

**Explaining Repressive Employer Coordination:
Evidence from the Open Shop Movement in the US Inter-War Period**

Abstract

What explains the development and variation in institutions of repressive employer coordination? Classic historical American business and labor literature focuses on institutions of labor repression and on select employer associations, but little systematic examination of such associations within the United States exists, particularly during the important inter-war period. Similarly, recent political science literature on the origins of industrial institutions underemphasizes the importance of repressive employer associations. In this paper I use new quantitative sub-national evidence from the United States inter-war period, with new data from the “open shop” movement in the United States at the local level after World War I. Understanding such variation across localities matters because that is where the starting point and bulk of repression via associations took place. I test a wide variety of different families of hypotheses that might explain variation in repressive employer coordination with specific data measuring the threat posed by organized labor. I find that such threats posed by unions are correlated with repressive employer associations, and that more recent unions and unions that are more credibly able to threaten firms are more likely to lead to the formation of repressive associations. I find less robust support for political opportunity variables and classic structural variables that might facilitate collective action at the local level. The results have implications for understanding local-level variation in the business repression of labor movements in the early twentieth century, and contribute to our understanding of the correlates of important labor repressive institutions and the incentives of firms to collectively act.

“I am to set before you the advantages of organization. The benefits of organization are so numerous and so diversified, and in some instances so obscure that to discuss all of them would require considerable time...[particularly] the existence of the National Metal Trades Association and kindred organizations of employers, originated in the militant attitude assumed by aggressive labor leaders towards the individual employer.” – Andrew J. Allen, Secretary of the Indianapolis Branch of the National Metal Trades Association (NMTA), addressed to the Ninth Annual Convention of the National Metal Trades Association, in Boston, Massachusetts¹

“The Open Shop has made Detroit a great industrial center,
Detroit needs the Open Shop if she is to continue to advance...
What can Mr. Average Citizen do to promote the welfare of Detroit and incidentally, of his fellows, his family, and himself?
The answer is a simple one:
Property owners specify the Open Shop and employ only local contractors who are fighting for progress.
Purchasers of goods buy only from Open Shop producers.
If you need printing, seen an Open Shop printer.
Manufacturers buy patterns and castings from open pattern shops and foundries.
Think Open Shop!
Talk Open Shop!
Yes, and vote for those who support the Open Shop.”²

Andrew J. Allen’s address to the member firms at the annual convention of one of the most prominent American employer organizations, the source of the first epigraph, exhorted the NMTA’s member firms to commit more resources to the organization. It was a plea for firms to devote more resources to enforce the principles of an organizational movement to unite firms against the demands of US unions. This effort is an example of an attempt to expand local level firm coordination in response to the “militant attitude” of workers. As an example of the type of organization that Allen praised, the second epigraph comes from an advertisement posted by the Employers’ Association of Detroit in 1926, which displays the rhetoric and strategies of local-level employer associations.

This effort of organizational leaders raises the theoretical and historical questions of what circumstances drive employer organizations to form in response to workers’ demands. Why did some localities in the United States experience such organizations and others not? Despite recent

work in comparative politics that seeks to explain variation in the formation of encompassing employer associations by using evidence from the United States, and the longstanding attention of labor and business historians to the relationship between US institutional labor repression and weakness of the labor movement, surprisingly few studies examine the determinants and variation of another source of labor repression in the early twentieth century in the United States, that of local-level repressive employer associations. Previous historical research explores the impact of select local or national-level employer associations in the United States, but does not explain their emergence at the local level. Further, the increasing attention in the subfield of comparative political economy to the historical origins of industrial institutions has generally ignored early repressive employer associations; this literature largely theorizes early employer associations as collaborative and primarily engaged in collective bargaining with workers.³ The absence of studies on the diffusion of local-level employer associations, particularly those espousing the “open shop” anti-union movement, is surprising, given that such associations are linked to the decline in union membership and major setbacks experienced by the labor movement in the inter-war period. Such associations, when they could form, were generally most effective in disseminating anti-union propaganda and engaging in local repression of workers.⁴ Explanation of the development of these local-level employer associations in the United States can broaden understanding of the causes of labor-repressing institutions in the early twentieth century, and provides an opportunity to test competing theories of the collective action of firms. Collective employer repression inhibited organized labor in the United States, but it remains an under-theorized outcome in the comparative political economy literature, and a relatively neglected phenomenon in the historical and sociology literature on US labor repression.

In this paper I present and test different families of hypotheses of collective employer

repression during the inter-war period, using new data on local variation in employer associations that supported the anti-union “open shop” movement at the county level. The data allows for consideration of many hypotheses derived from both theoretical and historical literatures that have not been systematically tested. I consider hypotheses that predict the baseline impact of structural factors that affect collective action, redistributive threats from organized labor, and political opportunities for collective action. The data provide evidence from the important anti-labor Open Shop movement in the United States during the early 1920s. This movement was one of industrial firms’ engaging in collective repressive strategies against workers before the Great Depression, with local and regional employer organizations that espoused an ideology and policies that restricted union presence at the plant level and undermined the nationalization of the labor movement. The new data measure participation in this movement at the US county level during the inter-war period, capturing sub-national variation in such coordination. I also consider a large set of variables that proxy for the historical factors that should be theoretically relevant for locality-level variation in employer associations, including measures of the different types of labor union locals that formed in the late nineteenth and early twentieth centuries, and county-level measures on the legacy of previous labor organization, labor conflict, and pre-WWI employer associations.

I find that firms’ adoption of repressive employer organizations against workers arose in response to higher levels of threats posed by labor, and that more recent threats as opposed to legacies of labor organization are more relevant. Additionally, the credibility of workers to win strikes, as proxied by previous strike success, also affects the collective action of firms. The evidence points to the relative importance of more proximate threats by organized labor, as opposed to just the historical organizing capacity of workers. But, general structural features of a

locality that condition incentives for collective action appear to be less important, and many do not positively correlate in expected directions with the adoption of collective employer repression.

These findings provide more systematic evidence regarding the instruments of firm and state repression of workers in the early twentieth century, and also contribute to the limited literature on the causes of repressive strategies of earlier employer associations. Besides contributing to our theoretical understanding of the emergence of different kinds of employer coordination, the paper also shows how these critical inter-war *local* level organizations that inhibited labor—the level at which much repression actually occurred—were a response to previous union organizing. The results help arbitrate among the many competing theories of firm associations during a period of greater anti-labor sentiment, and sheds new light on the origins and politics of the Open Shop Movement of the interwar period.

The paper proceeds as follows. The first section reviews related existing literature and extant questions, and discusses the particular relevance of the Open Shop movement. The second section presents the hypotheses and operationalization of specific variables. The third section describes the data and empirical tests. The fourth section presents the results. The fifth section concludes.

Employer associations and labor repression in the United States

The subject of general US labor repression in the early twentieth century and inter-war period has received ample scholarly attention in the fields of sociology and labor history, and a few signature studies document the roles of specific employer associations in the inhibition of the labor movement. The bulk of existing research in the social sciences and history on the role of US employer associations chronicles the activities of several prominent national or sector-

level associations, and their role regarding connections to the political establishment (such as political parties). The few studies in political science that examine historical US employer associations do so with the goal of explaining why the United States in the early twentieth century did not develop more corporatist or encompassing employer institutions compared to continental Europe. These studies focus on the influence of the lobbying association of the National Association of Manufacturers (NAM) and its connection with the Republican Party, and argue that the US two-party system and geographical sectional divisions explain the NAM's inability to become a more encompassing national association.⁵ Such accounts contribute to a larger comparative politics debate regarding the origins of national-level firm institutions of coordination, and whether electoral systems (majoritarian versus proportional) play a role in spurring peak institutions.⁶

The findings about the NAM are complemented by several rich case studies in US labor and business history by both historians and sociologists on the roles that sector-level associations played in repressing organized labor movements. This broader conception of employer coordination documents how these employer associations undermined unionism. Although such associations varied in recruiting and enforcement procedures, they generally functioned with member firms contributing to a collective fund and abiding by organizational rules in return for assistance during industrial conflict. Such services helped firms prevent or undermine union activity, preserving the employer's claimed "right to manage."⁷ Firms in these repressive employer organizations coordinated to prevent or minimize union influence within individual firms and plants and agreements that would challenge firms' flexibility in setting wages.⁸ As discussed in the subsequent section, other organizational instruments included the use of strikebreakers and importation of substitute labor during labor industrial disputes, the use of

blacklists to alert firms to employees' previous affiliations with unions or political organizations, and lobbying the state for use of coercive personnel to enforce lockouts or repress workers.

This recent scholarship in US labor and business history documents how employer associations in select localities undermined local-level unions. Important works discuss the development of the National Metal Trades Association (NMTA) in specific regions (including meticulous accounts of the founding of the Metal Manufacturers' Association of Philadelphia (MMA) in Philadelphia and its successful battles against the International Molders' Union (IMU)),⁹ and the rise of the National Erectors' Association (NEA) and its conflict with the International Association of Bridge, Structural, Ornamental, and Reinforcing Iron Workers (IABSIW).¹⁰ These accounts detail how open shop or related movements formed and responded to industrial conflict and demands by workers.¹¹ Voss specifically describes the relevance of local-level employer associations regarding the formation of the Knights of Labor (KL) in New Jersey, and concludes that the KL in New Jersey foundered in the late 1800s due to employer opposition and the choice of the government not to intervene on the KL's behalf.¹² This is one of the few quantitative studies that isolates the impact of employer organizations on union organization, with a focus on the KL in New Jersey. Overall, this recent historical work on these associations documents their negative impact on local-level union success and mobilization.¹³

The descriptive studies on the negative impact of employer associations on organized labor movements are connect to the voluminous historical literature on the different repressive political institutions that contributed to a weaker US labor movement, in comparison with other Western European democracies.¹⁴ These research agendas describe the connection between state institutions and reduced labor mobilization, such as the roles of the US executive branch, state-level political institutions, the judicial system (particularly its support of anti-trust enforcement

against unions and enforcement of anti-injunction legislation), specific Congressional legislation, and the use of coercive apparatus (soldiers or police) to put down strikes.¹⁵ Other scholarship discusses the roles of major individual firms in repressing workers, and how economic and political actors could act in tandem to repress workers.¹⁶

Thus while the recent attention in political science to the political origins of major business associations neglects the repressive dimension to such associations, the historiography of select major US employer associations that does document repressive strategies focuses less systematically on their theoretical origins, and importantly, their advent at the *local* level. Many of the above studies that discuss national-level lobbying do not address the roles of local, sector, and regional-level employer associations. This historiography neglects other anti-labor movements or collective employer repression as a strategy.

Absent from both of these discussions is research and evidence about the overall variation in the emergence of such relevant local associations, and answering why some areas experienced repressive employer associations, while others did not. This is unfortunate as repression against workers actually largely took place at the local level, but we lack evidence and testing of explanations regarding where this type of repression against workers emerged. There has been relatively little theorizing and evidence in the fields of comparative political economy and American political development regarding *variation* in the adoption of coordinated repression. Although a handful of detailed qualitative studies of individual associations note their large negative impact on workers, we do not have systematic evidence about their local-level variation. We thus know little about where and why local-level collective repression emerged as a firm strategy.¹⁷ Assessing which factors correlate with the rise of such associations within the United States can contribute to understanding broader cross-national and historical trends in the

rise of repressive employer coordination.

Beyond the comparative politics scholarship, this omission of the study of local-level coordinated repression is unfortunate for several reasons related to the study of American political and labor development. First, as noted above, the actual pushback against and repression of labor unions largely occurred at the local level. When associations of firms organized, their starting point was at the level of cities or counties, and it is in these initial environments where decentralized organizations first inhibited labor organizations. As Bernstein extensively chronicles in his account of the US labor movement in the inter-war period, the American labor movement faced difficult economic times, minimal wage increases, and organizing setbacks in the immediate post-WWI era and during and throughout the 1920s. He and other historians document the negative impact of such associations on union organizing and density during this period.¹⁸ Thus understanding their emergence, given that that was the locus of repression, is key to understanding how labor movements were inhibited after WWI.

Further, understanding the diffusion of local-level employer associations against unions deepens the extant literature on how decentralized political institutions inhibited national organizing capacities of workers. While much previous literature on federalist institutions focuses on how the decentralized institutions such as state legislatures and governors inhibited national-level labor organization, the resurgence of the “open shop” anti-union movement during the inter-war period is indicative of how the decentralized nature of the US political system facilitated such industrial coordination against workers. Whereas previous literature dwells on national-level efforts at coordination, and other literature shows how both state-level institutions and the US federalist system prevented effective labor organization, few studies examine the role of *local*-level institutions and organizations that initially mattered most.¹⁹ Thus better

understanding the politics and origins of inter-war anti-labor coordination, via the Open Shop Movement, is instructive about how local-level interest group agendas can emerge and become effective in highly decentralized political environments, where industrial activity and worker organization in geographically dense localities is what is most relevant for firms.²⁰ In a large, federalist, and decentralized system like the United States with much local level autonomy of firms, there was much variation in the capacity of firms to organize against workers, and a natural task is to account for such variation. This local-level variation in firm strategies with respect to workers ultimately contributed to difficulties in forming coherent, anti-labor associations that persisted, and other regional, sector, and national-level anti-union employer associations also used rhetoric and techniques that partially drew on some of the successful local-level firm efforts at coordination. While other research notes the connection between local urban political institutions and worker movements,²¹ this literature has also not focused on the origins of important firm-initiated organizations.

Finally, understanding variation in the development of local-level employer associations in the United States is relevant for the larger issue of the conditions under which firms can collectively act, a classic issue in the development of corporatist institutions. But, this outcome is rarely examined at the local level, nor were the original theoretical discussion of collective action (of firms or other elite actors) focused on the issue of labor repression.²² Understanding such patterns can help test competing theories of which factors should facilitate this type of collective action among firms, and thus contribute to the study of collective action among different types of actors.

Explaining variation in local-level repression requires data to document where it occurred, as well as further require information on what the correlates of such local-level

repression were. To more rigorously test some of the implicit theories in these historical accounts regarding development of employer associations, as well as standard theories of collective action that should apply to firms, I use new data from a time period in the United States where such employer repression was organized in response to labor attempts to improve worker conditions and institutions during the early inter-war period.²³

The United States and the inter-war “Open Shop” Movement

The US inter-war period is an instructive one in which to examine the development of repressive employer coordination, as much variation exists in the emergence of such coordination across different industrial sectors as well as localities. This is most relevant when considering the emergence of local-level associations of firms that supported the open shop (OS) anti-union movement, as such coordination of firms to check and roll back union activity proliferated after WWI. Further, building on the reasons laid out above, the movement itself in the inter-war period tell us much about the dynamics of local-level anti-labor organization, as it consisted of firms joining local-level employer associations to undermine craft and industrial unionism, and develop and spread anti-union messages. Such associations sought to prevent union infringement on firms’ supposed “right” to set wages, working conditions, and control of training. It was a response of employers to dismantle wage-compression agreements set up during the war, and to restore the pre-war status quo of US industrial institutions that was more hostile to labor. The movement re-inserted anti-union labor sentiment in the general public.

The background to the re-emergence of local-level anti-labor coordination is the failure of national bargains after WWI and waning capacity of war-time labor institutions. After the end of the war, major firms and prominent employer associations discussed the ending of government-imposed wage agreements that had been imposed during the war.²⁴ Their preferences over

policies and industrial institutions appeared in trade publications and at President Woodrow Wilson's National Industrial Conference in September 1919. A government objective of the conference was to derive an agreement about post-war industrial institutions that would resolve labor disputes that had emerged since the end of the war. The conference representatives of employer organizations included Magnus Alexander, the head of the National Industrial Conference Board (NICB), James A. Emery of the NAM, J.W. O'Leary of the NMTA, and representatives from large corporations.²⁵ The labor delegation had leadership of the American Federation of Labor (AFL), including Samuel Gompers, as well as leaders of major railroad unions.

Union leaders at the conference preferred to continue the framework that had been established by the National War Labor Board (NWLB), which had given workers the right to bargain collectively. But as Hurvitz notes, the business delegates' preferences were "diametrically opposed" to those of unions,²⁶ and employer representatives advocated returning to pre-war labor outcomes and a dismantling of collective bargaining. To accede to union demands, as one industrial representative put it, would be "nothing short of a national calamity, for it would set up a dominating power side by side with the National Government which would have an influence and a force...[that] no private organization should possess."²⁷ Alexander, the head of the NICB, advocated at this conference the principle of the open shop, indicative of the general employer belief at the conference that unionism imposed unfair restrictions on firms' managerial authority.²⁸ Employer intransigence caused the conference to end without any resolution, and largely anti-union and repressive preferences of key employer associations were attained, preventing continuation of war-time wage agreements and labor regulations. The Open Shop movement that emerged in the wake of the collapsed national conference challenged

organized labor and union efforts to maintain and extend such wage agreements. Wilson's attempts to solidify the government-imposed national cooperative industrial institutions failed. From the employers' perspective, the perception was that firms, after the period of war-induced government intervention private intervention, needed to "win back" managerial authority over workers. William H. Barr, the President of the National Founders' Association (NFA), succinctly stated the goal of liquidating war-time wages.²⁹

After the failure of these industrial conferences, and in the context of the massive strike waves of 1919 (where an estimate one in five workers at some point went on strike),³⁰ firms in some localities began forming open-shop associations to roll back unions. The resulting movement was characterized by the diffusion of employer associations across counties that supported open shop or anti-unionization principles for member firms. These associations generally formed in the metal-manufacturing and finished-goods industries, among other sectors. The phrase "open shop" refers to an objective of the owners of a firm to have the choice and "right" to hire and fire workers regardless of their union affiliation. The term also refers to the firm owner's perceived right to manage worker training without interference from apprenticeship demands from workers, and pay wages and benefits as he saw fit. The movement had an ideological component and use of patriotic rhetoric that used the language of firms' rights to oppose collective bargaining; local and sector member associations' publications provided information to member firms on the status of legislation and union demands in other states and localities.³¹

Firms involved in the movement and staff members for regional and local offices produced an array of publications and propaganda to promote its policy goals to reduce the political and economic influence of workers. The NMTA published *The Open Shop*, with

articles from prominent industrialists on threats posed to firms by unionism and pro-labor legislation, and the NAM published in 1921 a guide to the Open Shop for distribution in public schools and libraries.³² Other publications such as the *Iron Trades Review* and *Metal Trades Bulletin* discussed the progress of legislation at the state and federal level that was framed as detrimental to firms. They also included information on industrial trends and economic data. This diffusion in local associational activity coincided with increased activity from national-level employer associations that used aggressive and sometimes violent means to defeat unionism, such as in the steel-making and steel-erection industries. The goals of these local and state organizations characterized what has been called “undoubtedly the most militant and widespread offensive ever undertaken by the American employing class—a class which has probably shown greater vigor and fighting spirit than in any other country.”³³ The end of sustained government support for unionism after the war provided an opportunity for firms to strike back.³⁴

Local and regional collective repressive associations sought to achieve anti-union goals through several instruments. They imposed rules prohibiting employers from hiring union or formerly union-affiliated workers, coordinated blacklists that prevented workers with any union history from being hired, imported strikebreakers, and tried to consign member firms to participate in lockouts to enforce their aggressive anti-union stance. An instrument of such associations was the multi-employer sympathy lockout in response to strikes. Employers in a city would agree to lock out union-affiliated workers in the event of a strike, designed to force unions to use as much of their strike-support funds as possible. This strategy countered the union strategy of engaging in whipsaw strikes of striking against individual firms and forcing them to concede individually. Sustained employer coordination at the local level, with the weapon of the lockout, undercut such union activities. Beyond these instruments that directly

targeted union workers and treasuries, local and state-level employer associations lobbied state governments for legislation against unions, such as outlawing pickets and allowing the use of court injunctions against strikes.³⁵ Open-shop associations (OSAs) could further use techniques of worker discrimination such as firing or blacklisting workers who were part of unions, use injunctions against strikes, hire detective agencies for industrial espionage, or supply such spies themselves.³⁶

One of the first documented city-level associations formed in Seattle, and other historians note that this was likely due to the ending of the general strike that had just occurred and a reaction to the previous city-wide strike in Seattle in 1919.³⁷ The open shop association was initiated in 1919 by the Waterfront Employers' Association, which then allied with other business associations and firms, and formed the Associated Industries of Seattle.³⁸ Firms in industries such as manufacturing and retail merchants in other cities formed both industry-specific and more general anti-union open shop associations. Associations formed in Beaumont (the retail merchants association declared an open shop policy in April 1919), San Antonio, Toledo, Louisville, Miami, San Diego, Indianapolis (with the influential Associated Employers of Indianapolis), and St. Paul.³⁹ As an example of the orientation of such local-level associations, the Industrial Association of San Francisco formed in November 1921 and was primarily directed against unions in the construction industry, but had large employers in building, manufacturing, retailing, and banking. The association maintained a non-union supply of workers⁴⁰ and was also against the closed shop in building trades.⁴¹ Associations were often established by specific industries, though they sometimes adopted city titles for their movements. By 1922, over 200 US counties had employer organizations.⁴² These OSAs generally functioned as described above, with member firms paying dues and agreeing to comply with institutional

rules such as participating in a lockout, and in exchange receiving information and industrial-relations services described above, such as assistance in times of strikes, and supporting funds to compensate for lost productivity during lockouts. Some OSAs also published local trade journals and circulated information on labor conditions and wages of firms, and distributed information about ongoing and potential labor organization, and could provide strike assistance when a member firm asked for it.⁴³ The few historical descriptions of the local-level associations that exist describe the movement as a reaction to the end of the 1919 strike.⁴⁴ The available evidence indicates that the OS movement was initially firms responding to local-level labor organization, although the backdrop was the threat posed by the 1919 strike wave, failure of national-level negotiations, and the desire to recapture lost gains from the war.

Studying variation in the formation of OSAs provides an opportunity to test hypotheses about the causes of variation in repressive employer coordination. I use data on the locality level presence of OSAs to measure instances of repressive employer coordination, as the existence of a local OSA is the best available proxy for firms' repressive coordination against workers, because it is a discrete unit of a collective repressive employer organization. Despite the influence of the Open Shop movement on US industrial relations and its brand of ideological anti-unionism, little scholarship systematically examines its diffusion. As noted above, rich descriptions of specific associations' activities during this time period exist, but there has been little use of systematic data to explain why OSAs emerged in some counties and not others.⁴⁵

Theoretical perspectives and hypotheses

What theoretical factors can explain variation in local county-level presence of OSAs? What might account for why some firms in localities were able to do so, while others do not? Because of the scarcity of empirical studies of the development of the Open Shop movement in

the United States, and the absence of studies regarding variation in repressive employer coordination more generally, I outline a basic set of hypotheses, drawing on both theoretical literatures that have been applied to business collective action, and inferences based on claims made by some of the local-level associations discussed above. I consider variables that should affect the probability of adoption of an OSA at the local level.⁴⁶

The descriptive evidence of initial local employer associations suggests the need to distinguish among locality-level variables that affect the probability of organizing. I draw on these accounts and the wider collective action and relevant social movements literatures (though the latter has been more sparingly applied to firms).⁴⁷ I test different families of arguments that have been posited, or that follow from the cases discussed above; the goal is not to definitively arbitrate among them, but rather to see which variables that proxy for these perspectives seem to have more explanatory weight. These include: the existence of a legacy of previous coordination, structural factors that would prevent or facilitate firm collective action, the overall threat from workers posed to firms, and the political context that would facilitate firm-level action.⁴⁸ These families of hypotheses are not exhaustive, of course, but they cover many possible competing explanations for why employer associations formed at the locality level.⁴⁹ Within each theoretical perspective, one can decompose the category into more precise explanations, discussed in the next section.

Previous firm organizational presence

Sensibly, previous organizational experience from before World War I should affect the probability of association presence in the inter-war period. This could be because this organizational legacy indicates that firms in the locality have previously surmounted collective action problems, previous institutional apparatus might exist, or firms in the locality have

recollection of previous successful associations, even if such associations did not persist between their initial founding and the open-shop movement after WWI. Literature on organizations in other contexts details the importance of historical legacies and continuity in explaining later variation.⁵⁰

Structural factors inhibiting collective action

I now turn to explain separate variables that constitute structural factors that should affect collective action among firms. These structural factors can affect individual level firm decisions to join an association, as well as the eventual internal organization of an association.

Number of firms. A straightforward insight from collective action theory is that the incentive to collectively act is decreasing in the number of firms; this observation specifically about employer associations is also emphasized in Streeck and Schmitter.⁵¹ The number of firms in an area should be negatively related with the adoption of repressive employer organizations. Consistent with classic theories of collective action that emphasize incentives to free ride on public goods provided by associations, an increased number of firms should reduce the probability of successful collective action among firms.

Local level industrial heterogeneity. Another important structural feature of a locality that should affect incentives of firms to collectively act is the overall economic differences among sectors and firms. Collective action should be more difficult if firms have different industrial compositions, such as if production functions across firms are different, and if firms face differential labor and product markets.⁵² A related concern about locality level heterogeneity is differences in net benefits from collective action; the more varied these net benefits from cooperation are dispersed across individual level members, the less incentive some member firms would have to contribute to join an association. As Derber documents, the fact that many

initial employer associations were formed at the industrial sector level indicates baseline support for the intuition that some level of firm homogeneity is a precondition for initial collective action.⁵³

Industrial output and working population. Another structural feature that should matter is the amount of industrial output. The basic logic is that the more industrial activity, holding constant other structural features, the more profitability that such organizations could conceivably bring. Areas with higher manufacturing output should be more likely to have employer organizations, as higher industrial output would proxy for sufficient resources for firms to form organizations, or have an interest in maintaining high output through an employer organization. This hypothesis is consistent with previous descriptions of local, regional, and national-level employer organizations. Following the same logic about industrial output, I also expect areas with higher working population to be more likely to have repressive employer organizations.

Incentives to organize against threats

I now turn to describe hypotheses regarding the role of threats from organized workers that would incentivize the formation of repressive employer associations. While the above structural variables dealt with incentives to overcome collective action problems, this perspective focuses on factors that would affect collective repression as a strategy. As the above descriptive evidence from the previous section about employer organizations' preferences suggests (evidenced by their publications, discussion at annual meetings, and their positions taken at Wilson's Industrial Conference), the main reason documented as to why associations formed was in response to the threats posed by unions. While the threats posed by workers sensibly should matter, this concept can be disaggregated and measured in different ways, each of which poses a

distinct mechanism for why labor threats would affect the probability of firms organizing in response. Different measurements of this threat can test different aspects of this concept, and illustrate why labor threats mattered for associational formation. Variation in these threats include the amount of organizational capacity of workers, the legacy of organizational capacity, and the ability to inflict costs on firms via strikes. These labor threats are obviously not exhaustive nor necessarily mutually exclusive, but they allow for decomposition of broad types of threats posed by workers to firms. I turn to the theoretical relevance and more specific characterizations of each in turn.

Proximate amount of threats and legacy of union organization. The first conceptualization of overall threat to firms is a variable that captures the *proximate amount of threats posed by workers*. At the local level, repressive employer organizations should be more likely to form in response to higher overall threats to firms posed by worker unionization. I characterize this by the number of union locals at the locality level. More union locals across different sectors indicates a greater capacity for workers to organize, and thus higher potential for those unions to attain their demands from firms. Further, union locals that have organized more recently should be more likely to lead to employer associations in response.

Related to the proximate number of union locals, firms might also be responsive to the organizational *legacy* of unions, which might indicate latent worker organizational capacities. The legacy of worker organization is proxied by the historical presence of a Knights of Labor (KL) locals, which attained peak membership in the 1880s. One can also measure the legacy of worker organization by examining the number of KL locals during its peak period of activity. This captures the original organizing capacity of labor in a given locality.

Ability to inflict costs. Beyond just the simple number of union locals and historical

legacies of labor organization, though, union threats themselves may differ based on the ability to inflict costs on firms. The more that unions are able to demonstrate that they can win industrial conflicts against firms, or attain demands regarding workers, the more likely that firms should be incentivized to form repressive associations in response.⁵⁴ A reasonable indicator of the capacity of organized labor to attain its demands is the history of labor conflict in the region. The previous presence of strikes by workers would indicate the capacity of inflicting losses on firms, independent of the amount of union presence. Further, if there has been conflict, previous success of those strikes should affective incentives of firms to organize. If workers have been historically capable of winning strikes, this should increase the probability of firms organizing in response to workers. Other conflict variables that capture this threat related to conflict are the *number of previous strikes* and *number of workers involved in strikes* in the locality. Finally, besides industrial conflict history, an indicator of the ability for unions to inflict costs is that of stronger ties to the AFL central office. Unions affiliated with the AFL, such as those with more voting weight, should also be considered as more of a threat, as those unions would be more influential in national-level office.

Political context and electoral threats

I now turn to hypotheses discussing the role of political context, and how the political orientation of the locality could affect the formation of employer associations through several distinct channels. Given the attention in the comparative political economy literature to party systems and incentives of firms to respond to either left-wing oriented parties or to multiple political parties, I test these models in the context of the US two-party system. The most direct one is that greater Democratic orientation of a locality may indicate more support for state intervention that would negatively affect the interests of firms, and thus increase the chance of

employer associations forming. Evidence from sector and local-level associations indicates that such associations were more supportive of the Republican Party than the Democratic Party due to the latter's closer relationship with organized labor, and many employer associations were hostile towards policy positions of the Democratic Party platform and the Socialist party.⁵⁵ As discussed above, given that the open-shop movement in the early inter-war period was partially re-invigorated by the intransigence of major employer associations at the industrial conference of 1919, it is not surprising that local-level associations would be concerned with intervention at the state government and federal level.⁵⁶ This account also follows from the "power resources" tradition in comparative politics, which broadly argues that social policy and labor institution outcomes are a function of the degree of left-wing power, as captured by support for labor-supporting political parties.⁵⁷ Consistent with the literature on the politicization of organized labor movements, firms should be responsive to political conditions in making decisions about forming repressive organizations.

Building on these intuitions, one hypothesis is that repressive employer organizations should be more likely to form to respond to left-wing electoral support, as firms would be concerned that local support for left-wing politicians would make pro-union policies more likely. This could be because of the concern that the local population will support unions through favoring legislation (such as laws that prohibit the use of injunctions to prevent strikes, or that exempt unions from anti-trust regulation), or through coercive intervention in labor disputes that would favor workers. Under this hypothesis, employers coordinate to form repressive organizations in response to the activities of the state, as opposed to just those of unions.

Of course, the US Democratic Party during this time period was not nearly as institutionally connected with workers were Socialist parties in European states, indicating that

Democratic political support is not necessarily a threat to firms. I use the term “left-wing” only in a relative sense of being more likely to be more supportive of organized labor relative to the Republican Party. As Greene and others discuss, the national-level platform of the Democratic Party after 1908 contained more pro-labor provisions.⁵⁸ In reality, of course many Congressional districts supportive of the Democratic Party were also hostile towards organized labor, particularly in the South. Thus an addendum in the US context to the “threat from the left” hypothesis is that repressive employer organizations are more likely to form in areas of *more extreme* left-wing ideology, such areas where the Socialist party contested national elections.⁵⁹ Another expectation is that the closeness of the election should matter; if preferences of the electorate and the political opportunity structure matter at the local level, then the likelihood of one party winning versus another should influence firm decisions. Elections that are closer should increase the risk to firms of the Democratic Party gaining more support, and thus closer elections should induce more employer association activity.

Data Sources, Variables, and Estimation

I test these competing families of hypotheses with new data on US county-level variation in repressive employer organizations from the inter-war period. In this section I describe the sources of data and procedures used to code the variables to test the above hypotheses.

Measuring the dependent variable: county level repressive employer coordination

To measure the dependent variable of the existence of repressive employer coordination, I use results from a 1920 questionnaire distributed to firms and associations administered in 1920 by the Associated Employers of Indiana (AEI). The AEI supplemented the questionnaire with attempts to find out which cities in the United States had active Open Shop Associations (OSAs). The existence of an OSA in a county is a straightforward indicator of a collective repressive

coordination, as it constitutes a successful attempt on the part of to institutionalize their operations against organized labor. The adoption of an OSA in a county indicates that firms in a given locality had the capacity to create a formal association.⁶⁰ I use the AEI survey data to generate a list of US counties that contain an OSA.⁶¹ The dependent variable of interest for all county level analyses is binary; a “1” indicates the county-level presence of at least one OSA; “0” indicates no OSA was present from this survey data. This new data permit one to test a variety of hypotheses more directly and systematically than before, and allow for consideration of other factors that previously theories posit, but do not test at the local level.

Independent variables

Lagged organizational presence

To measure whether any previous employer organizations affect inter-war open shop mobilization at the local level, I use data from the most comprehensive available secondary account by Bonnett that describes the largest known number of local-level employer associations in US cities and counties between the period 1870 and 1900.⁶² I code each mention of an employer association that was formed to deal with labor issues and matched the locality Bonnett discusses to the proper county. The binary variable *Prev emp org* (previous employer organization) is an indication if the county had at least one employer association, deemed significant enough to merit mention in the media sources Bonnett combed. The book does not continue to systematically discuss associations beyond 1900. While there is no doubt measurement error as it may under-estimate the amount of local-level employer coordination, this newly coded variable is the best available indicator of the “legacy” of employer coordination at the county level.

Structural variables

To measure variables that capture structural factors that facilitate collective action, I use county level economic data from the 1920 US Census. These lagged variables include the natural log of the number of workers (*Ln workforce*), amount of manufacturing output (*Ln output*), and number of firms (*Ln firms*).⁶³ To generate a measure of industrial concentration, I use data from the US International Public Use Microdata Series (IPUMS) database to construct indices of concentration, using the amount of employment by industry (*Ind conc*). The measure for concentration is the standard inverse of the sum of squares of employment in each of 154 industrial categories. This variable is rescaled 0-1, with higher values indicating more overall industrial concentration (that is, employment is more concentrated in fewer industries, and thus, higher concentration should be linked to greater probability of OSA adoption).⁶⁴

Threat posed by unions

Legacy of labor activism

To code the legacy of labor activism, I first use data provided on the previous presence of the Knights of Labor (KL) locals in the county, between 1879 and 1889.⁶⁵ This gives some indication of the historical activism of workers in the area, even though the KL significantly declined in membership and influence before the twentieth century. I use a binary indicator of whether the county had *any* KL presence by coding the presence of at least one local office between 1879 and 1889. This variable is *KL presence*. I also proxy the overall legacy of labor activism with the sum of all independent KL locals that existed in the county in this time period. This variable is *KL locals total*.

To code the more proximate, pre-inter-war period threat of organized labor, I use data that quantifies the amount of more recent union presence at the county level. This data indicates whether a US county had a union local for 23 separate industries or craft professions for three

different time periods between 1890 and 1915. The three time periods for which data on the existence of a union local are coded are 1890-1895, 1895-1910, and 1910-1914. This detailed data on the presence of union locals by county are available for 595 cities in 17 states.⁶⁶ The structure of the data is that for each industry or craft in each discrete time period before 1914, there is an indicator of the number of different union locals represented by that industry in the county.

Measures of coding aggregate union threat

This data on the presence of different union locals in a county allows for two intuitive ways of coding the degree of union threat or presence. The first way makes use of the fact that in some US counties, there were multiple union locals representing different industries. One measure of union threat is simply the sum of all union locals (each local indexed l) across all industries i in a given county j , for any of the three time (indexed t) periods for which the data were coded. For example, there was an average of seven union locals during this time period with a large standard deviation of nearly 10 separate locals. This measure of union threat allows one to estimate the marginal impact of one more union local (in any industry) in a county on the probability of OSA adoption.⁶⁷ (Few counties have more than two locals for the same industry). This variable measuring total union local presence is called *Union locals* (proxying for the cumulative threat of number of separate union locals).

An alternative measure of union threat is the sum of all unique *industries* represented by a union (indexed i) in a county j for the entire time period. This sum is the total number of different *industries* represented by union locals in a county. To construct this alternative measure of union threat to firms at the county level, I first code a binary variable for each county that indicates whether county j was home to a union local in industry i at all for the time period 1890-

1914. A 0 indicates that for the given county-industry-time interval in question, no union local was present; a 1 indicates that at least one union local in that industry in that county was present. Each county thus has a binary indicator if that industry is at all represented by a union local in the county. I then sum for each county j each of these binary indicators; this sum is the alternative measure of union threat. For example, if a county had union presence in 10 different industries in that period, its summed union threat would be 10.⁶⁸ This variable indicating the cumulative threat of number of separate industries represented by union locals is called *Union ind.* The maximum number of industries in the dataset is 23; the mean number at the county is 4.6 separate industries. Higher values of this variable indicate that throughout the time period 1890-1914, the county had a higher number of different union-represented industries.

This alternative measure of union threat allows one to estimate the marginal impact of one additional industry represented by a union local in a county on the probability of OSA adoption. It allows assessment of whether having more industries represented by at least one local union increases the probability of collective employer repression. We would expect that the estimated marginal impact of an additional industry in a county would be greater than that of just one more local; the statistical tests below allow us to test these competing measures.⁶⁹ These two competing measures distinguish between the marginal effects of an additional industry being represented by a union, versus the impact of an additional local, regardless of industry.

Credibility of threat: strike data

To measure the credibility of union threats via strikes I use detailed data on the incidence of strikes at the county level, from a set of reports by the Commissioner of Labor in 1887 and 1894; these combined data present data on strikes between 1880 and 1894.⁷⁰ This dataset gives details on the incidence of strikes for US cities and counties, and relevant details including the

number of strikers involved and whether the strike was successful. For this time period, I code at the county level a binary indicator for whether the county had *any* strike (the variable is labeled *Any strike*), the total number of separate strike incidents that workers organized in the county (*Strikes*), the natural log of total number of strikers involved across all strikes (*Ln Strikers*), and, finally, the percentage of strikes that ended in success for workers (*Succ strikes*). Each of these variables allows us to assess which, of any, matter for the credibility of union threats against firms.

Decomposing the threat posed by unions

To capture distinct period changes in union threat and test the more specific hypotheses that firms may be more responsive to the aggregate union threat in 1910-1914 (the period right before WWI), as opposed to an earlier period, and that firms are responsive to different types of locals, I decompose the union threat variable into two categories. The first variable is the sum of the number of union locals and industries in the period 1890-1910 only (*90-10 unions*). The second variable is the sum of union locals and industries in the period 1910-1914 only (*1910-14 unions*). Thus we can distinguish between the impacts of an additional union local or union industry in the pre-1910 period versus the 1910-1914 period. I also distinguish among union locals that might pose higher threats based on their stronger affiliation with the AFL, as measured by greater voting weight with in the AFL central office. I code stronger unions as having greater than two percentage of votes and all others with less as weaker; the maximum among the available union data is eight percent.⁷¹ These variables are labeled *Strong unions* and *Weak unions*, respectively.

Political variables

To measure the threat from a left-wing electorate, I use county-level Democratic

presidential vote share from the 1920 election (*Dpres vote*). This is a proxy for political support for the left and the potential threat from the left to firms. To measure more extreme electoral left-wing threat, I use as well the Socialist presidential vote share from the same election (*Spres vote*). I also code the difference between the Democratic and Republican presidential vote shares, rescaled 0-1 such that higher values indicate a closer election (*Vote margin*).

Estimation procedure

Because the dependent is binary (whether the county was noted to have an OSA), to test the competing hypotheses about the development of repressive employer coordination, I estimate a standard logit regression model over the cross-section of US counties.⁷² The unit of analysis is at the US county level, with 3,082 counties.

Results

Descriptive statistics and simple differences across counties

Before presenting the results of different estimations, I summarize descriptive statistics that provide a sense of which families of hypotheses matter more for the development of local level employer repression. Table A1 in the Appendix gives the full set of descriptive statistics. In 1921, 217 counties had at least one OSA (seven percent of all counties). The cities and counties that had such associations were not just limited to the largest metropolitan areas; in fact, such employer associations were prominent in many medium to large industrialized cities throughout the Midwest and South. The counties having at least one OSA had in 1920 over forty percent of the US population and nearly 50 percent of the total number of firms.

How are counties that have an OSA different from those without? I first present simple difference of means tests as a baseline test of which categories of variables are more relevant. Regarding the legacy of previous associations, six percent of counties had at least one employer

association in the 1870-1900 time period. Among those counties in the inter-war period with an OSA, 44 percent had a previous organizational presence, whereas only four percent of counties that did not have any OSA after WWI had previous organizational presence ($p < .001$). Regarding the class of variables that capture the structural conditions that might affect collective action, simple difference of means tests between the means of variables related to structural conditions of the OSA and non-OSA counties reveal that at first glance, counties with OSAs had significantly more workers, firms, lower industrial concentration, and slightly more manufacturing output, as compared to counties without OSA presence. This is unsurprising, given the fact that many of these counties contained the most industrialized cities.

Turning to simple relationships with various measures of previous labor organization, among OSA counties, 89 percent had at least one previously active Knights of Labor assembly, whereas only 49 percent of counties without an OSA did; similarly, OSA counties relative to other counties had many more local assemblies, (an average of 20 compared to 2, $p < .001$).⁷³ If we consider the data on the sums of specific craft union locals in the later period from 1890-1914, in the dataset only one US county had an OSA that also had no union local presence in any industry (that, is where the value on the union threat variable is zero). In other words, the set of counties that experienced an OSA constitutes almost an entire subset of cities with at least some union presence in the previous time period 1890-1914. Regarding simple difference of means between OSA and non-OSA counties and the threat posed by different measures of union organization, overall, the initial test confirms that a higher proportion of OSA counties experienced higher labor threats than non-OSA counties. OSA counties also have a mean of over 20 different union locals between 1890 and 1914, while non-OSA counties had an average of five ($p < .001$) (for the counties where such union data are not missing). If we examine the

measure of labor threat that is the sum of number of distinct industries, OSA counties also have a mean of approximately 12 different industries represented by union locals between 1890 and 1914, while non-OSA counties had an average of three ($p < .001$). Thus the initial evidence indicates that union presence is an important factor that distinguishes OSA from non-OSA counties.

These differences between the two set of counties are also visible when we look at the variables that capture the capacity of unions to inflict harm on firms, as across the strike conflict-oriented variables, OSA counties are distinct from other counties. They are more likely to have experienced a strike (.83 vs. .19), have experienced more strikes (54 vs. 2), have correspondingly more strikes resolved in favor of unions as a proportion of all strikes (.35 vs. .08). In all cases these difference of means are statistically significant at $p < .001$.⁷⁴

Finally, in terms of descriptive difference of means tests, regarding differences in Democratic presidential vote share, OSA counties have a 10 percent less electoral support for the Democratic candidate than do non-OSA counties (.36 vs. .46, $p < .001$); however, OSA counties are more likely to have some form of socialist party contestation (.63 vs. .83, $p < .001$), and are more likely to have closer elections (.67 vs. .61 on the rescaled closeness scale). In the estimations below, I examine if these differences are robust to standard demographic controls.

Results by category of variables

I now present estimations where we separately consider the different categories of independent variables based on the theoretical propositions discussed above, before turning to complete multivariate estimations. I estimate simple logistic regression models where the outcome is whether a county had an association declare for the open shop.⁷⁵ This allows us to assess within each family of hypotheses, whether some variables are precisely estimated. Table

1 presents the results. Each column regresses the outcome on a separate category of covariates. Overall, many of the theoretical propositions independently are verified, with a few interesting exceptions. Column 1 considers just the impact of the previous presence of an employer association (based on the available data from Bonnett). The precisely estimated coefficient indicates, that, not considering other covariates, lagged associational presence is correlated with OSA presence.

Column 2 considers the class of variables that should affect structural incentives for collective action, including the total population, amount of manufacturing output, number of firms, and occupational fractionalization. This column indicates unsurprisingly, that firms with a larger working population are more likely to have an employer association. However, interestingly, the number of firms is not negatively correlated with formation of an association, and industrial concentration is *negatively* correlated with associational formation. One reason why this could be the case is that industrial concentration is negatively correlated with manufacturing output; it is in richer, more manufacturing-oriented counties where OSAs are likely to emerge, and in such counties, there are simply more industries (reducing the overall amount of employment concentration). Another possibility is that the concentration variable cannot capture decisions of individual large firms to bear costs of forming associations; measurement error could also be an issue.⁷⁶

The next two columns of Table 1 consider the class of variables related to the threat posed by organized labor, as measured by capacity of union organization. Column 3 considers just the legacy of worker organization, principally through previous presence of KL locals, while column 4 considers the role of more proximate labor threats, as indicated by the number different union locals in the period before the inter-war period. In both categories of variables, we observe

both the legacy of union organization as well more proximate success as being positively correlated with the probability of an employer organization counter-response. The marginal effect of a union local from a more proximate time period after 1890 (a non KL union) is more than twice that of an additional KL local.

Column 6 of Table 1 considers the credibility of threats posed by workers with variables related to previous strikes. All such strike variables are positively correlated with the presence of an association, with the highest magnitude being that of the fraction of strikes that were successful on the part of unions. The final column considers the specific role of political opportunity variables. The simple relationship does not reveal much support for the theorized role of electoral support for the Democratic Party, but Socialist presidential vote share as well as closeness of the election both are positively correlated with OSA presence. This indicates initial support for multiple theories by which political opportunity and concerns about the electorate preferences might matter. Overall, the evidence from Table 1 indicates that each “cluster” of variables is correlated with OSA presence, though the category of structural variables that should affect collective action and previous labor conflict (indicating credibility of previous threats against firms) both have the greatest explanatory weight.

[Table 1]

Multivariate results

I now consider these competing families of variables in tandem, by estimating a multivariate model that includes all the sets of variables displayed in Table 1. Column 1 of Table 2 presents these results. The column shows that when we consider the different families variables in a single model, many coefficients become less precisely estimated, and only several structural and union-oriented variables remain statistically and substantively significant at conventional

levels. For example, lagged employer organizational presence no longer matters; nor does the previous presence of labor organization as indicated by KL presence.

The structural variables that should facilitate collective action remain significant, although as with Table 1, the number of firms is actually positive (perhaps because that is likely to be correlated with economic activity); contra the straightforward collective action hypothesis, industrial concentration remains negatively correlated with the likelihood of collective action. The indicator of number of workers remains positively correlated with employer organization presence, indicating one measure of economic productivity is linked with incentives to organize; overall, we do not observe convincing evidence for the standard structural factors that would facilitate collective action, other than one proxy for county level industrial activity.

Turning to the other variables that remain robust in the multivariate estimation to alternative explanations, column 1 also shows the enduring relevance of the overall threat posed by unions, as the number of locals as an indicator of overall organizing capacity remains relevant. This indicates the value in separating the competing reasons why the threat from organized labor would induce collective action. The impact of additional union local variables (*Union loc*) remains positive, and the estimated marginal impact of an additional union local across all industries is on average one percentage point; however, at certain thresholds the impact of an additional local is considerably greater, as seen in Figure 1.⁷⁷ The figure shows the predicted probability of OSA presence, based on the model in column 1, holding all other variables at their means, and shows a steadily increasing impact of additional union locals. A county with no union presence has almost no chance of having an OSA, whereas counties with high numbers of locals are nearly guaranteed to have an OSA. Column 2 shows a larger marginal impact of an additional union local in a new *industry* (*Union ind*); although there is of course a

smaller range of data (as there are few industries than locals by definition), moving from five to 15 union industries (holding all other variables at their means) substantially increases the probability of OSA adoption from about 0.02 to .20. The robustness and magnitude of these effects are notable, given the battery of other explanations at the county level considered.

[Figure 1]

Beyond the impact of union presence however, columns 1 and 2 show that the most relevant conflict-oriented variable—which is an indicator for the credibility of unions to attain their demands—is previous success of industrial conflicts. The more successful unions have been in previous decades, the higher likelihood of employer coordination as a response.⁷⁸ The other indicators of conflicts—such as the mere presence of a conflict, or number of strikes and strikers—matter little, once other indicators of the locality are controlled for.

Finally, turning to variables capturing political opportunity and the preferences of the electorate, we observe that the Democratic presidential vote share variable has a negative sign, but is now imprecisely estimated (as is the Socialist vote share variable); the electoral closeness variable remains positively signed and precisely estimated, indicating that elections where the margins are closer are correlated with higher likelihood of OSA adoption. This is suggestive evidence, corroborating some discussion of the Republican platform above, that firm associations may react to the political opportunities provided, and the possibility of Democratic electoral preferences being attained can contribute to incentives to coordinate. Overall, the evidence points to the importance of union threat, but also previous strike success. If we compare the marginal effects of each variable, however, the number of post 1890 union locals still matters most in explaining OSA emergence.

Whereas columns 1 and 2 establish the importance of the amount of threats posed by

union locals and industries, columns 3 and 4 present more nuanced considerations of the impact of the union threat variable. These latter two columns present the same logistic estimations as before, but consider different components of the union local variable. Column 3 tests the credibility of threat hypothesis by examining the separate impact of unions representing industries with greater voting weight in the AFL, versus unions that represent industries with much lower voting weight within the AFL. This tests the hypothesis that unions in industries with more capacity to inflict costs should be more likely to affect OSA formation. Column 3 shows that union industries with higher voting weight are highly correlated with OSA option, whereas the coefficient indicating the presence of union locals with lower voting weight has a much smaller magnitude. Moving from zero to five additional industries with greater voting weight increases the probability of OSA adoption from nearly zero to above .20. This result supports the intuition that unions with greater weight could have a greater ability to win strikes or wrest concessions from firms because of greater linkages to the central office.⁷⁹ An alternative but not mutually exclusive interpretation is that such industries are a more reliable indicator of overall organizational capacity of workers, and that is why firms are more likely to respond.⁸⁰

Column 4 considers an alternative decomposition of the union threat variable, which is the separate impact of the sum of union locals from 1890 to 1910 versus the sum of union locals between 1910 and 1914. The column shows that the latter matters more than the former, as the latter coefficient is statistically significant at conventional levels and substantively large, whereas it is neither for the previous period. The estimated marginal effect for the more recent period of moving from the minimum to maximum number of locals is twice that of the effect of an additional union local in the previous period, and the latter coefficient is also imprecisely

estimated and near zero. Moving from zero to just five union locals in the more recent time period increases the probability of OSA adoption from near zero to 0.1.⁸¹ Column 4 indicates that differences among counties in the amount of union threat in the five years before WWI are more correlated with risk of OSA adoption than such differences before 1910.

Table 2 overall indicates that once that once the temporal aspect of union organization is disaggregated, the marginal impact of union threats is more driven by recent unions and unions in industries with slightly greater voting weight in the AFL. This interpretation also comports with the evidence from column 1, that once more recent union organization is accounted for, the “legacy” of previous organization in the form of KL locals dissipates. However, these different disaggregated effects are relatively smaller compared to the overall impact of having more union locals, regardless of time period and industry. Further, as Table 2 also shows, although there is still a lingering impact of the success of previous strikes, the magnitude of this variable is much smaller. The overall results indicate that more recent union threats, as opposed to legacies of threats, are more correlated with employer association formation.⁸²

Regarding the variables that proxy for political opportunity, the results from Table 2 also indicate that *electoral* concerns at the county level are not robust controlling for other variables; across all models, the absolute vote share variables are not precisely estimated. One possible reason for this null outcome is that as noted above, the Democratic Party, while perceived to be pro-labor, was far less extreme in its demands than counterpart Socialist parties in other states. However, the coefficient on the closeness of the election remains precisely estimated, although its substantive impact is quite small. Overall, in terms of relative explanatory weight, firms were more responsive to direct threats posed by recent union organization than other competing political opportunity variables.⁸³

[Table 2]

Overall, the results indicate that union presence in the late nineteenth and early twentieth century is strongly correlated with firms' adoption of collective repressive strategies during the immediate inter-war period, and more recent union organizations (as opposed to legacies of organizations), as well as labor organizations that have slightly stronger ties to the central AFL office, were more likely to induce the formation of repressive employer associations. Previous labor conflict successes and electoral closeness also are relevant, but less so. The results help isolate individual factors that explain why repressive employer coordination was adopted in some counties and not in others, and confirm the theory and previous historical evidence that repressive firm strategies were primarily designed as defensive organizations against union penetration of plants; importantly such factors are robust to many of the alternative families of hypotheses.⁸⁴

Conclusions and Implications

Despite the few detailed histories of influential American national and local-level employer associations, and the recent attention in comparative politics to US evidence to support theories of the development of certain systems of employer coordination, there is a surprising dearth of systematic analysis of such organizations at the local level. Such analysis of the open-shop movement is particularly useful because as these histories discuss, these organizations were an important instrument in inhibiting US labor mobilization throughout the first half of the twentieth century. If one wants to understand the origins of US coordinated employer repression, then it is critical to examine it at the local level, as that is where the relevant activity took place. Only then can we have confirmation of some theories which explain their existence, and with that more precise testing of competing families of hypotheses which explain firms' collective

action. With respect to the comparative political economy literature on the development of industrial institutions, many of these studies do not address the importance of repressive employer organizations; the historiographies of the select associations discussed focus less on testing theories of their emergence. This paper addresses these issues with new data on a key example of adoption of repressive institutions at the local level during a crucial time period—the post-WWI dismantling of war-time wage institutions. I demonstrate that such repressive coordination, in the form of the adoption of open-shop associations, can be best explained as a response to the threats posed by recent unions, even accounting for a host of competing theories. This hypothesis is corroborated by unique data on local-level participation in repressive employer organizations from the US inter-war period.

The findings indicate that measures of proximate union threat and the credibility of previous successes in conflicts are more important for explaining repressive employer coordination than are standard economic covariates. Moreover, there is strong evidence that more recent union threats—in the years before WWI—matter for explaining repressive employer associations; there is suggestive evidence that more recent union locals that posed a greater threat were also more likely to induce repressive employer associations. The threat is not just about the presence of a particular union industry, as previous historiographies richly show, but also about the additional threat that union organizing can pose to firms.⁸⁵ As discussed above, the concrete focus on OSA adoption likely underestimates the true degree of employer associations, as there may be employer associations that existed that were not contacted in the national associations' survey. Further, there were very likely to be repressive employer associations that did not engage with the “open shop” movement or used other instruments of repression as associations.

The fact that such coordination mattered in response to workers adds to our existing

research that has effectively documented how such coordinated was detrimental for unions. This study presents the first systematic survey and analysis of the formation of repressive local-level firm coordination. While other historical research claims from specific cases, that local OSAs arose in response to conflicts involving unions or workers, this had not been systematically shown, and nor had the threat or conflict posed by workers been disaggregated. The findings here demonstrate that even employer associations during the inter-war period were quite responsive to the threats posed by organized labor at the local level, and that more recently formed union locals in the run-up to WWI posted great risks to firms.

The study is also a contribution to the broader literature on union mobilization in the interwar period, and the analysis shows how employer repression is not just a cause of union mobilization, but a consequence of it as well. The empirical approach here allows one to point to a strong connection between union mobilization and aspirations which had increased during the war, and identifies the consequences of a key historical point where the failure of national-level bargaining and corresponding mass labor unrest in 1919 facilitated much relevant local-level responses on the part of employers to coordinate in response to workers. This key moment and the data that sheds new light on the politics of the Open Shop Movement as well as the way that union and employer conflict fit into American political development in the interwar period, and presents new evidence on the local origins of interest group agendas. One of the lessons from the evidence is how firms differentially responded to union threats that had mobilized before the war, and the limitations of purely demographic or economic factors in explaining local firm response.

The theory and results here raise additional research questions relevant for the fields of American political development as well as comparative political economy. On the empirical

front, this paper has focused on cross-sectional variation repressive employer coordination. But a knotty causal empirical question is the precise relationship between threats posed by unions and repressive associations, although this study brings more attention to the potential role of legacy organizations than before and uses the early inter-war period as a testing ground. As Voss has shown for New Jersey for an earlier time period, local-level employer associations in New Jersey helped undermine the ultimate success of labor unions there. By contrast, in many of the specific historiographies of local and regional-level associations, we observe the collective mobilizations of firms in a sector or area in response to the worker organizations and demands. The empirical design here has tried to use the lagged historical aggregate sums of unions to explain inter-war support for open-shop movements (going back to the late 1800s), but it is possible that in some cases, those measures of union threats going back to the late nineteenth century are affected by even earlier attempts at employer organizations. Certainly more specific data going back further in US history to help untangle the causality would be useful. However, the results presented are broadly consistent with some of the theories suggested by the specific historical accounts.

The measures of the threat posed to firms by workers are intuitively calculated here, but certainly more precise, systematic data on the differing demands of workers in different union locals would increase confidence that repressive coordination emerged in response to such threats. Such data might also shed light on the limited robustness of standard structural factors at the locality level, as what might matter more are precise indices of concentration and other variables that affect incentives for collective action within specific industries inside particular localities.

A second empirical extension would be to obtain data that allows one to disentangle different mechanisms for why more union local or industrial presence leads to employer

responses in the form of OSAs, beyond the new set of conflict indicators presented here. One intuitive mechanism for the “threat” theory is that the greater presence of locals or industries is an indicator to firms that workers are more likely to make demands on firms. Another non-mutually exclusive mechanism is that the greater presence of any local or industry represented increases the probability of that *particular* local or industry to make demands, or engage in industrial conflict. More specific data, which would be difficult to obtain at the locality level, could code individual reasons for formations of OSAs to distinguish between these mechanisms.

A third potential theoretical and empirical extension of the findings here is to examine the ways in which the different repressive institutions and strategies—state governments, individual firms, employer associations, and the courts—complemented or substituted for one another. Many of these open shop associations had preferences for anti-labor political leadership or supported the actions of the judiciary. Firms also could choose to coordinate as opposed to pursue repression individually. It could be that when the threat posed by workers reaches a certain threshold, it becomes easier to pool resources to form associations as opposed to do so individually. The relationship among individual firms, separate associations, and political institutions at the local level remains underexplored. A natural research agenda is to look at how localities varied in types of cooperation between these associations and public institutions.

On balance, however, the findings here should stimulate additional research into variation in the local-level dynamics of repressive employer coordination in a more systematic fashion. One interpretation of the findings here is that the success of the initial repressive coordination at the local level helps explain why the United States never developed long-lasting cooperative institutions that Wilson envisioned at his conference. The precise causal story though that links early collective repression to contemporary outcomes is an area of fruitful research.

Table 1: Explaining OSA emergence by separate categories of hypotheses

	(1)	(2)	(3)	(4)	(5)	(6)
Prev emp org	3.04*** (0.17)					
Ln workforce		0.50*** (0.14)				
Ln firms		1.06*** (0.20)				
Ln output		-0.13 (0.083)				
Ind conc		-7.72*** (1.74)				
KL presence			1.49*** (0.25)			
KL locals total			0.11*** (0.011)			
Union locals				0.28*** (0.029)		
Strikes					.014*** (0.0047)	
Ln Strikers					0.38*** (0.033)	
Succ strikes					0.77*** (0.29)	

Dpres vote					-0.020*** (0.0048)	
Spres vote					0.080*** (0.020)	
Vote margin					1.20*** (0.39)	
_cons	-3.10*** (0.096)	-4.94*** (1.77)	-4.21*** (0.22)	- 4.85*** (0.43)	-4.11*** (0.16)	-2.61*** (0.28)
<i>N</i>	3082	3060	3082	3082	3082	3048
<i>R</i> ²	.18	.49	.23	.18	.32	.06

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

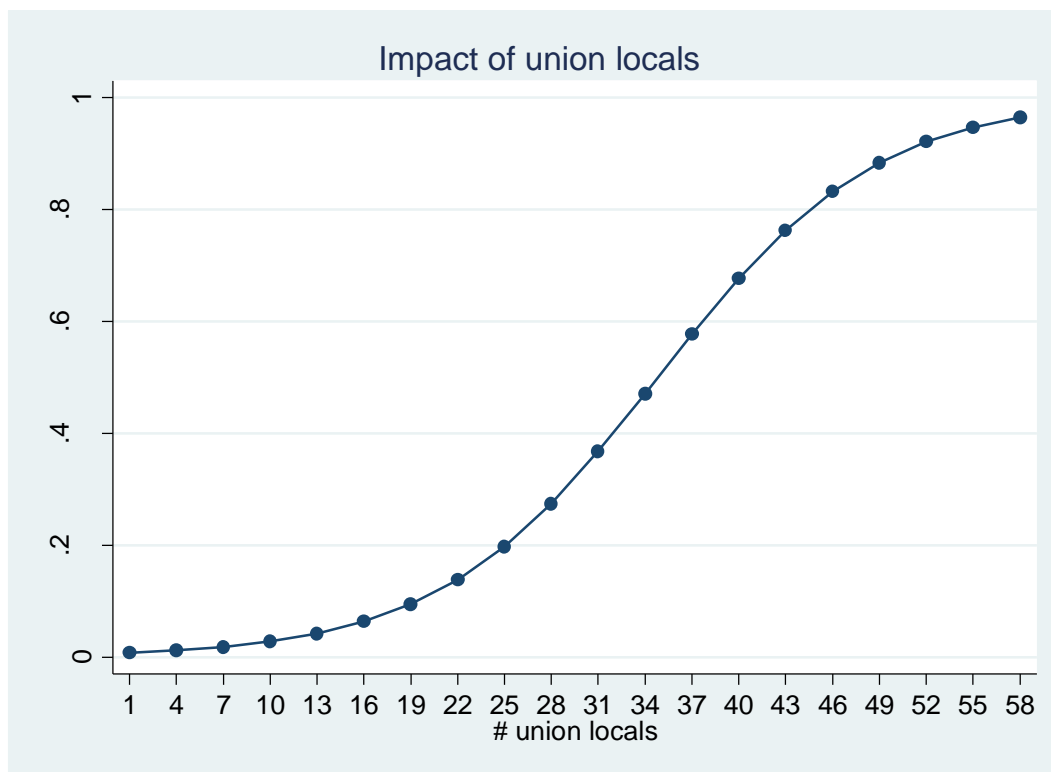
Table 2: Explaining Emergence of OSAs

	(1)	(2)	(3)	(4)
Prev emp org	0.23 (0.26)	0.23 (0.25)	0.23 (0.26)	0.20 (0.26)
Ln workforce	0.50*** (0.15)	0.50*** (0.15)	0.50*** (0.15)	0.54*** (0.16)
Ln firms	0.91*** (0.23)	0.91*** (0.23)	0.91*** (0.24)	0.88*** (0.24)
Ln output	-0.27** (0.10)	-0.26** (0.10)	-0.26** (0.10)	-0.28*** (0.11)
Ind conc	-5.59*** (2.11)	-5.47*** (2.10)	-5.46*** (2.10)	-5.48*** (2.13)
KL presence	-0.033 (0.34)	-0.063 (0.34)	-0.076 (0.34)	-0.063 (0.34)
KL locals total	-0.0045 (0.011)	-0.0043 (0.011)	-0.0043 (0.011)	-0.0045 (0.011)
Union locals	0.14*** (0.036)			
Union ind		0.26*** (0.065)		
Strikes	-0.00043 (0.0017)	-0.00045 (0.0017)	-0.00045 (0.0017)	-0.00043 (0.0017)
Ln Strikers	0.045 (0.046)	0.050 (0.046)	0.050 (0.046)	0.048 (0.046)
Succ strikes	0.76* (0.41)	0.75* (0.41)	0.75* (0.41)	0.78* (0.40)
Dpres vote	-0.012 (0.0086)	-0.012 (0.0086)	-0.013 (0.0090)	-0.014 (0.0088)
Spres vote	0.0035 (0.051)	-0.00025 (0.052)	-0.00075 (0.051)	0.0072 (0.047)
Vote margin	1.66*** (0.58)	1.68*** (0.59)	1.71*** (0.60)	1.62*** (0.58)
Stronger unions			0.41* (0.24)	

Weaker unions			0.19*	(0.11)
1895-10 unions				0.019 (0.070)
1910-14 unions				0.41*** (0.13)
_cons	-4.19* (2.43)	-4.50* (2.47)	-4.53* (2.48)	-4.13* (2.46)
<i>N</i>	3039	3039	3039	3039
<i>R</i> ²	.55	.55	.55	.55

Standard errors in parentheses
 * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 1: Marginal impact of union locals on OSA adoption



Notes

¹ Address delivered on March 21-22, 1907, pages 269, 272. From an address reprinted in *The Open Shop* publication. Andrew J. Allen, "The Benefits of Organization," *The Open Shop* 1907. 269-277.

² Employers' Association of Detroit, "Advertisement," *Detroit Saturday Night* 1926. This advertisement is cited in Robert W Dunn, *The Americanization of Labor: The Employers' Offensives Against the Trade Unions* (New York: International Publishers, Inc, 1927). 87-88.

³ For recent comparative political economy accounts that theorize employer associations as largely cooperative with organized labor, see Peter A. Hall and David G. E. Soskice, *Varieties of capitalism*, the institutional foundations of comparative advantage (Oxford [u.a.]: Oxford Univ. Press, 2001); Cathie Jo Martin and Duane Swank, "Does the organization of capital matter? Employers and active labor market policy at the national and firm levels," *American Political Science Review* 98, no. 4 (2004); *ibid.*; Thomas R Cusack, Torben Iversen, and David Soskice, "Economic interests and the origins of electoral systems," *American Political Science Review* 101, no. 03 (2007); Colin Crouch, *Industrial relations and European state traditions* (Clarendon Press, 1993).

⁴ Philip S Foner, *History of the Labor Movement in the United States: Postwar Struggles, 1918-1920*, vol. 8 (International Publishers Co, 1987).

⁵ Martin argues that the NAM was perceived to be too linked to the Republican Party, preventing it from being a true corporatist institution. Cathie Jo Martin, "Sectional parties, divided business," *Studies in American Political Development* 20, no. Fall (2006). The most relevant material on the electoral systems argument found in Cathie Jo Martin and Duane Swank, "The Political Origins of Coordinated Capitalism: Business Organizations, Party Systems, and State Structure in the Age of Innocence," *American Political Science Review* 102, no. 02 (2008); *The Political Construction of Corporate Interests: Coordination, Growth, and Equality* (New York: Cambridge University Press, 2012); Martin, "Sectional parties, divided business."; Cathie Jo Martin and Duane Swank, "Gonna Party Like It's 1899: Party Systems and the Origins of Varieties of Coordination," *World Politics* 63, no. 1 (2011).

⁶ Putting the US outcome in comparative context, Martin and Swank argue that proportional electoral systems promote and solidify corporatist employer associations while majoritarian electoral systems inhibit them; thus initial employer associations in the United States did not become more encompassing due to its party system. Cusack, Iversen, and Soskice propose a similar causal logic but advocate the reverse direction: in their account, different kinds of pre-existing economic coordination affect the choice of electoral system. Cusack, Iversen, and Soskice, "Economic interests and the origins of electoral systems." Both sets of explanations highlight the importance of electoral systems in the development of coordination among firms, as well as that of long-term industrial institutions that create incentives for firms to establish cooperative institutions with workers. Neither theoretical view dwells on the development of repressive employer associations. However, Swenson discusses the importance of the lockout strategy to employer associations in Sweden. Peter Swenson, *Capitalists against markets: the making of labor markets and welfare states in the United States and Sweden* (Oxford Oxford Univ. Press, 2002).

⁷ The term comes from Harris. Howell John Harris, "Employers' Collective Action in the Open-Shop Era: the Metal Manufacturers' Association of Philadelphia, c. 1903-1933," in *The Power to Manage? Employers and industrial relations in comparative-historical perspective*, ed. Steven Tolliday and Jonathan Zeitlin (London and New York: Routledge, 1991). For other accounts of sectors of firms that sought cooperation with unions (with evidence from largely before WWI), see Bowman and Carpenter. John R Bowman, *Capitalist Collective Action: competition, cooperation and conflict in the coal industry* (Cambridge University Press, 1989). Jesse Thomas Carpenter, *Competition and collective bargaining in the needle trades, 1910-1967* (Ilr Pr, 1972).

⁸ Such an organization could also have rules to constrain member firms from recognizing unions, though of course organizations varied in the degree of enforcement of such rules.

⁹ On the NMTA, see Jeffrey Haydu, "Employers, Unions, and American Exceptionalism: Pre-World War I Open Shops in the Machine Trades in Comparative Perspective," *International Review of Social History* XXXIII, no. 1 (1988); "Two Logics of Class Formation? Collective Identities Among Proprietary Employers, 1880-1900," *Politics & Society* 27, no. 4 (1999); Chad Pearson, *Reform Or Repression: Organizing America's Anti-Union Movement* (University of Pennsylvania Press, 2016). For the most detailed accounts of the MMA, see Howell John Harris, *Bloodless Victories: The Rise and Fall of the Open Shop in the Philadelphia Metal Trades, 1890-1940* (Cambridge: Cambridge University Press, 2000); "Employers' Collective Action in the Open-Shop Era: the Metal Manufacturers' Association of Philadelphia, c. 1903-1933."; *ibid.*; "Getting It Together: The Metal Manufacturers' Association of Philadelphia, c. 1900-1930," in *Masters to Managers: Historical and Comparative Perspectives on American Employers*, ed. Sanford Jacoby (New York: Columbia University Press, 1991). For a summary of the

response of the MMA to local IMU strikes, see the excerpt in Aaron Brenner, Benjamin Day, and Immanuel Ness, *The encyclopedia of strikes in American history* (ME Sharpe Incorporated, 2009).

¹⁰ Sidney Fine, *Without Blare of Trumpets: Walter Drew, the National Erectors' Association, and the Open Shop Movement, 1903-57* (Ann Arbor: University of Michigan Press, 1995).

¹¹ Harris, "Getting It Together: The Metal Manufacturers' Association of Philadelphia, c. 1900-1930."; *Bloodless Victories: The Rise and Fall of the Open Shop in the Philadelphia Metal Trades, 1890-1940*. For a description of the open shop ideology at work in Worcester, Massachusetts, see Chad Pearson, "Making the 'City of Prosperity': Engineers, Open-Shoppers, Americanizers, and Propagandists in Worcester, Massachusetts, 1900-1925," *Labor History* 45, no. 1 (2004).

¹² She also finds that craft conservatism, ethnic diversity, and industrial diversity were less important factors explaining union successes and survival. Voss finds that local employer associations explains the reduction in KL presence in New Jersey, between 1889 and 1895. K Voss, "The making of American exceptionalism," *The Knights of Labor and Class Formation in the Nineteenth Century*, Ithaca, NY (1993). This emphasis on employer repression as a cause of weakness in the Knights of Labor contrasts with the previous emphases on variables related to the influx of unskilled workers and craft consciousness. The classic arguments are in Philip Sheldon Foner, *History of the labor movement in the United States: from colonial times to the founding of the American Federation of Labor*, vol. 1 (International Publishers Co, 1947); Selig Perlman and Philip Taft, *History of Labor in the United States, 1896-1932* (New York: Macmillan Company, 1955).

¹³ For other influential scholarship on the consequences of such organizations see, Sanford Jacoby, "American exceptionalism revised: the importance of management," in *Masters to Managers: Historical and Comparative Perspectives on American Employers*, ed. Sanford Jacoby (New York: Columbia University Press, 1991); Gerald Friedman, *State-Making and Labor Movements* (Ithaca: Cornell University Press, 1998); Stephen Tolliday and Jonathan Zeitlin, "Employers and industrial relations between theory and history," in *The Power to Manage? Employers and industrial relations in comparative-historical perspective*, ed. Stephen Tolliday and Jonathan Zeitlin (London and New York: Routledge, 1991); Jonathan Zeitlin, "The Triumph of Adversarial Bargaining: Industrial Relations in British Engineering, 1889-1939," *Politics & Society* 18, no. 3. This literature on the importance of different institutions and instruments of repression, including the limited research on collective employer repression, is part of a larger canonical historiography that explains why the US lacked a relatively strong labor movement. See Werner Sombart, *Why is there no socialism in the United States?* (ME Sharpe, 1976); R Archer, *Why is there no labor party in the United States?* (Princeton Univ Pr, 2007). Such reasons include those related to political culture, ethnic divisions and immigration, relative prosperity; timing of enfranchisement; high religiosity; craft versus industrial sector divisions within the working force; geographical size inhibiting collective action; and size of labor force. Addressing the relative role of employer repression to these other explanations is beyond the scope of this article, though many scholars argue that such instruments and institutions of repression undoubtedly played a strong role in the stunting of US labor mobilization.

¹⁴ Forbath and Orren focus on the hostile legal environment. William E Forbath, *Law and the shaping of the American labor movement* (Harvard University Press, 1991); DR Ernst, *Lawyers Against Labor: From Individual Rights to Corporate Liberalism* (Univ of Illinois Pr, 1995); Karen Orren, *Belated feudalism: Labor, the law, and liberal development in the United States* (Cambridge University Press, 1992). On the role of state and federal government and their role in the high levels of violence resulting from labor repression, see the classic accounts by Taft and Ross, and Adams. Philip Taft and Philip Ross, "American Labor Violence: Its Causes, Character, and Outcome," in *The History of Violence in America: Historical and Comparative Perspectives*, ed. Hugh Davis Graham and Ted Robert Gurr (New York: Frederick A. Praeger, 1969); HM Gitelman, "Perspectives on American Industrial Violence," *The Business History Review* 47, no. 1 (1973); Graham Jr Adams, *Age of Industrial Violence 1910-15: The Activities and Findings of the United States Commission on Industrial Relations* (New York and London: Columbia University Press, 1966). An enormous literature links such repression to long term union inhibition. For a sample of the most important recent works, see Archer, *Why is there no labor party in the United States*; Michael Mann, "The Sources of Political Power," (Cambridge: Cambridge University Press, 1993); Friedman, *State-Making and Labor Movements*; Jacoby, "American exceptionalism revised: the importance of management."; David Montgomery, *The fall of the house of labor: the workplace, the state, and American labor activism, 1865-1925* (Cambridge University Press, 1989).

¹⁵ See the classic works of *The fall of the house of labor: the workplace, the state, and American labor activism, 1865-1925*; Perlman and Taft, *History of Labor in the United States, 1896-1932*. Letwin describes the judicial repression unions faced. William Letwin, *Law and Economic Policy in America* (Yale Law Journal, 1965).

¹⁶ On the actions of major firms such as US Steel, many accounts discuss their role in victories in major strikes and the resulting setbacks for unions in the late nineteenth and early twentieth century. See David Brody, *Labor in*

crisis: The steel strike of 1919 (University of Illinois Press, 1987); Edward W Bemis, "The homestead strike," *The Journal of Political Economy* 2, no. 3 (1894); Paul Krause, *The Battle for Homestead, 1880-1892: Politics, Culture, and Steel* (University of Pittsburgh Press, 1992). The role of such firms in strikebreaking and strike prevention was quite large in the late nineteenth century; one study estimates that between 1881 and 1900, firms hired over 500,000 replacement workers of the 4.8 million who went on strike; strikebreakers were used in 40 percent of strikes in this period and substantively increased firms' chances of defeating strikes. Joshua L Rosenbloom, "Strikebreaking and the Labor Markets in the United States, 1881-1894," *Journal of Economic History* 58, no. 1 (1998). During this period with few sector-level agreements between firms and workers, unions struck to attain bargaining rights, and both large and small firms responded with repressive strategies. These strategies of firms and political actors could also act in tandem. For example, the judicial apparatus and contested legal status of unions after 1890 also greatly helped firms inhibit unionization. For an overview of this process, see Derek C Bok, "Reflections on the Distinctive Character of American Labor Laws," *Harvard Law Review* 84, no. 6 (1971). Following the passage of the Sherman anti-trust act in 1890, a long legal battle persisted in state and federal courts between firms and unions on whether unions themselves were illegal agreements, and whether strikes were legal; firms could legally (and of course did) file injunctions against unions in anticipation of a strike, resulting in costly battles and delays for unions. This logic is explicated with many examples in Fitch and Lewin. John A Fitch, *The Causes of Industrial Unrest* (New York and London: Harper & Brothers, 1924); Letwin, *Law and Economic Policy in America*.

¹⁷ Martin discusses the turn of the NAM towards a more neo-liberal ideology but does not explicitly address the rise of other anti-labor movements or repression as a strategy before this transition. Her excellent account focuses on the link between the Republican Party and the NAM at the national level. Martin, "Sectional parties, divided business." Martin and Swank discuss the rise of the open shop movement at the local level outside of the industrial northeast, but do not focus on the relevant local-level variation in the movement. Martin and Swank, *The Political Construction of Corporate Interests: Coordination, Growth, and Equality*: 106.

¹⁸ Bernstein notes that this period saw the advent company-level unions, to blunt the organizational impact and appeal of other unions.

¹⁹ The role of anti-labor firm activity at the local level is particularly relevant for firms that could not for example easily re-locate, particularly for small and medium-sized enterprises. Gordon analyzes the growth of cities as a function of capitalist development and accumulation of capital power, but does not discuss the role of organization among such firms. David Gordon, "Capitalist development and the history of American cities," *Marxism and the Metropolis* (1978).

²⁰ For a different application of how the federated structure of interest groups can play developmentally into the politics of state formation, see Skocpol. Theda Skocpol, *Protecting soldiers and mothers* (Harvard University Press, 1995).

²¹ Gordon provides a theoretical account of how capitalist development and urban growth are intrinsically linked, but does not discuss the specific role of firm repression of workers or of collective repression. Gordon, "Capitalist development and the history of American cities."

²² A key theoretical monograph on the collective action of firms is by Streeck and Schmitter, which makes similar assumptions about employer associations as those works in the previous note (largely ignoring the activities of historical repressive associations). I draw on insights from this work later in the theoretical discussion. Philippe C Schmitter and Wolfgang Streeck, "The Organization of Business Interests: Studying the Associative Action of Business in Advanced Industrial Societies," in *MPIfG Discussion Paper* (Cologne 1991).

²³ Snyder documents the relevance of exploiting sub-national variation within a polity to test general theories, as many national-level factors can be held fixed. Richard Snyder, "Scaling down: The subnational comparative method," *Studies in comparative international development* 36, no. 1 (2001).

²⁴ See the accounts provided by Hurvitz and Wakstein. Allen M Wakstein, "The Origins of the Open-Shop Movement, 1919-1920," *Journal of American History* 51, no. 3 (1964).; "The Open-Shop Movement, 1919-1933" (University of Illinois, Urbana, 1961). A more recent discussion of select open shop movements is found in Chad Pearson, ""Organize and Fight": Communities, Employers, and Open-shop Movements, 1890--1920," (ProQuest, 2008). Allen M Wakstein, "The national association of manufacturers and labor relations in the 1920s," *Labor History* 10, no. 2 (1969). For discussion of the industrial conference, see Haggai Hurvitz, "Ideology and industrial conflict: President Wilson's first industrial conference of October 1919," *Labor History* 18, no. 4 (1977). Hurvitz's evidence on the positions of different representatives comes from the *Proceedings of the First Industrial Conference, October 6 to 23 1919* (Washington, D.C., 1920).

²⁵ Representatives from firms included Bethlehem Steel, DuPont, General Motors, International Harvester, General Electric, and Standard Oil of New Jersey. See Hurvitz, "Ideology and Industrial Conflict: President Wilson's First

Industrial Conference of October 1919."

²⁶ Hurvitz, "Ideology and Industrial Conflict: President Wilson's First Industrial Conference of October 1919," 519.

²⁷ Hurvitz, "Ideology and Industrial Conflict: President Wilson's First Industrial Conference of October 1919," 520. The original source of the quotation is in the *Proceedings of the First Industrial Conference, October 6 to 23 1919*, 196.

²⁸ Hurvitz, "Ideology and Industrial Conflict: President Wilson's First Industrial Conference of October 1919," 520. There were other third-party representatives appointed by President Wilson, but the main issues of contention were discussed by the organizations representing unions and employers. Firm representatives also advocated another strategy to undermine unions, by using "shop councils" which would be forums for workers to air grievances, but they would not be able to call strikes or make decisions without managerial consent. Employer associations also argued that firms could solve labor problems locally; they opposed the AFL's vision of large scale labor unions bargaining on an equal footing with employer associations. Firms also expressed anti-union preferences through their role in the National Civic Federation, which had minimal impact on actual employer association policy. Marguerite Green, *The National Civic Federation and the American Labor Movement* (Washington, DC: The Catholic University of America Press, 1956).

²⁹ Dunn, *The Americanization of Labor: The Employers' Offensives Against the Trade Unions*: 22.

³⁰ Foner, *History of the Labor Movement in the United States: Postwar Struggles, 1918-1920*, 8.

³¹ Pearson, *Reform Or Repression: Organizing America's Anti-Union Movement*.

³² "Wages Working to Normal Basis," *Iron Trades Review*, January 6 1921.

³³ Dunn, *The Americanization of Labor: The Employers' Offensives against the Trade Unions*, 22.

³⁴ Foner, *History of the Labor Movement in the United States: Postwar Struggles, 1918-1920*, 8: 170.

³⁵ Swenson discusses the logic and use of these lockouts, and mixed results in collective action success in the United States. Swenson, *Capitalists against Markets*. Swenson also discusses the conflicts between employers over union recognition, such as between manufacturing and building trades, although there were many instances of shared anti-union sentiment across industries, within OSAs. Swenson, *Capitalists against markets: the making of labor markets and welfare states in the United States and Sweden*: 175-77. Harris describes the lockout use in Philadelphia. See Harris, *Bloodless Victories* and Harris, "Getting It Together: The Metal Manufacturers' Association of Philadelphia, c. 1900-1930.", 111-132. The Senate committee hearings chaired by Senator Robert La Follette provide much detail about the use of lockouts, labor spies, and blacklists. See U.S. Congress, Senate, Subcommittee of the Committee on Education and Labor. Hearings Pursuant to S. Res. 266, Violations of Free Speech and Rights of Labor. 74th-76th Cong., (1936-1940). See also Robert Weiss, "The emergence and transformation of private detective industrial policing in the United States, 1850-1940," *Crime and Social Justice*, no. 9 (1978).

³⁶ Bernstein quotes the historian Bonnett's summary of their actions, as "the belligerent associations may fight the union in actual battles with machine guns; it may oppose the union in legislative and political matters; it may combat the union strikes; it may carry on a continual propaganda against the union in every particular or only against certain practices...." Irving Bernstein, *The Lean Years: A History of the American Worker* (Boston: Houghton Mifflin, 1960). 153-54.

³⁷ Wakstein, "The Origins of the Open-Shop Movement, 1919-1920."; Brenner, Day, and Ness, *The encyclopedia of strikes in American history*.

³⁸ Wakstein, "The Origins of the Open-Shop Movement, 1919-1920," 462.

³⁹ *ibid.*, 463-64. The San Antonio association was incorporated by the state in June 1919, and represented all interests except for retail merchants. W.S. Mosher, "Open Shop in the Southwest," *The Open Shop Review* 1921. See also Foner, *History of the Labor Movement in the United States: Postwar Struggles, 1918-1920*, 8: 287.

⁴⁰ Bernstein, *The Lean Years: A History of the American Worker*: 154.

⁴¹ Bernstein also describes employer association and NMTA victories against IAM locals in Cincinnati during this period *ibid.*, 165.

⁴² Wakstein, "The Open-Shop Movement, 1919-1933" ; "Public Sponsors Open Shop Associations," *Iron Trades Review*, November 11 1920; "Declare for Open Shop in 78 Cities," *Iron Trades Review*, August 12 1920. The NMTA, NEA, and NAM all supported the open shop. Associations varied in whether they were officially sponsored by the state; for example, the OSA of Jefferson County was chartered by state.

⁴³ Wakstein, "The Open-Shop Movement, 1919-1933"

⁴⁴ Only after the reaction at the local level did the NAM take on a leadership role. Elbert Gary of US Steel supported the open shop after the 1919 steel strike. Wakstein and Foner both note some preliminary patterns in the movement's initial diffusion, but the data presented are not systematic, nor do they address the question of why some localities had such movements. Wakstein, "The Origins of the Open-Shop Movement, 1919-1920.",

⁴⁵ Using county-level OSAs as a proxy of the degree of repressive employer coordination likely underestimates

such coordination, because there is evidence that such employer associations formed in counties but were not reached by the AEI survey discussed below. This type of local level employer coordination differs from other important trade associations that formed in the early twentieth century to share information and ultimately innovate in areas such as cost accounting. Berk and Schneiberg in a number of innovative articles examine the development of such associations, particularly in the printers' industry. They discuss the importance of these firms learning from previous mistakes and theorize them as alternative forms of employer coordination. In this study, however, I focus on the determinants of one specific, albeit consequential, type of anti-union association that adopted the above repressive strategies; the question is what would influence firms to decide to form an association that advocated the open shop and employ strategies to maintain it. Gerald Berk and Marc Schneiberg, "Varieties in Capitalism, Varieties of Association: Collaborative Learning in American Industry, 1900 to 1925," *Politics & Society* 33, no. 1 (2005); "From Categorical Imperative to Learning by Categories: Cost Accounting and New Categorical Practices in American Manufacturing, 1900-1930," *Research in the Sociology of Organizations* 31(2010).

⁴⁶ Because the question of interest is in local-level variation, theorizing is partly constrained by what characteristics should be relevant at the local or country level.

⁴⁷ Streeck and Schmitter's influential essay on business associations posits numerous "logics of membership" that detail different considerations for the formation and influence of sector-level considerations; some of the theoretical variables discussed in this section follow from their architecture, although they do not focus as closely on explaining cross-sectional variation. That monograph presents a complicated theoretical architecture but is oriented towards contemporary economies and does not focus on the particular issue of repressive associations, nor does it present specific historical evidence for the many theoretical claims.

⁴⁸ These families are not mutually exclusive of course, particularly as the political context may shape firm incentives by posing a distinct redistributive threat to firms via government intervention. There are other variables that cannot be easily tested using locality-level data, such as theories related to the importance of external interlocutors and internal organization issues. Future work should more carefully distinguishing among organizational issues, external interlocutors, and political contexts; doing so is difficult with locality-level data.

⁴⁹ The hypotheses that follow may not apply to other types of associations, as discussed for example in Berk and Schneiberg. Berk and Schneiberg, "Varieties in Capitalism, Varieties of Association: Collaborative Learning in American Industry, 1900 to 1925."

⁵⁰ Conell and Voss discuss how previous organizational experiences of Knights of Labor locals affected subsequent types of organization; similar hypotheses have not been tested for employer associations. Carol Conell and Kim Voss, "Formal Organization and the Fate of Social Movements: Craft Association and Class Alliance in the Knights of Labor," *American Sociological Review* 55, no. 2 (1990).

⁵¹ Schmitter and Streeck, "The Organization of Business Interests: Studying the Associative Action of Business in Advanced Industrial Societies."; Mancur Olson, *The Logic of Collective Action* (1968). Note this hypothesis ignores the relative size of firms, as larger firms could bear additional costs provide public goods of associations.

⁵² This is also emphasized in Streeck and Schmitter's consideration of the logic of membership, although they do not frame this in the context of historical coordination.

⁵³ Within individual sectors, Derber documents the importance of homogeneity across firms. Milton Derber, "Employers Associations in the United States," in *Employers Associations and Industrial Relations*, ed. John P. Windmuller and Alan Gladstone (Oxford: Clarendon Press, 1984). The evidence presented by Schneiberg and Berk, although focusing on a different kind of business association, also points to the importance of similarity in product and labor markets across firms as facilitating the formation of trade associations. Berk and Schneiberg, "Varieties in Capitalism, Varieties of Association: Collaborative Learning in American Industry, 1900 to 1925." Streeck and Schmitter also pose the theoretical possibility that "too much" homogeneity across firms can also inhibit collective action, as that would be linked to increased intensity in price competition, reducing incentives to cooperate. This observation was not linked to the probability of observing such cooperation within a given locality, however. Schmitter and Streeck, "The Organization of Business Interests: Studying the Associative Action of Business in Advanced Industrial Societies." See also McCaffree 1962 for discussion of this point. Kenneth M. McCaffree, "A Theory of the Origin and Development of Employer Associations" (paper presented at the Proceedings of the 15th Annual Meeting of the Industrial Relations Research Association Pittsburgh, PA, December 27-28 1962).

⁵⁴ Another possibility is that unions that have more "radical" demands could be viewed to be more of a threat to firms, and thus more likely to induce cooperation among firms. They are only more extreme in the sense that they supported greater redistribution for workers and plausibly posed more of a threat to firms. I discuss this in the evidence in the notes below.

⁵⁵ Major sector level associations such as the NEA supported labor policies in the Republican Party platform

beginning in 1908. As Martin notes the NAM became closely aligned with the Republican Party and remained so after its turn towards hostile policies against organized labor. Martin, "Sectional parties, divided business." Such associations opposed legislation on the eight-hour day, opposed legalization of boycotts, supported legislation that would allow firms to pursue injunctions against unions in anticipation of strikes, and did not want unions exempted from the Sherman anti-trust act, all goals more supported by the Republican Party at the time. See documentation from the NEA and local level associations from the Drew Collection at Bentley Library, Roll 20. The NEA also opposed the Clayton Act and related perceived anti-business legislation, mentioning Democratic support for it and related legislation. Walter Drew, "Letter to members of the National Erectors' Association," (Ann Arbor: Bentley Library, University of Michigan, 1912). While there was local-level variation in employer associations' explicit opposition to state-level Democratic candidates, such associations generally opposed legislation advocated by the party during this time period and were of course hostile to union-endorsed candidates. For examples of both, see electoral discussions by the NMTA. Fred W Job, "The Mythical Labor Vote," *The Bulletin of the National Metal Trades Association* 1904., and discussion of legislation by the AEI. Andrew J Allen, "Minutes of Board Meeting: Associated Employers of Indianapolis, Inc.," (Indiana Historical Society 1930).

⁵⁶ Of course there was much variation in the relationship between the Democratic Party and local level union positions, even though after 1908 the Democratic Party platform became much more pro-union. Greene describes the different goals, practices, and ideologies of local-level affiliates of the AFL and the national office; her account shows how the AFL national office slowly came to support the Democratic Party after 1908, and how such participation in national-level politics and occasional support for Democratic candidates alienated or divided many local-level unions because some unions allied with Socialist or other more left-wing political parties. Julie Greene, *Pure and simple politics: the American Federation of Labor and political activism, 1881-1917* (Cambridge Univ Press, 1998).

⁵⁷ W. Korpi, *The working class in welfare capitalism* (Routledge & Kegan Paul Boston, 1978).

⁵⁸ Greene, *Pure and simple politics: the American Federation of Labor and political activism, 1881-1917*.

⁵⁹ A reasonable alternative hypothesis is that a less left-wing electoral climate could mean that the local population or their elected officials would be willing to support actions by employer organizations (such as lockouts or importation of substitute workers during a labor conflict). Therefore, left-wing electoral support could be negatively correlated with more employer organizations. Political support for employer organizations could take the form of pro-firm or anti-union legislation, or executive intervention in industrial disputes. This support for employer organizations could take place an electoral environment that is more hostile to the goals of organized labor. The empirical test below helps arbitrate between these competing hypotheses.

⁶⁰ The AEI's survey data are discussed in several editions of the *Iron Trades Review*. The existence of an OSA in a county does not indicate that the city government or the electorate chose to have an OSA; it only indicates the collective decision of firms within a given locality to form an OSA.

⁶¹ This results in a reduced number of observations because some counties have more than one city which had an active OSA). Unfortunately the sampling methodology used by the AEI to form their list of active OSAs is not available.

⁶² The data are from all the associations described in Clarence E. Bonnett, *History of Employers' Associations in the United States*, First ed. (New York: Vantage Press, 1956). To my knowledge this data compiled by Bonnett has not been used in this type of analysis before.

⁶³ Unless otherwise noted, all county level economic or structural variables come from US Census Data. See Michael R. Haines, and the Inter-university Consortium for Political and Social Research. , "Historical, Demography, Economic, and Bibliographic Citation: Social Data: the United States, 1790-2000," ed. Inter-university Consortium for Political and Social Research (Ann Arbor: MI2004).

⁶⁴ Miriam King et al., "Integrated Public Use Microdata Series, Current Population Survey: Version 3.0. [Machine-readable database].", ed. Minnesota Population Center (Minneapolis, MN: Minnesota Population Center, 2010). The results below are similar regardless of the construction of the concentration measure.

⁶⁵ Jonathan Garlock, "Knights of Labor Assemblies, 1879-1889," (Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2009).

⁶⁶ The industries or crafts where union locals were coded are: Boiler Makers, Boot and Shoe makers, Bricklayers, Carpenters and Joiners, Cigar makers, Coopers, Flint glass workers, Gold beaters, Hod Carriers, Machinists (IAM) , Electrical Workers (IBEW) , Ladies Garment Workers (ILGWU), Molders (IMU) , Typographers (ITU) , Leather workers, Metal polishers, Painters, Postal workers, Pattern makers, Sheetmetal workers, Stove mounters, Amalgamated Wood Workers. The states for which county level data on union local presence were available are: Alabama, Arkansas, Florida, Georgia, Illinois, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas, Virginia, Wisconsin. This data were shared by Gerald Friedman.

⁶⁷ Unfortunately, annual data do not exist. Nor do data on union density by county level exist for this period. But the data at the time-period level capture much of the threat posed by unions to firms by documenting the number of locals in different industries.

⁶⁸ Similarly, if a county had one union local in the same industry across all three time periods, its value on the *Union local* variable would be three.

⁶⁹ Note that the effect of this measure could still be imprecisely estimated beyond a certain range because not many counties have large numbers of different industries represented, as most counties have a few industries represented and almost one union local per industry.

⁷⁰ I use this data on conflict due to its geographic precision and many characteristics of strikes noted. "Report of the Secretary of the Interior Being Part of the Message and Documents Communicated to the Two Houses of Congress at the Beginning of the First Session of the Fiftieth Congress," ed. Secretary of Interior (Washington: Government Printing Office, 1887); Commissioner of Labor, "Tenth Annual Report of the Commissioner of Labor. Strikes and Lockouts. Volume 1," ed. Commissioner of Labor (Washington: Government Printing Office, 1896).

⁷¹ The union locals with greater voting weight in the AFL and in the dataset are Boiler Makers (2.7%), Carpenters and Joiners (8%), Machinists (IAM) (8.7%), Electrical Workers (IBEW) (3.6%), Ladies Garment Workers (ILGWU) (2.7%), and painters (2.7%). Results do not change if a lower threshold of votes is chosen.

⁷² Standard errors are clustered by state. One methodological concern could be that given that fewer data are available regarding county-level union presence, there could be selection bias when estimating the effect of union presence on OSA adoption. It could be the case that for the counties for which data on union presence were available are also counties in which OSAs are adopted, but it may not be the case that the union presence has an independent causal effect on OSA adoption. To address the possible selection issues, I also estimate a Heckman probit model with sample selection. This is the equivalent of a Heckman selection model, except the model consists of a probit model in the selection equation, and a probit model in the outcome equation. In this model, the selection equation has the binary dependent variable indicating if data were available on union presence or not for a specific county; the main dependent variable is still OSA presence in a county. The intuition is that some of the economic independent variables might explain why union data are more available in certain counties. In the Heckman probit model, the statistical significance of the parameter estimate of ρ is the correlation of errors between the two outcomes. If ρ is zero, then the unobserved variables that affect whether union data are available for a county are independent of the unobserved variables which might affect adoption of an OSA. In all specifications of the selection model, ρ was statistically insignificant indistinguishable from zero, and the coefficient on both the union threat variables was the same. I therefore report results of the standard probit model. Interested readers should consult Dubin and Rivers for details on the model. Jeffrey A Dubin and Douglas Rivers, "Selection bias in linear regression, logit and probit models," *Sociological Methods & Research* 18, no. 2-3 (1989). See Berinsky for an application of the model. Adam J Berinsky, "The two faces of public opinion," *American Journal of Political Science* (1999). Note 73 also discusses a simple method of dealing with missing data on the independent variables without listwise deletion of data, which the following analyses conduct.

⁷³ Overall, about half of all counties, 52 percent, had at least one KL assembly, and the average number of KL locals was 3.2.

⁷⁴ 24 percent of counties experienced at least one strike in the lagged time period.

⁷⁵ Due to missing data for some of the independent variables, I present models that include binary indicators of missing data and recode counties missing on each of the control variables as 0 on those variables. This prevents listwise deletion of data, while allowing for an intercept shift for counties with missing data. Omission of counties with missing data does not substantively change the coefficients. The results are substantively similar using probit estimations. In all the tables that follow, all models control for both missing data binary indicators. All models also control for a dummy indicating county presence in a state in the geographical South (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia); the binary variable coefficient is not precisely estimated. The results are the same if the estimations control for each economic indicator separately.

⁷⁶ This non-effect of the number of firms could have several interpretations. A higher number of firms in a county would make it more difficult for a collective employer association to form. But it is possible that such a relationship could be non-linear: a small number of firms may decide they are capable of repressing workers without the need for a formal open-shop association, and thus not form an OSA. Conversely, if there are a large number of large firms, they may be better able to overcome collective action problems. The number of firms does not capture the relative sizes of firms, which would be a preferable but unavailable county-level proxy for difficulty of collective action as a predictor for formation of an employer organization

⁷⁷ The estimated marginal effect of a new *industry* in a county is greater than the estimated impact of a new union

local. Each additional local raises the probability of OSA adoption by about one percent, whereas each additional industry does so by nearly 1.5 percent.

⁷⁸ However, the marginal impact of this variable is much smaller; complete previous success in strikes only raises the probability of OSA adoption to .02, though this is double the probability of a county with no successful strikes.

⁷⁹ As an alternative consideration of union threat, I also coded sums of unions differentiating between more versus less extremist unions. Because systematic data on county-level union variation in union-local characteristics are not available, I calculate a rough proxy based on the union's voting positions in important industrial-relations resolutions raised at the annual AFL conventions. I use the resolutions highlighted by Marks as being particularly important to the AFL. Gary Marks, *Unions in Politics: Britain, Germany, and the United States in the Nineteenth and Early Twentieth Centuries* (Princeton, NJ: Princeton University Press, 1989). These propositions were whether the AFL should: engage in more political activity (1894); organize to attain more political and economic power (1902); support legislation on the eight-hour working day (1915); be opposed to the National Civic Federation and labor's connection with it (1911). I code unions that had at least 50 percent of their delegates at the AFL convention vote for at least one of these measures and did not vote against any of the measures, as being "more extremist" unions. They are only more extreme in the sense that they supported greater redistribution for workers and plausibly posed more of a threat to firms. I code unions that had at least 50 percent of their delegates at the AFL convention vote against one of the measures as "more moderate" unions. Seven unions had recorded votes on these issues that fall into neither category; they were not coded as more extreme or moderate. Of course extremism is relative, as these measures were far less extremist for example than labor parties' resolutions to engage in mass strikes, for example. Marks labels some of these resolutions as supporting "more radical" behavior. The set of more extremist unions include: goldbeaters, pattern makers, carpenters, brewers, garment workers, sheet metal workers, bricklayers, leather makers, international molders union, metal workers, and stove mounters. The set of more moderate unions include: boot makers; machinists; cigar makers; international typographers union. The following unions were classified as neither, either because of lack of data on voting or because of a mixed voting record on the four resolutions: boilermakers; coopers; flint glass workers; gold beaters; hod carriers; postal workers; amalgamated wood workers. Of course extremism is relative, as these measures were far less extremist for example than labor parties'. The results show that the aggregate threat posed by more extreme unions is positively correlated with OSA adoption, versus almost no effect for the threat posed by more moderate unions, regardless if we measure the aggregate union threat by number of locals or number of industries. The estimated marginal effect for an additional "extreme" union is near two percentage points, though the marginal effect for a similar union local is small (less than one percentage point, though still larger than zero). This is suggestive evidence that a type of union—a union whose delegates are more likely to support pro-worker redistribution measures—is correlated with an increased probability of OSA adoption. These effects remain positive but become less precise once we consider the marginal impact of more than four unions. These results are available upon request.

⁸⁰ We do not observe the same results when we consider number of union *locals* that are representing stronger versus weaker industries. This might be because there are fewer "stronger" unions in this dataset, as localities with union locals that have lower voting weight within the AFL in fact have more such locals; this is indicated by the fact that overall union local presence is correlated with the total sum of locals representing "weaker" unions. Another possibility is that the marginal impact of a new industry represented by a stronger union matters more, not just the presence of an additional local in such an industry.

⁸¹ Similar marginal effects are estimated if we examine the impact of more recent union industries versus the threat of industries in the previous period.

⁸² I also test hypotheses about the impact of *changes* in aggregate union threat, measured by both local and industrial sums, between the period 1890-1910 and the 1910-1914. I code a variable that captures the change in number of union locals between the first two time periods and third time period (between 1890-1910, and 1910-1914). For each industry for which there are data in these two time periods, I calculate the difference in number of union locals (most counties either experienced zero growth or some positive growth in the number of new locals). The sum of the growth in union locals across all industries represents the change in aggregate union threat. Using this change in union threat variable, I construct simple binary variable that indicates whether the county experienced any increase in union growth between the period 1890-1910 and 1910-1914. The variable is 0 if there was no growth and 1 if there was at least one more local in the sum. Neither the continuous nor binary indicators of union growth are correlated with OSA adoption. Even if counties experienced a positive change in union presence between these two periods, the cross-sectional differences in amount of union locals or different industries matters more for adoption of an OSA.

⁸³ See Pearson, "" Organize and Fight": Communities, Employers, and Open-shop Movements, 1890--1920." I also estimate all models in Table 1 with the economic variables normalized by number of workers in the county (as

opposed to per capita); the coefficients on both the union variables do not substantively change and remain statistically significant. The inclusion of other economic controls—percent of owned homes, amount of manufacturing value added—does not affect the results.

⁸⁴ These results also challenge the alternative hypothesis that an increased number of industries represented by union locals does not reduce the threat because of difficulty in cooperation among unions. One might expect that this increased number would lead to higher fractionalization of the labor force and thus a lower threat from workers, but this positive correlation does not support that view.

⁸⁵ While the specific findings about the role of union threats are limited to a subset of US states, these states (covering the Midwest, for example), were industrially important and were home to many of the important battlegrounds of organized labor.

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Appendix 1: Descriptive Statistics

	Mean	Standard Deviation
Population, logged	9.8	1.04
Workforce size, logged	5.8	2.1
Output per worker, logged	8.7	.7
Number of firms, logged	3.6	1.2
Industrial concentration	.47	.081
Percent of counties with strikes 1880-1895	23.8	
Percent of counties with at least one KL local 1880-1890	51.7	
Proportion of strikes successful for unions, 1880-1895 (conditional on a strike)	.37	.33
Democratic Presidential vote share, 1920	45.0	22.8
Total sum of union locals, 1890-1914	7.4	9.6
Total sum of distinct industries represented by unions, 1890-1914	4.6	4.6

Appendix 2: Estimating Impact of Binary Presence of Separate Industries

	(1)
boilhind	-0.34 (0.45)
bootind	0.24 (0.83)
brickind	0.62 (0.46)
carpind	-0.45 (0.67)
cigarind	1.65*** (0.41)
coopind	1.26* (0.67)
gbind	2.00** (0.82)
hodind	0.81* (0.44)
ibewind	1.83*** (0.58)
iamind	1.34* (0.73)
ilgind	1.61* (0.91)

imuind	0.45 (0.56)
ituind	-0.30 (0.62)
lthrind	0.91*** (0.29)
metalind	1.19** (0.52)
paintind	0.47 (0.60)
postind	-0.64 (0.42)
printind	2.18 (1.37)
shmetind	-0.018 (0.46)
stoveind	0.68 (1.07)
woodind	-0.30 (0.55)
_cons	-4.32*** (0.58)
<i>N</i>	3079
<i>R</i> ²	.18

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$