

Labor Facing Capital in the Workplace: The Role of Worker Representatives

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Abstract

The paper studies how the personal career of union (or worker) representatives is tied to the conditions in which revenues are shared between labor and capital at the firm-level. We argue that employers can have a strategic interest in either favoring or discriminating against union representatives in order to lower workers' bargaining power. The first strategy (favoritism) amounts to “buying the social peace” and can only be implemented with willing representatives. The second (discrimination) is a way to stigmatize vindictive representatives and curb their demands, notably by discouraging other workers to join the union. The behavior of union representatives during firm negotiations and the stake of those negotiations influence employers' willingness to use one or the other of those strategies. We formalize this theory with a model and provide evidence to support it using a rich survey for France in 2017 combined with administrative data on earnings and firm performance. Union representatives that are the most active during their mandate or represent the most campaigning unions have worse career outcomes, while those that do not participate in strikes experience a wage premium. Workers are in turn more likely to think that joining a union will negatively affect their career in firms where union representatives are paid less than their colleagues or feel discriminated against. Together, these results show that employers' capacity to affect representatives' careers can impair the quality of workers' representation and workers' ability to organize collectively in order to take part in the firm decision-making process.

Keywords: Bargaining, Unions, Workers Representatives, Strategic Discrimination

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Introduction

When recognized as bargaining partners in firms, labor unions negotiate wages and working conditions. They can permit the expression of workers' voice, hence reducing turn over (Freeman, 1980; Hirshman, 1970). They can also be useful in aggregating workers' preferences and hereby favor the provision of public or collective goods within the firm by solving standard free-riding problems. They can finally bargain wages, generate a wage premium and reduce wage inequality. Since the famous book by Freeman and Medoff (1984), these possible effects are well-known and have been studied extensively.

Less attention has been paid however to how these effects may be obtained, and in particular to the role played by union representatives in the interactions between labor and management in the workplace. This role is likely to be important and related to the social climate, possible industrial conflicts and the outcome of negotiations. Just like the decisions of politicians can change the fate of a country, the behavior of union representatives can affect (and be affected by) the outcome of collective bargaining. The objective of this paper is to clarify the interactions between the representatives of capital (the employers hereafter) and those of workers within the firm, as well as the consequences these interactions can have for collective bargaining, the quality of worker representation, and the ability of workers to organize collectively. We study how the career of union representatives depends on the way they exercise their mandate of representation, and how workers' decisions to join a union can be influenced by employers' behavior toward union representatives.

We start by recalling that there exists a conflict of interest between labor and capital regarding the split of firm revenues. This is simply because the revenues accruing to one party are lost for the other one. If sufficiently competitive, the labor market can in theory adjust supply and demand for each type of skills and workers and provide equilibrium prices that would provide a market solution to the conflict of interest. However, the standard Walrasian assumptions typically required to get market clearing are unlikely to hold in the labor market: it is costly for workers to exercise their arbitrage opportunities and move across firms; the job search process is frictional, workers' productivity is not immediately transportable from one firm to another due to firm-specific human capital, etc. Those features of the labor market generate firm-specific rents that can be shared in various ways between firms and workers. When unions are officially recognized for bargaining, they become a key actor of the sharing process.

While the market solution, when applicable, can regulate human interactions without immediate or open conflict, this is not necessarily the case with collective bargaining because it makes the divergence of interests between capital and labor explicit, and it structures an open

discussion on how revenues should be shared. We argue that union representatives are likely to play a key role in this discussion. They can indeed coordinate and motivate other workers to participate in collective action (Boudreau, Macchiavello, Minni, & Tanaka, 2021), transfer them key information on the firm’s financial health, amplify or curb their demands, organize strikes (Ashenfelter & Johnson, 1969), etc. They have margins to adopt different bargaining positions, from very lenient to very vindictive. In this paper, we take an economic perspective on the role of worker representatives, trying to understand their selection, incentives and behaviors.

In most countries, worker or union representatives at the firm or workplace level are elected or designated workers within the firm. This implies that they have two hats: they are both under the authority of the employer as salaried workers and their bargaining partner during firm negotiations. This “double status” of workers’ representatives is a key feature that motivates our analysis. Indeed, it implies that the employer can take advantage of the leverage she has on the worker and her career to affect her bargaining position. In fact, the strong asymmetry between the employer and the worker in the employment relationship (due to the large personal consequences of losing a job, or exercising it in difficult conditions) implies that the employer has a lot of margin to exert pressure on worker representatives in the negotiations in order to curb their bargaining position.

In our framework, the reason why employers may be willing to influence worker representatives by affecting their career is strategic: they do so in order to lower workers’ bargaining power and therefore maximize their profits. The strategic motive is simple: it is likely to be much less costly to target one (or a few) worker representative than to give a larger share of profits or rents to the whole workforce. To lower workers’ bargaining power, employers have in fact two possible polar strategies; they can either try to favor union representatives or discriminate against them. The first strategy (favoritism) amounts to “buying the social peace” and can only be implemented with a willing union representative in the context of a more or less tacit agreement. The second strategy (discrimination) can be implemented in all cases. It may not immediately discourage the union representative in place. However, it may discourage other workers to join unions and participate to collective action, making clear that such behavior can be costly.

The large media coverage given to examples of union leaders abusing of their position or being more or less directly bribed by employers provides anecdotal evidence that the first strategy does exist. While perhaps less advertised, the second strategy has also been documented, notably by several ethnographic studies and actual facts.¹ The paper formalizes why and when such

¹See for example union-busting activities in the U.S. that date back to the 1940s, with some firms hiring professional anti-union consultants in order to avoid certification elections (Logan, 2002). See also Amossé and

situations can occur and provide empirical evidence to confirm theoretical insights.

To describe employers' incentives and behaviors toward union representatives, we come up with the concept of "strategic discrimination".² As explained, this discrimination can be negative or positive. Importantly, it targets (through its holder) a representation mandate and the way it is exercised. Hence, contrary to usual discrimination, it is not the person and her immutable traits (gender, ethnicity) or social group that trigger the discrimination. The reasons leading to discrimination are also different than in existing economic theories: while we do not reject that discrimination against union representatives could sometimes also be taste-based (or information-based when productivity is hard to observe), this is not our main interpretation.

Our model of strategic discrimination is taken to the data on the French labor market using a rich and detailed survey for 2017 combined with administrative data on firms and workers. Using standard linear wage models that include workplace fixed-effect, we show that conditional on education, age, sex and tenure, *union delegates* (the union representatives in charge of the official negotiations with the employer) are paid on average 4% less than their colleagues in the same workplace. They are also a third less likely to have been promoted to a higher-level occupation over the period 2015-2017 and tend to declare worse working conditions on the various dimensions that we could measure.

Looking then at union delegates who just took a representation mandate, we observe that these representatives are not paid less than their colleagues. This means that workers who become union delegates are not initially negatively selected in terms of wages (conditional on their observable productive characteristics). Rather, their wage penalty tends to increase with the time since they started to exercise a mandate. This could be because the mandate itself limits their career opportunities, or because they start exerting less effort in their salaried work as they take a representation mandate. While we do not observe effort at work, we do know, for a subset of union delegates, the share of their total working time officially devoted to their representation mandate. We use this information as a proxy for the delegates' involvement in their primary job and observe that it is unrelated to their wage, which partly discards the idea that the time spent working directly for the firm is a main determinant of union delegates' lower wages.

We then turn to our main results and show that the career differentials between union dele-

DENIS (2016) for analyses of anti-union strategies in France, Dundon (2002) for the U.K. and Amossé and Denis (2016) for other countries. The French press also regularly reports legal procedures at the labor courts for anti-union discrimination, such as the one occurring against the multinational firm IKEA. See https://www.challenges.fr/entreprise/ikea-la-cgt-depose-une-nouvelle-plainte-pour-discrimination_264103.

²Such a concept has already been used to describe the behavior of participants in the game "the weakest link". While the context here is very different, our interpretation of discrimination is actually very similar to this earlier conceptualization.

gates and their colleagues (working in the same workplace) are highly heterogeneous, depending on the bargaining context. More precisely, union delegates' wages are highly dependent on several variables describing their involvement in collective bargaining and the corporate context in which this bargaining takes place. We look at variables capturing either representatives' investment in their mandate, their behavior during the negotiations, and the existence of conflicts. We find for example that the union delegates that are most active in their mandate (e.g. take part to or organize meetings, spend extra time on their representation activities outside working hours) experience the largest wage penalties relative to their colleagues. Union delegates are also particularly badly paid when they manage to bargain a firm-level collective agreement that makes a substantial difference (according to the employer). However, when they do not even initiate the legally-mandated wage negotiations with the employer—even though this is supposed to be their main duty as representatives—they do not experience any wage penalty. They are badly paid when they have participated to a strike over the period 2015-2017 (among workplaces where such strikes occurred). In contrast, those that did not take part in a strike when there was one—probably a sign of having interests more aligned with those of the employer than those of coworkers—actually experience a large bonus in terms of wages or career prospects. Union delegates from more campaigning unions are finally those that experience the largest wage penalty.

The key general pattern is therefore that the variables driving the heterogeneity in union delegates career paths are directly related to the bargaining context itself, rather than to factors that could impact their productivity at work. In itself, the fact that representatives' career outcomes vary strongly with variables related to their mandate and not with variables related to their job suggests the existence of strategic interactions. It could be that all the variables investigated (strikes, involvement in the mandate, behavior during negotiations, etc.) are correlated with unobservable productive characteristics, so that we actually capture differences in productivity. Even if our research design does not allow us to fully discard this interpretation, empirical results appear strongly aligned with the predictions of our model of repeated strategic interactions between employers and union representatives, and we conclude that they largely validate our theoretical framework. The model is also used to derive additional predictions regarding, e.g., how the unionization rate should affect the likelihood to observe anti-union discrimination, and these predictions appear validated by the data.

We finally go one step further and, still drawing on the model predictions, we try to uncover what could be the consequences of discriminating against union delegates on workers' participation to collective action. To do so, we exploit original data on the reasons that workers give

for not joining a union, and observe that in workplaces where union delegates are paid worse or less promoted, their non-unionized coworkers are more likely to declare that they did not join a union because they fear the negative consequences this could have on their career.

The rest of the paper is organized as follows. The next section presents the related literature. Section 2 provides a model of collective bargaining with endogenous workers' decision to become a union delegate and the possibility for employers to bribe or discriminate against the elected or designated delegates. The model shows that both bribing strategies and discrimination can emerge. The latter is however only observed in a repeated-game setting. Section 3 provides the institutional context for France and describes to what extent it is likely to foster the type of strategic interactions we are describing. Section 4 presents the data and show which methodological choices need to be done to adapt the general framework to the data available and institutions in place in the country. Section 5 provides the results and section 6 concludes.

1 Literature

A large literature in corporate finance and governance is dedicated to the study of the means to align CEOs or directors' interests with those of the shareholders (see Tirole (2010), for a review). This literature studies the governance or agency problems implying that the objectives of shareholders may not be appropriately represented within the firm and it tries to offer solutions. Our study of worker representation is in the same spirit: we are interested in the conditions under which the interests of workers will be appropriately defended by their representatives. The strategic incentives of employers described above imply that in turn workers' interests may not be optimally represented, and studying these behaviors is a first step in building a more developed theory on the conditions to solve governance problems on the employee side (see discussion).

While there is currently little economic research on governance issues among labor unions or workers, our approach can be traced back to early debates in the field of industrial relations between Dunlop, Fledderus, and van Kleeck (1944) and Ross (1948). Dunlop tended to conceptualize unions as any economic agent maximizing an objective function while Ross recognized the political nature of unions and conceived them as organizations including several members with various interests that could not always be easily reconciled. Economic analysis of unions has been later on very much influenced by Dunlop, with in particular a lot of attention dedicated to studying the objective function of unions and their effects. Our work is in contrast more closely related to Ross' approach, and follows a thin line of research trying to understand the

role of union leaders.³ This research has faced two main limitations. First the early pieces of work were lacking a good theoretical apparatus to study agency problems within unions, and in particular repeated game-theory or the kind of principal-agent approaches that were developed to study CEOs incentives in corporate governance. Second, data on union representatives or leaders was lacking.

Beyond these general limitations, the existing literature was mostly focused on the role of union leaders in shaping the union objective function—which has been the topic of extensive debates in the union literature, see for example Atherton (1973)—and organizing strikes Ashenfelter and Johnson (1969); Besancenot and Vranceanu (1999). To the best of our knowledge, none of the existing work has attempted to model explicitly the fact that employers can have the opportunity to bribe or discriminate against union representatives, and studied these strategies empirically.⁴ This is the key contribution of the paper, both from a theoretical and empirical point of view. In our model, union leaders' utility can be directly affected by employers and we show that this feature can be used strategically in some circumstances to curb union demands. In contrast to the existing literature, rank and file union members preferences are not inadequately represented because leaders' objectives differ from theirs (e.g. leaders are more interested in their own survival and increasing total membership than increasing the wage bill, see Ashenfelter and Johnson (1969)). Instead, it is the trade off between individual losses and gains that the employer may inflict to union leaders depending on their bargaining behavior that affects both *ex ante* workers willingness to run for union leadership, and *ex post* their behavior during the wage negotiations. To our knowledge, these phenomenons arising from strategic interactions between the management and union leaders have not been studied yet.

On the empirical side, our contribution is more specifically to use original data including rich information on both union representatives and their behaviors and the reasons why workers do not join unions. This allows us to highlight for the first time how the career of union representatives is tied to the general conditions of the rent-sharing process in the firm, and the consequences this can have for the bargaining power of workers. This paper is actually extending and confirming with better data former work by some of the authors (Breda (2011); Breda (2014); Bourdieu and Breda (2016)). These former papers introduced the concept of strategic discrimination and showed, under some identification hypotheses, that the union delegates were

³See Ashenfelter and Johnson (1969); Atherton (1973); Berkowitz (1954); Besancenot and Vranceanu (1999); Faith and Reid Jr (1987); Jones (1989); Pemberton (1988).

⁴A possible explanation for this is that in the U.S. institutional context, which has inspired most of the literature, bargaining and union organization are largely externalized, limiting the scope for within-firm strategic interactions, in particular discrimination (bribing local union leaders is still possible). We discuss this point in detail in Section 3.

paid about 10% less than their colleagues in 2004 and 2011.⁵ They were however not providing a formal theoretical model and they could not directly identify union delegates in their data, limiting the scope of the analyses they could perform.⁶ More recently, Brébion (2021) also draws on the concept of strategic discrimination to study worker representatives (work council members) in German firms. He finds a wage premium for representatives in the Manufacturing sector, where unions are well established, recognized, and where unions can be useful partners to opt out from strongly binding industry-level agreements. On the contrary, he finds a penalty in the services sector, where the legitimacy of worker representation is much less established. These differences across sectors are exacerbated for representatives that belong to a union or are politicized.

2 A stylised model

This section develops a model of collective bargaining at the firm level with two distinctive features: an endogenous decision on the worker side to apply for being a union negotiator and the possibility for the employer to bribe or discriminate against the union negotiator in certain circumstances. The objective is to formalize the main intuitions developed in the paper, notably the fact that employers may use discrimination or bribery strategically to lower the probability of facing collective bargaining and limit the bargaining power and representativeness of union delegates in case bargaining does occur.

2.1 Environment

General setup. We consider a firm with n employees. The players of the game are the employer and each employee who is described by a type $\theta \in R$ drawn from a distribution with cdf $F(\cdot)$. Employee types are i.i.d. θ is the key parameter in the model. It captures how much utility workers get from being a Union Delegate (UD) that bargains actively, e.g. because they are altruist or like this type of job. Importantly, we assume that workers' willingness to be a UD also depends on their political or general opinion regarding capitalism or rent-sharing: workers that strongly believe that firms' profits should be shared with workers (or even that firms should be owned by workers) get more utility from being a UD. They are likely to adopt tougher

⁵Former work was published in French journals and an expected value-added of the present paper is also to convey this research to a more international audience. For this paper we use a survey for 2017. This survey is done every six years. Breda (2011, 2014) was exploiting the 2004 wave of the survey. Bourdieu and Breda (2016) used the subsequent wave in 2011.

⁶Both between 2004 and 2011 and between 2011 and 2017, we worked in relationship with the statistical institute of the Ministry of Labor (Dares) in charge of the survey to include additional questions on union representatives and unionization, allowing for the improvements provided in the present analysis.

bargaining positions but may not be successful in doing so. To keep the model simple and avoid introducing two correlated parameters, we simply consider θ as capturing both workers taste for being a UD and their latent activism or willingness to defend strong pro-worker positions.

Importantly, we assume that the distribution of θ has a single mode $\theta_m > 0$ and is symmetric around that mode (e.g. a normal distribution). This means that there are more workers with intermediate pro-worker views (and utility gains from becoming a UD) than there are workers with either extreme pro-worker or pro-employer views (Figure 1). This is true in the general population of workers but we do not assume that it is true in all firms: due to randomness in the sampling of workers' types, firms may differ in, e.g., their share of workers with large or low types. Types are initially unobserved but are revealed when a worker becomes a UD.

Actions and Timing. The game includes three sequential steps which are repeated infinitely.

In step 1, workers decide if they want to run to become a UD who will be legally entitled to bargain wages and working conditions with the employer for all workers in the firm (see Figure 1). If more than one worker runs, we assume that one UD is randomly drawn among applicants. This assumption makes sense for example if types are initially unobserved.⁷

Steps 2 and 3 are then played only when there is a UD in the firm. By default, the UD will engage a bargaining with the employer for all workers in the firm as she is mandated to do so. However, in step 2, just after the beginning of the negotiations, the employer can try to "buy social piece" and offer the UD to reduce her bargaining effort in exchange of a personal benefit b that we call "bribe". This benefit can take various forms: a promotion, better working conditions, a wage bonus, or even an illegal cash transfer. While we model it as a one-off transfer for simplicity, the "bribe" is likely to take more often the form of a tacit arrangement between the employer and the UD building on during the official negotiation: the employer makes clear to the UD that her career conditions will be better if she does not bargain too strongly and the UD may then decide to reduce her effort during the bargaining in exchange of the promised career advantages.⁸ The UD that enters such an arrangement with the employer also experiences a utility loss due to not representing her coworkers as expected. The loss is simply set to θ_{UD} and could capture the social cost of facing colleagues or simply a pure moral cost.⁹

⁷See below for extensions to more than one UD and alternative appointment mechanisms.

⁸One way to model formally such a "tacit arrangement" is to assume a large number of repeated interactions between the Employer and the UD after the UD has been appointed. Just like in the repeated prisoners' dilemma, each party has an immediate interest in deviating from the collusion equilibrium by which the employer offers a bribe and the UD does not put effort in the bargaining, but punishment in subsequent periods makes such deviations unprofitable. For simplicity, we model instead collusion between the employer and the UD as a one-off transaction.

⁹Note that the model allow for $\theta < 0$, even if this case should be in practice rare. A UD with $\theta_{UD} < 0$ would

If the UD has refused the bribe or if the employer has not offered it, the UD exerts effort during the bargaining. In the final step of the game, the employer may decide to “punish” the UD and reduce her utility by a fixed amount d (“discrimination” strategy).¹⁰ We assume that such a strategy is costly for the employer. Specifically, she incurs a cost $c(s(\theta_{UD})) > 0$ which is increasing with the support provided to the UD by her coworkers and captures the fact that discrimination may entail legal or reputation costs, especially when a UD is largely supported by the workforce.¹¹

Bargaining The surplus that is bargained is denoted Π . It can be firm’s profits but may potentially also include other matters which are harder to observe and for which a bargaining might also take place (e.g. problems of work organization, mass lay off).

When a UD has accepted a bribe, we simply assume that she reduces her effort so that her bargaining power is null. In contrast, in case of active bargaining, the UD bargaining power in a given firm j depends on the share of workers $s_j(\theta_{UD})$ supporting her and workers get a fraction $s_j(\theta_{UD})$ of the total surplus Π that they will share equally.

Empirically, “supporting a UD” can mean joining the union of the UD and/or be willing to go on strike if needed. We assume that workers support “UDs that are like them”. Formally, this means that a worker θ supports a UD if and only if $\theta - \theta_{UD} < \bar{s}$, for a given positive \bar{s} . This implies that in all firms, the expected support a worker of type θ will get if she runs for UD is $s(\theta_{UD}) = \int_{\theta - \bar{s}}^{\theta + \bar{s}} f(x) dx$. $s(\theta_{UD})$ is a positive inverted U-shaped function of θ_{UD} which reaches its maximum at θ_m and converges to zero when θ goes to $-\infty$ or $+\infty$ (see Figure 2). The support $s_j(\theta_{UD})$ a UD actually receives may vary from firm to firm depending on workers’ types in the firm. We consider cases where $s_j(\theta_{UD})$ has the same properties as $s(\theta_{UD})$.

Payoffs. Payoffs for workers and the employer are summarized in Figure 1. In absence of effective bargaining, the payoffs of workers who are not UD and of the employer are normalized to 0 and Π , respectively. We also assume that workers have bounded rationality in step 1 and ignore potential bargaining gains obtained by another UD than them, so that their baseline utility when they do not become a UD is always 0. This assumption shuts down coordination problems across workers to become a UD (as some workers may choose to free-ride and let others apply). Doing so, it makes the resolution of the model easier to follow, but importantly,

be happy to shirk during the firm negotiations.

¹⁰Taking d as fixed assumes that there is a limit to the cost employers can impose and they will reach it if they choose to discriminate.

¹¹For example, coworkers supporting the UD may simply not accept that the former is discriminated against and strongly reduce their effort at work or go on strike if this occurs. Note that the employer may recoup d (if d only takes the form of a wage cut for the UD): we assume that d is always smaller than $c(s)$ and we include it in the latter.

it does not change its main predictions. [In Appendix A](#), we show how the model can be solved when workers are fully rational.

2.2 Equilibrium solutions

The game has multiple equilibria. Importantly, there are an infinity of firm-specific configurations depending on firm size n and the types $(\theta_1, \dots, \theta_n)$ of the workers in the firm. It is therefore not possible to provide a comprehensive resolution of the model for each type of firm configuration. Instead, we illustrate the main equilibria that can occur. While we do not set parameter values, we think that in a typical case, both the bribe b and the discrimination cost c are small in comparison with Π but large in comparison with $\frac{\Pi}{n}$. Workers' types θ are also unlikely to be negative.

No discrimination equilibrium. In the non-repeated three-steps game, the employer has no interest to discriminate in step 3 and will not do so at equilibrium. The game can then be solved by backward induction. In step 1, workers know that if they become a UD, they can always refuse a bribe and get their payoff under bargaining with no discrimination. All workers such that $\theta + s(\theta)\frac{\Pi}{n} \geq 0$ are therefore willing to become a UD. $\theta + s(\theta)\frac{\Pi}{n} = 0$ admits a unique solution,¹² implying that there exists $\bar{\theta}_{nd} \leq 0$ such that all workers with $\theta \geq \bar{\theta}_{nd}$ are willing to run for being a UD and bargain.

Workers such that $\theta \leq b$ are willing to run for UD in order to get a bribe. They will favor the bribe over effective bargaining in absence of discrimination if and only if $\theta + s(\theta)\frac{\Pi}{2n} \leq b/2$. Assuming that $\theta + s(\theta)\frac{\Pi}{2n}$ is increasing for all θ , there exists $\underline{\theta}_{nd} \leq b$ such that all workers with $\theta \leq \underline{\theta}_{nd}$ are willing to run for UD in order to get a bribe and will accept it if offered.

Offering a bribe in step 1 is profitable for the employer if and only if $s(\theta_{UD}) \geq \frac{b}{\Pi}$. Basically, as long as a UD can get enough support from her coworkers, the employer may be willing to offer her a bribe, and there exist θ_{nd}^b and $\theta'_{nd}{}^b$ such that the employer will only offer bribes to UDs with $\theta \in [\theta_{nd}^b, \theta'_{nd}{}^b]$.

The solution of the game depends on the ordering of $\bar{\theta}_{nd}$, $\underline{\theta}_{nd}$, θ_{nd}^b and $\theta'_{nd}{}^b$. We assume $\theta_{nd}^b < \underline{\theta}_{nd} < \theta'_{nd}{}^b$, implying that workers with $\theta \in [\theta_{nd}^b, \underline{\theta}_{nd}]$ are willing to run for UD and accept a bribe. If $\underline{\theta}_{nd} < \bar{\theta}_{nd}$, there is a set of workers between the two that does not run for UD. Otherwise, all workers, except those with $\theta < \theta_{nd}^b$ will apply for UD, and those with $\theta > \bar{\theta}_{nd}$ will effectively bargain. This case is illustrated on panel (a) of Figure 2.

By property, any Nash equilibrium in the 3-step sequential game is also a subgame-perfect Nash equilibrium in the infinitely-lived game in which those steps are repeated. This implies

¹²This is because $s(\theta)\frac{\Pi}{n}$ is positive and increasing until $\theta_m > 0$

that the game has a first equilibrium with no discrimination and possible bribe of some UD only (for reasonable parameter values). In this equilibrium, there is typically a large number of workers who are willing to be UD, and the expected type of the randomly drawn UD is close to θ_m : the UD is expected to be well representative of the workforce and therefore to be well supported and obtain a significant share of the profits during bargaining.

Discrimination equilibrium. What would happen if the employer was able to commit herself to discriminate in step 3? Under such commitment, and keeping with previous notations, we denote $\bar{\theta}_d$ the threshold above which workers are willing to run for UD and bargain, $\underline{\theta}_d$ the threshold under which workers are willing to run for UD if offered a bribe and would accept it, and θ_d^b and $\theta_d'^b$ the lower and upper bounds beyond which the employer does not offer a bribe.

Simple calculations show that $[\theta_{nd}^b, \theta_{nd}'^b] \subset [\theta_d^b, \theta_d'^b]$. Indeed, the employer is more willing to offer a bribe when this spares her the cost of discrimination. Importantly we also have $\bar{\theta}_d > \bar{\theta}_{nd}$: fewer workers are willing to run for UD and bargain under discrimination because they will have to incur the cost of discrimination. Regarding bribes, one can easily show that $b \geq \underline{\theta}_d > \underline{\theta}_{nd}$: more workers are willing to run for UD and take a bribe if offered one since the discrimination makes the bribe relatively more interesting.

A typical case is one in which $\underline{\theta}_d = b$ and $\bar{\theta}_d \gg \theta_m$ as in panel (b) of Figure 2. In such case, there may be no worker in a given firm willing to run for UD, and if there is a UD, she will either not bargain or get limited support and bargaining power. Hence discrimination is an effective way for the employer to incur a smaller profit loss.

Repeating steps 1 to 3 infinitely is a simple way of making discrimination from the employer a credible threat. Formally, consider the following strategies in the 3-step game repeated infinitely:

- Worker (θ): In period 1, and at each subsequent period providing that in the past periods the employer always discriminated UDs that were not bribed, apply for UD iff $\theta > \bar{\theta}_d$ or $\theta < \underline{\theta}_d$ and accept bribe if $\theta < \underline{\theta}_d$. If there was a UD neither bribed nor discriminated in the past, apply for UD iff $\theta > \bar{\theta}_{nd}$ or $\theta < \underline{\theta}_{nd}$ and accept bribe if $\theta < \underline{\theta}_{nd}$.
- Employer: In period 1, and at each subsequent period providing that in the past periods the employer always discriminated UDs that were not bribed, try to bribe UDs with $\theta \in [\theta_d^b, \theta_d'^b]$ and discriminate all UDs that have either refused or not been offered a bribe. If there has been a UD neither bribed nor discriminated in the previous period, try to bribe UDs with $\theta \in [\theta_{nd}^b, \theta_{nd}'^b]$ and do not discriminate any UD.

These strategies are such that both the employer and the workers play as if the employer could commit herself to discriminate in step 3 of each period, but switch to the no-discrimination

equilibrium as soon as the employer has been observed not discriminating a UD (that is not bribed) in the past.

Theorem 1. *The strategies above from the employer and the workers constitute a subgame-perfect Nash equilibrium if and only if*

$$c(\theta_m) < \frac{\delta}{1-\delta} \left(\mathbb{E}[(1-s(\theta_{UD}))\Pi|Discrim] - \mathbb{E}[(1-s(\theta_{UD}))\Pi|No\ discrim] \right). \quad (1)$$

with $c(\theta_m)$ the maximum possible cost of discriminating, δ the discount factor, and $\mathbb{E}[(1-s(\theta_{UD}))\Pi|Discrim]$ and $\mathbb{E}[(1-s(\theta_{UD}))\Pi|No\ discrim]$ the expected profits of the employer at a given period (defined before step 1) when workers behave as if the employer would or would not discriminate, respectively.¹³

Proof. The possible subgames can be partitioned in two groups: those in which the employer has not discriminated a UD that was not bribed at some point in the past, and those in which she has always discriminated UDs that were not bribed. In the first group of subgames, both the employer and the workers play the no-discrimination equilibrium described in the previous section and none of them has interest to deviate from the equilibrium strategies.

In the second group of subgames, workers have no interest to deviate from their equilibrium strategy when the employer plays hers. Indeed, workers strategies are such that only those that are willing to run for UD for a bribe or to bargain under discrimination do so; hence any deviation would lead to a lower expected payoff in the current period since the employer discriminates at equilibrium. It would also have no incidence on payoffs in future periods. It is therefore not profitable. The employer may, however, have an interest to deviate in step 3 to recoup the cost of discrimination $c(\theta_{UD})$. The larger gain for the employer is in a subgame in which she faces the most supported worker. In such a game, the employer may gain $c(\theta_m)$ today, but her expected profits will move to those in the no-discrimination game in all future periods. Hence the deviation is profitable if $c(\theta_m) \leq \frac{\delta}{1-\delta} (\mathbb{E}[(1-s(\theta_{UD}))\Pi|Discrim] - \mathbb{E}[(1-s(\theta_{UD}))\Pi|No\ discrim])$. Otherwise, the equilibrium strategies above are a Nash equilibrium in every subgame. \square

Theorem 1 shows that the employer may have an interest to discriminate UDs even in a context where it is immediately costly to do so. This is because discrimination can dissuade many workers to become UD in the future, in particular those that may get a large support from their coworkers; hence it can increase future profits. In the model, discrimination appears as a way to marginalize UDs and it makes them less representative of their colleagues.

¹³To simplify notations, we assume $s(\theta_{UD}) = 0$ if there are no workers running for UD in the firm.

2.3 Comments and extensions

We conclude this section with a couple of remarks regarding model properties and some possible extensions. [Appendix A provides additional formalization to back up the claims made here.](#)

Avoiding unions. Discrimination may be a way to prevent all workers to run for UD. Indeed, in the no-discrimination equilibrium, most workers are willing to run for UD and there will be UDs in most firms.¹⁴ In contrast, (much) fewer workers are willing to run for UD under discrimination, and there could be no unions at all in some firms if none of the workers has a type θ triggering a candidacy for UD. In fact, the probability P_n to have a UD in a firm of size n can be expressed as one minus the probability that none of the workers has a type such that she is willing to run for UD:

$$P_n = 1 - (1 - \mathbb{P}(\theta \in [\bar{\theta}_d, +\infty[\cup[\theta_d^b, \underline{\theta}_d]))^n \quad (2)$$

P_n grows exponentially with firm size n ¹⁵

Strongly supported unions. If the cost of discrimination is large enough, for example because a UD is strongly supported, the employer will never have a strategic interest to discriminate. This means that solving free-riding problems inherent to collective action on the worker side, for example by offering a large support to a charismatic UD, may be a way to avoid discrimination. Institutional or cultural features not included in the model that make discrimination costly or coordination among workers easier can be an efficient way to avoid strategic discrimination.

Alternative appointment rules. The random appointment of one UD among those running for the position is credible under our assumption that types are initially unobserved: in that case, workers cannot vote for the candidate whose type is closest to theirs. However, if types are observed—which is likely if the game is repeated—, the fact that the UD is randomly chosen may appear unrealistic. Importantly, alternative appointment rules would not alter significantly the model takeaways. If for example, the candidate whose type is the closest to θ_m is elected as UD, both the no-discrimination and discrimination equilibria remain.¹⁶ The incentive for employers to discriminate is even stronger because in the no-discrimination equilibrium, they will face the

¹⁴Only firms where all workers have pro-employer views ($\theta < 0$) may have no UDs.

¹⁵The probability to have a UD that is not bribed can also be calculated as one minus the probability that all workers have $\theta < \bar{\theta}_d$, that is $1 - \mathbb{P}(\theta < \bar{\theta}_d)^n$.

¹⁶It may just be that some workers will not apply for UD if they know their colleagues' types and that they get no chance to be elected (in which case they are indifferent between running and not running for UD).

worker in the firm that gets the strongest support (the closest to θ_m), which is not the case when the UD is appointed randomly. In short, the appointment rule does not matter much as long as the most representative workers (those with θ close to θ_m) are not penalized by the rule. Indeed, discrimination can be an equilibrium only if it prevents from running for UD, workers that would (i) get a lot of support from their coworkers, and (ii) have reasonable chances to be appointed.

Multi-unionism. The model may also be extended to allow for more than one UD to be appointed. UDs could still be randomly drawn among candidates for a predefined number of UD positions, or other appointment rules may apply. UDs' bargaining power may in that case be defined as the sum of the support obtained by each (non-bribed) UD. The employer will still have interest to bribe UDs with a sufficiently large support. It will also still have interest to avoid that the most representative workers apply for UD. The logic of the model is therefore not fundamentally altered by allowing for multi-unionism.

Endogenous support. It is possible to adopt a different or more general rule for workers' decision to support a UD. For example, we may consider that all workers whose type is larger than θ_{UD} support the UD. We can also endogenize the decision to support a UD by modelling directly the utility obtained from supporting a UD that actively bargains as $g(\theta) + \Pi/n^2 - h(\theta - \theta_{UD}) - c$, with c is a fixed cost for example associated to paying union dues, Π/n^2 the extra gain during firm bargaining due to her support to the UD, $g(\theta)$ an increasing function of θ that captures the non-monetary utility derived from participating to collective action, and $h(|\theta - \theta_{UD}|)$ an increasing and convex function in the distance between the worker's and the UD types capturing the fact that workers lose utility when they support a UD that is not like them.

Additionally, the model could allow the employer to discriminate union supporters, at least to some extent. We discuss these extensions further in Appendix A and show that, under additional assumptions, they do not necessarily prevent strategic discrimination. Rather, discrimination can also be used to discourage workers to support UDs, reducing further the incentive for representative workers to run for UD by weakening their expected bargaining power.

Bounded rationality. Solving the model without bounded rationality on the workers side is cumbersome. The problem if workers are fully rational is that they may free-ride and let other workers becoming UDs or on contrary apply because they expect the appointed UD to get too little support and a low share of the firm profits. While discussing these coordination problems

among workers is not the main objective of the model, it can be done, and we provide model solutions without bounded rationality in Appendix A.

Model predictions. The model is stylized in the sense that it does not provide clear predictions regarding what should happen in a given firm. First, the model allows workers' types to differ across firms, implying that virtually any configuration of bargaining can happen in a given firm. Second, the likelihood to observe on average across firms behaviors such as bribes or discrimination depends on the general distribution of worker types and other model parameters that have been left voluntarily unspecified. Hence the model show that some configurations could exist, or are more likely to exist in some contexts, but it is not informative on which configurations are most likely on average. Finally, when both a discrimination and a no-discrimination equilibrium are possible in a firm, the model is also agnostic on which equilibrium would emerge, preventing us even more to draw clear theoretical conclusions on the prevalence of discrimination equilibria.

3 Institutional Settings

Since our empirical analysis takes place in France in 2017, we describe here the main features of the French collective bargaining system at that time and discuss to what extent it may encourage strategic interactions between employers and worker representative. A quick comparison with other countries is also provided.

General organization of employment relations in the French private sector. In the French private sector, industrial relations are organized at three main layers: workplace/firm, industry (called branch) and national. Despite one of the lowest union membership rate among OECD countries—around 10% in the private sector—, unions are key players and most French workers are covered by collective agreements.

At the national level, employer and representative worker organizations are consulted on future labor regulations and can also bargain over any relevant issues. If some large union and employer organizations reach a bilateral agreement called a “common position” or a national inter-industry agreement, the government is incited to include their propositions into the legislative process.

At the industry level, employer organizations and representative unions meet a few times a year to update former agreements. They discuss all aspects of pay (e.g., the pay scales prevailing in the industry), benefits (e.g., sickness absence compensation) and working conditions (e.g,

shift work). When they reach an agreement, it is extended to all firms in the industry by the government, providing that it complies with the labor law.

In firms or workplaces with more than 10 employees, three different types of worker representation mandates can coexist : works councils, worker delegations, and union delegations. There is no official firm-level worker representation in smaller firms.¹⁷

Firm-level representation. The different types of worker representatives have different prerogatives. In all covered workplaces/firms, the employer is required to inform worker delegates and collect their views concerning several specific matters. Conversely, the delegates pass on individual grievances and collective demands concerning such matters as the organization of work (e.g., health and safety), or the implementation of higher-level collective bargaining agreements. In firms or workplaces with 50 employees or more, individual problems are still dealt with by delegates, but collective issues were mainly the prerogative of the works council (*comité d'entreprise*), which is chaired by the employer and whose functioning is more formally organized.

By contrast, formal collective bargaining is the province of the union delegates. When there are union delegates in a firm, only them are allowed to negotiate or sign legally binding collective bargaining agreements with the employer. Employers must negotiate with them at least once a year regarding wages, working conditions and employment.¹⁸ These negotiations may lead to collective agreements and have to cover all workers in the workplace/firm.

The members of the works council and the worker delegates are named at staff elections that occur every two, three or four years (depending on the prevailing collective agreement). Depending on workplace or firm size, there is a predefined legal number of seats for worker delegates and elected members at the work council. These seats are attributed in two rounds and only workers endorsed by a union can be candidates at the first round.¹⁹ This means that a second round is only organized if there are no (or not enough) candidates from unions in the first round or if the ballot turnout is below 50%. In that case, candidates not endorsed by a union can run for the election and members of the works councils or workers' delegates may be non-union members.

¹⁷Until 2016, the French multi-level collective bargaining system respected on most topics the “hierarchy of norms” which implied that industry-level (firm-level) collective agreements must be more favorable to workers than the law (industry-level agreements). From late 2016 onward, firm-level agreements that are less favorable than the industry-level ones can be negotiated by union delegations on certain matters (such as working time). By decentralizing to some extent collective bargaining, this feature is giving a larger role to firm-level bargaining.

¹⁸Bargaining on other matters such as gender equality or union rights within the firm is also mandatory, but at a lesser frequency.

¹⁹Candidate unions present ordered lists of names for the election. Workers vote for one list, and are allowed to cross the names of people they do not want to see elected. Seats are then allocated to unions proportionally to their vote casts, and within unions to workers according to the number of votes obtained on their name.

Importantly, union delegates are not elected but chosen by unions among the candidates at the first round of staff elections who gathered at least 10% of the vote casts on their name. This implies that there can be up to 10 unions allowed to bargain in a firm, each union having between one (firms with less than 500 employees) and five union delegates (firms with more than 10,000 employees).

Based on the institutional context, we distinguish three main types of worker representatives. First, the union delegates (UD) are of central interest to us since they are those in charge of collective bargaining. Then, we consider together the members of the works council and the workers' delegates but make the distinction between those that are union members (Unionized Worker Representatives–UWR) and those that are not (NUWR). This choice is motivated by the fact that unionized representatives are usually better trained for their mandate and can get support from the union. Another motivation for considering them separately is that they may also introduce inside the firm social demands from their union that go beyond the main specific issues that need to be discussed in the firm.

Comparison with other countries. Three features of the French bargaining system are likely to foster the type of strategic interactions highlighted in the model. First, many unions can bargain or represent workers at the firm level, implying that the employer could exploit a “divide to reign” strategy, by which she would jointly favor the more lenient unions and penalize the more vindictive ones in order to make clear what type of bargaining behavior is expected. Second, the appointment of union delegates is only subject to mild electoral requirements. This implies that workers only have limited control to appoint the UD that best represent them or to get rid off those that are putting too little effort in the representation duties. Third, and most importantly, bargaining is not externalized at all to professional union employees; it is done by workers in the firm that combine their mandate and bargaining duties with their professional career.

These three features are typical of continental European countries, implying that the scope for strategic discrimination is not specific to the French context. In fact, it is hard to think of institutional rules that would fully avoid strategic discrimination. The U.S. context might be the closest to achieving this goal: multi-unionism at firm-level is very rare, union recognition is subject to stronger electoral requirements through certification elections, and bargaining or setting-up a union is largely externalized to professional union staff. On this last point, we can quote Kremer and Olken (2009): “paid organizers are often critical in obtaining the signatures required to have an election and in campaigning for union certification, because, unlike activists within firms, paid organizers are not susceptible to threats from management”. Nevertheless,

even in the U.S. context, our theoretical insights are likely to apply at least to some extent. First, organizing campaigns or bargaining cannot be entirely externalized, penalties incurred by firms for dismissing union supporters are weak (Kremer & Olken, 2009), and there is evidence that union activists within firms are penalized (Weiler, 1984). Second, the absence of repeated elections implies that unions become entrenched once elected in a firm, which may favor collusion between local unions and firms.²⁰

4 Data

4.1 The REPOSE dataset.

The empirical analysis is primarily based on the French Ministry of Labor’s Workplace Employment Relations Survey for 2016-2017 (REPOSE17), covering 5,948 non-agricultural business establishments with more than 10 employees. REPOSE17 is one of the leading sources of data on industrial relations in France. Its main originality and strength is to collect information in most participating establishments from a management representative, a sub-sample of employees, and a worker representative.

Employer survey (REPOSE17-Employer). In 4,363 of the participating establishments, a management representative could complete a lengthy face-to-face interview relating mainly to work organization and industrial relations. The answers constitute the employers’ part of the survey, from which we retrieve information on the presence of union representatives, the unionization rate, the outcome of collective bargaining, strikes or other collective actions, employers’ opinion of union representatives, etc.

Worker representative survey (REPOSE17-REP). At the end of her interview, if the management representative declares that there are worker representatives in the establishment, she is asked to provide the contact details of one of them. 2,891 worker representatives are identified that way and subsequently interviewed, providing detailed information on their mandate and industrial relations in the establishment.

Worker survey (REPOSE17-Workers). A random sample of 5 to 10 workers in each participating workplace finally receives a 2-page, 50-item questionnaire by mail or by email. The questionnaires are filled out by a core sample of 21,320 workers in the subset of 4,363 establishments that participate in the employer survey, plus an additional sample of 7,643

²⁰On this matter, see Kremer and Olken (2009) for a theory of how unions may survive without optimally representing their members’ interests.

workers in 1,584 more establishments for which no workplace level information is available. The data includes the usual worker demographics, work organization, job satisfaction, union membership and representation mandates. Hourly earnings for 2015 are also available. They are taken from social security records (*the Déclaration Annuelles de Données Sociales*, or DADS) and have been matched with REPOSE17 by the Ministry of Labor. These hourly earnings are constructed as annual earnings divided by the number of hours worked. They include basic wages, performance-related pay and non-performance related bonuses. They are net of employers and workers' social security contributions, but gross of income tax.

4.2 Samples of analysis.

Main sample. Our main sample is based on the REPOSE17 worker survey, combined with establishment-level information retrieved from employers' interviews and firm-level information on economic performance obtained from corporate tax records (see details in Appendix B). We exclude part-time workers, apprentices and interns, as those workers are unlikely to hold a representation mandate and may bias our comparisons. The final sample comprises 20,708 workers, including 271 UDs, 645 UWR, 629 NUWR and 1,706 unionized workers with no mandate (Table 1).

Using the sampling weights provided with the survey that allow to compute statistics representative of the 7 million full-time workers having at least one year of tenure in French business sector firms with more than 10 employees, we find that about 12.4% of them are union members, 6.4% are members of the works council or worker delegates and 1.2% are union delegates (Table 1). With more than 600,000 French workers, worker representatives constitute therefore a significant share of the employed population. As shown in Table 2, UDs are on average 5 years older and 6 years more tenured than workers that are neither unionized nor a worker representative ("base workers" hereafter). More than two thirds of them are men (compared to 54% of base workers). They are slightly more likely to hold at least an educational degree, but much less likely to be highly educated. They are finally distributed across broad occupation categories very similarly to base workers. The same patterns are found, but to a lesser extent, for other types of representatives: they are also older, more tenured and more likely to be men than base workers.

Auxiliary sample. We use as an auxiliary sample the 2,891 surveyed worker representatives. This sample is mostly used to study the effect on representatives' careers of the official time devoted to the representation mandates. However, it has two drawbacks. First, it is not representative of the general population of worker representatives since only those suggested

by the employer are interviewed. While the employer is asked to select one representative “randomly”, it is likely that she will more naturally suggest those with whom relations are not too tensed, that is, those that are less likely to be discriminated against.²¹ Due to this limit, we do not use the auxiliary sample to compute statistics representative of the general population, but only to check the relation between some variables, assuming that the studied relations are not affected by the way the sample was selected.

The second drawback is that the survey of worker representatives cannot be directly linked to wage information using worker identifiers. We overcome this issue by matching ourselves the responding representatives with workers in the social security records using workplace identifiers, age, occupation and gender. This statistical match allows us to retrieve wage information with certainty for 737 representatives and with uncertainty (two or more possible wage values) for 1,329 representatives. We provide details on the matching in Appendix B and also explain how we account for the uncertainty in our empirical analyses.

5 Results

We present the results in six steps. First, we study the prevalence of workplace representation and how it varies with workplace size. Second, we present, from simple Mincer wage equations, estimates of wage gaps between worker representatives and their colleagues. Third, we discuss selection issues, namely the fact that wage gaps may reflect a selection of low-paid or low-effort workers into representation mandates. Fourth, we provide evidence consistent with the model that UDs that are active in bargaining or have strong pro-labor claims have worse careers, while those that are very inactive have better ones. Fifth, we investigate the role of firm economic performance. Sixth, we provide evidence that discrimination of UDs may discourage other workers to unionize (and become UDs).

5.1 The low prevalence of UDs

On average, UDs are present in only 22% of workplaces of the business sector with more than 10 employees (Table C3).²² This means that in the vast majority of workplaces, there is simply no candidate to become a UD and therefore no collective bargaining even though it is legally

²¹We provide latter on evidence consistent with this hypothesis. Table C2 also provides descriptive statistics on these representatives surveyed in REPOSE17-REP and shows that they have higher-status occupations and are more educated than those in the representatives in the main sample, implying that selection also occurs on observable characteristics.

²²Other types of representatives are present in 65% of the workplaces.

authorized.²³

The limited number of workplaces with UDs signals that holding a mandate of representation is unattractive for most workers. This is despite the fact that representation mandates grant workers with a number of rights that may seem advantageous. First, UDs and other representatives are partly protected against layoffs as the employer needs to obtain a specific authorization by the French work inspection authority to fire them. Worker representatives also get paid delegation hours dedicated to their representation mandate. These hours are taken during the official working time, they represent on average 10% of this time and might be a way to limit job strain or hard work for workers with tough working conditions. In addition to these legal arrangements, UDs might also benefit from a more favorable socio-economic status in the firm: they get access to key information about the firm and may get extra esteem from their coworkers or acquire a higher social status. In a nutshell, serving as UD looks on paper like an attractive and interesting task as compared to many other jobs.

While we do not claim identifying all obstacles that can explain the low level of UD candidacies, we do suggest that the fear of negative consequences on one’s own career can be one of them, consistent with the “strategic discrimination” equilibrium in our model. To back up this claim, we go one step further and show that the probability to have at least one UD in the workplace varies with workplace size according to the model prediction. The plain curve in Figure 3 is obtained by estimating p in $P(n) = 1 - (1 - p)^n$ on the data by maximum likelihood (see equation 2). The fit is visually good and we find that the probability p that a worker has a type θ such that she is willing to run for UD is 0.006. This low individual probability to be willing to be a UD is consistent with the “strategic discrimination” equilibrium in the model.

5.2 Career differentials between worker representatives and their colleagues

Wage gaps. To investigate the wage differentials between worker representatives and their colleagues, we run a series of wage regressions of the type:

$$\log(w_{i,j}) = Rep_{i,j}\beta_1 + X_i\beta_2 + Z_j\beta_3 + \epsilon_{i,j} \quad (5.2)$$

where $\log(w_{i,j})$ is the log hourly wage of worker i in workplace j , $Rep_{i,j}$ a set of four indicator variables identifying Union Delegates (UD), other Unionized Worker Representatives (UWR), Non-Unionized Worker Representatives (NUWR) and Only Unionized workers (OU). X_i and Z_j are worker-level and firm-level controls, respectively.

²³In early 2017, in absence of UDs, employers could bargain with other types of representatives. However, this was possible only in specific circumstances and in practice rarely done.

Column (1) of Table 3 shows the raw wage differential in log points between union members or worker representatives and other workers. We see that NUWRs are paid about 4% less while UDs are paid 3% more than base workers, the latter gap being not statistically significant (at the conventional level of 5%). When controls for workers' education (8 groups), age (third-order polynomial) and gender along with controls for workplace industry (1-digit), size (5 groups) and number of years since creation (4 groups) are included in the regression model (column (2)), all estimated wage differentials become small and not statistically significant. When additional controls for workers' tenure and occupation are added, these conclusions are unchanged (columns 3 and 4).

To better control for workplace unobserved characteristics, columns (5) to (7) of Table 3 include workplace fixed effects instead of the workplace controls Z_j . These specifications control for example for the fact that collective bargaining may induce a wage premium, implying that UD are on average working in establishments that pay more (Breda, 2015). They provide an average of the wage gaps observed between worker representatives and their colleagues in each working establishment and are therefore better suited to detect possible discrimination or favoritism at the establishment level.

In column (5), which only controls for education, age and gender on top of the workplace fixed effects, we observe that UDs are paid about 3.5% less than base workers (the estimated effect is not significant) and unionized workers with no mandate about 3% less. The wage penalty for UDs increases to about 5% when an additional control for tenure is included (column 6) and it goes back to 3.6% when we further control for 1-digit occupation. In columns (6) and (7), a small wage penalty is also observed for union members and NUWR.

In Table C4, we use the social security records to provide additional estimates based on an extended sample that includes all workers in each REPOSE17 establishment, allowing to compare worker representatives to all of their coworkers in each workplace.²⁴ In this sample, we do not observe education and tenure for all workers and therefore control instead for workers' age, age squared, gender and either 1-digit (column 1), 2-digit (column 2) or 3-digit (column 3) occupation groups on top of workplace fixed effects. The wage penalty for UDs and other unionized workers in such specifications is between 3 and 4%, showing that even within narrowly defined occupation groups, UDs are paid less than their colleagues.

In the remaining of the paper and unless otherwise specified, we stick to the REPOSE17-worker sample. We systematically include workplace fixed effects along with controls for work-

²⁴We do not observe if workers in the social security records hold a mandate. These employees are thus put in the control group. However provided that their wage compensation conditional on the sets of controls we use in our analysis is smaller than their colleagues, this assumption biases our estimated wage gaps toward 0 (see all details in Appendix B).

ers' education, age, age squared, gender and tenure. Workplace fixed effects allow us to get comparisons "within workplaces", while the workers' controls allow us to account for differences in the main observable productive characteristics.²⁵

Promotion gaps. We now exploit three questions of the REPOSE17 survey measuring if workers have been promoted in the past 3 years, if they think they will be promoted in the 3 next ones, and if they think they may be laid off the following year. Results from specifications that include workplace fixed effects and controls for workers' gender, age, education, tenure, show that UDs are much less likely to declare they have been promoted in the past three years (Table 4). The gap is quantitatively large: while 30% of the workers declare such promotions, only about 20% of UDs do so. UDs also feel less likely to obtain a promotion in the near future. Interestingly, other worker representatives do not appear significantly different from base workers on those dimensions. In contrast, just like UDs, union members with no mandate declare having been less promoted, being less likely to be promoted in the future, and being more likely to be laid off than base workers. The magnitude of these differentials are however smaller than those between UDs and base workers.

Working conditions and feeling of discrimination. We complete our description of career differences between worker representatives and their colleagues with an analysis of declared working conditions and of representatives own assessment regarding the effect that their mandate of representation had on their career trajectory.

We first observe that UDs and other union members are about 3% more likely than baseline workers to declare having staggered hours, working at night or on Sundays, while, in contrast, non-unionized worker representatives are 3% less likely to do so (Table C5). A similar contrast appears regarding more subjective perceptions of working conditions: compared to baseline workers, UDs and other union members perceive their work as less recognized by employers, less reconcilable with their personal life, more risky for their health, and including tasks they don't approve (Table C6). Again, the opposite is true for non-unionized worker representatives.

The same type of contrast between non-unionized and unionized representatives is observed when looking at their own assessment regarding the effect of their mandate on their career trajectory, which we measure using the auxiliary sample. Only 2.5% of non-unionized worker representatives declare that their representation mandate was an obstacle for their career, while this is the case for 25.8% of their unionized counterparts, and more than a third of UDs (Fig-

²⁵We do not control for occupation systematically because such a control may prevent us from measuring wage differences occurring through differences in promotion rates (leading to a change in occupation).

ure 4). Interestingly, the share of UDs declaring that their mandate had a positive effect on their career is small but not negligible (10.%) and it is comparable to the share of non-unionized representatives declaring a positive effect. Together, these results imply that UDs are much less likely than other representatives to declare that their mandate had no effect on their professional career, consistent with the idea that their charge of official negotiators increases the scope for strategic interactions with employers.

To wrap up, conditional on education, age, gender, tenure and workplace fixed effects, UDs appear to be paid less than their colleagues, they are also less likely to have been promoted in the past and assess their working conditions as being worse. Similar but less pronounced patterns are observed for other unionized worker representatives and union members. In contrast, non-unionized worker representatives do not have systematically worse career outcomes.

5.3 Selection and effort at work

Selection into representation mandates. We now investigate selection into representation mandates according to past career outcomes, in particular wages. To do so, we examine how the wage differentials between worker representatives and their colleagues evolve depending on the time before or since they took their first representation mandate. We find that UDs or other unionized representatives that took a mandate in 2016 or early 2017 are paid in 2015 similarly to their colleagues (Table 5, panel A, columns 1 and 2).²⁶ In sharp contrast, workers that become a non-unionized worker representative or join a union without taking a mandate are paid on average 7% and 5% less than their colleagues, respectively (columns 4 and 5). We then observe that the wage penalties for UDs and other unionized worker representatives tend to increase with the time spent as a representative (even though differences across tenure groups are usually not significant), while this is not the case for non-unionized representatives and union members.

Similar analyses regarding past promotions (Panel B of Table 5) show that UDs did not experience fewer promotions before taking a mandate, but do so afterwards. In total, results in Table 5 suggest that UDs and other unionized worker representatives are not initially selected according to wages or other characteristics that could be related to their productivity or skills. This is however not the case for non-unionized worker representatives and union members. As a consequence—and because our aim is to focus on workers legally in charge of collective

²⁶See also column 3 where UDs and UWRs have been grouped to increase statistical power (the sample contains only 22 UDs that are about to take a mandate in 2015 versus 151 UDs with less than 8 years of tenure and 94 with more than 8 years of tenure). Note that we observe the time since workers' representative took their mandate in early 2017 based on a question in REPOSE17-Workers while earnings are measured for the year 2015 in the DADS. For some representatives, earnings are therefore observed before taking a mandate.

bargaining—we mostly focus in UDs in the rest of the paper.

Effort at work. While UDs’ lower wages or promotion rates are not explained by the fact they are drawn from the bottom of the wage distribution—which would have suggested that they are less productive—, they may reflect a reduction of their effort at work once they have taken a mandate. In fact, UDs working full-time do spend on average 10% fewer hours working directly for the firm due to their statutory delegation hours. By law, employers should pay these delegation hours at the same wage rate as hours dedicated to the salaried work representatives perform for the rest of their working time, implying that these delegation hours should not impact representatives’ earnings. However, from an economic point of view, employers may be less willing to reward, promote or pay bonuses to those representatives that spend a lot of time working for the union, and only little time working directly for the firm.

To investigate this hypothesis, we use the auxiliary sample in which UDs’ statutory delegation hours are observed. In column 1 of Table 6, we start by providing an estimate of UDs’ wage penalty in the auxiliary sample. The estimate is positive, which is not surprising considering that UDs included in this sample have been chosen by the employer (see Section 4). In column 2, we split UDs between those in workplaces with only one worker representative and those in workplaces with more than one. By construction, in the first group, the employer had no choice regarding which UD or worker representative could be designated to participate to the survey. Consistent with our intuitions, we do find a significantly larger wage penalty for UDs in this first group than in the group where the employer could select a particular representative (the estimates are significantly different at the 10 percent level). This confirms that the auxiliary sample should be used with caution. In column 3 of Table 6, we provide a sanity check to show that the even if it is not representative of all UDs, the auxiliary sample can still be used to make meaningful wage comparisons across groups of UDs. Namely, we verify that UDs that declare that their mandate had a negative effect on their career are paid less than their colleagues. This is indeed the case, which is reassuring regarding both the wage information and the UDs subjective perceptions included in the auxiliary sample.²⁷ Turning to the role of statutory delegation hours, we finally show in column (4) that the wage penalty of UDs in the auxiliary sample does not increase significantly with the share of their total working time officially spent working for the union. This shows that UDs are not paid less because they work less directly for the firm. It also partly discards the idea that a main determinant of representatives’ lower wages is their lower involvement in their primary job, even though it would be necessary to observe the effort

²⁷Due to the very small number of UDs declaring that their mandate had a positive effect on their career, we have grouped them with those declaring it had neither a positive nor a negative effect (see Figure 4).

they produce during the time spent working for the firm to fully confirm this point.

5.4 Bargaining context and behavior as representative

We now turn to the main empirical results of the paper and show that UDs' careers are tightly related to characteristics of their mandate and how they exercise it. The variables we consider to characterize UDs' activity can be thought in light of the model as proxies for their θ , or directly the fact that they are unlikely to be bribed.

Employers' opinions regarding unions. Employers surveyed in REPOSE17-Employer are asked to what extent they agree (four possible responses) with four statements regarding union activities in the firm, and one regarding union representativeness in general.²⁸ For four of the five questions, UDs' wage penalties are significantly negative only when the employer has a negative opinion of unions (Table 7). For the last statement ("unions harm business"), the wage penalty against UDs is larger when the employer agrees than when he does not, but it is only statistically significant in the latter case (at the 10% level).

Overall, evidence shows that UDs careers are related to employers opinions regarding unions in the firm. Hence, UDs careers as employees are tied to their representation mandate and how it is perceived by the employer. This result is arguably not surprising and compatible with multiple interpretations as employers' opinions on unions are likely to be mixed up with what they think of UDs as employees: employers are probably unlikely to think that unions are doing a good job if they have a negative opinion of the work done for the firm by the employees that are involved in them. Wage penalties against UDs in firms where the employer has a negative opinion on unions could therefore also reflect a reverse causality: in firms where workers involved in unions are not very productive and therefore paid worse than their coworkers, the employer will tend to have a negative opinion of unions.

Note however that the question on representativeness concerns union representativeness in general (and not the representativeness of unions in the firm) and it is therefore less subject to the issue above. In all cases, the results are also consistent with a wage discrimination linked to union activities—something we will investigate more thoroughly—and show that the data is adequate to capture contrasted outcomes for UDs across different firms.

Investment in defense of workers' interests. We consider two measures of UDs' participation in collective action: participation to strikes and participation to collective meetings. All workers in REPOSE17-Workers are asked if there has been a collective action (strike or

²⁸See Table B1 for the questions asked by the survey.

walkout) and if there have been meetings organized by worker representatives during the 3 years preceding the survey. If this is the case, they are asked if they participated to these events. The participation rate of UDs to collective actions and meetings are high: 86.5% and 93.6%, respectively.²⁹ Nevertheless, a few UDs declare they have not participated to these events when they took place, producing a relatively clear signal of a limited engagement in the defense of their colleagues' interests. Table 8 shows that this limited engagement of some UDs is not associated with lower wages in comparison to their colleagues, rather, the UDs that did not participate to collective action even appear better paid than their colleagues that do not hold a mandate. In contrast, the UDs that participated to meetings or collective action when those events took place experience the largest wage penalties (-9% for the UDs that participated to collective action), confirming that being active in the defense of workers' interest—a sign that a UD is not bought out by the employer—is associated with worse career outcomes.

Another indication of UDs investment in the defense of their colleagues' interests is the time they actually dedicate to it relative to the time they are granted by law. In REPOSE17-REP, surveyed representatives are not only asked how many statutory delegation hours they have, but also if they dedicate more time than these official hours to their mandate. This extra time spent is unpaid and cannot be taken on official working time. It therefore signals a high motivation and investment of UDs in their representation activities.³⁰ However, this investment does not seem pay in terms of career outcomes: conditional on their other observable characteristics, those UDs that spend extra time for their mandate (about 35.7 % of UDs in the auxiliary sample) are paid about 7% less than other UDs (column 5 of Table 6). Of course, we cannot reject that UDs that are the most invested in their mandate activities are also the least motivated by their work and that they put less effort in their work. While fully consistent with our theory that a stronger implication for workers implies worse career outcomes due to strategic discrimination, our results so far may also reflect this type of selection.

Participation to official bargaining. When UDs are present in a workplace, the employer must in principle negotiate with them at least once a year regarding wages and working conditions during the so-called *Négociations Annuelles Obligatoires*. However, there is no external control that these negotiations indeed take place, and it appears that 5.5% of workplaces where UDs are present have actually not held negotiations during the period 2014-2016 (according to employers' responses). This could be the case either because the UD(s) did not request to

²⁹UDs who participate to collective actions or meetings are likely to have organized them. We do not observe this information in the main sample, and rely instead on questions that are not tailored for UDs only but target all workers. Nevertheless, these questions are informative on UDs behavior.

³⁰For additional evidence on the time spent on representation activities outside work, their potentially time-consuming nature and their effect on personal life, see for example Lescurieux (2021).

negotiate, or because she tried, but the employer resisted, and the UD eventually gave up. In both cases, the absence of official bargaining signals that UDs are not doing the job for which they have been mandated—they resemble the “bribed” UDs in the model. Consistent with the model predictions, these UDs that did not bargain over the period 2014-2016 are not paid less than their colleagues while those that did negotiate experience significant wage penalty (-5.5%, see Table 9, columns 1 and 2).

One may argue that according to the model, the UDs that do not negotiate are bribed and should even be better paid. There are three responses to this point. First, the model provides a stylised representation with only two possible behaviors for UDs: some bargain “as much as they can” while the others do not bargain at all. In reality, UDs’ attitude to bargaining are likely to be less clear cut, and the fact that some UDs did not bargain indicates a low level of effort to defend workers’ interests, but not necessarily that they are fully on the employer’s side. Second, “bribes” may not take the form of a permanent wage premium, but rather consist in fringe or intangible benefits that are harder to capture in the data. Third, the threat of being discriminated may in itself be sufficient to reduce UDs’ willingness to bargain, something we did not allow in the model but that may be verified in practice.

Union ideology. France counts seven large national and inter-branch labor unions gathering together 96% of the votes at the first round of staff elections during the period 2013-2016: CFDT, CGT, FO, CGC, CFTC, UNSA and SUD. These unions are on different bargaining lines at the national level. CGT is the oldest French union and is still marxist and very radical. So is the recently created SUD. In contrast, CFDT, CFTC, UNSA and CGC are usually described as reformist, meaning that they are more willing to make concessions in the bargaining process to reach an agreement. FO stands somewhat in the middle. We provide in Appendix Table C7 more details on these unions, their full name, and their ideology to back-up our claims.

We identify UDs in REPOSE17-Workers but not the union they belong to. To estimate wage penalties for UDs from different types of unions, we therefore have to split the sample of workplaces depending on which unions are recognized for bargaining (those are declared by employers in REPOSE17-Employer). Table 10 shows that UDs from a union we classify as “tough” (CGT or SUD) appear to be significantly more penalized than UDs from “soft” unions (CFDT, CFTC or CGC, see columns 1 and 2). In cases where there are both soft and tough unions in the workplace (or also FO and UNSA), the UDs observed in REPOSE17-Workers could be from any of these unions, and the estimated wage penalties are intermediate (around -5%, see column 3). In columns 4 to 7 of Table 10, we keep workplaces where only one union is recognized, so that there is no ambiguity on the union the UDs belong to. In those workplaces,

UDs from CGT and FO are the most penalized. However, sample sizes get small, so that results should be considered with caution.

Our auxiliary sample has the advantage to contain information on the union she belongs to for each observed UD. We therefore reproduce as a robustness check our analysis of wage penalties by type of union on this larger (but not representative) sample of UDs with direct information on the union they belong to. Results confirm that UDs from the most confrontational unions experience the largest wage penalties (between 10 and 20% for UDs from CGT, SUD or FO, even when detailed occupation controls are included, see Table C8).

These large penalties could be seen as a sign of a retaliation from the employer against the most vindictive UDs. The model suggests an alternative and more subtle interpretation: firms that discriminate strategically dissuade less vindictive workers to run for becoming a UD and are left with the toughest unions only.

Support to the UD. UDs with a large support from the workforce are likely to be harder to discriminate and those that are bribed (or do not pay any effort in their mandate) will have no support at all from their colleagues. This suggests that the wage penalties experienced by UDs, if they reflect at least to some extent strategic discrimination, should only be observed for UDs with a low to medium level of support from the workforce. This is indeed what we observe when we consider the workplace-level unionization rate as a proxy for union support. The wage penalties against UDs are largest (6.5% and 9%) in workplaces where 1% to 10% of the workforce is unionized, while they are low and not statistically significant both in workplaces with a union density above 10% and in those where union density is close to zero (see Table 11).³¹

Effectiveness of the bargaining. We push the contrast between active and inactive UDs one step further by linking their wages to proxies of their success at the official negotiations. Indeed, even if these negotiations took place, it is not clear that UDs were actively bargaining or obtained substantial changes for workers. We start by using employers' own assessment regarding the role of the negotiations: When they think that, absent the negotiations, the outcome for workers would have been very different, UDs experience large wage penalties (around 17%, see Table 9, column 3). In contrast UDs are not significantly penalized when the bargaining did not make a difference (column 4), suggesting that only UDs that obtain

³¹Average union density in the private sector is around 10%. In our sample, 1.2% of workplaces having a UD declare a unionization rate close to zero, 37.8% a unionization rate between 1% and 5%, 29.1% a unionization rate between 6% and 10%, 16% a unionization rate between 11% and 20%, and 17% a unionization of more than 20%.

something are penalized.

To link more closely UD wage penalties to bargaining gains, we also try to get direct measures of the possible effect of the bargaining on wages. To this aim, we first recover firm fixed-effects from an AKM-style wage equation (Abowd, Kramarz, & Margolis, 1999) estimated using the whole DADS panel for the period 2006-2015 (see details in Appendix B.3). Estimated from the wage variations of workers moving across firms, those firm fixed effects capture differences in wages across firms that are independent from the composition of the workforce. They are therefore more likely to capture the effect of firm-level bargaining on wages, and we use them as a proxy for bargaining wage gains.

Table 12, column 1, shows the wage penalties against UD in each quartile of the distribution of the deviation of firm fixed effects relative to the 2-digit industry average.³² The penalties are highest (and only significant) in the second quartile. In columns 2 and 3, we replicate the analysis with alternative sets of firm AKM-style fixed effects, obtained when controlling for workers tenure (column 2) as well as workers occupation (column 3) on top of workers fixed effects. Results are similar and show that UD do not experience large wage penalties only in workplaces that pay the best. Finally, in column 4 of Table 12, we replace the quartiles of firm fixed effects by quartiles of firms' labor share (again relative to the industry average) computed using firm tax records, with the idea that a higher labor share may also reflect higher bargaining gains. We still find significant wage penalties only in the second quartile.

Results in Table 12 are at odd with the idea that UD that obtain the largest bargaining gains are penalized in return. They are however consistent with our model predictions. In fact, to obtain large gains, UD need to benefit from a strong support from the workforce; otherwise their bargaining threats are limited. According to the model and simple intuition, it can be difficult and costly for employers to discriminate against those UD that are highly supported and can therefore obtain large bargaining gains.

Stake of the bargaining. The way the stake of the bargaining influences strategic discrimination is non-trivial because many mechanisms are at play. On the employer side, offering a bribe becomes more appealing when the stake increases because the avoided loss of profits is larger. However, the willingness of workers to accept these (fixed) bribes decreases when the stake and therefore the potential bargaining gains increase. One can easily check that according to our model, the probability that a bribe occurs goes to zero when the stake goes to infinity. This result however crucially depends on the model hypothesis that the value of the bribe cannot

³²To avoid our firm-level fixed-effects to capture structural differences across industries, we also residualize it on 2-digit industry dummies, so that quartiles are computed "within" industries.

be increased when the stake increases and should be considered with some caution.

Regarding discrimination, employers are of course more willing to use it when stakes are high if it can allow them to discourage the most representative workers to run for UD and lower their bargaining power. The problem is, however, that when the bargaining gains become large enough, well-supported workers will be willing to run for UD even if they have to incur a (fixed) discrimination cost. Hence, without setting model parameters to specific values, the model is not conclusive regarding the fact that when the stake is very high, discrimination can really prevent workers to organize collectively efficiently.

One clear prediction arises, however, when the stake is very low. In that case, the employer has neither interest to bribe nor to discriminate (see equation 1) because these behaviors are costly and do not imply any substantial gains. Hence discrimination or bribes are likely to be observed only when the stake is above a certain threshold, but not necessarily when the stake is very high.

To investigate the question empirically, we use the firm tax records to build measures of firm value-added per worker (labor productivity), profit per worker, returns on equity and TFP. Those measures can be seen as proxies for the pie that can be bargained over. While accounting profits per worker may seem the most natural of these measures, one should keep in mind that they correspond to the outcome of the rent-sharing process rather than to the pie that is really bargained over. Hence, they may not be able to adequately capture the rents that could be captured by workers *ex ante*. The same can be said for returns on equity.

For each of the above measures of firm performance, we split the sample in four quartiles and estimate wage penalties for UDs in each of them. We observe large and significant wage penalties in the top quartile of firm value-added per worker and returns on equity (Table C9). Regarding profits per employee, significant wage penalties are found in the third quartile only, but these penalties are not quantitatively much larger than those observed in the other groups. Together, these results tend to support the idea that strategic discrimination is indeed more likely to occur when the stake is not too low. A limit of this interpretation, however, is that firm performance may increase both the likelihood of negative discrimination and bribes, something we are not able to detect clearly in the data as we only measure the average result from these two polar cases. We should also mention that measures of firm performance may not capture well the real stake of collective bargaining at the workplace level. For example, the stake may be very high when the firm is negotiating a mass layoff. These limitations together with the absence of clear theoretical predictions imply that the results presented in this section should be considered with caution.

Multi-unionism. When more than one union is recognized for bargaining in a workplace, strategic discrimination could be a way for employer to make effective a “divide and rule” strategy. Favoring the least vindictive UD while being at the same time tough against the others might indeed increase and make directly visible the rewards from being a compliant UD. It is also a way to stigmatize UDs that do not behave according to employers’ views regarding how social dialogue should be done. In fact, in a context where employers have to negotiate with several workers representing different interests and bargaining positions, they may not need complex strategic motives to try to get an agreement with the UDs that are closest to their own position. In turn, employers may be more likely to favor the career of those UDs they manage to obtain an agreement with. In our framework, we call this strategic discrimination, and we argue it could undermine the quality of representation of workers’ interests. However it could emerge quite progressively and subtly, looking almost natural.

There is however also abundant qualitative evidence that firms can use much more explicit “divide and rule” strategy in a multi-unionism context, for example by setting their own company union (so called *syndicat jaune* or *syndicat maison* in French) in order to avoid bargaining with labor unions having stronger claims. We are not able to provide strong direct evidence on this type of strategies but nevertheless observe that wage penalties for UDs are on average smaller in workplaces having many unions recognized for bargaining (Table 13): this may be because in those workplaces, it is more likely that some UDs are penalized while others are favored, whereas in single-union workplaces, negative discrimination is more systematic. To investigate this hypothesis, it is possible to go beyond the mean and examine the entire distribution of UDs wages. To do so, we have estimated an OLS regression of workers log hourly wage on “Mincer” controls and workplace fixed effects and plotted the residuals from such model separately for UDs and baseline workers, and both in single- and multi-union workplaces (see Figure 5). Visual inspection of the distributions suggests that in multi-union workplaces, UDs residual wages are much more dispersed than in single-union workplaces. To ease the comparisons, the bottom part of the figure plots the difference between the density of UDs residual wages and the density of baseline workers wages in each type of workplace. It clearly appears that in single-union workplaces, UDs are overrepresented (compared to baseline workers) in the distribution of residual wages slightly below 0, and underrepresented slightly above 0. In contrast, in multi-union workplaces, UDs are overrepresented both below and above zero, and underrepresented close to zero. This pattern is consistent with the hypothesis that some UDs are discriminated while others are favored in these multi-union workplaces.³³

³³A Kolmogorov-Smirnov test of equality of the distributions confirms that the distribution of residual wages for UDs are different between single and multi-union workplaces, while this is not the case for baseline workers.

5.5 Deterring collective action

We conclude our empirical analysis by an investigation of the possible deterring effects of strategic discrimination on workers' participation to collective action. Indeed, consistent with the model, strategic discrimination, when it has immediate costs, can only make sense if it dissuades workers to run for UD in the future or more broadly to join or support unions. To provide evidence that this could be the case, we stop focusing directly on UDs careers, but relate instead these careers to the decision of other workers to join unions. To do so, we exploit a new and original set of questions in REPOSE17-Worker inquiring about the reasons why workers who are not union members did not join a union. Five responses are possible: (1) I fear that joining a union could be detrimental to my future career, (2) Unions do not represent me well, (3) I do not need unions, (4) I cannot pay for it, and (5) there are no unions in my workplace. Appendix Figure C1 shows, for workplaces that have unions, how the four first reasons provided by non-union members vary with their age. The most frequent response, given by about 40% of non-union members, is that they do not need unions. Then comes the feeling that unions do not represent them well, which is steadily increasing with age and concerns about 25% of the workforce. Fearing a detrimental effect of joining a union on one's career comes in third position. It concerns about a quarter of non-union members below 45 y-old, and not surprisingly, a much smaller share of older workers. Finally, less than 10% of non-union members declare they cannot afford paying union dues.

To explore the link between UDs careers and decisions not to join a union, we restrict our main sample to workplaces where a UD was interviewed in REPOSE17-Rep. We observe that when the interviewed UD in REPOSE17-Rep declares that her mandate had a negative effect on her career (rather than no effect or a positive effect), non-union members are 6 percentage points more likely to declare that they did not join a union because they feared it could be detrimental for their careers (Table 14, panel A, column 1). This represents an almost 40% increase relative to the sample average, establishing clearly that in workplaces where UDs think that their mandate impacted negatively their career, workers are more afraid to join unions. This relationship is robust to controlling for workers characteristics (column 2) as well as workplace size and industry (columns 3 and 4). However, our preferred specification does not control for workplace characteristics as they are unlikely to directly affect workers' fear of discrimination but could however be determinants of firms using discrimination against UDs.³⁴

A test of equality of the variances of the distribution further confirms that the variance of UDs residual wages is larger in multi-union firms.

³⁴Indeed it is likely that discrimination is more widespread in some sectors or firm size groups, and controlling for these characteristics prevents us from examining if workers in industries or firm size group that discriminate the most are more worried regarding the fact that they could be discriminated if unionized.

In panel B, we reproduce the same exercise on the main sample using the workplace-level wage penalties for UDs instead of their subjective assessments. These workplace-level wage penalties are the residuals from a regression of log hourly wages on workers "Mincer" controls and workplace fixed effects. The analysis is then restricted to workplaces in which we observe at least one UD in REPOSE17-Workers and the (opposite of the) wage residuals of UDs in those workplaces are averaged to form the workplace-level wage penalty that we then relate to non-union workers reasons not to have joined a union. The advantage of this second approach is that we rely on more objective information. The drawback is that this information is likely to be more noisy, as the wage differential between UDs and baseline workers in a specific workplace could potentially reflect many things.³⁵ This could explain that we find a relationship that seems quantitatively smaller than in Panel A of Table 14: when the wage penalty against UDs increases by 10 log points, workers are about 1 percentage point more likely not to have joined unions because they feared for their career. As in Panel A, this result is robust to controlling for workers characteristics and firm size, but it disappears when also controlling for industry (column 4), likely because most of the identifying variation in UDs wage penalties is observed across industries.

Together, the evidence in Table 14 shows that workers are more afraid to join unions in workplaces where union representatives are either badly paid or think their mandates affected their career negatively. While this relationship is certainly not causal, it is in line with our theoretical framework, and there is no obvious alternative explanation for it.

6 Concluding comments

Combining administrative data on earnings with a rich survey on employment relations allowing us to identify workers representatives, we show that union delegates (UDs) who negotiate wage agreements have on average worse careers outcomes than their colleagues. In particular, they are paid about 5% less on average. This wage penalty does not reflect adverse selection on wages (UDs are not paid less before taking their mandate) nor does it reflect the number of contractual hours paid by the employer but spent working for the union. Instead, it appears correlated to UDs behavior when performing their representation duties and to the context in which bargaining takes place. For example, UDs that are the most active to defend their colleagues' interests or belong to a union reputed as confrontational are the most badly paid. UDs career outcomes are finally correlated to workers decision to join a union: in workplaces

³⁵We are also left with fewer observations because we keep only workplaces with union delegates surveyed in REPOSE17-Workers.

where UDs are badly paid or think they have been discriminated, workers are more likely not to join a union because they fear for their careers.

To rationalize these results, we build a model of strategic discrimination that shows that in some circumstances employers may have a strategic interest in bribing UDs to avoid bargaining or discriminating against them to discourage unionization and limit the support unions could get. These strategic behaviors can deter the most representative workers to run for UDs: only those that are either willing to be bribed or ready to suffer a discrimination would still be willing to take a mandate. The model also illustrates that there can be an equilibrium with no discrimination, limited options for bribes, and UDs that are more representative of and highly supported by their colleagues.

Even though the data might suggest that in France, an equilibrium with discrimination prevails, it might not be systematically the case. Indeed, among developed countries, France has both one of the lowest unionization rate and lowest extent of perceived cooperation between employers and employees.³⁶ This is in sharp contrast with the situation prevailing in countries like Denmark or Sweden, which have both high levels of unionization and declared cooperation. In a sense, our micro-level analysis of worker representatives careers illustrates how these well-known cross-country differences in the quality of employment relations may also be rooted in the career opportunities given to the workers that are engaged in the defense of their colleagues interests: in countries where union representatives are typically offered limited career prospects, it is probably harder to build trust and cooperation between social partners. Hence, thinking about the institutional rules that can limit strategic discrimination and improve the career prospects of worker representatives appears a necessary step to encourage a large participation into unions and improve the quality of employment relations.

³⁶In terms of cooperation in labor-employer relations as declared by managers, France ranks 117 out of 145 countries participating to the World Economic Forum global competitiveness index in the 2016-2017.

References

- Abowd, J. M., Kramarz, F., & Margolis, D. N. (1999). High wage workers and high wage firms. *Econometrica*, 67(2), 251–333.
- Amossé, T., & DENIS, J. (2016). La discrimination syndicale en question: la situation en france. *Travail et emploi*(145).
- Amossé, T., & Denis, J. (2016). La discrimination syndicale en question : un panorama international. In *Travail et emploi* (Vol. 145(2)). Dares.
- Ashenfelter, O., & Johnson, G. E. (1969). Bargaining theory, trade unions, and industrial strike activity. *The American Economic Review*, 59(1), 35–49.
- Atherton, W. N. (1973). *Theory of union bargaining goals* (Vol. 1232). Princeton University Press.
- Berkowitz, M. (1954). The economics of trade union organization and administration. *ILR Review*, 7(4), 575–592.
- Besancenot, D., & Vranceanu, R. (1999). A trade union model with endogenous militancy: interpreting the french case. *Labour Economics*, 6(3), 355–373.
- Boudreau, L., Macchiavello, R., Minni, V., & Tanaka, M. (2021). *Union leaders: Experimental evidence from myanmar*.
- Bourdieu, J., & Breda, T. (2016). Des délégués syndicaux sous-payés: une situation de discrimination stratégique?. une analyse économétrique à partir de l'enquête reponse de 2010. *Travail et emploi*(145), 31–58.
- Brébion, C. (2021). The works council wage premium in germany: a case of strategic discrimination?
- Breda, T. (2011). Syndicats, négociations, ou capitalisme familial: effets sur les salaires et la protection de l'emploi. *École des Hautes Études en Sciences Sociales, These de doctorat en Sciences Économiques*.
- Breda, T. (2014). Les délégués syndicaux sont-ils discriminés? *Revue économique*, 65(6), 841–880.
- Breda, T. (2015). Firms' rents, workers' bargaining power and the union wage premium. *The Economic Journal*, 125(589), 1616–1652.
- Dundon, T. (2002). Employer opposition and union avoidance in the uk. *Industrial Relations Journal*, 33(3), 234–245.
- Dunlop, J. T., Fledderus, M. L., & van Kleeck, M. (1944). Wage determination under trade unions.
- Faith, R. L., & Reid Jr, J. D. (1987). An agency theory of unionism. *Journal of Economic*

- Behavior & Organization*, 8(1), 39–60.
- Freeman, R. B. (1980). The exit-voice tradeoff in the labor market: Unionism, job tenure, quits, and separations. *The Quarterly Journal of Economics*, 94(4), 643–673.
- Freeman, R. B., & Medoff, J. L. (1984). *What do unions do*. New York: Basic Books.
- Hirshman, A. O. (1970). Exit, voice and loyalty. *Cambridge, Massachusetts*.
- Jones, S. R. (1989). The role of negotiators in union-firm bargaining. *Canadian Journal of Economics*, 630–642.
- Kremer, M., & Olken, B. A. (2009). A biological model of unions. *American Economic Journal: Applied Economics*, 1(2), 150–75.
- Lescurieux, M. (2021). *Le temps de militer: carrière syndicale et disponibilité biographique des femmes et des hommes de la cfdt* (Unpublished doctoral dissertation). Paris, EHESS.
- Logan, J. (2002). Consultants, lawyers, and the ‘union free’ movement in the usa since the 1970s. *Industrial relations journal*, 33(3), 197–214.
- Pemberton, J. (1988). A managerial model of the trade union. *The Economic Journal*, 98(392), 755–771.
- Ross, L. (1948). Conciliation and arbitration in australia and new zealand: Recent developments in australian industrial relations. *ILR Review*, 2(1), 98–105.
- Tirole, J. (2010). *The theory of corporate finance*. Princeton University Press.
- Weiler, P. (1984). Striking a new balance: freedom of contract and the prospects for union representation. *Harvard Law Review*, 351–420.

7 Figures

Figure 1: Tree of the Period Game

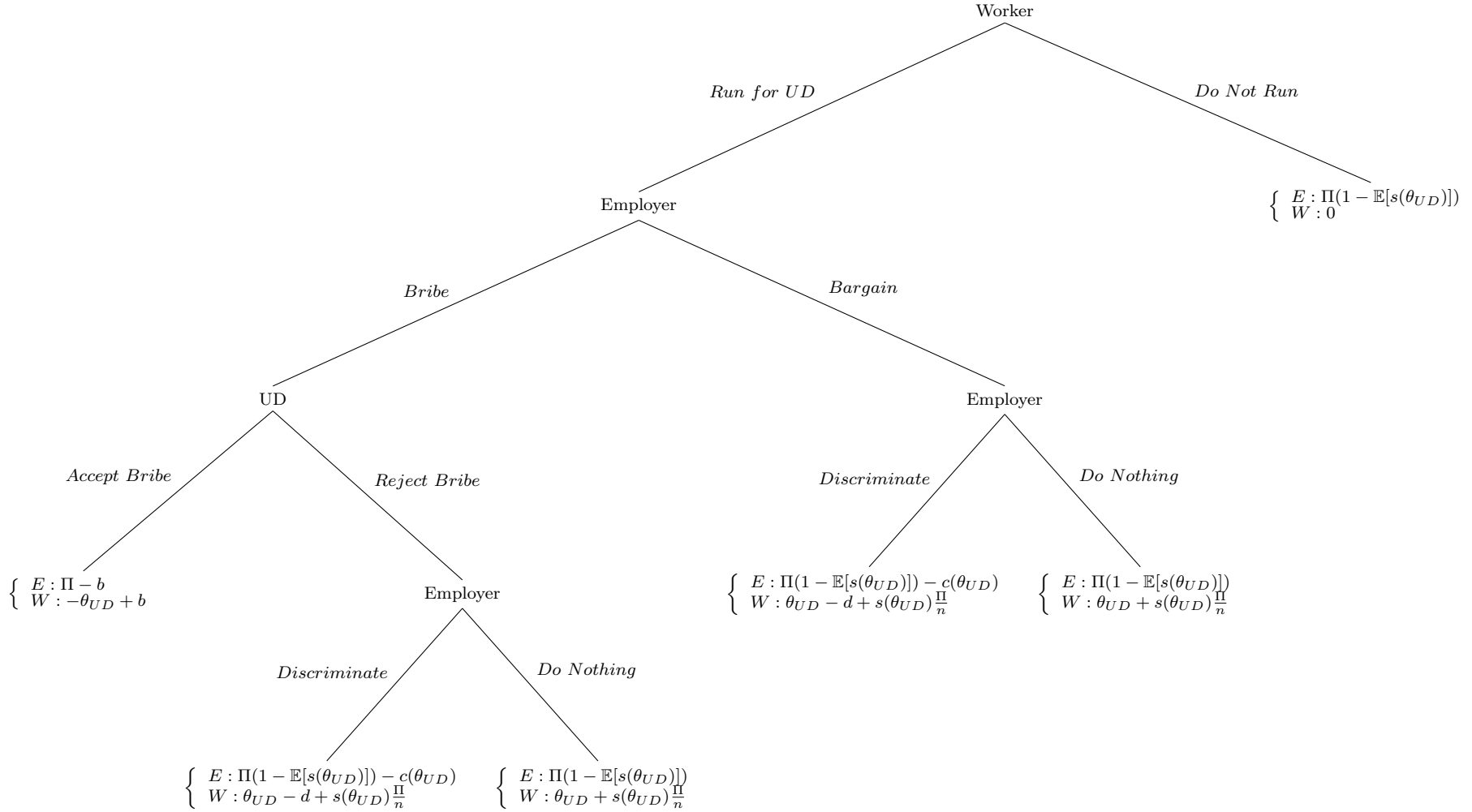
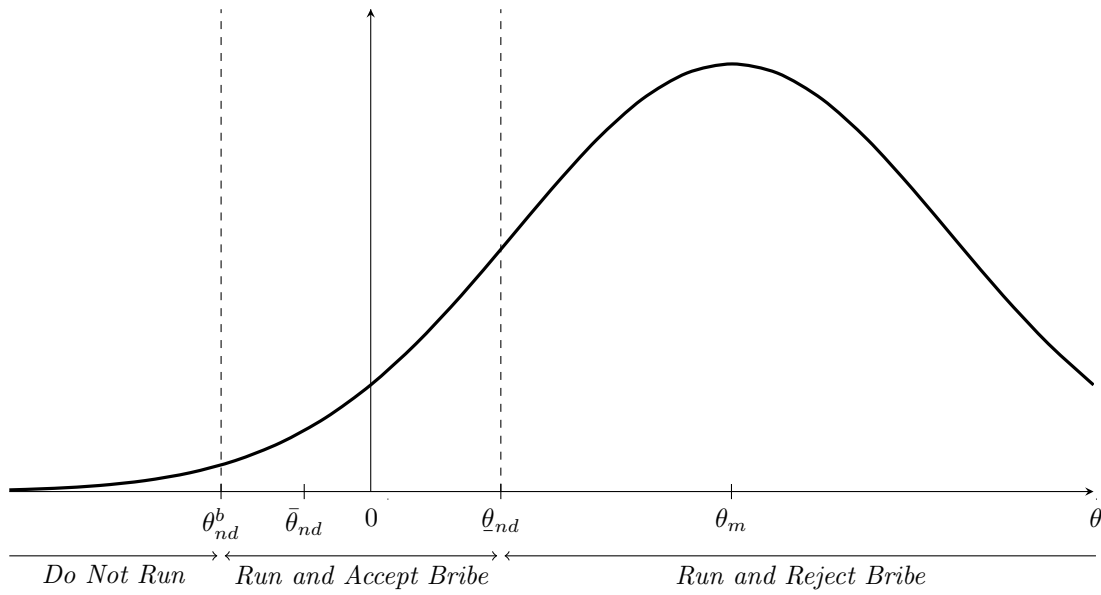
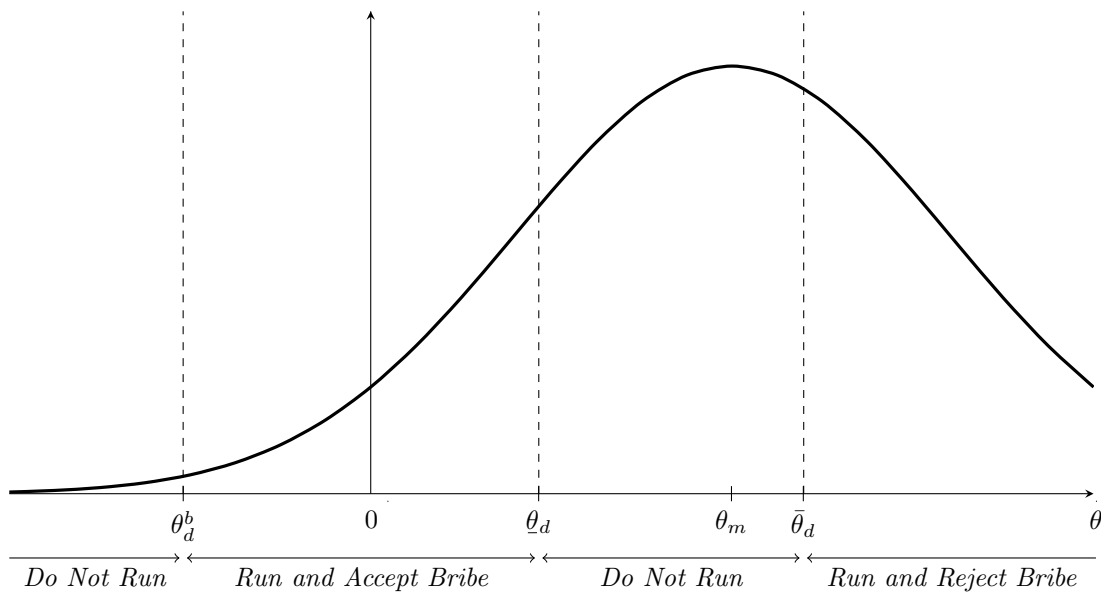


Figure 2: Distribution of Employee Types in the Two Equilibria of the Game

(a) No Discrimination Equilibrium

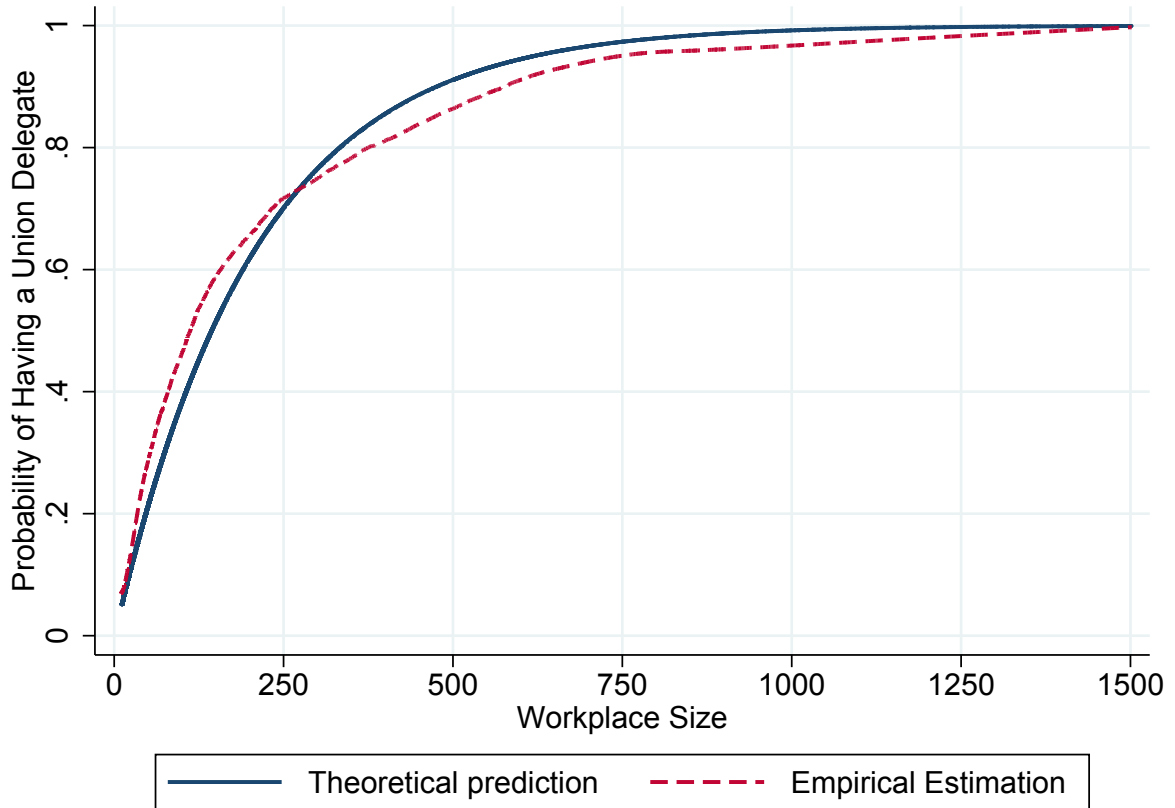


(b) Strategic Discrimination Equilibrium



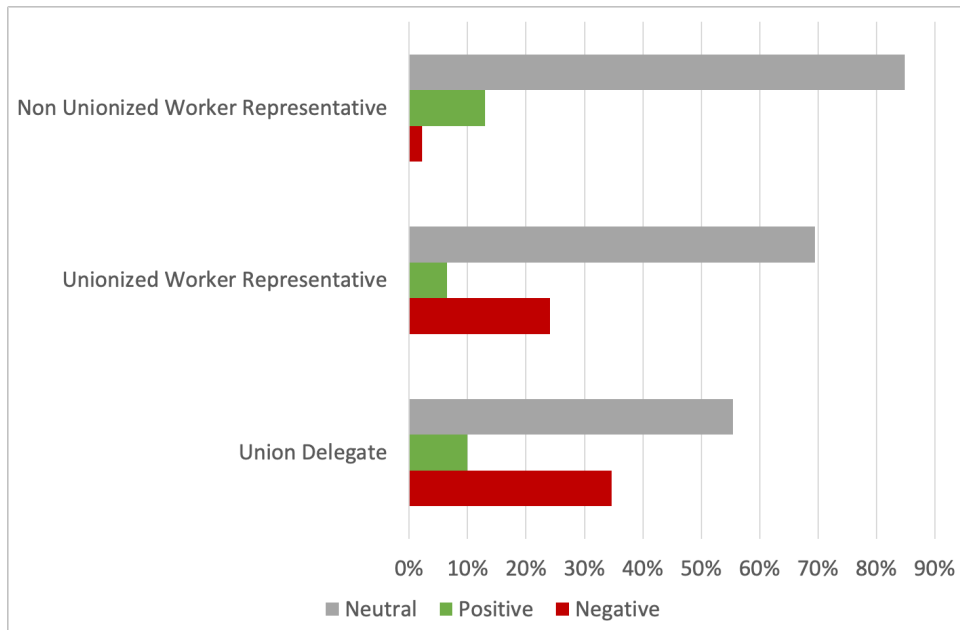
Notes: The figure represents the two types of equilibria of the game that are discussed in section 2. Each graph represents the distribution of worker types and the cutoffs that determine their decision to run as UDs and their behavior regarding bargaining with employer.

Figure 3: Probability of Having a Union Delegate in a Workplace as a Function of Workplace Size



Notes: The empirical estimation is the result of a locally weighted regression of wages on establishment size with a bandwidth of 1. The theoretical prediction is the function $g(n) = 1 - (1-p)^n$ with the parameter $p = 0.00483$ estimated by Maximum Likelihood. The model assumes that p is the exogenous probability that a given worker in a given establishment becomes a Union Delegate. The parameter estimated as the argmax of the function $\ln(1-p) \sum_{j:UD_j=0} n_j + \sum_{j:UD_j=1} \ln(1 - (1-p)^{n_j})$ defined over all establishments j of size n_j in the estimation sample, where UD_j is an indicator for the presence of a Union Delegate in establishment j . The data used for the estimation are all establishments in the REPOSE17-Employer Survey.

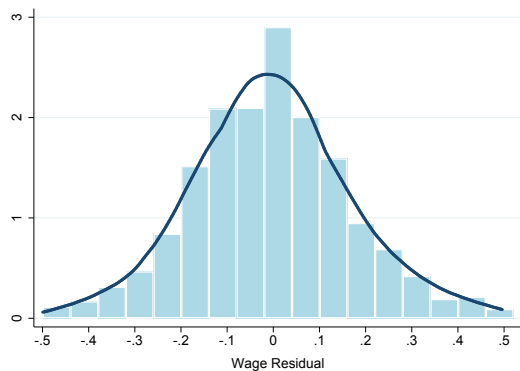
Figure 4: Effect of Holding a Representation Mandate on Career Evolution for Different Groups of Representatives.



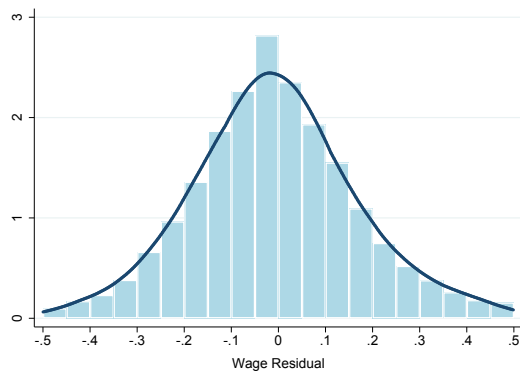
Notes: Responses to the question “Regarding the evolution of your career in the firm/establishment, your experience of representative has been: (1) an engine (2) an obstacle (3) neither one nor the other”. The sample used for the computation is REPOSE17-REP.

Figure 5: Distribution of Wage Residuals by Group of Employees

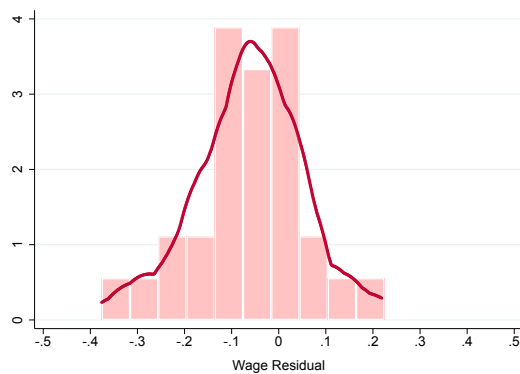
(a) Base Employees - One Union
(Mean = 0.005, SD = 0.206, N = 2268)



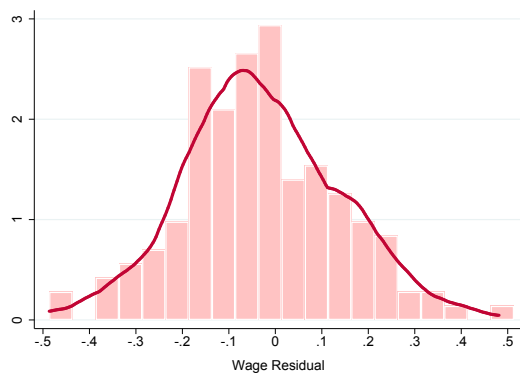
(b) Base Employees - Multiple Unions
(Mean = 0.005, SD = 0.211, N = 6098)



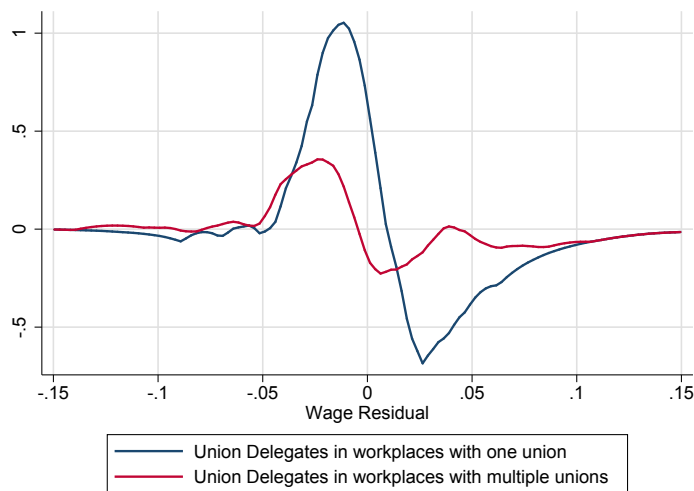
(c) Union Delegates - One Union
(Mean = -0.064, SD = 0.12, N = 32)



(d) Union Delegates - Multiple Unions
(Mean = -0.034, SD = 0.177, N = 144)



(e) Difference in Distributions



Notes: Panels (a) to (d) display the distribution of the residuals of a linear regression of the log hourly wage on Mincer Controls, Tenure, and workplace fixed effects for four different groups of employees: employees that are neither representatives nor unionized in workplaces with a unique union brand and in workplaces with multiple union brands, as well as Union Delegates in the same two groups of workplaces. Note that a Kolmogorov-Smirnov test for the equality of distributions reject that the distributions of Union delegates are the same across the two groups of workplaces, while they do not for base employees. The bottom graph shows the difference in distributions between Union Delegates and base employees for the two same groups of workplaces.

8 Tables

Table 1: Prevalence of Worker Representation

	Number in Sample	Percentage in Economy
Total	20,708	100%
Unionized Workers	2,455	11.6%
Union Delegates	271	1.2%
Unionized Worker Reps	645	3.0%
Unionized Workers not Reps	1,539	7.4%
Non Unionized Worker Reps	629	3.4%

Notes: Weighted statistics using our Main sample that represent about 7M workers full-time workers excluding apprentices in workplaces of more than 10 employees. Weights are at the employee-level and provided in survey.

Table 2: Characteristics of Worker Representatives surveyed in REPOSE17-Workers

	Base Workers	Union Delegates	Unionized Worker Reps	Non Unionized Worker Reps	Unionized Workers
<i>Gender</i>					
% Female	0.46	0.29	0.36	0.46	0.38
% Male	0.54	0.71	0.64	0.54	0.62
<i>Age (years)</i>					
Mean	43.79	49.05	47.16	44.68	46.98
Median	44.00	50.00	48.00	45.00	47.00
<i>Tenure (years)</i>					
Mean	13.27	19.73	18.47	14.95	17.06
Median	11.00	18.00	16.00	13.00	15.00
<i>Education level</i>					
% No diploma	0.08	0.07	0.09	0.05	0.09
% Lower than Bac	0.28	0.38	0.32	0.28	0.32
% Baccalaureate	0.18	0.16	0.22	0.20	0.18
% Two-year graduate	0.17	0.21	0.17	0.20	0.16
% Bachelor or higher	0.29	0.19	0.20	0.27	0.25
<i>Occupation category</i>					
% Laborers	0.27	0.29	0.32	0.25	0.32
% Employees	0.27	0.27	0.24	0.25	0.23
% Intermediate	0.22	0.21	0.24	0.28	0.25
% White collars	0.23	0.23	0.20	0.22	0.20

Notes: Weighted statistics using our Main sample that represent about 7M workers full-time workers excluding apprentices in workplaces of more than 10 employees. Weights are at the employee-level and provided in survey.

Table 3: Wage Differentials Between Worker Representatives or Union Members and their Colleagues

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent Variable: Log Hourly Wage						
Union Delegate	0.035 (0.029)	-0.019 (0.023)	-0.037 (0.023)	-0.015 (0.019)	-0.037* (0.022)	-0.050** (0.022)	-0.036** (0.017)
Unionized Worker Rep.	0.018 (0.021)	0.002 (0.015)	-0.011 (0.016)	0.000 (0.013)	-0.014 (0.015)	-0.025 (0.016)	-0.016 (0.014)
Not Union. Worker Rep.	-0.038** (0.017)	-0.007 (0.02)	-0.015 (0.012)	-0.018* (0.011)	-0.013 (0.013)	-0.024* (0.013)	-0.026** (0.011)
Only Unionized	0.008 (0.015)	-0.021* (0.011)	-0.025* (0.011)	0.002 (0.010)	-0.030*** (0.009)	-0.034*** (0.009)	-0.019** (0.008)
Observations	20,324	20,119	20,002	19,997	19,580	19,449	19,444
R-squared	0.000	0.513	0.523	0.635	0.752	0.760	0.824
Employee Controls	No	Mincer	Mincer +Tenure	Full	Mincer	Mincer +Tenure	Full
Workplace Controls	No	Yes	Yes	Yes	FE	FE	FE
Sample	Main	Main	Main	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the results from the linear wage regression models described in equation 5.2. The dependent variable is the log of earnings divided by hours workers during the year 2015. "Mincer" controls include a dummy for the individual's gender, education (in 8 groups) and a third order polynomial in workers age, as well as a dummy for whether the individual has been unionized in the past. Tenure denotes a third order polynomial in the tenure declared by employees in 2017 minus 2 years. Full controls add four-category occupation dummies in 2015. Workplace controls include a dummy for the presence of a union delegate in the workplace, dummies for workplace size (8 groups) and age (6 groups) as well as industry dummies (21 groups). Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4: Differences Between Worker Representatives or Union Members and their Colleagues in Terms of Past or Expected Promotions and Risk of Being Laid Off

VARIABLES	(1) Promoted over past 3 years	(2) Chances of Promotion over next 3 years	(3) Risk of Layoff next year
Union Delegate	-0.117*** (0.039)	-0.195** (0.086)	0.108 (0.103)
Unionized Worker Rep	-0.032 (0.027)	-0.085 (0.057)	0.142** (0.061)
Non Unionized Worker Rep	0.008 (0.024)	0.033 (0.053)	-0.018 (0.048)
Unionized Worker	-0.049*** (0.018)	-0.117*** (0.044)	0.162*** (0.047)
Sample average	0.305	0.034	-0.036
Observations	18,850	16,523	15,853
R-squared	0.365	0.424	0.448
Employee Controls	Mincer+Tenure	Mincer+Tenure	Mincer+Tenure
Workplace Controls	FE	FE	FE
Sample	Main	Main	Main
Weighted	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2 but where the dependent variables are respectively a dummy taking the value one when employees report having been promoted over the past 3 years, and two demeaned and standardized variables taking four values for the self-reported likelihoods that the employee is promoted over the next 3 years, and dismissed over the next year. Controls include a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5: Wage Differentials Depending on Tenure in the Mandate

	(1)	(2)	(3)	(4)	(5)
	Union Delegates	Unionized Worker Reps	Unionized Reps	Non Unionized Worker Reps	Unionized Workers
<i>A. Dependent variable : Hourly Wage Gap</i>					
About to take on a mandate	-0.019 (0.047)	0.009 (0.73)	0.004 (0.058)	-0.084** (0.033)	-0.063** (0.030)
Up to 8 years	-0.052 (0.032)	-0.030* (0.016)	-0.035** (0.015)	-0.019 (0.014)	-0.034*** (0.011)
More than 8 years	-0.048 (0.029)	-0.044** (0.020)	-0.045*** (0.017)	0.050 (0.050)	-0.024* (0.013)
Observations: 19,410; R-squared: 0.761					
<i>B. Dependent variable : Promoted over the last three years</i>					
About to take on a mandate	-0.018 (0.060)	-0.089 (0.084)	-0.074 (0.068)	-0.080 (0.069)	-0.083* (0.048)
Up to 8 years	-0.160*** (0.053)	-0.020 (0.030)	-0.055** (0.027)	0.022 (0.028)	-0.073*** (0.024)
More than 8 years	-0.106* (0.054)	-0.018 (0.066)	-0.050 (0.048)	0.043 (0.078)	0.005 (0.034)
Observations: 18,939; R-squared: 0.366					

Notes: The table shows the results from linear regression models akin to those described by equation 5.2 where the different groups of representatives have been divided according to the time they have spent in their mandate (note that representatives “about to take a mandate” are those with less than one year of tenure). For Unionized Workers we consider the time spent since joining a union instead of the time spent since taking a mandate. Each horizontal panel presents the results of the same regression and the estimates are staggered for clarity. All regressions include the following controls: a dummy for the individual’s gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6: Wage Differentials for Representatives Chosen by the Employer

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Dependent Variable: Log Hourly Wage				
Union Delegate	0.010 (0.020)			-0.015 (0.027)	0.011 (0.031)
UD in Workplace with One Rep		-0.096 (0.061)			
UD in Workplace with Many Reps		0.015 (0.020)			
Mandate had negative effect			-0.081*** (0.024)		
Mandate had neutral effect			0.056*** (0.014)		
Mandate had positive effect			0.001 (0.031)		
UD x Delegation Load				0.735 (0.868)	0.898 (0.899)
UD Overtime Delegation Work					-0.073** (0.041)
Observations	25,928	25,928	26,249	25,559	25,545
R-squared	0.770	0.770	0.770	0.769	0.769
Employee Controls	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	FE	FE	FE	FE	FE
Sample	Auxiliary	Auxiliary	Auxiliary	Auxiliary	Auxiliary
Weighted	No	No	No	No	No

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. Specification 2 splits UD's according to the number of representatives that are declared by employers, specification 3 does not distinguish between types of representatives but they are divided according to the answer they give when questioned regarding the effect of their experience of representative one the evolution on their career. In specification 4 the delegation load is the time granted by the employer for the practice of the duties as representative. All regressions include the following controls: a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, and a third order polynomial in tenure. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 7: Wage Gap Depending on Employer Opinions

	(1)	(2)	(3)	(4)	(5)
	Unions are irreplaceable	Unions are helpful for employees	Unions are selfish	Unions harm business	Unions are not representative
Dependent Variable: Log Hourly Wage					
UD in workplace where employer agrees	-0.0188 (0.0318)	-0.0414 (0.0296)	-0.0715** (0.0295)	-0.0671 (0.0505)	-0.0816*** (0.0260)
UD in workplace where employer disagrees	-0.0806*** (0.0310)	-0.0787*** (0.0284)	-0.0275 (0.0381)	-0.0446* (0.0244)	0.0171 (0.0433)
Share employers that agree	0.472	0.719	0.608	0.329	0.777
P-value equality test	0.024	0.259	0.200	0.442	0.087
Observations	19,449	19,449	19,449	19,449	19,449
R-squared	0.76	0.76	0.76	0.76	0.76
Employee Controls	Mincer + Tenure	Mincer + Tenure	Mincer + Tenure	Mincer + Tenure	Mincer + Tenure
Workplace Controls	FE	FE	FE	FE	FE
Sample	Main	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. For each specification, Union delegates are divided according to whether employers of their workplace agree or disagree with the following statements: “unions play an irreplaceable role in the representation of employees”, “unions are helpful for employees”, “unions put their own interests and motto before employees’?”, “unions harm the business of the firm”, and “In general unions are weakly representative”. The test of equality is an F-test of the difference between coefficients being equal to zero. All regressions include the following controls: a dummy for the individual’s gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 8: Union Delegate Wage Gaps as a Function of their Participation to Meetings and Strikes

VARIABLES	(1)	(2)	(3)	(4)
	Log Hourly Wage Gap	Promoted over last 3 years	Log Hourly Wage Gap	Promoted over last 3 years
	<i>A. Meetings</i>		<i>B. Strikes</i>	
Participated ($n^A = 235$, $n^B = 162$)	-0.063** (0.025)	-0.137*** (0.041)	-0.928*** (0.029)	-0.167*** (0.046)
Did not participate ($n^A = 4$, $n^B = 19$)	0.126** (0.042)	-0.016 (0.117)	0.082* (0.048)	-0.264* (0.141)
Event did not take place ($n^A = 9$, $n^B = 63$)	0.003 (0.061)	-0.076 (0.092)	-0.005 (0.043)	-0.019 (0.074)
Observations	18,795	18,265	18,892	18,352
R-squared	0.763	0.370	0.763	0.372
Employee Controls	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	FE	FE	FE	FE
Sample	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. In specifications 1 and 2 Union Delegates are grouped according to their reply to the following question: “Over the last three years, have you participated to a meeting organized by employee representatives?”. In specifications 3 and 4, they are grouped according to their replies to the following two questions “Over the last three years, have you participated to a work stoppage”, and ‘Over the last three years, have you participated to another type of collective action?”. Those categorized as “Participated” are those that have participated to at least one of the two and those who “Did not participate” are those that did not participate to any. All regressions include the following controls: a dummy for the individual’s gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 9: Union Delegate Wage Gaps Along Bargaining Dimensions

	(1)	(2)	(3)	(4)	(5)
	Bargaining Over Last 3 Years	No Bargaining Over Last 3 Years	Without Bargaining, the Outcome Would Have Been:		
			Very Different	Somewhat Different	Not Different
VARIABLES	Dependent Variable: Log Hourly Wage				
Union Delegate	-0.057** (0.026)	-0.006 (0.069)	-0.173** (0.083)	-0.032 (0.021)	-0.052 (0.030)
Observations	10,547	2,424	584	3,294	4,928
R-squared	0.766	0.738	0.772	0.770	0.763
Employee Controls	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	FE	FE	FE	FE	FE
Sample	Main	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. In specification 1 are kept only workplaces where employer and representatives have bargained at least once over the period 2014-2016. In specification 2 are kept only workplaces where no bargaining has occurred over the same period. In specifications 3 to 5, workplaces are divided according to the answer that employers give to the question: "Without bargaining how different the decision regarding wages would have been?". All regressions include the following controls: a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 10: Union Delegate Wage Gaps Depending on Which Unions are Recognized for Bargaining

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Tough	Soft	Mix	CGT Only	CFDT Only	FO Only	CFTC Only
VARIABLES	Dependent Variable: Log Hourly Wage						
Union Delegate	-0.100*** (0.029)	-0.0376 (0.0415)	-0.0512 (0.0351)	-0.111*** (0.031)	-0.079 (0.070)	-0.230*** (0.055)	0.182 (0.159)
Observations	899	2,216	6,001	766	880	404	237
R-squared	0.752	0.785	0.759	0.752	0.717	0.698	0.784
Employee Controls	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	FE	FE	FE	FE	FE	FE	FE
Sample	Main	Main	Main	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. In specification 1 are kept only workplaces where there are Union Delegates from tough unions CGT and SUD (see table C7 for a classification of unions' ideologies), in specification 2 are kept workplaces with UDs from soft unions CFDT, CFTC and CGC, while in specification 3 are kept only those workplaces with a mix of unions from both types. Specifications 4 to 7 keep workplaces only with UDs from a single union brand. All regressions include the following controls: a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 11: Union Delegate Wage Gaps Depending on Unionization Rates

	(1)	(2)	(3)	(4)	(5)
	Unionization Rate Estimated by Employer:				
	0%	1% – 5%	6% – 10%	11% – 20%	> 20%
VARIABLES	Dependent Variable: Log Hourly Wage				
Union Delegate	0.0084 (0.0553)	-0.0899* (0.0485)	-0.0651* (0.0394)	-0.0265 (0.0348)	0.0083 (0.0299)
Share of Workplaces	0.012	0.378	0.291	0.16	0.17
Observations	7,835	8,475	7,257	6,261	6,346
R-squared	0.750	0.759	0.773	0.778	0.758
Employee Controls	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	FE	FE	FE	FE	FE
Sample	Main	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. For each specification are kept only workplaces corresponding to the estimated unionization rate by the employer and the workplaces that do not have union delegates (for whom the unionization rate is unknown). The latter workplaces are kept in order to have more statistic power to estimate the effect of the individual control characteristics (which is supposed constant across workplaces with and without a UD). We have checked that results are qualitatively similar when these workplaces without unions are removed from the analysis. The row “Share of Workplaces” indicates the share of workplaces with the unionization rate corresponding to each specification. All regressions include the following controls: a dummy for the individual’s gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 12: Wage Penalty for Union Delegates Depending on Firm Fixed Effects

	(1)	(2)	(3)	(4)
	AKM FE	AKM FE (+Tenure)	AKM FE (+Occupation)	Labor Share
VARIABLES	Dependent Variable: Log Hourly Wage			
Union Delegate Q1	-0.034 (0.044)	-0.040 (0.050)	-0.034 (0.044)	-0.090 (0.057)
Union Delegate Q2	-0.119* (0.049)	-0.108* (0.047)	-0.119* (0.049)	-0.040 (0.029)
Union Delegate Q3	0.000 (0.045)	0.000 (0.045)	0.000 (0.005)	-0.089** (0.044)
Union Delegate Q4	-0.057 (0.039)	-0.057 (0.039)	-0.058 (0.039)	0.030 (0.051)
Observations	19,488	19,488	19,488	16,880
R-squared	0.64	0.64	0.64	0.76
Employee Controls	Mincer + Tenure	Mincer + Tenure	Mincer + Tenure	Mincer + Tenure
Workplace Controls	FE	FE	FE	FE
Sample	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. In each specification Union Delegates are divided into four groups depending on performance of the firm in which they operate. For example “Union Delegate Q1” of specification 1 denotes delegates that are in firms of the first quartile of the distribution of AKM fixed effects relative to the two-digit industry average. These are computed by In the first three specifications firm fixed effects are estimated according to the procedure detailed in Appendix Section B.3, and they differ on the employee controls we use in their estimation. The labor share is computed as the ratio of payroll costs to value added. All regressions include the following controls: a dummy for the individual’s gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 13: Wage Penalty Depending on Having One or Many Unions in the Workplace

	(1)	(2)
	One Union	Many Unions
VARIABLES	Dependent Variable: Log Hourly Wage	
Union Delegates	-0.096*** (0.037)	-0.044 (0.029)
Observations	2,660	7,339
R-squared	0.737	0.767
Employee Controls	Mincer+Tenure	Mincer+Tenure
Workplace Controls	FE	FE
Sample	Main	Main
Weighted	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. Specification 1 restricts the sample to workplaces where a single union brand operates, while specification 2 restricts it to workplaces where multiple union brands coexist. All regressions include the following controls: a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 14: Not Being Unionized by Fear of Consequences for Career

VARIABLES	(1)	(2)	(3)	(4)
	Dependent Variable: Not unionized for fear of consequences on own career			
<i>Panel A</i>				
Mandate had negative effect on career	0.061*** (0.011)	0.055*** (0.008)	0.037*** (0.008)	0.035*** (0.008)
Sample Average	0.159	0.159	0.157	0.157
Observations	12,640	12,507	12,507	12,442
R-squared	0.005	0.022	0.029	0.033
<i>Panel B</i>				
Union Delegate Wage Gap	0.116** (0.048)	0.110** (0.050)	0.097* (0.054)	0.050 (0.060)
Sample Average	0.174	0.174	0.174	0.174
Observations	861	859	859	859
R-squared	0.005	0.017	0.021	0.045
Employee Controls	No	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	No	No	Size	Size+ Industry
Sample	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression of a dummy that takes the value one when employees declare that they are not unionized for fear of the consequences that unionization can have on their career on measures of the workplace-level penalties against representatives. Panel A measures the penalty with a dummy that takes the value one when representatives have reported that their mandate has had a negative consequence on their career. Panel B replaces that variable with the average log wage penalty of Union Delegates at the workplace level. It is computed as the difference in residuals from a regression of log hourly wages on worker “Mincer” controls and workplace fixed effects, between UDs and employees that are neither representatives nor unionized. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix to
Labor Facing Capital in the Workplace: The Role of Worker
Representatives

Jérôme Bourdieu, Thomas Breda and Vladimir Pecheu

March 9, 2022

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Appendix A Model proofs

Bla bla bla

Appendix B Data Appendix

B.1 Administrative data sources

Worker social security records (DADS). The DADS (*Déclaration annuelle de données sociales*^{A.1}) is a data set widely used by economists. Every year employers are mandated to report a set of information regarding all their employees in each of their establishments such as the type of their job, their compensation, working duration, gender, age, occupation category. The data set is exhaustive of all French employees officially employed in a firm.

Firm tax records. We use the FARE (*Fichers approchés des résultats d'Esane*^{A.2}) data base to obtain firm tax records. Every year for-profit firms outside of the financial and agricultural industries have to report their financial statements to the French Ministry of Finance. The data are complemented with two surveys covering about 160,000 firms. In total there are between 3,5 and 4 million firm-level observations every year. The data contains information on both balance sheets and financial statements.

B.2 Construction of the samples of analysis.

Main sample. Our main sample is constructed by matching the REPOSE17-worker survey with the establishment-level information retrieved from the REPOSE17 employer survey. We further match the data to the FARE data sets from 2011 to 2015. We are able to match between 23,179 observations (with 2011 records) and 24,082 observations (with 2015 records). We then exclude part-time workers who self report as working part-time in the REPOSE17 survey, and are identified as part-time workers in the DADS records. We also exclude workers working less than 1,500 hours yearly (note that the legal full-time working duration in France is 1,820 hours per year corresponding to 35 hours per week). We also drop workers identified as apprentices and interns in the DADS records, as well as employees whose occupation category is employers. The final sample includes 20,708 workers representative of full-time employees in business establishments with more than 10 employees.

Auxiliary sample. The auxiliary sample is constructed by statistically matching the 2,892 employee representatives of the REPOSE17-representative survey with the DADS social security records to retrieve wage and occupation information. More precisely, within all establishment in the REPOSE17-representative survey we match the representatives with the employ-

^{A.1}Annual declaration of social records

^{A.2}“Financial statement files from Esane”. Esane itself stands for “elaboration of annual firm statistics”.

ees of the same establishment in the 2015 DADS records on the demographic variables that are common to the two data sets: gender, age, and four-level professional category (white collar, technician, employee or laborer). We use the 2015 data set because the REPOSE17-employee survey has itself been matched to the 2015 records by the Ministry of Labor. We are able to match 2,664 representatives. After the operation we exclude 594 representatives that held more than one position inside their establishment in 2015, as well as 4 representatives who did not declare their unionization status. Eventually, we are left with a set of 2,066 representatives. **Note that the reason there are about 300 delegates that are not matched is certainly because they were not present in the establishment in 2015. We do not exclude part time reps!**

Extended main sample The extended main sample is constructed by appending to the workers in the main sample, their coworkers from their establishment. We proceed by first matching statistically all workers in the REPOSE17-worker survey with the 2015 DADS data on gender, annual hours, net wage compensation, and occupation category. We are able to perfectly match 19,175 of our main sample of 20,706 workers in REPOSE17 (92.61%).^{A.3} The remaining 1,531 employees (7.39%) have between two and eleven counterparts in the 2015 DADS. We exclude all these matched observations. We then consider all workers in the 2015 DADS working in one of the REPOSE17 establishments, but not matched with any REPOSE17 worker. In this sample we exclude individuals working part time or less than 1500 hours yearly, so that we match our sample restriction on REPOSE17. We are left with a sample of 1,349,763 employees from the DADS, who are the distinct colleagues of the employees in our main sample of REPOSE17 workers. The extended main sample is the concatenation of the two data sets, it contains 1,370,547 observations. Note that in the DADS we do not observe if workers hold a mandate. In the merged data set, these employees are thus put in the control group of employees neither representatives nor unionized. Therefore in the analysis using this sample we compare representatives and unionized workers to a sample that may contain a small portion of unionized workers and/or representatives. However provided that their wage compensation conditional on the sets of controls that we use in our analysis is smaller than their colleagues, which is the case in the wage gap analysis in the main sample, this assumption biases our estimated wage gaps toward 0. Note finally that in the DADS, we do not observe education. Hence, we cannot control for it when we use the extended main sample.

^{A.3}Recall that the information on earnings and working hours in the REPOSE17-worker survey comes from the 2015 DADS. This explains the quality of the match.

B.3 Construction of the AKM Fixed Effects

We detail here the procedure we used to compute the firm fixed effects used in the regressions of Table 12. We use the panel of employees from the DADS over the period 2011-2015, that constitutes 1/12 sample of the whole workforce in France. We exclude trainees, interns and executives, and keep worked aged 15 and above. Then we restrict the sample to individuals that are observed in multiple firms working more than 100 hours per year and whose hourly wage is larger than 1/4 of the minimum wage. We also exclude those whose hourly wage is above 300 times the minimum wage. Eventually, if in a given year there are multiple observations for an employee, we keep the one with the largest number of hours. We are left with a sample of about 7.5 observations, consisting of 1.4 million workers in 800,000 firms. We then resort to the *R* package *lfe* to restrict the sample to the connected set of firms. We are left with 640,000 firms. Then we use the Stata command `reghdfe` to estimate the fixed effects in the following base specification:

$$\log w_{ij} = \beta_0 + \beta_1 Age_{ij} + \beta_2 Age_{ij}^2 + \beta_3 Age_{ij}^3 + \rho_i + \tau_j + \varepsilon_{ij} \quad (\text{A.1})$$

Where w_{ij} denotes the hourly wage, ρ_i are individual fixed effects, τ_i are firm fixed effects, and ε_{ij} is an error term. In two other specification, we respectively add a third degree polynomial in actual experience and a four occupation dummies (according to the French classification PCS1).

B.4 List of Survey Questions

Table B1: List of the REPOSE17 Survey Questions

Topic	Section	Question	Reference
Promotions	Employee	Over the last three years, have you received a promotion?	Table 4
		Over the next twelve months, do you think that you have chances of being promoted or getting a pay rise?	Table 4
		Over the next twelve months, do you think that you are facing the risk if loosing your job?	Table 4
Length of mandate	Employee	For how long have you held a mandate of representative? (elected or appointed)	Table 5
		For how long have you been a member of a union?	Table 5
Effect of mandate	REP	Regarding the evolution of your career in the firm/establishment, your experience of representative has been: (1) a engine (2) an obstacle (3) neither one nor the other (4) Does not know	Table 6 Figure 4
Delegation load	REP	Of how many hours are you discharged [for your activity as a representative] or how many hours are you credited with? This is the time granted, whether it is used or not, by the employer in order to practice all your duties as a representative inside the firm/establishment.	Table 6
	REP	Is the time you dedicate to your activity as a representative larger, smaller, or equivalent to this hours-credit?	Table 6
Investment of representatives	Employee	Over the last three years, have you: - Participated to a meeting organised by worker representatives? - Participated to a work stoppage (strike, walk-out) - Participated to another form of collective action (petition, public gathering, demonstration) For each question, possible answers are: (1) Yes (2) No, while one has taken place (3) No, none of these have taken place	Table 8

Table B1: List of the REPOSE17 Survey Questions (Continued)

Topic	Section	Question	Reference
Bargaining	Employer	Over the last three years (2014 - 2016), has collective bargaining been engaged with employee representatives in the firm, the establishment, or the joint-venture, with the objective to reach a collective agreement, whether it has been concluded or not.	Table 9
		Had not there been this bargaining, the decision of the employer regarding wages would have been: (1) Very different (2) Somewhat different (3) Not different (4) Do not know	Table 9
Reason for absence of unionization	Employee	<p>If currently you are not part of a union it is because:</p> <ul style="list-style-type: none"> - There is no union in your firm - The unions(s) present in your firm do not represent you would like to - You fear that it harms the evolution of your professional career - You do not need it to defend yourself - You do not have the means to pay the union fees - For some other reason 	Table 14
Subjective working conditions	Employee	<p>A series of questions whose choice of answers are (1) Always (2) Often (3) Sometimes (4) Never (5) Not applicable. The questions are:</p> <ul style="list-style-type: none"> - Does your work allow you to organize your personal life with satisfaction? - Do you work with the same colleagues? - Do your colleagues help you with your work? - Do you know which colleagues you are going to work with next year? - Do you know who your direct superior will be next year? - Does your employer determine precise target objectives to reach? <p>(possible answers: (1) Yes (2) No)</p> <ul style="list-style-type: none"> - When something unusual occurs at work, do you solve the issue yourself? - Does your work allow you to learn new things? - Is the true value of your work recognized? - At work, do you do things that you disapprove? - Do you have the feeling that your work is harmful for your health? 	Table C6

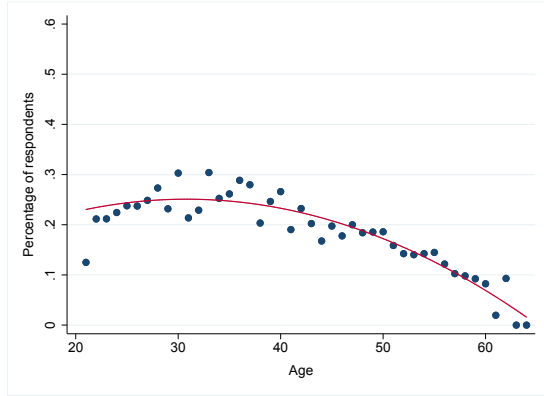
Table B1: List of the REPOSE17 Survey Questions (Continued)

Topic	Section	Question	Reference
Employer opinion	Employer	In general, for you how representative are unions today? For each question possible answers are: (1) Very weak (2) Weak (3) Strong (4) Very Strong (5) No opinion/Do not know	Table 7
Employer opinion	Employer	Regarding unions, what do you think of the following statements? (If there are no unions in your firm/establishment, give your opinion on unions in general.) - Unions are helpful for employees - Unions put their own interests and motto before employees' - Unions play an irreplaceable role in the representation of employees - Unions harm the business of the firm For each question possible answers are: (1) Totally agree (2) Somewhat agree (3) Somewhat disagree (4) Totally disagree (5) Do not know	Table 7

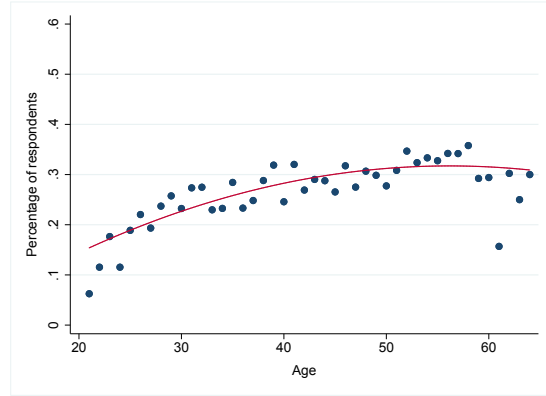
Appendix C Additional Figures and Tables

Figure C1: Reasons for Not Being Unionized as Functions of the Age of Individuals

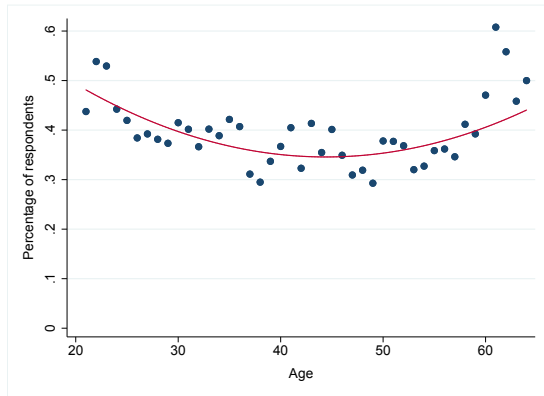
(a) I fear unionization is detrimental for my career



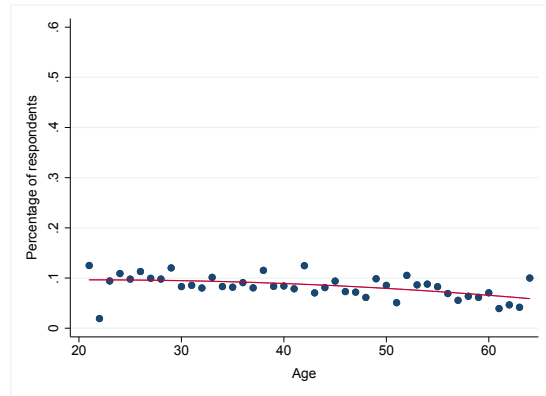
(b) Unions do not represent me well



(c) I do not need unions



(d) I cannot pay for unionization



Notes: Each graph displays the average proportion of individuals that give that particular reason for not being unionized within age. Computations are based on the whole sample of REPOSE17-Workers aged 20 to 65. The red curve is a quadratic fit of the data.

Table C2: Characteristics of Workers Representatives surveyed in REPOSE17-REP

	Union Delegates	Unionized Worker Reps	Non Unionized Worker Reps
<i>Gender</i>			
% Female	0.29	0.54	0.52
% Male	0.71	0.46	0.48
<i>Age (years)</i>			
Mean	47.3	45.2	41.1
Median	48	47	40
<i>Tenure (years)</i>			
Mean	19.8	17.9	13.9
Median	20	16	12
<i>Education level</i>			
% No diploma	0.03	0.04	0.03
% Lower than Bac	0.33	0.29	0.25
% Baccalaureate	0.26	0.20	0.26
% Two-year graduate	0.23	0.24	0.26
% Bachelor or higher	0.15	0.25	0.20
<i>Occupation category</i>			
% Laborers	0.17	0.18	0.20
% Employees	0.19	0.28	0.28
% Intermediate	0.35	0.31	0.29
% White collars	0.29	0.23	0.33

Notes: The sample consists of the representatives surveyed in REPOSE17-REP (selected by the employer). Statistics are weighted by the probability that the delegate is matched correctly with the Social Security Records. They can be compared with those of the main sample in Table 2.

Table C3: Worker Representation and Unionization: Workplace-Level Statistics

	Percentage of Workplaces with:		Average workplace unionization rate
	Union Delegates	Other Worker Representatives	
<i>Whole Sample</i>	0.22	0.65	0.12
<i>Industry</i>			
Manufacturing	0.28	0.67	0.14
Construction	0.13	0.45	0.06
Trade	0.15	0.62	0.07
Services	0.25	0.69	0.13
<i>Workplace size</i>			
10-19 empl.	0.07	0.42	0.06
20-49 empl.	0.17	0.70	0.09
50-99 empl.	0.44	0.91	0.11
100-199 empl.	0.64	0.98	0.12
200-499 empl	0.82	1.00	0.15
500-999 empl	0.95	1.00	0.16
> 1,000 empl.	0.98	1.00	0.17

Notes: Weighted statistics representing full time employees in ordinary positions (excluding apprentices and interns) of workplaces with more than 10 employees operating in the French commercial sector.

Table C4: Wage Gaps Controlling for Occupation Groups in Extended Main Sample

VARIABLES	(1)	(2)	(3)
	Dependent Variable: Log Hourly Wage		
Union Delegate	-0.037** (0.015)	-0.039*** (0.015)	-0.033** (0.014)
Unionized Worker Rep	-0.030*** (0.010)	-0.030*** (0.010)	-0.028*** (0.009)
Non Unionized Worker Rep	-0.015 (0.010)	-0.017* (0.010)	-0.015* (0.009)
Unionized Worker	-0.030*** (0.006)	-0.030*** (0.006)	-0.027*** (0.006)
Observations	1,370,547	1,370,547	1,370,547
R-squared	0.730	0.739	0.758
Employee Controls	Mincer+Tenure +Occup1	Mincer+Tenure +Occup2	Mincer+Tenure +Occup3
Workplace Controls	FE	FE	FE
Sample	Extended Main	Extended Main	Extended Main
Weighted	No	No	No

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. Controls include a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure, as well as controls for occupations. Specification 1 controls for one-digit occupation groups, specification 2 controls for two-digit occupation groups, while specification 3 controls for three-digit occupation groups. They are defined by the PCS French Classification of Socio-Professional Categories. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table C5: Gaps in Terms of Working Time Conditions

VARIABLES	(1) Fluctuating Hours	(2) Evening Shift	(3) Night Shift	(4) Sunday Shift
Union Delegate	0.0371 (0.0358)	0.0310 (0.0310)	0.0376 (0.0254)	0.0393 (0.0261)
Unionized Worker Rep	0.0250 (0.0233)	0.0205 (0.0194)	0.0323** (0.0158)	0.0381** (0.0162)
Non Unionized Worker Rep	-0.0278 (0.0206)	-0.0556*** (0.0185)	-0.0129 (0.0151)	-0.0461*** (0.0155)
Unionized Worker	0.0237 (0.0158)	0.0469*** (0.0132)	0.0355*** (0.0108)	0.0229** (0.0110)
Observations	18,272	19,955	19,903	19,955
R-squared	0.453	0.467	0.508	0.598
Employee Controls	Mincer+Tenure	Mincer+Tenure	Mincer+Tenure	Mincer+Tenure
Workplace Controls	FE	FE	FE	FE
Sample	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. Controls include a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure, as well as controls for occupations. Fluctuating hours indicates a situation where the workers does not have a fixed schedule. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table C6: Gaps in Terms of Subjective Working Conditions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Flexible Work	Work with Same Colleagues	Helping Colleagues	Knows Future Colleagues	Knows Future Manager	Precise Objectives	Solve Problems Individually	Learn New Things	Work Recognized	Disapprove Work	Work is Unhealthy
Union Delegate	-0.307*** (0.0738)	-0.106 (0.0699)	0.174*** (0.0622)	0.0966 (0.0717)	-0.0968 (0.0688)	-0.0521 (0.0339)	0.111 (0.0733)	-0.0754 (0.0712)	-0.204*** (0.0725)	0.209*** (0.0740)	0.268*** (0.0735)
Unionized Worker Rep	-0.118*** (0.0457)	-0.0205 (0.0430)	0.0179 (0.0385)	0.0221 (0.0442)	-0.109** (0.0426)	-0.00833 (0.0210)	0.0270 (0.0453)	-0.175*** (0.0440)	-0.190*** (0.0449)	0.119*** (0.0456)	0.141*** (0.0453)
Non Unionized Worker Rep	0.108** (0.0438)	0.0742* (0.0412)	0.119*** (0.0369)	0.162*** (0.0425)	0.0956** (0.0409)	-0.0344* (0.0201)	0.076* (0.0435)	0.120*** (0.0423)	0.0507 (0.0432)	-0.0645 (0.0439)	-0.153*** (0.0437)
Unionized Worker	-0.126*** (0.0310)	-0.0522* (0.0293)	0.0127 (0.0261)	-0.081*** (0.0302)	-0.174*** (0.0290)	-0.000413 (0.0143)	-0.0341 (0.0307)	-0.108*** (0.0299)	-0.189*** (0.0305)	0.113*** (0.0310)	0.164*** (0.0308)
Observations	20,500	20,180	20,473	20,191	20,299	20,495	20,477	20,519	20,480	20,480	20,453
R-squared	0.339	0.400	0.372	0.375	0.419	0.448	0.325	0.364	0.355	0.315	0.346
Employee Controls	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	FE	FE	FE	FE	FE	FE	FE	FE	FE	FE	FE
Sample	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. Controls include a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure, as well as controls for occupations. Variables are defined in Table B1 Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table C7: Description of the Main French Unions in 2016

Union Name	Historical and Ideological Roots	Representation
Confédération Française Démocratique du Travail (CFDT)	Socialist/Reformist	26.37%
Confédération Générale du Travail (CGT)	Marxist	24.85%
CGT-Force Ouvrière (FO)	Trotskyism	15.59%
Confédération Générale des Cadres (CGC)	White collars	10.67%
Confédération Française des Travailleurs Chrétiens (CFTC)	Christians	9.49%
Union Nationale des Syndicats Autonomes (UNSA)	Reformist and secular	5.35%
Union Syndicale Solidaires (SUD)	Class warfare unionism	3.46%
Others (generally local or sector specific unions)		3.99%

Notes: The last column gives the electoral results of all votes cast at all elections of representatives during the period 2013-2016. These numbers determine the representativeness of unions at the French national level.

Table C8: Wage Gaps for Representatives Chosen by Employers Depending on their Union

	(1)	(2)
	Dependent Variable: Log Hourly Wage	
CGT Delegate	-0.183*** (0.049)	-0.107*** (0.037)
SUD Delegate	-0.123* (0.073)	-0.162*** (0.061)
FO Delegate	-0.160*** (0.047)	-0.125*** (0.029)
CFDT Delegate	-0.031 (0.030)	-0.018 (0.021)
CFTC Delegate	-0.032 (0.052)	-0.059 (0.037)
CGC Delegate	0.223*** (0.060)	0.004 (0.053)
Observations	24,924	24,919
R-squared	0.770	0.840
Employee Controls	Mincer+Tenure	Mincer+Tenure +Occup3
Workplace Controls	FE	FE
Sample	Secondary	Secondary
Weighted	No	No

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. Union delegates are divided according their brand. All regressions include the following controls: a dummy for the individual's gender, education (in 8 groups), a third order polynomial in workers age, and a third order polynomial in tenure. Additionally, specification 2 controls for 3-digit occupation categories. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table C9: Union Delegate Wage Gaps Depending on Firm Economic Performance

	(1)	(2)	(3)	(4)
	Labor Productivity	Profits per Employee	Return on Equity	Total Factor Productivity
VARIABLES	Dependent Variable: Log Hourly Wage			
Union Delegate Q1	0.003 (0.041)	-0.067 (0.053)	0.026 (0.049)	-0.025 (0.038)
Union Delegate Q2	-0.026 (0.036)	-0.035 (0.038)	-0.045 (0.059)	-0.058 (0.051)
Union Delegate Q3	-0.036 (0.041)	-0.056** (0.029)	-0.035 (0.032)	-0.021 (0.033)
Union Delegate Q4	-0.099* (0.055)	-0.005 (0.050)	-0.102*** (0.038)	-0.056 (0.060)
Observations	19,449	19,449	19,449	19,449
R-squared	0.76	0.76	0.76	0.76
Employee Controls	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure	Mincer +Tenure
Workplace Controls	FE	FE	FE	FE
Sample	Main	Main	Main	Main
Weighted	Yes	Yes	Yes	Yes

Notes: The table shows the results from linear regression models akin to those described by equation 5.2. In each specification Union Delegates are divided into four groups depending on performance of the firm in which they operate. For example “Union Delegate Q1” of specification 1 denotes delegates that are in firms of the first quartile of the distribution of value added per employee. Profits per employee are computed using accounting profits, while Total Factor Productivity is estimated as the residual of a regression of the log of value added on the log of fixed assets and the log of payroll costs over the period 2014-2016 including year and 2-digit industry fixed effects. All regressions include the following controls: a dummy for the individual’s gender, education (in 8 groups), a third order polynomial in workers age, a dummy for whether the individual has been unionized in the past, and a third order polynomial in tenure. Part-time workers and apprentices are excluded from the sample of analysis. Standard errors (in parenthesis) are clustered at the workplace level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.