron, 2004), which measures the extent to which individuals perceive community- and self-interest as overlapping. IOS has been validated across a wide variety of contexts, and adapted versions are found to be strongly correlated with environmental behavior (Schultz, 2002) and connectedness to the community (Mashek, Cannaday and Tangney, 2007). We code the measure from 1 to 7, where 7 implies highest overlap. Applicants are asked to choose between sets of pictures, each showing two circles (labeled "self" and "community") with varying degrees of overlap, from non-overlapping to almost completely overlapping.



Notes. x indicates union members, non-members and managers, respectively.

B.4 Mobilization Session 3: information provided to workers in each treatment arm

Prior to the surprise invitation, the field team handed the worker their payment in an envelope. After handing them their payment, they read the following scripts:

1. *Leader or staff invitation, no information arm:* Invites worker to do final survey that is about living standard and working conditions and tells worker that participation to the survey is entirely voluntary and that it was already very good that they came to the session and did the surveys in the morning. Given that the final survey is a surprise, the research team is going to donate 8000 kyat to buy sewing machines and training fabric for CTUM Training Centre per each discussion group where every member of the group participates in the Minimum Wage Survey.

2. *High coordination information (leader and staff invitation):* Same as (1), plus staff tells worker: "Everyone will be told about the final survey, but LLs might not have time to speak with every worker. They will be able to speak with only X worker in your group," where **X**=group size – 1.

3. *Low coordination information, staff invitation:* Same as (1), plus staff tells worker: "Everyone will be told about the final survey, but LLs might not have time to speak with every worker. They will be able to speak with only **one worker** in your group."

4. *Low coordination information, leader invitation:* Same as (1), plus staff tells worker: "Everyone will be told about the final survey, but LLs might not have time to speak with every worker. They will be able to speak with only **you** in your group."

5. *Social pressure information:* Same as (1), plus staff tells worker: "If you are staying for the survey, I will accompany to the room, and some LLs will welcome you and register you."

C Appendix C: placebo and robustness tests for consensus-building experiment

We conduct a placebo test for the main results. For each control discussion group, we identify the worker with the highest predicted leader similarity score, and we assign this worker as the placebo leader. For leader groups, we use the assigned leader's baseline view. We test whether we find greater convergence in treatment groups to the real leader's view compared to the placebo leader's view. Column (1) of Table C.1 shows that we find much stronger convergence to the real leaders' minimum wage preferences relative to the placebo leaders' preferences. The evidence of convergence is qualitatively stronger for the own leader treatment arm, although there is suggestive evidence of greater convergence to the external leaders' preferences compared to the placebo control leaders' (column (2)). Consistent with our main results, we find no evidence of effects on expectations about the likely minimum wage level (columns (3) and (4)).

We also conduct multiple robustness checks. First, Table C.2 shows that results are very similar if we use the mean of views rather than the median as reported in Table 2. Second, we check whether union leaders have effects on group discussion outcomes even conditional on the predicted leader similarity of the workers in their discussion group. We show that our results hold controlling for the average or the maximum of the similarity score among workers in the discussion group (Table C.3). We also run a flexible specification where we rank group participants by their similarity score and control for the similarity of each rank (Table C.4, Panel A). It is clear that leaders influence groups' outcomes above and beyond even other potentially prominent individuals in the group.

Third, the results hold when controlling for the leader or placebo leader similarity (Table C.4, Panel B). Fourth, we conduct a robustness test for our leader similarity measure, which is that we drop one family of variables in the prediction model at a time (i.e., demographics, personality traits, psychological traits, and Raven score) and re-estimate the results. Our results are robust to dropping each family of variables (results reported in the Supplementary Materials). Fifth, we show in Table C.5 that results hold if we do not use probability weights in the regressions.

Finally, leaders are somewhat more likely than workers to be men (12.9% compared to 3.3%). Gender is an observable characteristic that may be an alternative channel through which leaders affect workers or may complement or substitute for leadership. Consequently, we separately test for effects of female and male leaders in Table C.6. While the smaller sample of male leaders limits our precision for this group, the effects do not provide evidence of heterogeneity except for the deviation from the union's beliefs about the minimum wage; in

addition to inducing convergence in preferences to the union's ideal (of a similar magnitude as female leaders), male leaders also induce convergence in beliefs to that of the union's leaders. As the leader's gender also affects the group's gender composition, which may affect consensus building through other channels than leadership, Table C.6 also shows that our main results are robust to controlling for groups' gender composition.

Robustness checks for leaders' traits and charisma. We examine the real leaders' similarity relative to placebo control leaders, whom we define in the same way as the first placebo test above. We use the similarity score to partition the control group into high and low placebo leader similarity. Table C.7 presents the results. For minimum wage preferences and beliefs, we first use the baseline construction of the outcome, then we exclude the individual leader's views from the union views and finally we use deviation from the placebo leader view for the control groups. Across numerous specifications, our main results continue to hold: High-similarity union leaders are the most effective at inducing convergence to the union's preferred minimum wage and increasing engagement in the discussion. We cannot reject that the effects of low-similarity union leaders and placebo leaders are the same, which is consistent with their being indistinguishable in terms of their similarity to union presidents (Figure 3). We also conduct a robustness test for our leader similarity measure, which is that we drop one family of variables in the prediction model at a time (i.e., demographics, personality traits, psychological traits, and Raven score) and re-estimate the results. We report these results in the Supplementary Materials.

Table C.1: Placebo leaders (workers with highest leader similarity) in control groups

	Predicted Leader Control			
	(1)	(2)	(3)	(4)
	Preference		Belief	
Leader	-256.7**		136.1	
	(122.0)		(83.68)	
Own Leader		-288.3**		127.6
		(143.0)		(95.73)
External Leader		-206.8		149.6
		(153.7)		(109.3)
R-squared	0.286	0.286	0.485	0.485
Control Mean	1395.362	1395.362	684.124	684.124
Number of obs.	833	833	833	833
p-values				
External=Own:		0.628		0.850

Notes. Unit of observation is worker. Probability weights used and standard errors clustered at the group level. For groups with leaders, the dependent variables are the absolute value of the endline minimum wage preference/belief minus the median of leaders' preferences and beliefs at baseline at the factory level. For control groups, the dependent variables are the absolute value of the endline minimum wage preference/belief minus baseline preference/belief of the worker of highest similarity (placebo leader). Sample restricted to workers who are not placebo leaders. Stratification FEs included: Factory FEs x Union FEs. Controlling for group size FE.

Table C.2: Group Discussions: deviation from mean views

	Deviation from workers' mean in discussion group		Deviation from union leaders' mean in factory	
	(1) Preferences	(2) Beliefs	(3) Preferences	(4) Beliefs
Panel A: Leader				
Leader	-57.74	67.30	-223.0**	-19.82
	(84.88)	(54.77)	(94.63)	(55.04)
R-squared	0.218	0.347	0.246	0.340
Control Mean	987.455	506.739	1130.078	712.308
Number of obs.	914	914	914	914
Panel B: Own versus External LL				
Own Leader	-127.4	40.95	-248.9**	-25.43
	(104.1)	(69.88)	(105.4)	(64.38)
External Leader	50.03	108.0	-182.9	-11.05
	(112.0)	(72.04)	(111.2)	(76.99)
R-squared	0.224	0.348	0.247	0.340
Control Mean	987.455	506.739	1130.078	712.308
Number of obs.	914	914	914	914
p-values				
External=Own:	0.189	0.468	0.532	0.869

Notes. Unit of observation is worker. Probability weights used and standard errors clustered at the group level. In Col. 1-2, the dependent variables are the absolute value of the endline minimum wage preference/belief minus the workers' mean wage preference/belief at the discussion group level at baseline. In Col. 3-4, the dependent variables are the absolute value of the endline minimum wage preference/belief minus the mean of leaders' preferences and beliefs at baseline at the factory level. Stratification FEs included: Factory FEs x Union FEs. Controlling for group size FE.

Table C.3: Average and max discussion group leader similarity and union leader

	Deviation from median union leader	
	(1)	(2)
	Preference	Belief
Panel A: Average discussion group leader similarity		
Leader	-198.1***	-20.52
	(68.75)	(42.08)
Average Group Similarity	-7889.4***	1019.3
	(1511.1)	(1530.9)
R-squared	0.344	0.342
Control Mean	1194.103	654.399
Number of obs.	914	914
Panel B: Maximum discussion group leader similarity		
Leader	-204.3***	-22.81
	(68.73)	(41.84)
Max Similarity in Group	-1496.5***	268.6
	(307.2)	(321.7)
R-squared	0.342	0.343
Control Mean	1194.103	654.399
Number of obs.	914	914

Notes. Unit of observation is worker in all columns. The dependent variables represent the absolute value of the endline minimum wage preference/belief minus the workers' median wage preference/belief at the discussion group level at baseline. Probability weights and bootstrap standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs).

Table C.4: Robustness to flexibly controlling for group and leader similarity

	Deviation from median union leader	
	(1) Preference	(2) Belief
Panel A: Flexibly controlling for Individual President Similarity		
Leader	-176.8***	-18.30
	(67.76)	(42.64)
Similarity of Member w/ Rank=1	-1245.5***	347.5
	(314.8)	(353.4)
Similarity of Member w/ Rank=2	7058.2*	-1021.5
	(3717.9)	(3160.4)
Similarity of Member w/ Rank=3	-67187.5***	-5010.5
	(22904.7)	(18472.9)
Similarity of Member w/ Rank=4	-89949.5	-23648.9
	(74186.7)	(64674.4)
R-squared	0.358	0.344
Panel B: Controlling for Placebo President Similarity		
Leader	-241.8***	-23.81
	(67.26)	(41.05)
Leader or placebo leader similarity	-856.1***	426.9
	(299.8)	(345.9)
R-squared	0.333	0.344
Control Mean	1194.103	654.399
Number of obs.	914	914

Notes. Unit of observation is worker in all columns. The dependent variables represent the absolute value of the endline minimum wage preference/belief minus the workers' median wage preference/belief at the discussion group level at baseline. Probability weights and bootstrap standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs).

Table C.5: Robustness to estimating consensus-building results without probability weights

	Deviation from median union leader			
	(1)	(2)	(3)	(4)
	Preference		Belief	
Panel A: Leader				
Leader	-283.9***	-274.6***	20.31	20.31
	(95.57)	(93.30)	(74.68)	(73.05)
R-squared	0.322	0.323	0.312	0.312
Panel B: Own versus External LL				
Own Leader	-315.4***	-306.7***	-30.90	-30.90
	(113.3)	(110.4)	(82.60)	(80.76)
External Leader	-234.3**	-224.0**	102.7	102.7
	(108.1)	(105.9)	(105.9)	(103.6)
R-squared	0.322	0.324	0.315	0.236
Control Mean	1232.665	1232.665	655.189	655.189
Number of obs.	914	914	914	914
p-values				
Own Leader = External Leader	0.489	0.471	0.235	0.223
PDS lasso selected controls	N	Y	N	Y

Notes. Unit of observation is worker in all columns. The dependent variables represent the absolute value of the endline minimum wage preference/belief minus the workers' median wage preference/belief at the discussion group level at baseline. Probability weights and standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs). R-squared for columns that applied PDS lasso selected controls are estimated by the correlation between the observed outcome and the predicted outcome.

Table C.6: Robustness to gender of leader and share of men in the group discussion

	Deviation from median union leader			
	(1)	(2)	(3)	(4)
	Preference		Belief	
Panel A: Leader				
Female Leader	-248.2**		10.66	
	(114.4)		(78.48)	
Male Leader	-368.8**		-190.8	
	(186.6)		(123.4)	
Leader		-243.4**		28.95
		(105.5)		(75.25)
Male share in group		-582.3		-1032.7***
		(751.3)		(347.9)
R-squared	0.331	0.332	0.347	0.356
Panel B: Own versus External LL				
Own Female Leader	-304.7**		-28.16	
	(136.4)		(86.65)	
Own Male Leader	-211.5		-158.4	
	(237.6)		(128.0)	
External Female Leader	-142.2		77.39	
	(140.7)		(119.7)	
External Male Leader	-743.6***		-265.8	
	(208.6)		(291.6)	
Own Leader		-280.4**		-12.62
		(127.0)		(81.08)
External Leader		-184.9		95.46
		(123.4)		(111.2)
Male share in group		-593.8		-1046.5***
		(746.0)		(348.1)
R-squared	0.336	0.333	0.349	0.359
Control Mean	1194.103	1194.103	654.399	654.399
Number of obs.	914	914	914	914
P-val: Female Leader = Male Leader	0.548		0.109	
P-val: Female Own = Male Own	0.730		0.329	
P-val: Female External = Male External	0.010		0.279	
P-val: Female Own = Female External	0.309		0.411	
P-val: Male Own = Male External	0.089		0.737	
P-val: Own Leader = External Leader		0.498		0.352

Notes. Unit of observation is worker in all columns. The dependent variables represent the absolute value of the endline minimum wage preference/belief minus the workers' median wage preference/belief at the discussion group level at baseline. Probability weights and standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs).

Table C.7: Placebo control group leaders, leader similarity, and main results, control group leader is member with highest similarity

	Deviation from Union Median	Deviation Exc. Leader	Deviation from Union or Placebo leader	Deviation from Union Median	Deviation Exc. Leader	Deviation from Union or Placebo leader
	(1)	(2)	(3)	(4)	(5)	(6)
	Preference			Belief		
Leader, High Similarity	-365.2**	-323.0**	-509.1***	-54.40	-43.93	64.03
	(142.1)	(144.1)	(183.4)	(114.8)	(115.9)	(116.4)
Leader, Low Similarity	-278.5*	-250.8*	-470.4**	-26.31	-6.790	33.80
	(148.1)	(149.9)	(196.7)	(115.3)	(115.0)	(121.2)
Control, High Similarity	-58.18	-87.75	-262.2	-25.73	-20.89	-23.89
	(164.7)	(165.9)	(207.0)	(117.1)	(117.1)	(145.1)
R-squared	0.323	0.319	0.291	0.342	0.340	0.342
Control Mean	1135.491	1188.522	1395.362	713.572	656.318	684.124
Number of obs.	833	833	833	833	833	833
p-values						
High Similarity= Low:	0.507	0.582	0.773	0.796	0.733	0.792
Leader High= Control High:	0.037	0.102	0.118	0.781	0.825	0.503
Leader Low= Control High:	0.176	0.312	0.284	0.996	0.890	0.710

Notes. Unit of observation is worker in all columns. The variable *Leader, High Similarity* is a binary variable equal to 1 if the estimated probability of a line leader having similar attributes to president is above the median in the treatment group. The probabilities are estimated for each worker based on a probit model, which includes demographics (gender, age, education, migrant(0/1), months in factory/sector), personality metrics (extraversion, agree- ableness, conscientionsness, neuroticism, openness) and psychological metrics (raven, score, grit, altruism, choice in life). In the control group, the worker with the highest probit scores is considered as the leader (placebo leader). The variable *Control, High Similarity* is a binary variable equal to 1 if the placebo leader's probit score is above the median in the control group. Sample restricted to workers who are not placebo leaders. The dependent variables in Cols. 1-6 represent the deviation from the factory median of baseline leaders' preferences and beliefs (Cols. 1 and 4, respectively); Cols. 2 and 5 exclude the individual leader view from construction of the factory median for the leader groups and Cols. 3 and 6 use deviation from the placebo leader view for the control groups. Probability weights and standard errors clustered at the group level. Controlling for group size FE and stratification FEs (Factory FEs x Union FEs).