Union Ideology*

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Abstract

Labor unions across the world differ markedly in their ideology, ranging from radical unions with an anti-capitalist ideology to cooperative reformists. To understand the effect of union ideology on worker outcomes, we study France's institutional setting, where unions with sharply contrasting ideologies compete in workplace elections for collective bargaining rights. Workers and firms sort systematically by union ideology: low-wage workers and less productive establishments are more likely to be represented by radical unions, high-wage workers and more productive establishments tend to be represented by reformist unions. Conditional on establishment and worker effects, radical unions are associated with wage penalties, reformist unions with wage premia for workers (concentrated among white-collar workers). As an additional source of sharp variation in union representation, we focus on close establishment-level elections that determine which unions represent workers. Although close elections reveal no significant average wage effects, radical unions significantly reduce blue-collar worker exit rates relative to reformist unions. To understand the mechanisms underlying our results, we study bargaining behavior and find that electing a radical union leads to more strikes and more refusal to sign bargaining agreements compared to electing a reformist union. Radical unions appear to successfully protect blue-collar employment, but their confrontational approach does not yield wage gains for workers.

JEL Codes: J31, J51, J52, L25
Key words: Unions, Ideology, Bargaining, Wages, Firm Performance

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1 Introduction

A long-standing debate in economics concerns how ideology shapes economic outcomes such as inequality or growth [see, e.g., Piketty, 2020, Johnson and Acemoglu, 2023, for recent contributions]. A key hypothesis is that ideologies influence outcomes by affecting how different groups choose to pursue their economic interests—through confrontation or cooperation with existing institutions [Hirschman, 1970, North, 1988]. Labor unions provide a particularly clear setting to study the consequences of ideology as unions differ markedly in their ideology, from revolutionary syndicalists advocating class struggle to reformist unions pursuing cooperation with employers [Barbash, 1943, Friedman, 1998, Streeck and Hassel, 2003], and can directly affect worker and firm outcomes. The ideological divisions across unions mirror broader political cleavages between communist and social democratic approaches to economic change. The economic consequences of this ideological divide remain unclear: do radical approaches that prioritize confrontation benefit workers, or do more cooperative strategies prove more effective?

We examine the effect of union ideology on worker outcomes by focusing on France, which provides an ideal setting due to its system of competitive workplace representation and establishment-level collective bargaining. French unions can be clearly classified into two main ideological blocks that mirror the broader divide between revolutionary and reformist approaches to social change. On one side are radical unions like SUD and CGT, whose founding charters explicitly advocate class struggle and view strikes as the "quintessential" means of action for achieving worker emancipation. On the other are reformist unions like CFDT, CFTC, and UNSA that emphasize social dialogue and cooperation with employers [Hureau and Servais, 2006], and the reformist white-collar union CFE-CGC focused on managers and professionals [Andolfatto, 2006]. Between these poles stands FO with a "militant reformist" stance. The stakes of these ideological differences are clear in cross-sectional differences: establishments with radical unions experience strike rates two to three times higher than those with reformist unions, and radical unions systematically oppose agreements that reformist unions support.

The French institutional setting allows us to study how these ideological differences affect worker outcomes through a unique system of establishment-level elections and bargaining. A key institutional feature is the 10% vote threshold in elections held every four years—unions that receive at least 10% of votes can appoint a delegate who gains the right to participate in mandatory annual ne-

gotiations with management on wages, working hours, and working conditions [Askenazy and Breda, 2020]. This creates a setting where multiple delegates from ideologically diverse unions can simultaneously negotiate with employers. The delegates' bargaining power increases with vote share: binding agreements can only be concluded by (coalitions of) delegates representing at least 30% of workers (if there is no majority opposition). Following large-scale reforms, collective bargaining in France became highly decentralized, with substantial scope for wage-setting at the establishment level [Breda, 2015, Carcillo et al., 2019]. We exploit this institutional variation by constructing a unique dataset that matches union election results to comprehensive information on bargaining behavior, linked employer-employee records, and establishment-level productivity and financial data. The combined data, covering the years from 2009 to 2020, allow us to examine how different union ideologies translate into bargaining strategies and affect worker and firm outcomes.

Our strategy uses a regression discontinuity design based on establishment-level union elections to identify the potentially causal impact of electing a delegate from a union with a specific ideology on subsequent worker and firm outcomes. Our objectives are to investigate whether union delegates behave differently depending on their ideology. If so, are certain ideologies achieving more favorable outcomes for workers, or for specific categories of workers? A parallel question is, do ideologies express themselves in terms of trade offs between objectives such as compensation versus employment? Lastly, what are the effects of these different ideologies on establishment and firm performance?

Our study also brings insights to major questions specific to the literature on unions. In particular what are unions' objectives? And, how do they compete in a multilateral setting, where multiple delegates can bargain jointly with an employer? Importantly, our results inform on whether workers benefit from being represented by multiple unions within the same firm, a crucial question for public policy.

To the best of our knowledge, this is the first analysis of the effects of union ideology within a well-identified causal framework. The ideological division of unions between radicals and reformists has been common knowledge among economists and policy makers for decades [Freeman and Medoff, 1984]. The more prevalent view is that reformist unions may benefit employees more by adopting a more cooperative stance with employers to better channel their voice [Turner, 1993, Hauptmeier and Heery, 2014]. Hyman [2001] argues that this is the reason for the better outcomes for workers in Germany and Nordic European countries. Others suggest that what matters is the ideological alignment

between unions and employers [Bermiss and McDonald, 2018], which could be the reason why the context of rising neoliberal policies could have benefited more to reformist unions [Baccaro and Howell, 2017].

Multiple union representation with competing ideologies is standard in most European countries and in places like Mexico, Brazil, South Africa, and India. However, our results are also relevant in institutional contexts where a single union represents workers within firms, such as in the United States. While US unions are generally ideologically homogeneous and stemming from a reformist stance, they are known for adopting radical strategies in many circumstances [Batut et al., 2024]. In fact, the U.S. has witnessed some of the longest and most impactful strikes in recent history[1] Therefore, we believe that insofar as ideologies reflect varying strategic approaches, our findings can extend beyond a purely ideological interpretation.

We begin our analysis by estimating union fixed effects on a variety of worker and firm outcomes in regressions in line with the literature on union wage premiums [Card, 1996, Lemieux, 1998]. Starting with detailed worker and establishment controls, we find a wide heterogeneity across ideologies: workers represented by radicals experience a 0.5% wage penalty compared to workers in non unionized establishments, while workers represented by reformists benefit from premiums of up to 4.2%. We find the same pattern regarding productivity: establishments with radical unions have lower value-added per worker than non-unionized ones, whereas those with reformist unions show the opposite.

The richness of our worker-level data and its panel structure allow us to augment the analysis with worker and establishment fixed effects in AKM-style specifications. This is a novel and and unique contribution of our paper. It allows us to identify the effects of union entry within establishments, exempt of selection bias due to time invariant intrinsic worker and establishment characteristics, like for example ability or productivity.

The results show that a significant part of the union premiums is explained by sorting of workers and establishments into specific unions. Low-wage workers are more likely to be represented by radical unions, while high-wage workers and high-wage establishments are sorted into reformist unions. The specifications nonetheless still estimate small but significant wage penalties for radical unions

[1]For example, in 2023, the American actors' union SAG-AFTRA staged its longest strike in history, lasting 3 months and 26 days. The United Auto Workers mobilized 25,000 workers for over three weeks in a strike targeting major car manufacturers. Additionally, 75,000 Kaiser Permanente healthcare workers undertook a successful three-day strike. In 2024, significant labor conflicts included a month-long strike by 33,000 Boeing machinists and a dockers' strike that prompted the intervention of President Joe Biden.

and wage premiums for reformist unions. Additional analysis with heterogeneous effects by worker occupation shows that these wage premiums accrue solely to higher-skilled, white-collar employees. Turning to establishment- and firm-level outcomes, we find that radical unions are linked to 2% more strikes, but we do not find significant relations with respect to performance measures.

These baseline findings do not necessarily represent causal effects. They may, for instance, reflect the sorting of workers and establishments based on unobserved, time-varying factors. Further, they are likely to be biased towards zero because of downward wage rigidity. That is why we pursue the analysis with a regression discontinuity design to investigate the causal impact of union ideologies. Our analysis is methodologically aligned with the approach taken by a series of papers that have studied the causal effects of unions using close elections in the United-States [Dinardo and Lee, 2004, Lee and Mas, 2012, Farber et al., 2021, Wang and Young, 2023].

The vast majority of union elections occur in smaller establishments with fewer than 100 voters, where a single vote accounts for a non trivial share of the votes. Our running variable can thus difficultly be considered as continuous, and the classic approach based on the estimation of local polynomials on both sides of the threshold can lead to both underpowered and biased results [Cattaneo et al., 2023]. Thus, instead of using vote shares as our running variable, we implement a discrete local randomization design based on the actual number of votes. Our estimates are derived by comparing mean outcomes between groups just below (control) and just above (treatment) the score thresholds, within a narrow window around these cutoffs.

We determine the optimal bandwidth for analysis using balancing tests on union behavior variables, which we refer to as our *first-stage* outcomes. Specifically, we select the largest bandwidth where no significant differences in union participation in bargaining exist between the treated and control groups the year prior to the elections. Regarding our *second-stage* outcomes, which include a large number of worker and firm variables, some fail the balancing tests across the different RD specifications. To mitigate potential bias in our estimates, we use a Difference-in-Discontinuities approach for these outcomes. Pioneered by Grembi et al. [2016], this approach has been applied in analyses of union elections in the US by Frandsen [2021] and Wang and Young [2023] to address potential selection into treatment and control groups. It consists of conducting the regression discontinuity analysis on post-election outcomes differentiated with outcomes one year before elections.

The first contribution of our causal analysis on first-stage outcomes is evi-

dence that union delegates exhibit distinct behaviors based on their ideological orientation. Upon entry into an establishment when they pass the 10% threshold, radical unions adopt a more confrontational stance compared to their reformist counterparts: they engage less in bargaining, sign fewer agreements, and are associated with an increase in strike occurrence. We also find that radical unions become more active in bargaining and more likely to sign agreements when they pass the 50% threshold, which grants them power to impose binding contracts independently of other unions' positions. This result brings further evidence that radicals are less willing to make concessions on they bargaining stance.

Our framework allows us to analyze competition between unions, by examining their reactions to the entry of a competitor. In every case, entry leads to a decrease in the presence of other unions, but without any pattern related to either the ideology of the entering union or its competitors. Neither do we find any differences in participation and signature behavior when we distinguish by which union has arrived first at elections. These results rule out a cooperative behavior between unions that share close ideologies, or a competition driven by ideological alignment. However we do find that both participation in bargaining, and opposition to agreements increase with the number of competitor unions, which means that competition fosters the expression of ideological differences.

When we examine the effects on employee and establishment outcomes, our findings align with the ideological divide of unions. First, the entry of the largest radical union, the CGT, leads to a 1.2% increase in the retention of blue-collar workers the three years after elections, and to a 1.8% decrease in the hourly wages of higher-skilled white-collar workers, relative to the year before the elections. These effects result in a compression of wages at the top of the distribution, driven by changes in workforce composition. Specifically, there is a larger influx of lower-paid, higher-skilled white-collar workers, predominantly younger women, which helps explain the observed wage compression. Second, the entry of the large white-collar reformist union CFE-CGC, leads to wage increases across the entire earnings distribution, but more importantly at the bottom. Interestingly, the results indicate that this union enters after periods of conflict and lower firm performance. Lastly, we do not find strong effects on firm performance measured by returns-on-equity and returns-on-assets ratios, but the results suggest that reformist unions lead to an increase in profit margins, and to a reduction in the debt-to-assets ratio. This last point can be connected with a literature that has argued that firms take up on debt levels upon union entry to limit wage increases [Bronars and Deere, 1991]. Our findings are further supported by an analysis restricted to elections with at more than three com-

peting unions where we observe a more active behavior of entrants. Overall, our analysis bring evidence that radical and reformist unions behave differently and maximize different objectives. Reformist unions indeed engage in more cooperative relationships with employers and seem to focus on wages, while radical unions seem to favor tenure and job security.

The remainder of the paper is organized as follows. Section 2 introduces the French institutional framework and the ideological divide between unions, Section 3 presents the data, Section 4 presents the regression analysis based on changes in unions structure, Section 5 introduces our regression discontinuity design and analyses its results, Section 6 concludes.

2 Institutional Framework and Union Ideology in France

France's industrial relations institutional framework make it a good setting for studying how union ideology affects firm outcomes. Firstly, unions are strongly divided along ideological lines. and Tthey compete for the representation of workers inside firms through elections every 4 years. Depending on which unions are present and their degree of power, bargaining an union organization will be guided by contrasting beliefs and goals. Secondly, legislation protects and facilitates the expression of unions. Lastly, between 1982 and 2009, successive laws have given predominance of bargaining at the firm level rather than at the industry level.

French Unions and their Ideologies French Unions and their Ideologies The seven largest French unions: SUD, CGT, FO, CFDT, CFTC, UNSA, and CFE- CGC, represent 96% of workers. They hold contrasting views regarding their roles and goals in society, which stem from either Marxist or Christian social justice doctrines. Aisling from the former one, SUD and CGT officially state in their founding charters that society is dominated by class struggle between workers and capitalists. Their charters advocate for strikes as the "quintessential" means of action and an uncompromising stance in face of employers. On the opposite side are CFDT, CFTC, and UNSA, who call themselves "reformists" (Hureau and Servais, 2006), meaning that they are willing to strike deals with their interlocutors and to carry gradual improvements of the existing system that would benefit to everyone in society. FO is a union that stands in between these two opposites. It started as an offshoot of the CGT that rejected its affiliation to the French Communist Party, and has oscillated between radical and reformist stances (Pigenet, 2006). The last large French union CFE-CGC is a

union representing managers and higher skilled white collars. Being categorical, it is an outlier, but its stance is openly on the side of reformists, and has hold stances close to employer unions'. This ideological division is very clear at the national level. When governments prepare new legislation they invite unions to bargain or at least give their stance on the projects. With a few exceptions, since the 1990s the usual pattern has been SUD and CGT refusing to discuss with governments, while CFDT, CFTC, UNSA and CFE-CGC accepting the invitation and trying to weight on the legislation, in which case they have often approved the final bill. Figure 1 brings evidence for the ideological divide with two measures. Panel (a) reports an index measuring the degree of opposition and cooperation for each union based on their positions regarding 12 national level reforms over the period 1995-2024, which they were invited to participate to by the government. I attribute a score of 1 if the union accepted to negotiate on the legislation, and a score of -1 if it refused and opposed the bill. Table 9 gives details on the reforms and the corresponding positions of unions. Note that in some cases unions' positions evolved over the legislative process, in which I consider that they both opposed and cooperated. The final index is computed by summing the opposition and cooperation scores for each piece of legislation. The figure draws a sharp contrast between SUD, CGT, and FO on the one side and CFDT, CFTC, UNSA, and CFE-CGC on the other. The first group of unions score is negative, meaning that they opposed most legislation over the period, while the second group is positive, meaning that they cooperated at least to some degree for most of these bills.

Panel (b) reports average firm-level strike incidence by union. Our data do not allow us to identify which union participated to a strike, but it shows that firms where SUD and CGT are present have two to three times the incidence of strikes of firms where other unions are present. One notable difference between the two figures, is that FO stands apart from SUD and CGT regarding strikes. In fact the union is known for a more pragmatic stance than the two other radicals, which has been labeled as "militant reformist" by its leaders[2].

Union Competition Historically, France has allowed for plural union representation inside establishments. Since 2009, employee representation in workplaces with more than 11 employees has been legitimated by Works Council elections in which only unionized candidates are allowed to run in the first round. If a union gets more than 10% of the votes, it can appoint a union delegate

[2]See for example this editorial by Jean-Claude Mailly who directed the union between 2008 and 2022: https://www.force-ouvriere.fr/jc-mailly-le-reformisme-militant-marque-de-fabrique-de-notre

who is given the right to bargain with the employer. This means that multiple delegates, representing different unions can engage at the bargaining table with the employer. If a union gets a 50% majority, then its delegate can sign binding agreements with the employer by itself. If a union gets past a score of 30%, it is given the right to sign a binding agreement, only if there is no coalition of unions with more than 50% that opposes to the contract. These thresholds grant increasing power to unions, which is likely to stir competition for votes for two main reasons. Firstly, it stimulates unions that do not have strong hold in a workplace to run as they only need a small share of votes to be able to express their voice in the bargaining process. Second, competition is also encouraged as this framework provides incentives for earning a large share of the votes by offering the possibility to union delegates to unilaterally impose their stance.

Additionally, by their aggregation, establishment level election results determine the representativity of unions at the national level, along with their weight when they bargain with governments. Unions need at least 8% of votes at the national level to be allowed to take part to the legislative process. Further union budgets are heavily dependent on government subsidies, a share of which is proportional to election results (Rehfeldt and Vincent, 2023).

This gives unions incentives to run for election in every possible establishment. The legal length of a representation mandate is four years ; however, establishments can reduce the term to three or two years if both unions and employers agree. The national election results have been computed in 4-year cycles since 2009. When there are no employees to run for elections,no union will be present in the establishment. Note that, in these cases, the French authorities will conduct surveys and ask for hypothetical voting preferences of employees to complete the computation of the national election results.

Union Expression On multiple levels, French labor laws provide a robust framework for union expression. Firstly, it protects strikes, which are a fundamental right in France, enshrined in the Constitution. Workers have ability to strike without fear of dismissal, or of being replaced, which allows unions to use this tool effectively in negotiations with employers. The right to strike is broad and covers different forms of work stoppages, from limited, targeted actions to full-scale strikes. Secondly, legislation mandates annual negotiations between employers and unions on key workplace issues, including wages, working hours, and working conditions. These mandatory negotiations are designed to ensure continuous dialogue between employers and employee representatives, providing unions with regular opportunities to express themselves and push for their

interests.

Most Bargaining is at Firm Level Since 1982 successive laws have given predominance of bargaining at the firm level rather than at the industry level.[3] Concurrently, and potentially as a consequence, industry-level bargaining has diminished, with many of its agreements — particularly those setting wage floors — becoming outdated due to inflation and subsequent increases in the minimum wage.

3 Data Sources and Analysis Samples

3.1 Data Sources

We use 4 comprehensive administrative data sources providing information on professional worker elections, establishment level bargaining agreements, employee hours and compensation, firm performance. Additionally we use a large survey by the French Ministry of Labor on industrial relations inside firms.

Professional Elections Data: MARS Since 2009, every establishment holding professional elections is mandated to report the results to the French administration, which aggregates the data and makes it publicly available. It reports the number of votes for each union and allows us to compute election scores.

Establishment Level Bargaining Agreements: D@ccord When employers and unions bargain, they must report the outcome to the administration in a document that contains the topic of bargaining (wages, profit-sharing, employment, etc.), the unions that were present during negotiations, as well a those that signed the agreement.

Worker social security records: DADS The DADS is a data set widely used by economists. Every year employers are mandated to report 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

[3]The Auroux Laws (1982) mandated yearly firm bargaining which outcome would prevail over industry-level agreements if more favorable to workers. The Fillon Law of 2004 and the 2008 Law on Social Democracy and Working Time, further reinforced this shift by giving precedence to firm-level agreements, especially on key matters like working hours and overtime pay. The El Khomri Law (2016), and the Macron Ordinances (2017) have further given priority to firm-level agreements on working hours, wages, and job security.

a firm. These yearly database do not make public employee identifiers, which would allow researcher to use it as a panel. However, the administration constructs internally a panel with a 1/12th subsample of employees (those born in October).

Firm tax records: FARE Every year for-profit firms have to report their financial statements to the French Ministry of Finance. The data are complemented with two surveys covering about 160,000 firms exempt of this declaration. In total there are between 3,5 and 4 million firm-level observations every year and is comprehensive for firms with more than 10 employees. The data contains information on both balance sheets and financial statements, including profits, value added, equity, assets, and debt.

Industrial Relations Survey: DSE Every year, the French Ministry of Labor surveys a representative sample of 20,000 to 30,000 french firms about their industrial relations. The data set notably reports whether a strike occurred, its purpose — be it wages, working time, working conditions, layoffs — and its duration.

3.2 Construction of Analysis Samples

All our empirical analyses rely on MARS election results, which we use as a base to which we merge other data. It contains observations at the establishment level and yearly, between 2009 and 2020, and a total of about 450,000 observations. We use term length information to extend the data based on the corresponding duration of union presence. Starting from there, we merge this sample to other data sources depending on which variables we need for our analysis. Because we do not have information on union presence before the first reporter elections over the 2009-2012 cycle, we can assume that establishments that do not report elections by 2012 do not have worker not union representatives. We therefore restrict the data to years 2012 onwards and input a value of zero to dummies accounting for union presence in our matched datasets. Even though it is very likely that an establishment that does not report elections indeed did not organize one, it is also possible that some of those workplaces that do not report any results did actually hold elections, and have union delegates, but did not comply with their reporting duty. Thus a small share of establishments that are not unionized in our data, may actually be unionized. This would bias the results of our analysis towards the absence of detection of an effect.

When the matched dataset is at the firm level (FARE and DSE), we merge the MARS establishments using their firm identifiers and cluster our analyses at the firm level. We also restrict our sample to establishments with at least 11 employees, which is the condition for the company to be mandated to organize elections of worker representatives. When working at the employee level, we exclude trainees apprentices, and very short term spells with less than 5 hours worked. We also exclude observations where the hourly wage is below a quarter of the minimum hourly wage, and above three thousand the minimum wage. Firm level variables (e.g. return on assets, return on equity, value added per worker) are truncated below 1 and 99 percentiles. For more information check our data Appendix D

4 Union Fixed-Effects and Stylized Facts

This section gives a landscape of the prevalence of French unions based on descriptive statistics and provides stylized facts on out of the correlations between union presence and firm economic outcomes.

4.1 Descriptive Statistics

Figure 2 reports the national election results over the three electoral cycles between 2009 and 2020. With more than 20% of votes, CGT and CFDT have clearly been the most dominant unions in France. At the third position stands FO, while CFTC and CFE-CGC are the last two to stand above the 8% that grants representativity at the national level. While the scores have been relatively stable over the period, the figure highlights two trends. The most important one is the decline of the CGT, which was the first union in 2012, but lost crown in the following cycle and declined by 4% over the three cycles. The second trend is the increasing popularity of the white collar union CFE-CGC, which has gained more than 2% over the period and stands at 12% in 2020. Appendix Figure 11 displays the aggregate election results computed using our MARS database. Overall, the scores are very similar to the national election results. CGT and CFDT stand 3% to 4% higher but our data also capture the steady decline of the CGT. The largest difference regards the CFE-CGC which scores hovers at around 6% and remains constant. This difference is due to the fact that national results are completed with surveys of establishments that did not run elections as explained in Section 2. Because white-collar workers may be more reluctant to be represented by unions, the surveys would capture their

preferences, otherwise unexpressed, which would logically boost the white collar union that is CFE-CGC.

Table 1 displays statistics relative to union presence by establishment size in our sample of analysis. In our sample of analysis, about 29% of establishments have a Union Delegate and this proportion increases considerably with size (56% and 69% of those with more than 50 and 100 employees respectively). Conditional on union presence, there are on average 1.7 unions per establishment, which number increases to 2.2 in firms with more than 100 employees.

Panel (a) of Figure 12 displays union presence by 2-digit industries. The figure is ordered by the descending score of revolutionary unions SUD and CGT. These are more prevalent in lower-skilled service and blue-collar industries (Health and Social Work, Accommodation and Food, Manufacturing), while the share of reformist unions increases with the skill level of industries (Scientific Activities, Finance and Insurance). The share of establishments with union delegates of a given union varies by 5 to 10 percentage points, but almost every union maintains a considerable presence in each industry. Panel (b) represents union shares by firm size. Interestingly union representation varies even less than across industries. The largest variation comes from the share of CFE-CGC union delegates, which goes from 6% in establishments with less than 100 employees, to 12% in establishments with more than 1000 employees. The share of the two small unions SUD and UNSA also increases slightly with firm size.

4.2 Stylized Facts

In a first step of studying the link between union ideology and firm outcomes, we use the richness of our panel data to estimate union fixed effects. We run a series of regressions with worker and establishment controls, as well as AKM worker and establishment fixed effects. We identify a set of stylized facts that we use as the reference staring point for the remainder of this paper. Formally, we identify the correlation between the presence of each union in a given establishment and either individual, or establishment- and firm-level outcomes using simple OLS regressions of the form:

$$Y_{i,j,t} = \sum_{u \in \mathcal{U}} \beta_u U_{j,t} + X_{i,j,t}\Gamma + OCCUP_o + CITY_c + SIZE_s + IND_k + \tau_t + \alpha_i + \gamma_j + \varepsilon_{i,j,t} \quad (1)$$

Where $Y_{i,j,t}$ is our outcome of interest for individual i, in establishment j in year t, $\mathcal{U} = \{\text{SUD, CGT, FO, CFDT, CFTC, UNSA, CFE-CGC}\}$, $X_{i,j,t}$ is a vector of worker characteristics including, gender, region of birth, third order polynomials

in experience and age, and dummies for long-term and full-time contracts. The consecutive terms $OCCUP_o$, $CITY_c$, $SIZE_s$, IND_k, and τ_t designate fixed-effects respectively for : 4-digit occupation categories, city of work, establishment size, 4-digit industy categories, and year. Eventually α_i and γ_j are individual and establishment fixed effects. The time period covered is 2013-2020. Standard errors are clustered at the firm level to factor the fact that establishment level outcomes may depend on firm decisions, and therefore be correlated. For specifications on establishment-level variables, we keep one observation by establishment, in which case we would drop the individual subscript i in the above equation. Our coefficients of interest are denoted by β_u. They measure the association between the presence of each union and the outcomes.

In practice we start by running the specification without the individual and establishment fixed effects as a benchmark. We then add the successively. This informs us about the potential bias in our OLS coefficients due to a correlation between unions and individual and establishment intrinsic characteristics such as ability and productivity.

Stylized Fact 1: The union wage premium increases with representation from more reformist unions. However, this difference is driven by workers in higher-skilled occupations. Panel (a) of Figure 3 displays the yearly coefficients of union fixed effects from worker-level regressions of the hourly gross wage, including the set of worker and firm characteristics such as type of contract, age, gender, corporate experience, occupation, location, establishment size, and industry. The dummies measure what the literature refers to as the union wage premium: the wage difference between workers represented by unions and their counterparts in non-unionized establishments conditional on having the same characteristics. Despite some yearly variations, the figure outlines an increasing pattern between the wage premium and a more cooperative ideology. Workers represented by the more radical union are paid about 0.5% less than their colleagues in non-unionized firms. Workers represented by the more reformist unions benefit from premiums of up to to 4.2%. The successive addition of worker and establishment fixed effects lowers the difference across unions but the gradient in the union wage fixed effect remains.

Stylized Fact 2: High wage workers are sorted into reformist unions, while low wage workers are sorted into radical unions The successive addition of worker and establishment fixed effects in figure 3 reveals a positive sorting between on the one side, high wage worker and reformist unions, and on

the other, low wage workers and radical unions. This is also represented in panel (a) of figure 4, which displays union presence relative to the sample average, as a function of the estimates of worker fixed effects. In panel (b) We do not see the same marked patterns, except for the white collar CFE-CGC union. This means that this latter union is sorted into high wage establishments, but there is such sorting for the other ones.

Stylized Fact 3: Union wage premiums accrue to high-skill white collar workers Figure 5 reports union fixed-effects, estimated for subgroups of workers by one digit occupation, as defined by the French official PCS nomenclature. It shows that the sorting of workers outlined by the above stylized fact is driven by high-skill white collars. Further, after accounting for AKM fixed effects, the figure indicates that union wage premiums accrue to this same category of workers. Others, and in particular low-skill employees, which include care workers and clerical employees, suffer from small but significant penalties when represented by unions.

Stylized Fact 4: Firms with radical unions are characterized by lower exit rates for their lower skilled workers The fact is displayed in Figure 6. The gradient is less compelling than the one on wages, but it holds on average across the ideological divide. When accounting for AKM fixed effects, workers represented by radical unions have one-year quit rates similar to their colleagues in non unionized establishments. While those represented by reformists have a quit rate 0.4% higher. Note that the comparison with the point estimates from the base regression, and the one with worker fixed effects only, indicate a negative sorting between more mobile workers and unions, as well as a positive sorting between establishment level exit rates and union presence.

Stylized Fact 5: Radial unions strike and oppose bargaining agreements more often than reformist unions do. Figure 7 displays union fixed effects for the measures of the occurrence of the most common types of strikes (any type, wage strike, and work conditions strike). The results first indicate that after accounting for firm fixed effects, strikes are 2 percent more likely to occur in firms with radical unions, and in particular the largest one, CGT. Note also that the large variation in strike occurrence is captured by establishment fixed effects. This indicates that strikes are establishment specific events, and highlights the potential role of employers or corporate culture in their occurrence.

Stylized Fact 6: There is no significant correlation between union ideology and firm level outcomes Figure 14 displays union dummy coefficients from firm-level regressions of a selection of firm outcomes computed using FARE fiscal data. Union fixed effects on all different firm outcomes measures, firm performance (Return on Equity, Return on Assets), debt to asset ratio, value added per worker, or labor share, are either non significantly different from zero for the most part, or very small. Nevertheless, the comparison of coefficients across specifications indicate a sorting of unions on productivity: radicals into establishments with lower value added per, and reformists into higher ones.

In aggregate, these stylized facts present a contrasting perspective on the potential effects of unions on firms' outcomes. It is important to note that the correlation cannot be interpreted as the causal effect of unions on outcomes, given that these unions are elected by employees. The negative correlation between wages and labor productivity with radical unions can be explained through multiple factors: the lower productivity at an employee or establishment level could potentially foster radical ideology or, conversely, radical union discourse could be more readily adapted to these employees or within those firms. The reduced return on equity observed in firms with radical unions may be associated with their increased propensity to engage in strike action; however, the lack of correlation with other financial performance indicators raises questions regarding the validity of this relationship. The results for wage premiums suggest that radical unions can generate better outcomes for lower-skilled workers, whereas higher-skilled workers' wage premiums are affected by their presence, as opposed to what is observed in reformist unionized firms. However, this negative effect on high-skilled wage premiums can also be explained by less-paid employees being more inclined to elect radical unions, which is also associated with firms with a reduced return on equity. One of the most relevant questions is whether wage premiums is the consequence of the unions' action, or whether it is independent and representative of powerless unions' in certain return on equity contexts. To better understand these dynamics, we need to resort to designs that allow us to identify the causal effects of unions, which we discuss in the next section.

5 Using Regression Discontinuities at Electoral Thresholds to Identify the Causal Effects of Unions

French professional elections offer a classic setup for estimating unions' causal effects with a regression discontinuity (RD) design (Hahn, Todd, and Van der Klaauw (2001), Imbens and Lemieux (2008)). The design exploits a discontinuity

in the treatment assignment based on a running variable, which in our case is a union's score, to identify a causal effect by comparing outcomes just below and above the threshold. The framework of professional elections offers three types of treatment determined by cutoffs at 10%, 30% and 50%. At 10% we can estimate the effect of the possibility to sending a union delegate at the negotiation table. At 50%, we can estimate the effect of giving full power to a union regarding its ability to conclude bargaining agreements with the employer. The treatment at 30% is weaker, it gives limited powers to the union, which can then sign agreements with the employer only if no majority opposes it.

5.1 Methodology

The classic RD design relies on two assumptions. First, that treatment is a deterministic function of the running variable and the cutoff, second, that potential outcomes and all of its unobserved determinants are continuous around the cutoff. Under these assumptions, the discontinuity in the outcome variables at the cutoff then corresponds to the sole causal effect of the treatment. Unbiased estimation depends on the ability to accurately estimate the functional forms of the outcome variables around the cutoffs. When the running variable is continuous around the cutoff, this is done by fitting polynomial functions on a bandwidth around the cutoff that can be optimally determined to minimize for bias [Cattaneo et al., 2023]. When computed on thousands of votes, election scores can plausibly be treated as continuous running variables. This is the case in the more common framework of political elections. However, professional elections, which are held in firms with at least 11 employees, cater to much smaller numbers of voters, and in many cases to only a handful of employees. In our data, 50% of elections have fewer than 40 voters and 75% have fewer than 97. In that case election scores can only take a few discrete values around cutoffs. For example in an election with 40 voters, a union would need 4 votes to pass the 10% threshold needed to send a union delegate to the negotiation table with the employer, and a single vote represents 2.5%. This implies that estimation on a small window of scores around cutoffs like $[-1\%, 1\%]$ would de facto exclude many elections with smaller turnouts. Further, withing the window of estimation, the estimates would be driven by elections with larger turnouts, which are those that can mathematically yield scores closer to the threshold.

That is why, we resort to a discrete approach in our design, with the assumption of local randomization in a small window $[-w, w]$ around the cutoff, which we normalize to zero. Instead of working with union scores in percentage terms, we consider them in number of votes relative to the number of votes needed to

pass a threshold. The score of union i in election j can thus be expressed as $S_{i,j} = V_{i,j} - \bar{V}_j$, where $V_{i,j}$ are the number of votes obtained by the union and $\bar{V}_j$ are the number of votes needed to reach a majority in election j.

In the local randomization framework, we restrict our estimation sample to elections were unions have lost or won only by a handful of votes, and assume that the placement above or below the cutoff is assigned as in a randomized experiment. The usual procedure to assess whether this assumption holds is to perform balancing tests of the equality of means on the two sides of the cutoff on predetermined outcomes. The estimation window can actually be optimally determined by performing successive balancing tests starting with the smallest possible window of one vote below and one above the cutoff, and then enlarging it by unitary increments on both sides, until a balancing test rejects the null hypothesis of the equality in means for a given variable [**?**]cattaneo2023practical).

Our data set presents an additional challenge for the construction of the window of estimation. In the case of elections with few voters we cannot extend the threshold past a lower bound. Consider the same example as above, of 37 voters and the 10% threshold. Unions's minimum score is 1, so that it can get at most 3 votes below than the threshold. Thus in order to maintain a balanced window, we cannot extend the window above the threshold past 3 votes either. Therefore when we consider larger thresholds of analysis, we can only enlarge the estimation window in elections with a sufficient number of voters. For example, at the 10% threshold, elections with between 11 and 20 votes can gave at most 1 vote above and below the cutoff, those with 21 to 30 votes only 2, etc. Thus by construction, when we extend the estimation window we can only do it for elections with sufficiently large number of votes.

In our data, balancing tests reject the equality in means for some predetermined variables, in particular the number of employees and the number of votes, even in the smallest possible window. Table 10 shows the results of balancing tests at the 10% cutoff for each union score. All three CGT, CFDT, and UNSA get past the 10% threshold in elections with significantly more voters, even when we restrict ourselves to one-voter toss up elections. The differences are relatively large, respectively 10, 16, and 50 more votes. This suggests that election results are subject to manipulation by unions.

A proper test for this hypothesis consists in comparing the distribution of union scores across the cutoff. Figure 15 plots the distribution of votes around the 10% cutoff when considering a bandwidth of 10 votes below and above. Looking at the graphs, all unions except CFE-CGC, display a strong jump or fall in the number of observations at the cutoff. Proper tests for the discontinuity of

the distribution exist. In the case of a continuous running variable the common procedure consists in running a McCrary test [McCrary, 2008], in the discrete situation or a local randomization the test performs poorly as it disproportionately rejects the null hypothesis of continuity [Frandsen, 2017]. Cattaneo et al. [2017] develop a simple test consisting of comparing the empirical distribution of the number of units on each side of the threshold to a random sample of same size drawn from a Bernoulli random variable with parameter 1/2, while Frandsen [2017] develop a more sophisticated test based on a Binomial distribution as well but that takes into account the shape of the whole empirical distribution. The simple Cattaneo et al. [2017] test rejects the null hypothesis in our smallest window of estimation, even for the CFE-CGC. We therefore cannot exclude that election outcomes are manipulated.

In order to apprehend the potential biases and threats to estimation that this can pose, we adopt a double strategy. The first one follows Wang and Young [2023], who also acknowledge the potential manipulation of outcomes in their study of union elections in the United-States. They address it by studying differences in outcomes before and after elections. As in a Difference-in-Differences (DiD) framework, as long as the units on both sides of the threshold would have followed parallel trends without elections, the regression discontinuity estimates on the differentiated outcomes are unbiased. Their approach consists of taking a large estimation window of scores between 20 and 80% of votes in favor of unionization, and to condition on firm characteristics like industry and firm size.

We depart from that assumption and instead of conditioning on characteristics, we decide to keep our analysis close to the cutoff and to constrain optimally the window of estimation by successive balancing tests on our first stage outcomes, which are participation in bargaining and signature of bargaining agreements. Since we want to estimate the effect of the expression of a union's ideology on the bargaining table, we want to make sure that there are no differences across treated and untreated units in these outcomes before the election.

Table 2 shows the results of our balancing tests at the successive windows. we use the p-values in parentheses under estimates to determine the largest estimation windows, which range from $[-3, 2]$ for the CFE-CGC to $[-10, 9]$ for SUD, CFTC, and UNSA. An additional challenge of this selection procedure is the lack of power in the case of the smaller unions SUD and UNSA. The absence of significance across successive windows could simply be the result of a smaller number of observations. We thus set their estimation window to the largest estimation window found among other unions, which is CFTC's.

From there, we can move on to the estimation of our treatments effects

estimated by the following simple univariate OLS regression:

$$Y_{j,t} - Y_{j,t-1} = \alpha + D_j^u \beta + \varepsilon_{j,t} \tag{2}$$

Where D_j^u is the union specific treatment dummy with $u \in \{SUD, ..., CFE - CGC\}$, and $D_j^u = 1$ if the score S_j is greater or equal to zero and $D_j^u = 0$ if the score S_j is strictly negative, both within the optimal window of $[-w_u, w_u - 1]$ around zero. We cluster our standard errors at the firm level to account for the fact that some variables like strikes and firm outcomes are at the firm level, and also for the possibility of establishment level bargaining being influenced by decisions at the firm level.

5.2 Results

First Stage: Participation in and Behavior at Negotiations We start by focusing on our first stage variables which are participation in bargaining, as well as signature and opposition to bargaining. Figure 8 displays the differences in these variables across the treatment and control groups for every year before and after the election (defined at time 0), and for every case of union entry at the 10% threshold. We do not implement our difference strategy at this stage, and want to make sure there are no differences before the election in those variables, nor pre-trends. This is indeed what the figure shows overall. The coefficients on participation are all statistically centered on zero in years before the election. Regarding signature, we can observe a small deviation from zero three to four years before elections, however these are minor, especially when compared with the dynamics after elections.

In that respect, the graphs show strong significant increases in all three outcomes for the treated groups and for all unions except the white collar union CFE-CGC. Participation in bargaining jumps by 45% to 65% one year after the election across unions, while signatures jump by 36% to 52%. Opposition to bargaining as well by smaller amounts, 12% to 22%. In the following years all three variables decline slightly but difference across treated and control groups remains very large. Additionally, the strength of the results is not driven by the selection of our window of estimation. Figure 16 shows the average rate of participation in bargaining of unions along the running score variables, for every union and by their optimal window of estimation. For all unions, there is a strong and significant jump right at the cutoff point.

These strong effects are remarkable by their magnitudes but also because their strength seems to correlate with union ideology. Both participation and

signature rates are smaller among more radical unions one year after elections. Taken together, the radical SUD and CGT sign 18% less agreements than the remaining unions. When we consider opposition to bargaining, it is indeed 20% larger among the former unions on average. However the reformist union UNSA also display a large proportion to oppose agreements. This can be explained by the fact that it is the union that participates most to bargaining when it enters.

Interestingly, these effects are not necessarily expected. The legal framework does not grant much power to a union delegate with the smallest share of the vote. The results show that unions express their voice when they are given the opportunity.

We turn then to analysing the same outcomes at the 30% and 50% thresholds. The graphs are shown in Appendix Figures 17 and 18. They draw a relatively different picture. At the 30% threshold, we observe an increase in participation for four unions only: SUD, CGT, CFDT, and CFTC, and of smaller magnitudes, less than 10% on average, except for SUD which stands at 18% the first two years after the election. Notice that the coefficient for signatures of bargaining agreements are about the same, so that we do not measure any significant change in union opposition. This suggests that at this threshold that grants a conditional decision-making power some unions take its opportunity to sign agreements.

At 50%, the situation is somewhat different yet. Among unions that pass this threshold, only FO and SUD participate significantly more to bargaining, 8% on average, the three years after the elections. However we measure a result for signature of bargaining agreements, but only for radical leaning unions SUD, CGT, and FO, which engage into signing more agreements between 6% and 15% more often than their counterparts who have arrived just below the 50% threshold. For SUD and CGT, opposition drops by about 5 to 10 percentage points, which means that they take the opportunity of being granted full decision power to effectively sign agreements.

Union Competition We now examine how union presence and behavior changes at the thresholds. The top panel of Table 8 shows the change in the presence of a union delegate in the establishment for each union (columns) when considering the union entry at 10% for each union (rows). By construction of the RD resign the diagonal equals one for every union. The last column is the sum of the coefficients and corresponds to the change in the total number of unions inside the firm. This analysis allows us to examine the type of substitution or complementarity patterns that there can exist between the unions. The table does not display a pronounced pattern of substitution, between unions, and neither

between ideologies.

First notice that all coefficients are negative, which rules out any complementarity between unions. If anything, it suggests that there is competition and substitutability between unions within ideologies, or with close ideologies. For example the entry of SUD has the biggest effect on the presence of a CGT union delegate, which drops by 12%. The entry of UNSA leads to a reduction in the presence of CFDT by 6.5%. The entry of FO leads to a reduction in CFDT presence by 6.7%, and conversely when considering the entry of FO. The entry of CFTC leads to drop in the presence of all other unions except CFE-CGC, but mostly for CFDT (-6%). As in the previous analysis, CFE-CGC stands as an outlier. The presence of its UDs is unaffected by the entry of other unions, and its own entry has only a mild impact on SUD and FO. Panel b) displays the same matrix using participation in bargaining as ouctome. The results are very close to those on the presence of union delegates. Panel c) considers signatures of bargaining agreements, and the effects are milder. For example there is no effect on the signature of agreements by the CGT, while its union delegate has a 12% larger probability of exiting the workplace. This suggests that the entry of unions at 10% leads to the exit of smaller unions that do not engage into signing bargaining agreements.

We now turn to examine how behavior at the bargaining table varies depending on the number of competitors, their sores, and which union dominates the establishment. Figure 9 displays the RD estimates on participation in bargaining the year after the election by splitting our samples of analysis according to a) the number of competitor unions present in the workplace, b) bins of the score of the leading union that account for the two decision-making thresholds, and c) the leading union in the workplace.

Panel a) shows that for all unions, the more competing unions the new entrant faces, the more likely she or he is to participate to bargaining. Interestingly, with more than 4 unions, the figure reports a significant increase in the participation of the white collar union CFE-CGC, which was nonexistent in the whole sample. The result is intuitive because we expect that the more union there are, the more divided they are, and the more room there is for a new entrant to weight on the decision process. This is confirmed by panel b) which shows that overall participation is at its maximum when the score of the leading union is below 50%. Participation is the lowest when the leading union has the highest scores above 75%, but oddly, when it stands below 30%, except for CFE-CGC. This is something that we cannot explain at this stage. The last panel c) reports participation by the union that has the majority score. We do not observe a

particular pattern there, which corroborates the idea that union competition is not driven by ideology. In other words, there are no signs of cooperation between unions. Unions may prioritize their own success before the success of their ideology. Or even if outsiders may consider their ideology to be close, they themselves do not.

Bargaining and Strike Outcomes We now start to examine the differentiated RD outcomes, starting with bargaining and strike outcomes. Table 3 reports the outcomes at three points in time: $t-2$, $t+1$, and the average between $t+1$ and $t+3$. We use the first one to determine whether there is a pre-trend in the outcome, which would be problematic if its coefficient is of the opposite sign of the coefficient at $t+1$. Measures at $t+1$ and the average over $t+1$ and $t+3$ allow to determine whether an effect is temporary or permanent. Results are reported for every union, and for every outcome which is significant at the 10% level for at least one union. We analyse the results union by unions. The entry of SUD leads to an increase in the occurrence of disagreements between unions and the employer by 8.4% the year after the election, by an average of 9.7% the three years after. Considering that the average rate of disagreements stands at 8.2%, this is more than a two fold effect. SUD is considered to be the most radical union in France, so this is not necessarily a surprise, but it is a strong confirmation of this prior. The entry of the union also leads to an increase in wage bargaining by 6.8% the year after the election. However the entry of the union is marked by significantly more bargaining on layoff and employment topics the two years before. This differential trend could bias the results because the increase in disagreements might be the consequences of the pre-election layoffs or downsize inside the firm. They also suggest that SUD might be the better union to elect in that situation because of its ideology.

The entry of CGT leads to .1 more negotiations with the employer, and 2% decrease in the number of unilateral decisions by the employer, on average the three years after. The latter results corresponds to a drop of 43% relative to its sample average at 4.6. This increase in bargaining frequency could be driven by more bargaining on layoff topics, which coefficient is small (.6%), but at the same level as the sample average. The entry of a CGT union delegate also causes an increase in the occurrence of wage strikes by 7.4% (sample average of 36.6%) the year after its election.

The most striking results regarding the entry of FO is the increase of bargaining on employment and layoff topics. These are accompanied by an increase in strikes on employment topics, but which might be driven by a drop of these

the year before elections.

Interestingly, we do not observe any significant difference in the bargaining outcomes of the CFDT.

The entry of the CFTC is mostly marked by differences in predetermined outcomes: more unilateral decisions by employers, fewer bargaining on wages, and more on profit sharing, two years before the election.

The entry of UNSA is also marked by pre-trends. A decrease in the occurrence of wage bargaining and the the number of times bargained. Concurrently there is an increase in the occurrence of strikes, which could be driven by wage strikes.

Regarding CFE-CGC, we do not see any causal pattern. We can note that strike occurrence, and in particular wage strike occurrence is much higher than the year before election in all periods. However, note that two years before elections workplaces are characterized by signs or conflicts: more unilateral decisions by employers, more disagreements, bargaining on layoffs, and strikes.

Wage Outcomes Table 5 shows display the results for wage outcomes. We examine the effect on the hourly wage among all workers, white and blue collars separately, as well as along the its distribution at the establishment level. The entry of SUD is associated with a shift of the middle of the distribution, as all 25th, 50th, and 75th percentiles display an increase by 1.6% to 2% on average the three years after elections.

The entry of CGT is associated with a decrease by 1.1% of the establishment level average hourly wage the year after its election and by 0.9% the three years after elections. However this wage drop is concentrated among white collars, who lose 2% on average over the three years post entry. This as well as the 1% decrease of the 90th percentile over time are evidence for a wage compression effect.

The entry of FO or CFDT are not not associated with any significant change in wage outcome neither before, nor after elections. When a new delegate from the CFTC enters, we measure a 1.2% decrease in the hourly wage on average, which is stronger for white collars, and expectedly at higher percentiles of the distribution.

The entry of UNSA is linked to a 2.2% increase in average hourly wages in the three years after elections, and interestingly, it is stronger at the bottom of the distribution and among white collars.

The entry of CFE-CGC is characterized by an increasing trend in the average hourly wages, that is concentrated at the top of the distribution, but not at the

bottom. However it is also more salient among blue collars than white collars.

Establishment Composition and Firm Performance Outcomes Establishment-level worker composition outcomes are displayed in Table 13. The entry of SUD is not marked by a significant change in worker age nor composition in terms of blue and white collars. Contrary to the entry of CGT, which is associated with a decline in average employee age by .14 years, which is potentially linked to a higher retention of blue collars, which exit rate decreases by 2.2% the year after the election, and to the increase in the percentage of women. Their hiring rate increases by 2% after union entry, and is accompanied by a significant increase in the hiring rate of white collars.

The entry of FO on it side, is associated with more turnover. Both an increase in the percentage of exiting employers, twice more among blue collars than among white collars, accompanied by an increase in the percentage of entering employees.

After the entry of the CFDT union delegate, hires increase by 2% on average, and they are predominantly white collar, which presence increases by 1%.

The entry of a CFTC delegate in linked with increase in exits, twice more among white collars than among blue collars, and an increase in the average age of the workforce by 0.14 years.

Worker composition is not marked by large changes in the case of entry of UNSA and CFE-CGC. One result is that there is an increasing pre-trend in the percentage of white collars in the winning elections two year before elections.

Table 7 display firm level outcomes. There are very few significant differences between treated and control groups overall. We can note a decrease by 1.8% and by 0.7% in firms where SUD and CFTC enter respectively, but only the year after elections. The other outcome that show significant results is debt to assets. It falls prior to elections of UNSA, and after an election of CFE-CGC.

6 Conclusion

In conclusion, our analysis demonstrates that unions' behavior varies according to their ideological divides, resulting in differing outcomes for firms. However, we are unable to definitively conclude whether a particular ideology consistently leads to better outcomes for specific types of workers or firms. To deepen our understanding of these results, future research will focus on several key areas. First, we plan to conduct a heterogeneity analysis based on the number of competing unions and across different industries to identify patterns of behavior

and outcomes more precisely. We also want to disaggregate white collars into the three lower skilled occupation categories that are in distinguished the stylized facts. Additionally, we will refine our regression discontinuity approach by holding union composition constant, allowing us to more accurately attribute changes in outcomes to the entry of specific unions. To further mitigate the risk of election manipulation, we will also employ a "Donut" RD design, which excludes observations around the election thresholds, reducing potential bias. Lastly, we aim to explore the role of employer ideology by examining whether the alignment or mismatch between unions' and employers' ideologies influences bargaining outcomes, offering a more nuanced perspective on the interaction between ideological stances in labor negotiations. This expanded analysis will provide clearer insights into how ideological dynamics shape the interactions between unions, employers, and workers, and may shed light on the optimal configurations for improved firm and worker outcomes.

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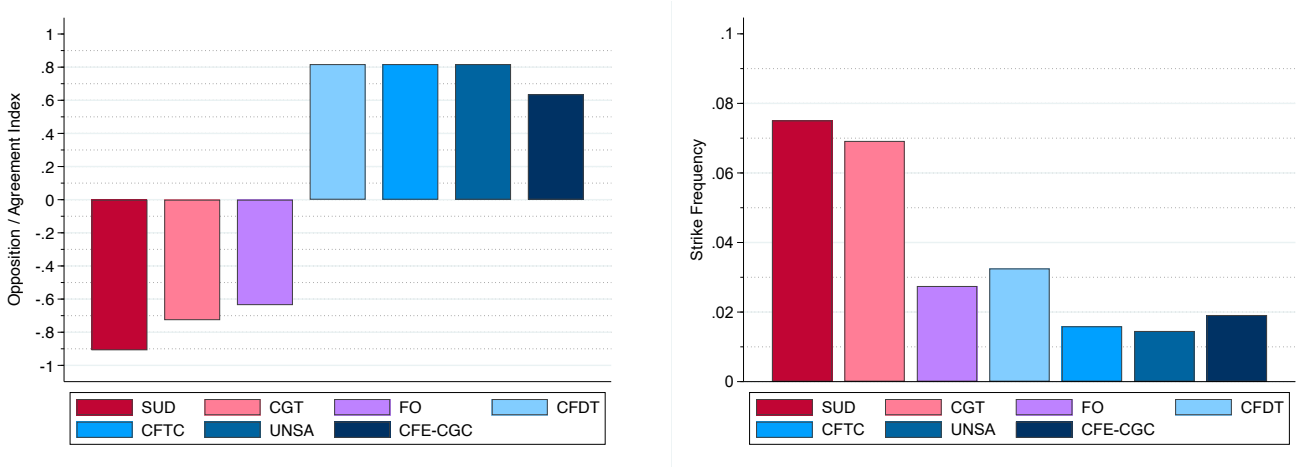
7 Figures

Figure 1: Differences in Policy Positions and Strike Frequency Across Unions

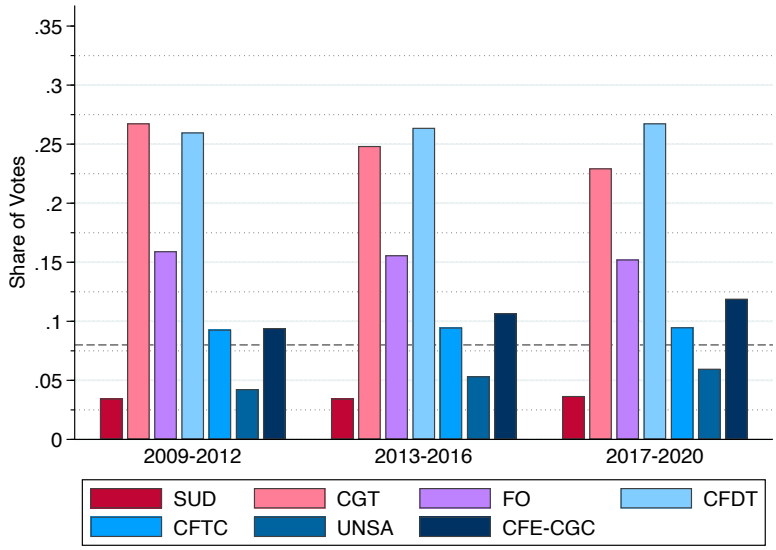
(a) Index of Opposition/Cooperation by Unions to National Political Reforms

(b) Strike Occurrence by Union



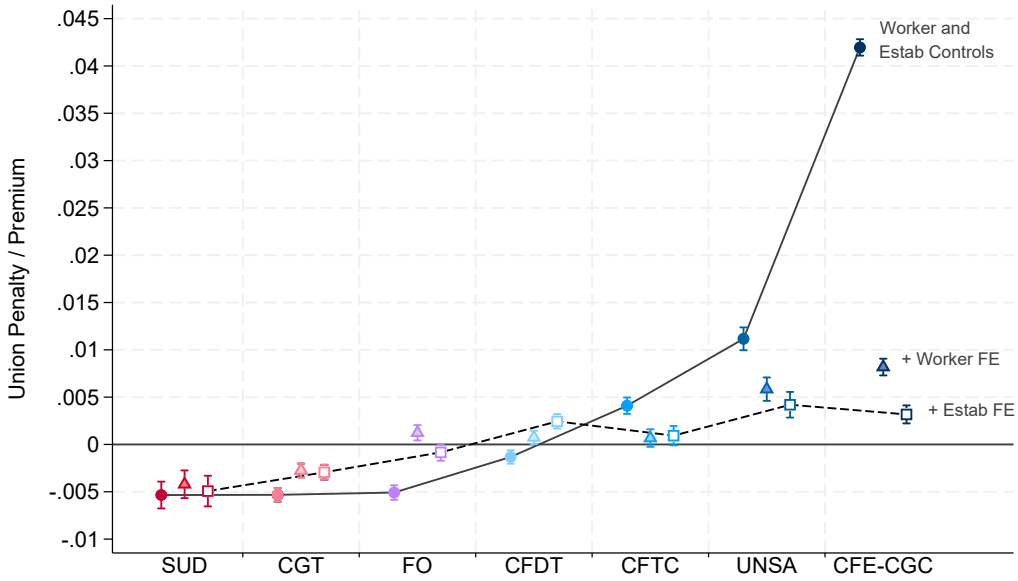
Note: Panel (a) reports union stances towards national legislation. In France, unions are regularly invited by the government to formally participate in negotiations of national policy. We calculate an index of opposition to versus consent or cooperation with government reform proposals. We focus on 12 national political reforms between 1995 and 2024, for which unions were formally invited to negotiate. We assign a score of 1 for each reform if the union agreed to negotiate or signed the agreement, and a score of -1 if it declined the invitation and opposed the reform, and calculate the average index as the average of scores (meaning that +1 indicates support of all reforms and -1 indicates opposition to all reforms. The reforms are listed in Appendix Table 9. Panel (b) reports the rate at which different unions strike. We focus on firms with a single union (to be able to clearly isolate the approach of different unions when unencumbered by other unions). We use the DSE firm-level survey data where each observation is a firm-year cell and strike occurrence is reported as a dummy variable. The averages are computed using sampling weights provided in the survey and are representative of the distribution of firms with more than 11 employees.

Figure 2: Union Vote Shares Over Time (2009-2020)



Note: The figure displays the official national-level union election results, aggregated from establishment-level professional elections, over the three 4-year electoral cycles between 2009 and 2020. The data are computed and reported by the French Ministry of Labor. A union is considered representative at the national level if it has obtained more than 8% of the votes (the share represented by the dashed line). Unions representative at the national level are invited by the government to negotiate over major reforms. This gives them an opportunity to weight in on the legislative process.

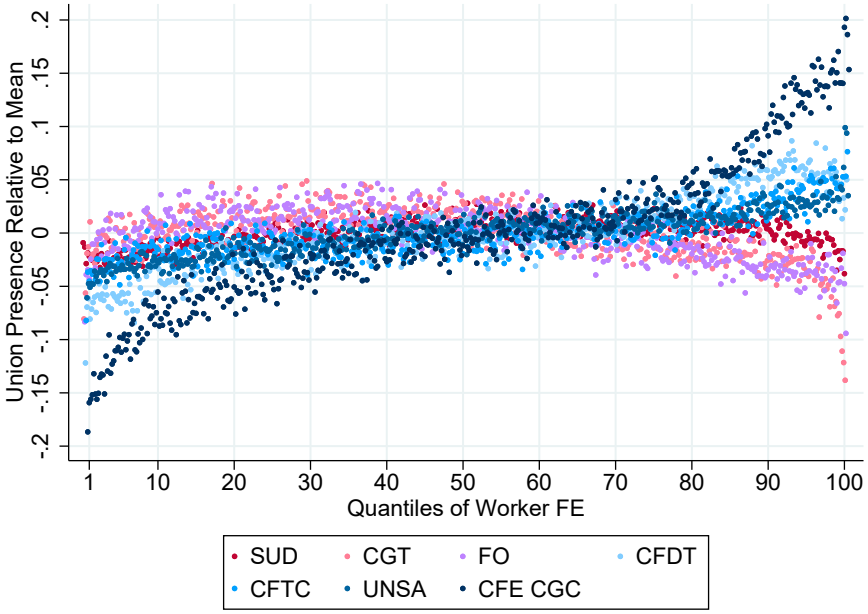
Figure 3: Union-Specific Wage Premia



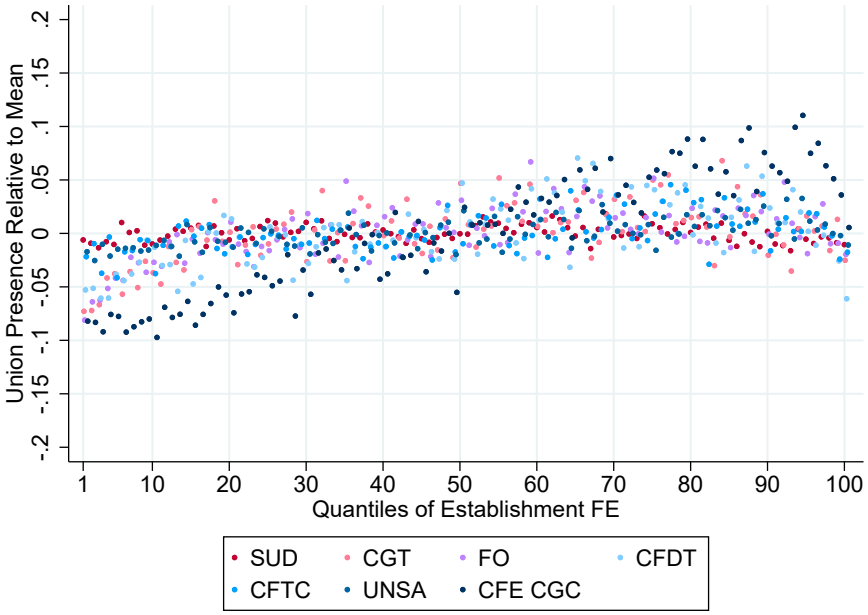
Note: The figure displays coefficients of union dummies in modified Mincer and AKM specifications as described by Equation (1), with log hourly wages as outcome variable. The round markers are estimates from a "base" regression with individual and establishment controls, triangle markers are estimates from an augmented base regression with worker fixed effects, while the square estimates come from a modified AKM regression with both worker and establishment fixed effects. Unions are reported on the x-axis, ranging from the most radical to the most reformist from left to right.

Figure 4: Selection: Union Presence by AKM Worker and Establishment Fixed Effects

(a) Union Presence by AKM Worker Fixed Effects

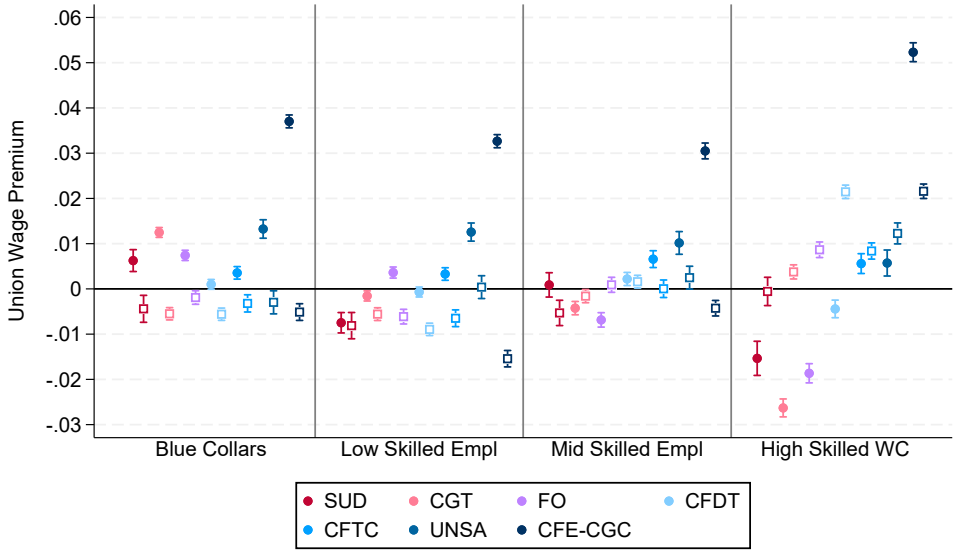


(b) Union Presence by AKM Establishment Fixed Effects



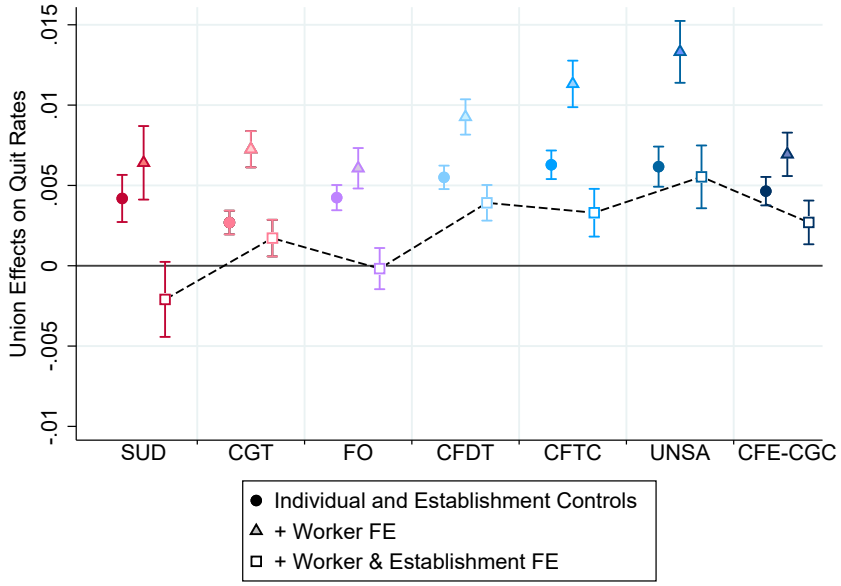
Note: Panel (a) represents the average probability of union representation, demeaned by its sample overall average, across quantiles of worker fixed effects estimated from the AKM specification in equation (1). Panel (b) represents average union presence at the establishment level, also demeaned, across quantiles of establishment fixed effects as estimated in equation (1).

Figure 5: Union Wage premiums, by Occupation Groups



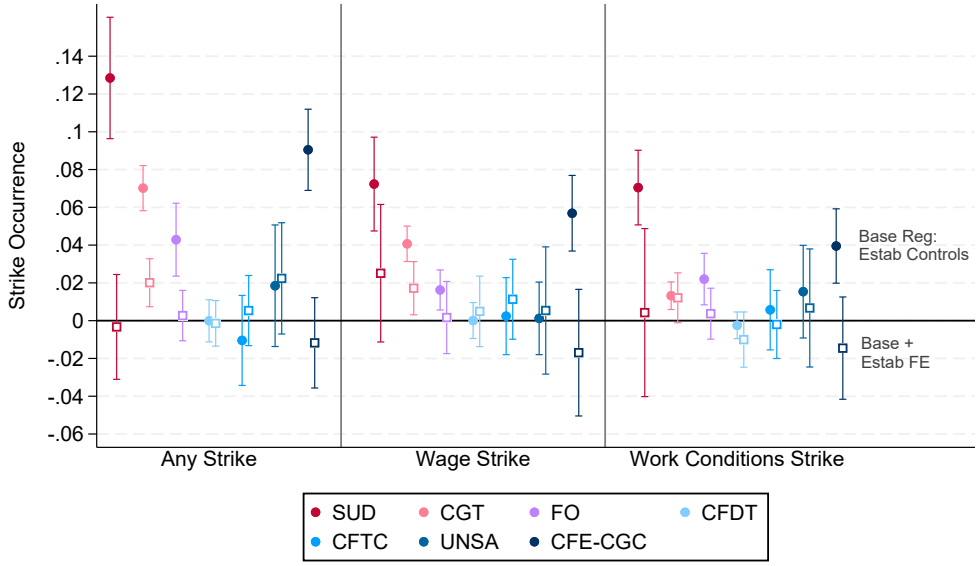
Note:The figure displays coefficients on union dummies from the regressions of the log of the hourly wage as described by Equation (1), by 4 worker occupation dummies from regressions with (square markers) and without (round markers) worker and establishment fixed effects. The categories are the French national *Professions et catégories socio-professionnelles* 1-digit occupation grouping, which sorts workers by their skill level.

Figure 6: Union premiums Regarding Exit of Workers



Note: The figure displays coefficients on union dummies from regressions of the probability that a worker exits the year after, as described by Equation (1). The round markers are estimates from a "base" regression with individual and establishment controls, triangle markers are estimates from an augmented base regression with worker fixed effects, while the square estimates come from an AKM regression with both worker and establishment fixed effects .

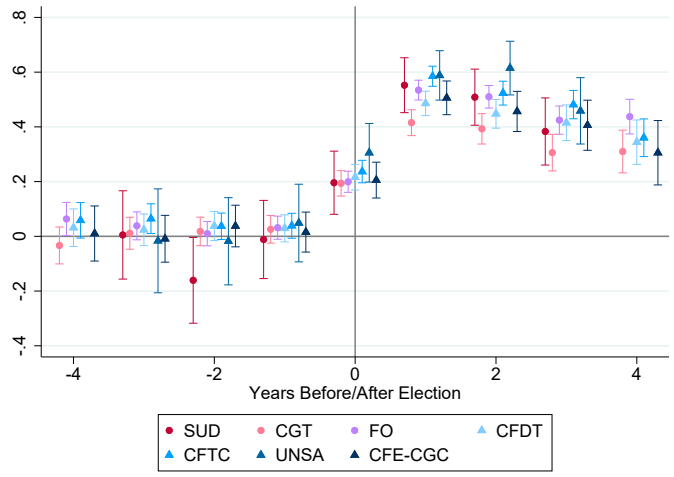
Figure 7: Union Fixed Effects Regarding Strike Occurrence



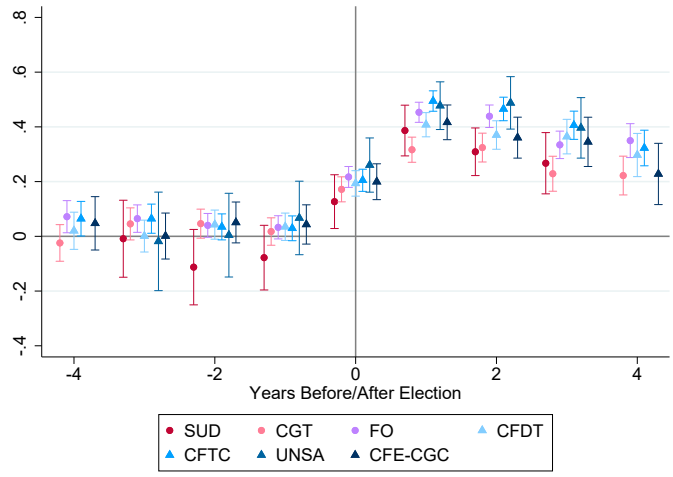
Note: The figure shows coefficients on union dummies from regressions of firm level strike occurrence measures on a set of establishment controls (round markers), as well as from regressions with establishment fixed effects (square hollow markers), as described by Equation (1).

Figure 8: Regression Discontinuity Estimates at 10%: Bargaining Behavior by Union and Years Since Election

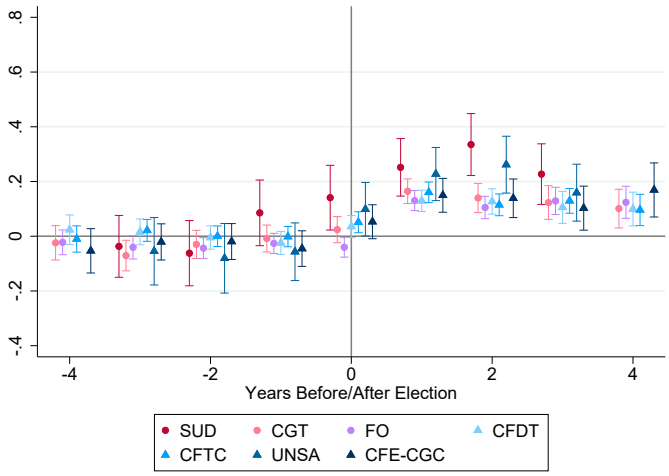
(a) Participation in Bargaining



(b) Signature of Agreement



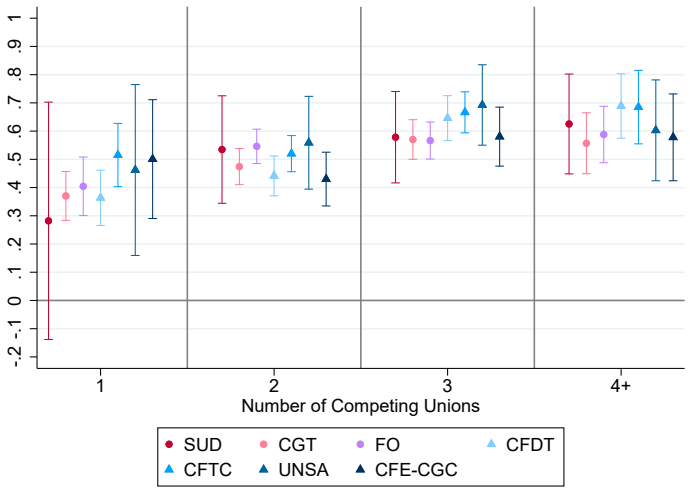
(c) Opposition to Agreement



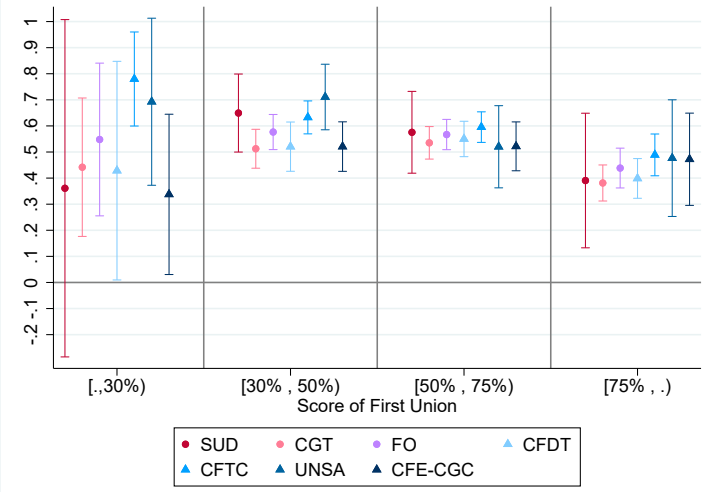
Note: Each panel presents the regression discontinuity estimates derived from the estimation of Equation (2), on lagged and post-treatment outcomes, which are the average proportion of negotiations in which a given union (a) participated, (b) signed an agreement, (c) opposed the agreement. Colors represent separate RD designs, one for each union entry, comparing elections where a given union received just above the 10% vote threshold with those where it fell slightly below. For example, the dark-red marker at time 2 in Panel (a) indicates that the probability of SUD union delegates participating in negotiations was 55% higher two years after their entry, compared to establishments where they did not win the elections. Error bars represent 95% confidence intervals.

Figure 9: Regression Discontinuity at 10%, Participation in Bargaining, Heterogeneity Analyses

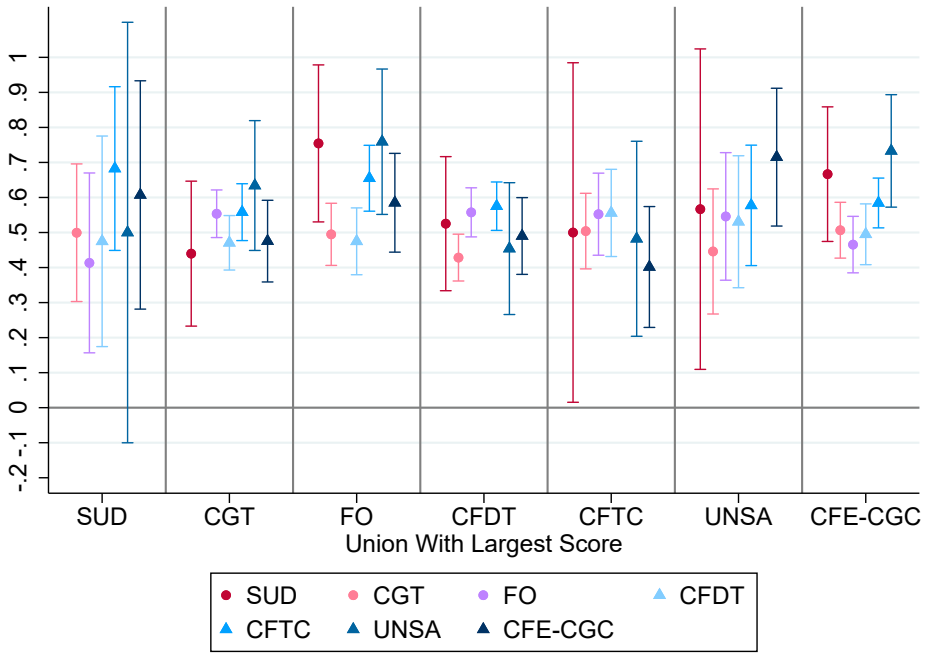
(a) By Number of Competitor Unions



(b) By Score of First Union



(c) By First Union



Note: Each panel presents the regression discontinuity estimates derived from the estimation of Equation (2), on the average participation in negotiation the year after the election. The sample is divided into different subgroups in each panel: (a) the number of competing unions, (b) the election score of the union that arrived first, and (c) the union that received the highest score. Colors represent separate RD designs, one for each union entry, comparing elections where a given union received just above the 10% vote threshold with those where it fell slightly below. For example, the dark-red marker in the first column of Panel (a) indicates that the probability of SUD union delegates participating in negotiations was 41% higher one year after their entry, in establishments where only one other union had been elected. Error bars represent 95% confidence intervals. The dark-red marker in the first column of Panel (b) indicates that the probability of SUD union delegates participating in negotiations was 48% higher one year after their entry, in establishments where the union that arrived first in the election received less than 30% of the vote. The pink marker in the first column of Panel (c) indicates that the probability of CGT union delegates participating in negotiations was 51% higher one year after their entry, in establishments where SUD arrived first. Error bars represent 95% confidence intervals.

8 Tables

Table 1: Union Presence by Establishment Size

	Establishment Size by Number of Employees		
	≥ 11	≥ 50	≥ 100
Number of Unions			
No Union	70.8%	44.5%	30.5%
One	15.4%	23.0%	21.2%
Two	8.5%	18.3%	23.9%
Three	3.8 %	9.9%	16.5%
Four or More	1.5%	4.3%	8.0%
Union Presence Conditional on Having at Least One Union			
SUD	4.3%	5.1%	5.8%
CGT	45.0%	49.4%	54.5%
FO	28.7%	32.1%	36.3%
CFDT	47.6%	52.1%	57.0%
CFTC	17.9%	20.1%	22.6%
UNSA	5.9%	7.3%	8.9%
CFE-CGC	17.1%	21.5%	27.7%
Average Number of Unions	1.72	1.93	2.19

Note: All figures are computed on the period 2013-2020 for the sample of establishments reporting union election results between 2009 and 2020. The top panel figures report the proportion of establishments with a given number of unions, and each column restricts the sample successively larger establishments. The bottom panel presents statistics restricted to establishments with at least one union.

Table 2: Balancing Tests in Union Participation in Bargaining and Signature to Agreements at 10% Threshold

	sud		CGT		fo		CFDT		CFTC		UNSA		CFE-CGC	
Estimation Window	part	sign	part	sign	part	sign	part	sign	part	sign	part	sign	part	sign
$[-1, 0]$	-.1	0	.02	.01	-.1	-.05	.01	-.01	-.04	-.02	.15	.17	.05	.05
	(0.58)	(0.98)	(0.64)	(0.88)	(0.11)	(0.33)	(0.8)	(0.84)	(0.57)	(0.73)	(0.42)	(0.33)	(0.37)	(0.37)
$[-2, 1]$	-.07	-.01	.01	0	-.01	.01	0	0	.02	.02	.12	.12	.03	.02
	(0.63)	(0.95)	(0.76)	(0.97)	(0.71)	(0.73)	(0.96)	(0.94)	(0.64)	(0.61)	(0.39)	(0.35)	(0.46)	(0.51)
$[-3, 2]$	-.04	-.05	.01	.01	-.01	.01	0	.01	-.03	-.02	.1	.1	.02	.02
	(0.72)	(0.62)	(0.73)	(0.7)	(0.71)	(0.74)	(0.92)	(0.69)	(0.48)	(0.51)	(0.39)	(0.35)	(0.53)	(0.44)
$[-4, 3]$	-.02	-.04	.02	.01	0	.01	.02	.03	-.01	-.01	.09	.1	.04	.05
	(0.84)	(0.62)	(0.5)	(0.69)	(0.98)	(0.59)	(0.43)	(0.29)	(0.77)	(0.69)	(0.37)	(0.3)	(0.18)	(0.08)
$[-5, 4]$	-.05	-.04	.03	.02	.01	.02	.04	.04	0	-.01	.13	.11	.04	.04
	(0.58)	(0.65)	(0.18)	(0.35)	(0.58)	(0.41)	(0.09)	(0.07)	(0.88)	(0.77)	(0.18)	(0.2)	(0.16)	(0.07)
$[-6, 5]$	-.07	-.08	.03	.03	.02	.02	.04	.04	0	0	.09	.08	.04	.05
	(0.42)	(0.29)	(0.12)	(0.13)	(0.41)	(0.32)	(0.05)	(0.07)	(0.87)	(0.88)	(0.31)	(0.36)	(0.08)	(0.02)
$[-7, 6]$	-.07	-.08	.04	.03	.04	.04	.05	.04	.01	.01	.1	.08	.05	.06
	(0.46)	(0.27)	(0.08)	(0.12)	(0.09)	(0.09)	(0.03)	(0.08)	(0.68)	(0.69)	(0.27)	(0.34)	(0.02)	(0.00)
$[-8, 7]$	-.06	-.1	.04	.04	.04	.03	.05	.04	.02	.02	.04	.03	.05	.06
	(0.48)	(0.17)	(0.03)	(0.05)	(0.04)	(0.09)	(0.01)	(0.03)	(0.45)	(0.5)	(0.65)	(0.74)	(0.03)	(0.00)
$[-9, 8]$	-.06	-.11	.04	.04	.05	.04	.06	.05	.03	.02	.06	.06	.05	.07
	(0.44)	(0.12)	(0.04)	(0.03)	(0.02)	(0.02)	(0.00)	(0.01)	(0.28)	(0.43)	(0.39)	(0.41)	(0.01)	(0.00)
$[-10, 9]$	-.06	-.1	.04	.04	.06	.05	.05	.05	.04	.03	.05	.06	.05	.07
	(0.48)	(0.15)	(0.02)	(0.02)	(0.00)	(0.00)	(0.00)	(0.01)	(0.14)	(0.23)	(0.46)	(0.35)	(0.00)	(0.00)
Optimal Window	$[-10, 9]$		$[-6, 5]$		$[-6, 5]$		$[-4, 3]$		$[-10, 9]$		$[-10, 9]$		$[-3, 2]$	
Number of Elections	140		1695		1645		1289		1331		180		896	

Note: The table reports balancing tests for each union entry RD specification (columns). Coefficients measure the difference between treatment and control groups in two predetermined outcomes: the proportion of negotiations to which the union participated (left columns) and the proportion of bargaining agreements signed (right columns), both measured the year before elections. Rows presents the difference for increasing windows around the 10% election threshold, measured by the number of votes below the threshold, and the number of votes above ($[-1, 0]$ being the smallest window). Standard errors are reported in parentheses. The optimal window is the largest window for which there is no significant difference between the two groups at the 10% significance level. The number of elections within this optimal window is reported at the bottom of the table.

Table 3: Regression Discontinuity Estimates - Union Outcomes

					Bargaining Topic				Strike Occurrence		
Union	Period	Number Times Bargained	Unilateral Decision Employer	Disag-reement	Wages	Profit Sharing	Employ-ment	Layoffs	Any Topic	Wages	Employ-ment
SUD	$t-2$	-0.338	0.037	0.032	0.021	0.017	0.052**	0.022*	0.075	0.091	-0.063
	$t+1$	-0.047	0.023	0.084*	0.068*	-0.023	0.025*	-0.010*	-0.040	-0.037	-0.002
	$t+1$ to $t+3$	-0.044	0.010	0.097**	0.038	-0.005	0.024*	-0.015**	-0.014	0.008	0.068
CGT	$t-2$	0.054	-0.001	0.008	0.003	-0.005	0.012**	0.003	0.025	0.037	-0.023
	$t+1$	0.079	-0.014	-0.002	0.011	0.003	-0.003	0.004	0.071**	0.074*	-0.027
	$t+1$ to $t+3$	0.102**	-0.020**	-0.010	0.010	0.006	0.002	0.006*	0.039*	0.038	-0.022
FO	$t-2$	0.005	0.000	0.000	0.009	-0.004	-0.009	-0.002	-0.019	-0.081***	0.067**
	$t+1$	-0.052	0.000	-0.010	0.006	0.004	-0.018***	-0.008**	-0.024	-0.027	0.057**
	$t+1$ to $t+3$	-0.095*	0.005	-0.005	-0.001	-0.001	-0.015***	-0.005**	-0.006	-0.031	0.051**
CFDT	$t-2$	0.053	-0.003	0.013	0.009	0.010	0.002	0.002	-0.019	-0.010	0.022
	$t+1$	-0.018	0.003	-0.030	0.000	0.001	-0.009	-0.002	0.007	0.010	0.034
	$t+1$ to $t+3$	0.055	0.007	-0.026	0.012	0.000	-0.001	0.000	-0.003	-0.002	0.006
CFTC	$t-2$	0.021	0.019*	-0.008	-0.026**	0.021**	-0.003	0.000	0.014	-0.016	-0.018
	$t+1$	0.086	-0.002	0.006	-0.002	0.019*	0.006	-0.003	0.024	0.005	-0.007
	$t+1$ to $t+3$	0.063	0.003	-0.002	0.004	0.015*	0.000	0.000	0.032	0.036	0.020
UNSA	$t-2$	0.509	-0.002	-0.014	0.082*	-0.026	0.000	0.019*	-0.091	-0.271**	0.104
	$t+1$	-0.112	0.010	-0.052	-0.024	-0.037	0.014	0.010	0.062	-0.007	0.008
	$t+1$ to $t+3$	-0.129	0.000	-0.023	-0.068**	-0.035*	-0.008	0.006	0.122***	0.059	0.029
CFE-CGC	$t-2$	0.069	0.007*	0.006	-0.003	0.002	-0.017*	0.002	0.067*	0.008	-0.003
	$t+1$	0.109	0.001	-0.003	0.013	0.024	0.006	0.007	-0.027	0.007	-0.014
	$t+1$ to $t+3$	0.093	0.001	-0.001	0.010	0.023	0.001	0.000	0.002	0.036	-0.022

Table 4: Regression Discontinuity Estimates - Wage Outcomes

		Hourly Wage Estimates:					
Union	Period	Mean	P10	P25	P50	P75	P90
SUD	$t-2$	-0.008	-0.022	0.001	0.001	0.008	0.006
	$t+1$	0.001	-0.005	0.009	0.009	0.003	0.013
	$t+1$ to $t+3$	0.003	0.001	0.009	0.010	0.011	0.015
CGT	$t-2$	-0.003	0.002	0.001	0.002	0.000	-0.003
	$t+1$	-0.011**	-0.006	-0.004	-0.005	-0.008*	-0.005
	$t+1$ to $t+3$	-0.009**	-0.006	-0.004	-0.003	-0.007	-0.010*
FO	$t-2$	-0.003	-0.003	0.000	-0.001	0.000	0.001
	$t+1$	-0.003	0.001	-0.006	-0.008*	-0.008*	-0.007
	$t+1$ to $t+3$	-0.001	0.004	-0.001	-0.004	-0.005	-0.007
CFDT	$t-2$	0.008	-0.002	0.004	0.003	0.001	0.001
	$t+1$	0.001	-0.004	0.002	0.002	-0.004	-0.008
	$t+1$ to $t+3$	0.003	0.000	0.004	0.005	0.000	-0.003
CFTC	$t-2$	0.002	0.002	0.001	0.001	-0.002	0.001
	$t+1$	-0.007	-0.010**	-0.006	-0.005	-0.004	-0.001
	$t+1$ to $t+3$	-0.013**	-0.008	-0.009*	-0.008*	-0.008	-0.008
UNSA	$t-2$	0.000	0.008	0.004	0.001	-0.004	0.002
	$t+1$	0.015	-0.005	0.009	0.011	0.009	0.028
	$t+1$ to $t+3$	0.019	0.016	0.017**	0.017*	0.014	0.019
CFE-CGC	$t-2$	-0.007	0.001	-0.002	-0.007	-0.006	-0.008
	$t+1$	0.025***	0.016**	0.016***	0.015**	0.014*	0.019*
	$t+1$ to $t+3$	0.018*	0.014**	0.012**	0.011*	0.012	0.008

Table 5: Regression Discontinuity Estimates - Wage Outcomes

		Hourly Wage Estimates:			
		Blue Collars	Low-Skill Employees	Mid-Skill Employees	High-Skill Employees
SUD	$t-2$	0.020	0.003	-0.022	0.018
	$t+1$	-0.001	-0.012	-0.005	0.003
	$t+1$ to $t+3$	0.012	-0.011	0.011	0.005
CGT	$t-2$	-0.002	0.005	0.000	-0.009
	$t+1$	0.004	-0.006	0.002	-0.011
	$t+1$ to $t+3$	0.002	0.000	0.002	-0.018**
FO	$t-2$	-0.003	0.004	0.000	-0.004
	$t+1$	-0.012	0.008	0.008	0.002
	$t+1$ to $t+3$	-0.003	0.001	0.007	-0.001
CFDT	$t-2$	0.003	0.004	0.000	-0.005
	$t+1$	-0.014**	-0.002	-0.005	-0.010
	$t+1$ to $t+3$	-0.007	0.000	-0.001	-0.012
CFTC	$t-2$	-0.001	0.003	-0.001	-0.007
	$t+1$	-0.012	-0.007	-0.006	0.003
	$t+1$ to $t+3$	-0.014*	-0.008	-0.012	-0.013
UNSA	$t-2$	0.023	-0.023	-0.002	-0.011
	$t+1$	0.018	0.010	0.010	0.016
	$t+1$ to $t+3$	0.014	-0.002	0.002	0.011
CFE-CGC	$t-2$	0.015	-0.017	-0.002	-0.004
	$t+1$	0.031**	0.024**	0.032*	0.014
	$t+1$ to $t+3$	0.029**	0.022**	0.026	0.011

Table 6: Regression Discontinuity Estimates - Worker Composition Outcomes

Union	Period	Mean Age	% Women	% White Collars	% Exiting Employees	% Exits WC	% Exits Blue Collars	% Empl Hired	% WC Hired	% Women Hired
SUD	$t-2$	-0.018	-0.004	-0.001	-0.014	-0.011	-0.020	-0.019	0.016	-0.034
	$t+1$	-0.054	-0.006	0.008*	0.107	0.102	0.112	-0.006	0.003	-0.010
	$t+1$ to $t+3$	-0.189	0.004	0.003	0.040	0.038	0.039	0.013	-0.004	0.008
CGT	$t-2$	0.004	0.002	0.001	0.000	0.003	-0.001	0.000	0.014**	-0.001
	$t+1$	-0.164***	0.007***	-0.001	-0.015	-0.006	-0.022**	0.006	0.020***	0.023***
	$t+1$ to $t+3$	-0.140**	0.006***	0.002	-0.010	-0.005	-0.012*	0.003	0.015**	0.014**
FO	$t-2$	-0.071	0.001	0.000	0.007	0.012	0.025	-0.007	-0.002	0.003
	$t+1$	-0.019	-0.002	-0.006*	0.017*	0.032**	0.013	0.014*	-0.003	0.003
	$t+1$ to $t+3$	-0.040	-0.002	-0.003	0.018***	0.025***	0.017**	0.019**	0.002	-0.005
CFDT	$t-2$	-0.082*	0.002	0.005*	0.007	0.011	0.004	0.005	0.005	-0.001
	$t+1$	0.000	0.001	0.009***	0.001	0.000	0.006	0.021**	0.009	0.013
	$t+1$ to $t+3$	0.075	0.002	0.010***	-0.003	-0.003	0.000	0.019**	0.011	0.013
CFTC	$t-2$	0.188*	-0.001	0.001	0.006	-0.009	0.008	0.004	0.002	-0.003
	$t+1$	0.091	-0.001	-0.004	0.015	0.014	0.018	0.007	0.012	0.001
	$t+1$ to $t+3$	0.138**	0.001	-0.006	0.015*	0.029**	0.015*	0.008	0.002	0.006
UNSA	$t-2$	-0.003	-0.004	-0.006	-0.019	0.030	-0.022	0.063***	0.013	0.000
	$t+1$	0.196	0.005	-0.007	0.028	0.042	0.037	0.000	0.016	0.005
	$t+1$ to $t+3$	0.060	0.004	0.003	0.009	0.009	0.009	0.011	0.040***	0.006
CFE-CGC	$t-2$	-0.066	-0.001	-0.005**	0.006	0.011	0.006	-0.040	-0.004	-0.008
	$t+1$	-0.029	-0.001	-0.002	0.017	0.061	0.014	-0.004	0.002	-0.001
	$t+1$ to $t+3$	0.018	0.000	0.001	0.005	0.029	0.005	-0.009	0.008	0.002

Table 7: Regression Discontinuity Estimates - Firm Outcomes

Union	Period	Profit Margins	ROE	ROA	Debt to Assets	Value Added Per Worker
SUD	$t-2$	0.019	0.012	0.003	0.003	-0.030
	$t+1$	0.229	-0.058	-0.016*	0.005	-0.054
	$t+1$ to $t+3$	0.085	-0.024	-0.004	-0.003	-0.021
CGT	$t-2$	0.024	0.017	0.004	-0.002	0.015*
	$t+1$	0.097	0.005	0.004	0.001	0.009
	$t+1$ to $t+3$	0.048	0.016	0.004	0.005	0.009
FO	$t-2$	-0.128**	0.014	0.003	-0.003	0.010
	$t+1$	-0.027	-0.018	-0.002	0.001	0.003
	$t+1$ to $t+3$	-0.053	-0.014	-0.001	-0.004	-0.001
CFDT	$t-2$	0.074	0.005	0.000	0.002	-0.009
	$t+1$	0.069	-0.020	0.001	0.004	-0.006
	$t+1$ to $t+3$	0.101	0.000	0.004	0.001	-0.010
CFTC	$t-2$	0.001	-0.039	0.000	-0.002	-0.002
	$t+1$	0.055	0.018	-0.005	0.005	-0.007
	$t+1$ to $t+3$	0.138*	-0.010	-0.003	0.004	-0.014
UNSA	$t-2$	0.037	0.029	-0.005	0.014	-0.018
	$t+1$	-0.143	0.073	0.002	0.003	-0.011
	$t+1$ to $t+3$	-0.208	0.010	-0.003	0.008	-0.014
CFE-CGC	$t-2$	-0.240**	0.054	0.004	0.004	-0.005
	$t+1$	-0.154	0.003	-0.002	-0.015**	-0.007
	$t+1$ to $t+3$	-0.146	0.017	-0.003	-0.016**	0.008

Table 8: Regression Discontinuity Estimates - Elections and Reactions of Union Delegates by Union

	a) Probability of Having Union Delegate from:						
Entering Union Delegate from	SUD	CGT	FO	CFDT	CFTC	UNSA	CFE-CGC
SUD	1***	-0.119***	0.007	0.027	-0.080**	-0.039	-0.007
CGT	-0.016*	1***	-0.034**	-0.026*	-0.037***	-0.011	-0.017
FO	-0.022**	-0.012	1***	-0.067***	-0.030**	-0.003	-0.016
CFDT	-0.019**	-0.025	-0.068***	1***	-0.017	-0.006	-0.014
CFTC	-0.026***	-0.040**	-0.038**	-0.060***	1***	-0.029***	-0.014
UNSA	-0.030	-0.004	-0.058	-0.065*	-0.001	1***	-0.030
CFE-CGC	-0.018*	-0.003	-0.034*	-0.024	-0.010	0.004	1***
	b) Probability that Union Delegate Participates to Bargaining the $t+1$						
	SUD	CGT	FO	CFDT	CFTC	UNSA	CFE-CGC
SUD	0.542***	-0.124**	0.059	-0.042	-0.112**	-0.080*	-0.079
CGT	-0.023	0.464***	-0.042*	-0.040*	-0.034	0.017	-0.050**
FO	-0.007	-0.020	0.540***	-0.059***	-0.066***	-0.007	-0.064***
CFDT	0.013	-0.070***	-0.057**	0.487***	-0.021	0.005	-0.036
CFTC	-0.013	0.006	-0.028	-0.051**	0.577***	-0.058**	-0.029
UNSA	-0.072**	-0.008	-0.116*	-0.052	0.022	0.610***	-0.082
CFE-CGC	0.002	-0.007	0.043	0.015	-0.016	-0.010	0.016
	c) Probability that Union Delegate Signs a Bargaining Agreement the $t+1$						
	SUD	CGT	FO	CFDT	CFTC	UNSA	CFE-CGC
SUD	0.394***	-0.027	0.015	-0.056	-0.071	-0.045	-0.051
CGT	-0.012	0.334***	-0.018	-0.027	-0.022	0.015	-0.033
FO	-0.014	-0.025	0.454***	-0.049**	-0.051***	-0.011	-0.056**
CFDT	0.019	-0.066***	-0.041	0.406***	-0.015	0.001	-0.029
CFTC	0.001	0.007	-0.024	-0.044*	0.488***	-0.051**	-0.032
UNSA	-0.045	-0.036	-0.075	-0.058	0.010	0.503***	-0.069
CFE-CGC	0.008	0.010	0.038	0.026	-0.017	0.004	0.024
	d) Probability that Union Delegate Opposes to Bargaining Agreement the $t+1$						
	SUD	CGT	FO	CFDT	CFTC	UNSA	CFE-CGC
SUD	0.148***	-0.097***	0.043	0.014	-0.041*	-0.035	-0.028
CGT	-0.006	0.130***	-0.025***	-0.013	-0.012	0.000	-0.017**
FO	0.003	0.005	0.086***	-0.010	-0.015*	0.002	-0.008
CFDT	-0.003	-0.004	-0.016	0.081***	-0.006	0.002	-0.007
CFTC	-0.006	-0.001	-0.004	-0.007	0.088***	-0.003	0.003
UNSA	-0.028	0.028	-0.041	0.006	0.012	0.107***	-0.012
CFE-CGC	-0.004	-0.017	0.006	-0.010	0.001	-0.010	-0.008

Appendix A Figures

Figure 10: Chronology of French Unions and Ideological Scale

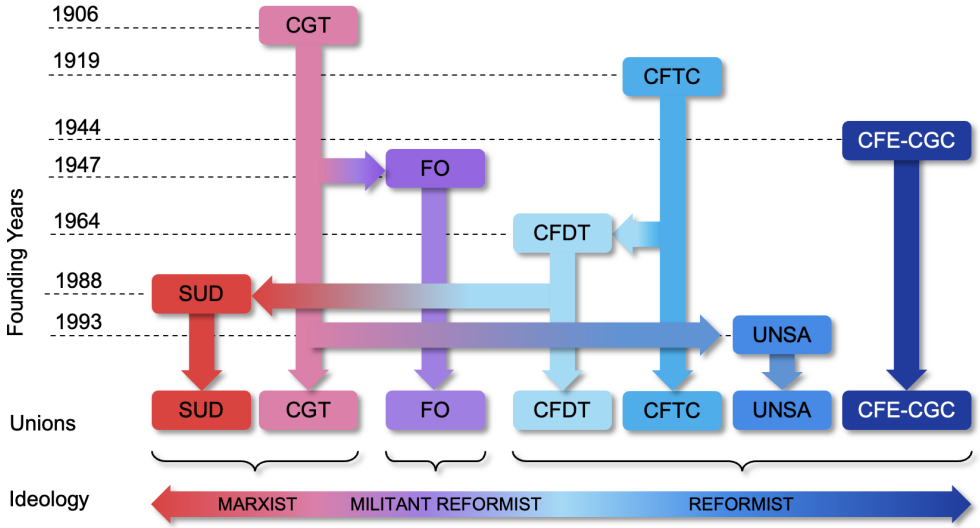


Figure 11: Election Scores in MARS Data

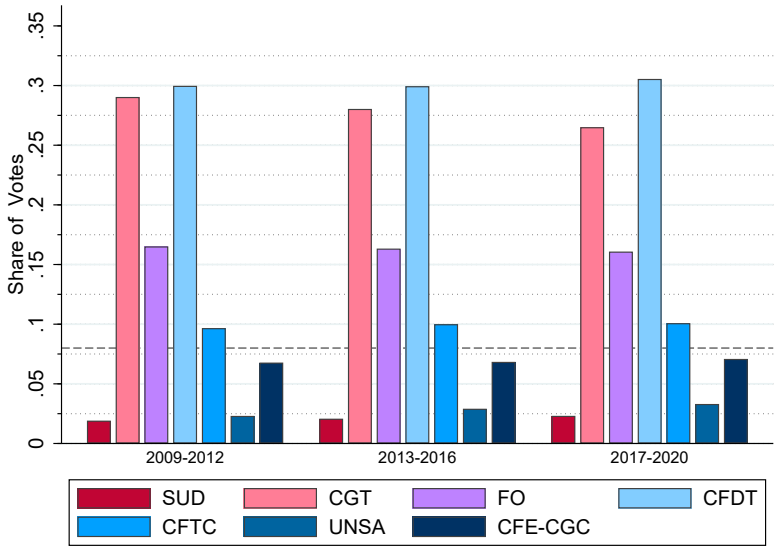
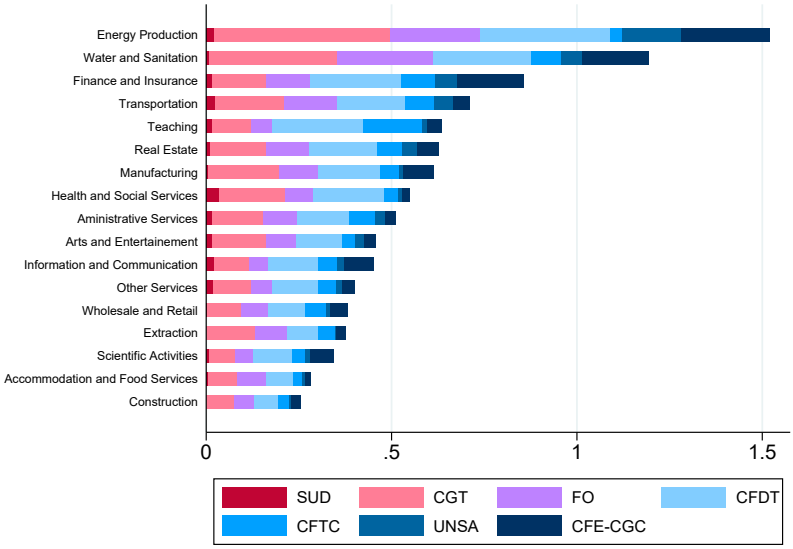


Figure 12: Variation in Union Presence across Industries

(a) Average Number of Union Delegates by Industry and Union



(b) Share of Union Delegates by Industry

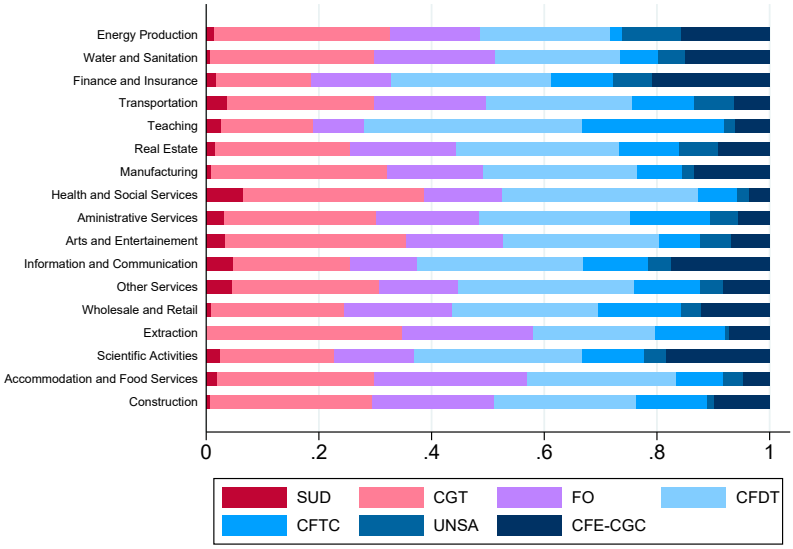
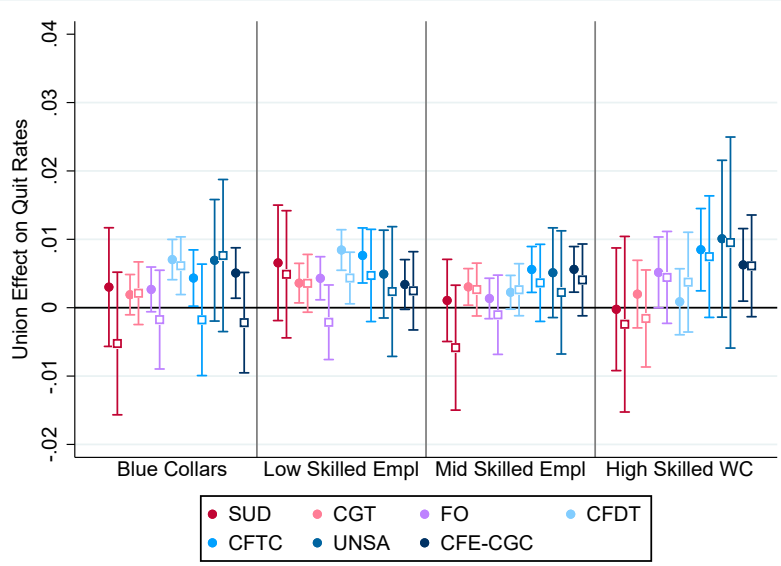
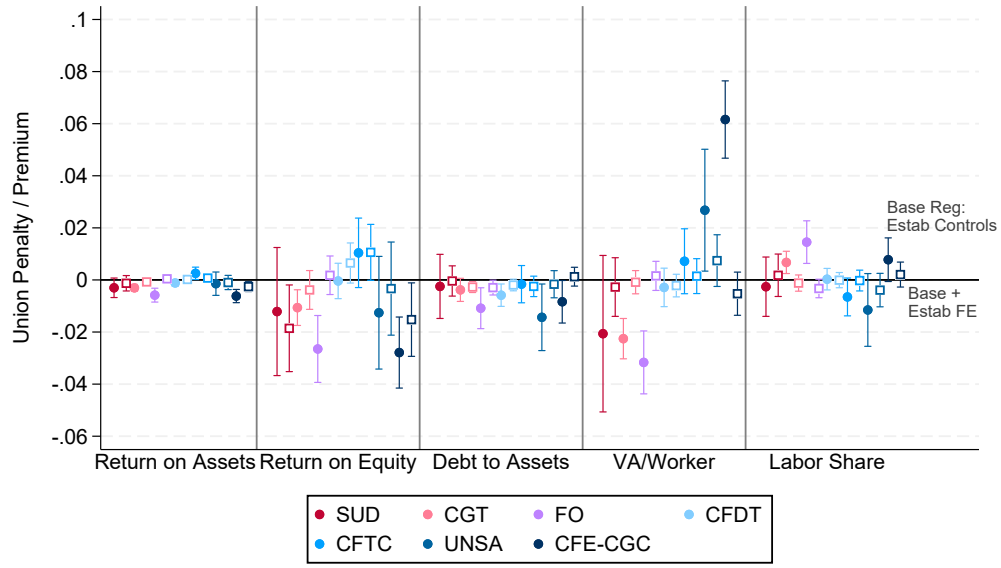


Figure 13: Union premiums Regarding Exit of Workers



Note: The figure shows coefficients on union dummies by 4 worker occupation dummies from a regression of the probability that a worker quit their job the year after on a set of individual and establishment controls, and as well as worker and establishment fixed effects, added successively, like described by Equation (1). The categories are the French national *Professions et catégories socio-professionnelles* 1-digit occupation grouping, which sorts workers by their skill level.

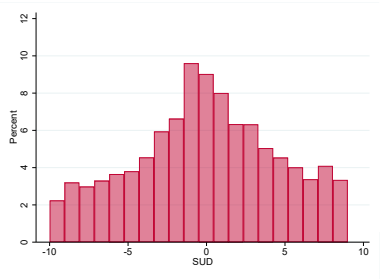
Figure 14: Union premiums Regarding Firm Outcomes



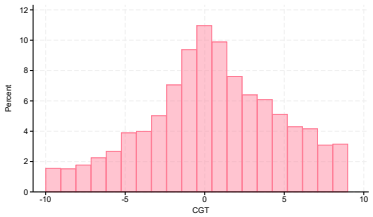
Note: The figure shows coefficients on union dummies from regressions of firm level outcomes on a set of establishment controls (round markers), as well as from regressions with establishment fixed effects (square hollow markers), as described by Equation (1).

Figure 15: Distribution of Votes Around the Cutoff

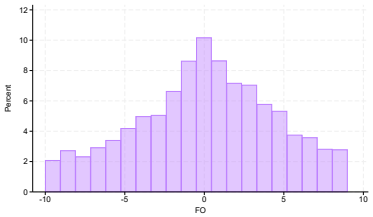
(a) SUD



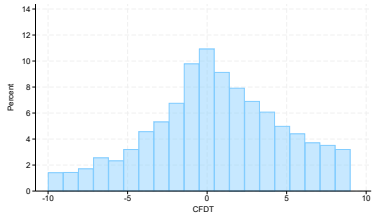
(b) CGT



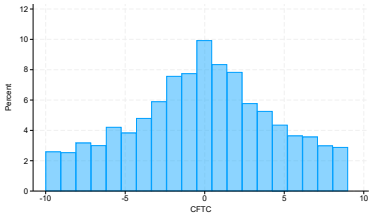
(c) FO



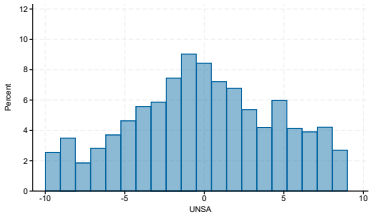
(d) CFDT



(e) CFTC



(f) UNSA



(g) CFE-CGC

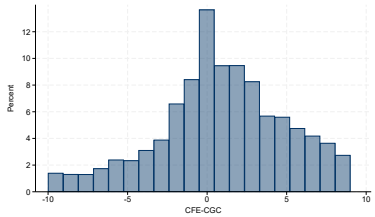
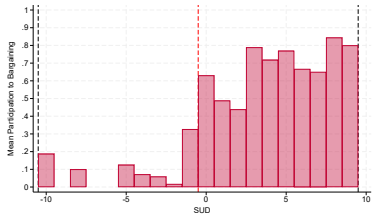
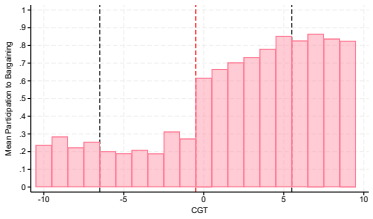


Figure 16: Participation in Bargaining One Year After Elections by Number of Votes Around 10% Cutoff

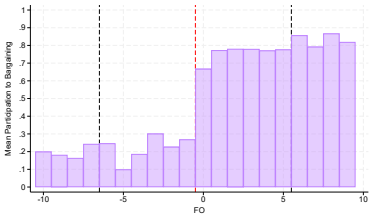
(a) SUD



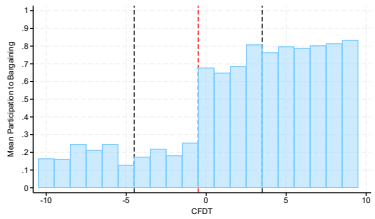
(b) CGT



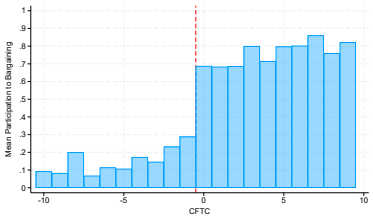
(c) FO



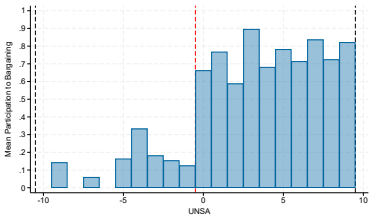
(d) CFDT



(e) CFTC



(f) UNSA



(g) CFE-CGC

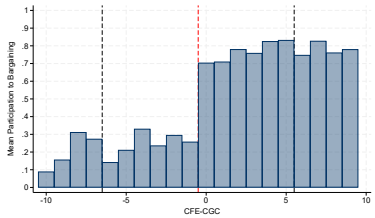
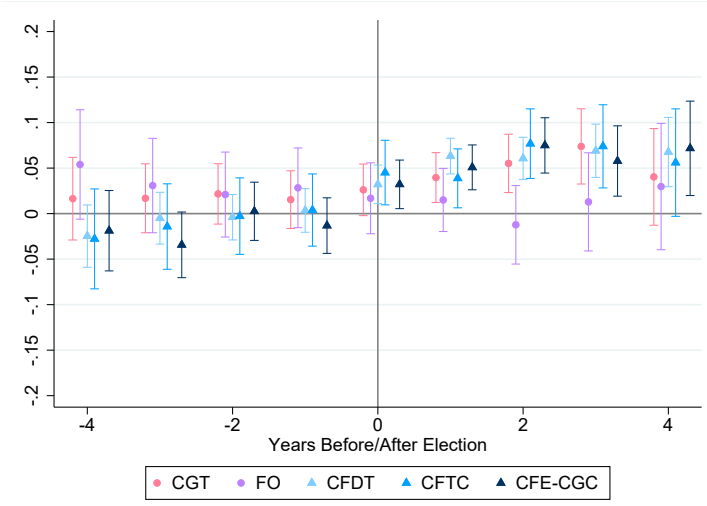
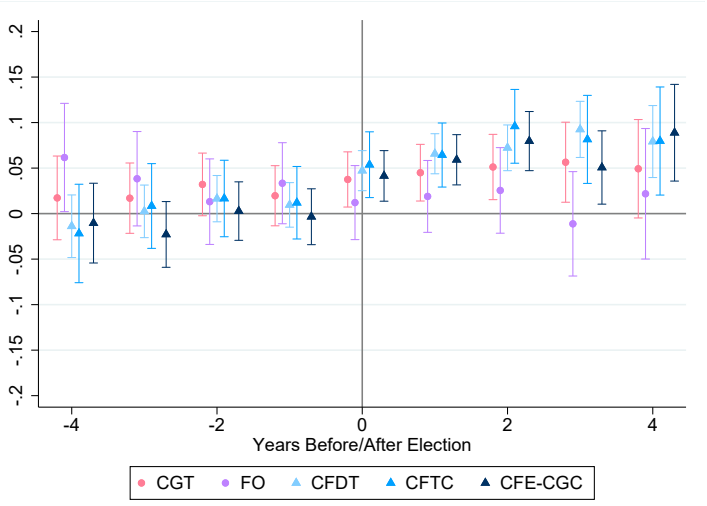


Figure 17: Regression Discontinuity at 30%, Bargaining Outcomes by Union and Years to Election

(a) Participation in Bargaining



(b) Signature of Agreement



(c) Opposition to Agreement

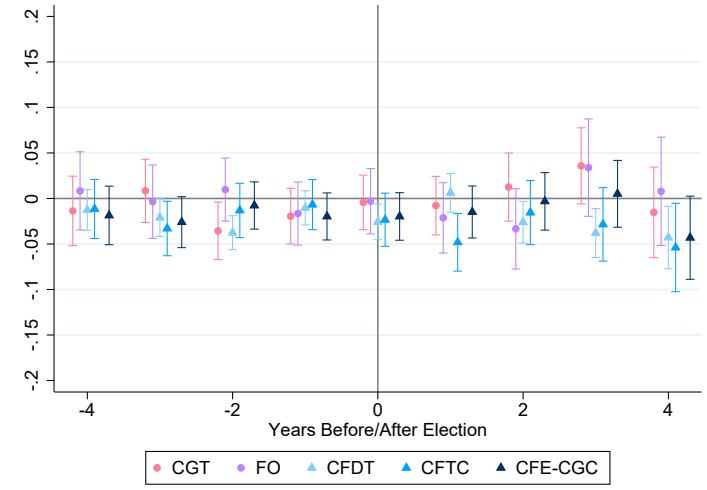
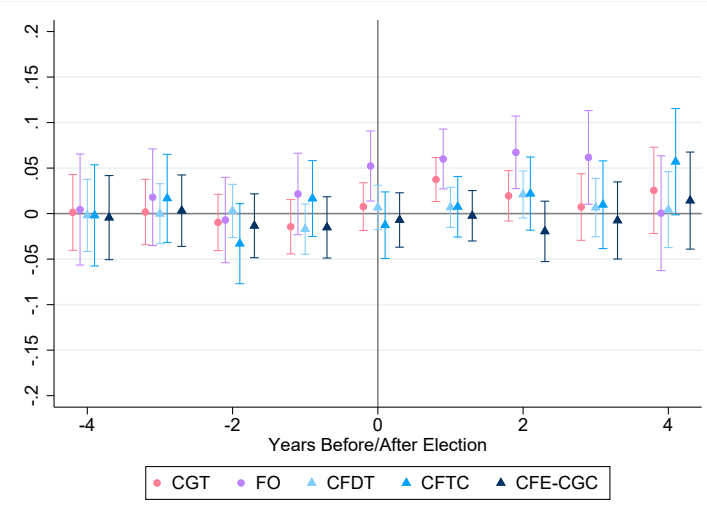
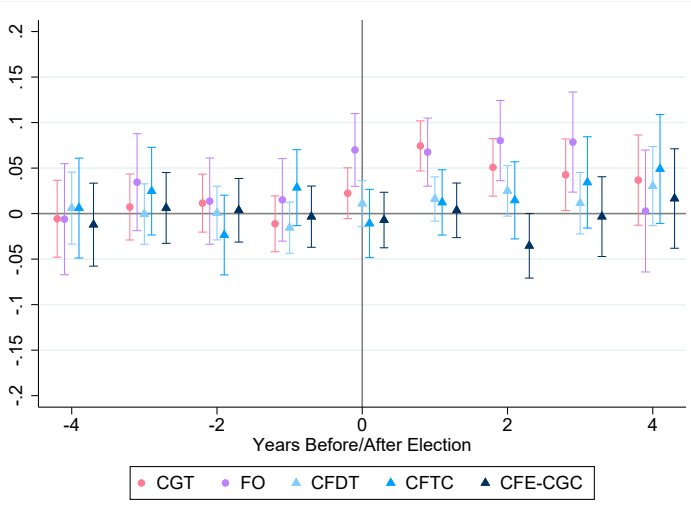


Figure 18: Regression Discontinuity at 50%, Bargaining Outcomes by Union and Years to Election

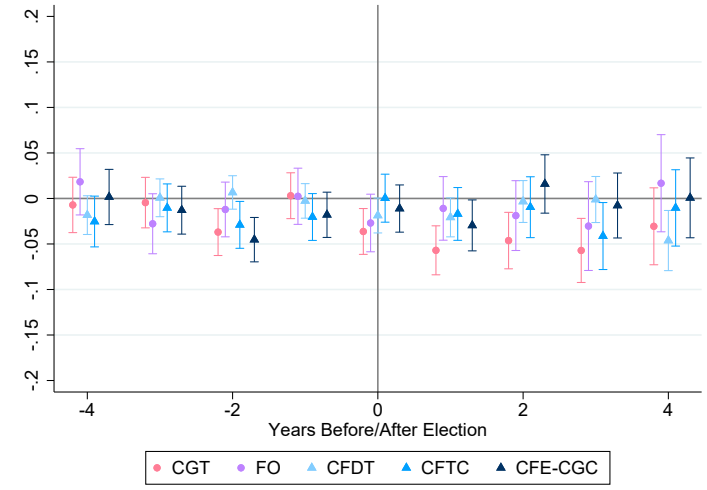
(a) Participation in Bargaining



(b) Signature of Agreement



(c) Opposition to Agreement



Appendix B Tables

Table 9: List of Political Reforms in France between 1995 and 2024, for which Unions Were Invited to Negotiate

Year	Reform	Government Political Orientation	Unions Against	Unions Open to Negotiate or in Favor
1995	Civil Service Pensions	Conservative	SUD, CGT, FO	CFDT, CFTC, UNSA, CFE-CGC
1998	35-hour week	Social Democrat	FO	SUD, CGT, FO, CFDT, CFTC, UNSA, CFE-CGC
2003	Pension Cuts and Extension of Contribution Period	Conservative	SUD, CGT, FO	CFDT, CFTC, UNSA, CFE-CGC
2006	Youth Employment Flexibility Contract	Conservative	SUD, CGT, FO CFDT, CFTC, UNSA CFE-CGC	
2007	Labor Modernization and Social Dialog Reform	Conservative	SUD, FO	CGT, CFDT, CFTC, UNSA, CFE-CGC
2010	Increase of Retirement Age from 60 to 62	Conservative	SUD, CGT	FO, CFDT, CFTC, UNSA, CFE-CGC
2016	Flexibilization of Labor Market	Social Democrat	SUD, CGT, FO	CFDT, CFTC, UNSA, CFE-CGC
2017	Flexibilization of Labor Market and Reform of Social Dialogue	Center Right	SUD, CGT, FO, CFE-CGC	CFDT, CFTC, UNSA
2019	Business Creation and Financing Modernization	Center Right	SUD, CGT, FO	CFDT, CFTC, UNSA, CFE-CGC
2019	French Healthcare Modernization and Access Reform	Center Right	SUD, CGT, FO	FO, CFDT, CFTC, UNSA, CFE-CGC
2020	Reduction of Unemployment Benefits	Center Right	SUD, CGT, FO	CFDT, CFTC, UNSA, CFE-CGC
2023	Increase of Retirement Age from 62 to 64	Center Right	SUD, CGT, FO, CFDT, CFTC, UNSA, CFE-CGC	CFDT, CFTC, UNSA, CFE-CGC

Table 10: Balancing Test of the Number of Votes at 10% Threshold

Estimation Window	SUD	CGT	FO	CFDT	CFTC	UNSA	CFE-CGC
$[-1, 0]$	8.45	-11.58	-3.75	-14.07	2.1	-38.11	-5.31
	(0.63)	(0.07)	(0.58)	(0.03)	(0.82)	(0.06)	(0.48)
$[-2, 1]$	-1.01	-16.08	-9.72	-17.45	-.93	-30.59	-12.42
	(0.94)	(0.00)	(0.08)	(0.00)	(0.9)	(0.04)	(0.02)
$[-3, 2]$	-6.43	-17.44	-13.96	-14.26	-6.52	-21.92	-9.46
	(0.61)	(0.00)	(0.00)	(0.00)	(0.29)	(0.08)	(0.04)
$[-4, 3]$	-8.61	-17.86	-16.56	-16.95	-3.07	-24.1	-12.12
	(0.47)	(0.00)	(0.00)	(0.00)	(0.59)	(0.04)	(0.00)
$[-5, 4]$	-8.85	-19.86	-18.36	-16.17	-5.52	-26.24	-12.46
	(0.43)	(0.00)	(0.00)	(0.00)	(0.3)	(0.01)	(0.00)
$[-6, 5]$	-7.12	-18.65	-17.65	-14.74	-9.17	-19.96	-13.89
	(0.5)	(0.00)	(0.00)	(0.00)	(0.07)	(0.05)	(0.00)
$[-7, 6]$	-6.88	-18.56	-17.55	-14.24	-9.22	-22.81	-14.21
	(0.49)	(0.00)	(0.00)	(0.00)	(0.06)	(0.02)	(0.00)
$[-8, 7]$	-5.57	-17.8	-18.82	-13.79	-10.79	-17.54	-14.65
	(0.57)	(0.00)	(0.00)	(0.00)	(0.02)	(0.06)	(0.00)
$[-9, 8]$	-2.37	-17.38	-22.32	-13.95	-11.51	-14.02	-15.6
	(0.8)	(0.00)	(0.00)	(0.00)	(0.01)	(0.13)	(0.00)
$[-10, 9]$	-1.54	-17.9	-24.11	-14.57	-13.61	-15.37	-18.03
	(0.87)	(0.00)	(0.00)	(0.00)	(0.00)	(0.09)	(0.00)

Table 11: Regression Discontinuity Estimates - Wage Outcomes of Stayers over $t-1$ to $t+3$

		Hourly Wage Estimates:				
		All	Blue Collars	Low-Skill Employees	Mid-Skill Employees	High-Skill Employees
SUD	$t-2$	-0.001	-0.010	0.019	0.004	-0.004
	$t+1$	0.000	-0.020	-0.012	0.002	0.020
	$t+1$ to $t+3$	0.004	-0.005	0.004	-0.002	0.011
CGT	$t-2$	-0.001	-0.006	-0.003	0.004	-0.003
	$t+1$	0.001	-0.007	0.009	0.004	-0.005
	$t+1$ to $t+3$	-0.001	-0.004	0.006	0.006	-0.011
FO	$t-2$	0.010*	0.010	0.000	0.024***	-0.007
	$t+1$	0.005	0.009	-0.012	0.001	0.021
	$t+1$ to $t+3$	0.009	0.015	-0.022***	0.013	0.030
CFDT	$t-2$	0.002	0.006	0.001	-0.005	0.006
	$t+1$	0.000	0.007	-0.006	-0.010	0.006
	$t+1$ to $t+3$	-0.002	-0.001	-0.004	-0.010	0.003
CFTC	$t-2$	-0.003	-0.007	-0.004	-0.002	-0.001
	$t+1$	0.007	0.001	0.008	0.014	0.015
	$t+1$ to $t+3$	-0.003	-0.010	0.006	0.008	-0.004
UNSA	$t-2$	0.017*	0.007	0.021*	0.027	0.017
	$t+1$	0.028**	-0.002	0.016	0.051**	0.062**
	$t+1$ to $t+3$	0.030**	0.033*	0.016	0.050**	0.027
CFE-CGC	$t-2$	0.008	0.008	0.005	0.013	0.002
	$t+1$	-0.012	-0.023	-0.013	0.002	-0.015
	$t+1$ to $t+3$	-0.005	-0.012	-0.017	0.006	-0.002

Table 12: Regression Discontinuity Estimates - Exit Rate of Incumbents at $t-2$

		Hourly Wage Estimates:				
		All	Blue Collars	Low-Skill Employees	Mid-Skill Employees	High-Skill Employees
SUD	$t-2$	0.012	0.000	-0.013	-0.016	-0.016
	$t+1$	-0.051	-0.089	0.077	-0.054	-0.133*
	$t+1$ to $t+3$	-0.051	-0.085*	0.048	-0.067*	-0.093
CGT	$t-2$	0.013	-0.010	0.001	-0.006	0.042
	$t+1$	-0.016	-0.042	-0.024	-0.030	0.052
	$t+1$ to $t+3$	-0.032*	-0.041**	-0.034	-0.022	-0.010
FO	$t-2$	0.008	-0.001	0.009	-0.004	0.001
	$t+1$	-0.007	-0.011	-0.064*	0.017	0.003
	$t+1$ to $t+3$	-0.015	0.001	-0.055**	-0.004	-0.023
CFDT	$t-2$	0.014	0.012	0.000	0.001	-0.003
	$t+1$	0.002	0.005	-0.055	0.045	0.003
	$t+1$ to $t+3$	-0.003	-0.006	-0.018	0.021	-0.018
CFTC	$t-2$	0.005	-0.006	0.001	0.000	-0.018
	$t+1$	0.018	-0.021	-0.038	0.015	0.137**
	$t+1$ to $t+3$	0.006	-0.011	-0.031	0.014	0.073**
UNSA	$t-2$	-0.010	-0.006	0.004	-0.004	-0.010
	$t+1$	-0.070	-0.136*	-0.085	0.001	-0.036
	$t+1$ to $t+3$	-0.004	0.008	-0.051	-0.012	0.008
CFE-CGC	$t-2$	-0.013	0.016	0.017	0.019**	0.007
	$t+1$	-0.008	-0.022	-0.004	-0.017	-0.009
	$t+1$ to $t+3$	-0.031	-0.043	-0.032	-0.040	-0.022

Table 13: Regression Discontinuity Estimates - Worker Composition Outcomes

Union	Period	Median Wage White Collars	P90 Wage White Collars	Median Wage Blue Collars
SUD	$t-2$	0.040	0.052	0.010
	$t+1$	0.028	0.024	0.026**
	$t+1$ to $t+3$	0.022	0.009	0.021**
CGT	$t-2$	-0.005	-0.012	0.002
	$t+1$	-0.014*	-0.008	0.004
	$t+1$ to $t+3$	-0.015**	-0.019*	0.003
FO	$t-2$	-0.007	-0.004	0.001
	$t+1$	-0.002	-0.003	-0.001
	$t+1$ to $t+3$	-0.004	-0.006	0.001
CFDT	$t-2$	-0.007	-0.007	-0.004
	$t+1$	-0.010	-0.005	-0.001
	$t+1$ to $t+3$	-0.011	-0.007	0.001
CFTC	$t-2$	-0.008	-0.008	0.003
	$t+1$	-0.001	0.005	-0.001
	$t+1$ to $t+3$	-0.010	-0.017	-0.003
UNSA	$t-2$	-0.016	-0.028	0.002
	$t+1$	0.010	0.048	0.011
	$t+1$ to $t+3$	0.004	0.035	0.011
CFE-CGC	$t-2$	0.001	0.009	-0.003
	$t+1$	0.021*	-0.013	0.009*
	$t+1$ to $t+3$	0.009	0.007	0.013**

Appendix C Union History

French unions hold contrasting views regarding their roles and goals in society, which have roots in opposed Marxist and Christian social justice doctrines. Their history has been one of division and opposition along those lines. Stemming from the former, the General Confederation of Labor (*Confédération Générale du Travail* or CGT), was the first to organize itself in France in 1906. In its founding charter[4], it advocates for the "recognition of the class struggle, which, on the economic level, opposes labor and capital" ans states that is ultimate goal is "to establish worker management of production and services". It also clearly support strikes as "the quintessential means of action for the achievement of the workers' emancipation." The French Confederation of Christian Workers (*Confédération Française des Travailleurs Chrétiens* or CFTC) was the second union to establish in France in 1919, by Catholic social activists who wanted to promote a vision of social justice based on Christian values (Koutroukis, 2023). It positioned itself at the opposite of the CGT, claiming in its charter that "the CFTC rejects class struggle and favors social dialogue as a means to achieve a more just and fraternal society". As managerial occupations grew steadily throughout the first half of the 20th century in 1944 the French Confederation of Management – General Confederation of Managers (*Confédération française de l'encadrement - Confédération générale des cadres* or CFE-CGC) was formed. Far from class struggles, its action is focused on defending managers and their interests. This union has had the reputation of being close to employers (Andolfatto and Labbé, 2006). After World War II, a group of union leaders became dissatisfied with the CGT's affiliation with the French Communist Party, while the American Federation of Labor lobbied for the creation of a liberal leaning trade union in the French landscape (Régin, 2002). In 1947, with funding from the CIA, the Worker's Force (*Force Ouvrière* or FO) was created as an offshoot of the CGT with the promise to remain independent of any political influence. Concurrently, a group of high-ranked union members at the CFTC, advocated for a social democrat union leadership, without being Marxist, and opposed to center-right political circles meddling with the CFTC's leadership (Vignaux, 1980). They took over the direction of the union in 1964 which they reestablish as the (*Confédération Française Démocratique du Travail* or CFDT), while a minority of union members split to maintain the CFTC as a separate union with its original ideology intact. Originally the CFDT knitted ties with the French social Democratic party as well as the CGT, but it moved towards a

[4] *La Charte d'Amiens*

'partnership' style of unionism based on the German model in the 1980s and the 1990s, willing to negotiate with employer unions. In the 2000s its leader François Cherèque defined the union's ideology as "reformist" (Hureau and Servais, 2006), willing to strike compromises with the other party even when it comes from the right wing political spectrum. In the 1980s and the 1990s, workers who were dissatisfied with existing, more established unions, such as the CGT and CFDT, which they perceived as becoming too bureaucratic or too close to employers and the government, created the union confederation Solidarity, Unity, Democratic (*Solidaires, Unitaires, Démocratiques* or SUD). SUD represents the most radical labor union in the French spectrum today. The organization's charter explicitly states that "class struggle is not an abstract concept but a concrete reality. We want to build a unionism of struggle, grassroots, and direct action, without concessions to the established order". In parallel, officials from the CGT and SUD who grew dissatisfied with their ideology were deemed too radical and, split to form the National Union of Autonomous Unions (*Union Nationale des Syndicats Autonomes* or UNSA) in 1993. The UNSA claims, in its charter, that its mission is to develop a strong, united, and reformist trade union movement in France, Europe, and worldwide. French labor unions can be categorized into two primary groups: the radical left-leaning SUD and CGT, and the reformist CFDT, CFTC, and UNSA. FO occupies an intermediate position between these two categories and identifies itself as "militant reformist" . CFE-CGC, while more closely aligned with reformist unions, represents a distinct category due to its focus on higher-paid employees and would be considered an outlier in this classification.

Appendix D Construction of Databases