

Fairness perceptions and union intentions among U.S. workers: Evidence of a cognition action gap

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Abstract

Public approval of unions in the United States has risen to levels not seen in decades, yet union membership remains near historic lows. This study examines whether workers' perceptions of organizational justice explain this representation gap. Drawing on organizational justice theory and the concept of union instrumentality, we surveyed 600 U.S. wage and salary workers, evenly divided between union members and nonmembers, and retained 593 usable responses. Analysis proceeded in three stages: descriptive and Mann Whitney Wilcoxon comparisons, stability selected LASSO network analysis, and confirmatory factor analysis followed by multigroup structural equation modeling with invariance testing. Distributive justice and union instrumentality were empirically indistinguishable and were combined into a single Justice Instrumentality construct. Procedural justice strongly predicted Justice Instrumentality (standardized $\beta = .76$ to $.80$), but neither procedural justice nor Justice Instrumentality significantly predicted union orientation, and explained variance in union orientation was minimal ($R^2 \approx .01$). Structural paths were equivalent across union and nonunion groups. These results suggest that fair procedures shape beliefs about what unions can deliver without translating into pro union intentions, a pattern we term the cognition action gap. Because the design is cross sectional and measures intentions rather than behavior, the gap should be treated as a proposition for longitudinal testing. We discuss implications for employers and for union organizing strategy.

Keywords: Union Perceptions, Procedural Justice, Distributive Justice, Union Instrumentality, Union Intentions, Cognition Action Gap, Representation Gap, Structural Equation Modeling, Employment At Will, Labor Relations

JEL Classification: J51, J53, D63

1. Introduction

Public attention to labor, high-profile strikes, new campaigns in service and tech, and growing discourse on job quality has revived questions about how workers themselves perceive unions. Yet perceptions are not the same as membership. The United States combines relatively strong approval of unions with relatively low union density. Understanding this divergence requires tracking attitudes, demographics, workplace context, and institutional frictions. The increase in management and legislator support for Employment At Will (EAW) restrictions on employees is also a concern. Recent federal statistics and major nonpartisan polls provide support for such an assessment (Bureau of Labor Statistics, 2024; Gallup.com, 2024; Pew Research Center, 2023). This study contributes to the labor relations and human resource management literature in several important ways. First, it advances understanding of the persistent gap between public support for labor unions and comparatively low levels of union membership in the United States. Prior research has examined union decline primarily through structural explanations, including globalization, changes in industry composition, declining manufacturing employment, employer resistance, and legislative constraints on organizing (Farber & Western, 2001; Freeman & Rogers, 1999; Kochan et al., 2019). However, fewer studies have examined how contemporary workers' perceptions, beliefs, and intentions regarding unions influence the possibility of future collective action. By focusing on employee attitudes and behavioral intentions, this study expands the literature beyond traditional measures of union density and membership outcomes. Second, this research contributes to the literature by examining the psychological and attitudinal processes that shape employees' willingness to support or join labor organizations. Existing studies have demonstrated that union participation is influenced by perceptions of fairness, job insecurity, dissatisfaction with management practices, workplace voice, and expectations regarding union effectiveness (Budd, 2004; Premack & Hunter, 1988). However, the relationship between contemporary workplace experiences and employees' desire or intention to seek union representation remains underexplored. This study addresses this gap by investigating how employee perceptions of workplace conditions, management practices, and employment protections relate to union support and organizing intentions.

Third, this study extends research on Employment At Will (EAW) by exploring how perceptions of employment protections may influence attitudes toward collective representation. Although EAW has historically provided employers broad discretion to terminate employees without contractual limitations, scholars have debated whether such flexibility creates employee vulnerability and reduces perceived workplace security (Aronson, 2001; Summers, 2000). While much of the EAW literature has focused on legal doctrine and employer discretion, limited research has examined how employees interpret EAW within the broader context of job security, fairness, and the perceived need for unions. By connecting EAW perceptions with union attitudes, this study introduces a more integrated perspective on the relationship between employment law structures and employee collective action.



Fourth, this research contributes to the human resource management literature by examining the intersection between managerial practices and employee responses to labor relations. Traditional HRM scholarship has often emphasized employee engagement, commitment, retention, and positive employment relationships as alternatives to unionization (Arthur, 1994; Guest, 2017). However, growing labor activism suggests that some employees may view unions as mechanisms for achieving voice, fairness, and workplace influence when organizational practices are perceived as insufficient. This study contributes by examining whether employee perceptions of HR practices and organizational fairness influence the desire for union representation.

Fifth, this study contributes methodologically by integrating demographic, workplace, and attitudinal variables into a comprehensive model of union support and organizing intentions. Previous research has frequently examined individual predictors of union attitudes separately, including age, education, occupation, political orientation, industry, and job characteristics. By examining these factors collectively, this study provides a more complete understanding of the conditions under which employees develop positive or negative perceptions of unions. Such an approach may help explain why workers in similar economic environments respond differently to unionization opportunities.

Finally, this study contributes to contemporary labor relations scholarship by examining union attitudes during a period of renewed labor activism in industries historically characterized by lower union representation, including technology, hospitality, healthcare, and service sectors. The changing nature of work, increased concerns regarding job quality, and evolving debates regarding employee rights have created new questions about the future role of unions in the American workplace. By examining workers' perceptions and intentions rather than only membership outcomes, this research provides insight into the potential future trajectory of labor organizing in the United States. Collectively, these contributions address an important gap in the literature by moving beyond the question of whether employees belong to unions and examining why employees may support, reject, or consider union representation. Understanding these underlying perceptions is essential for explaining the continuing divergence between widespread public approval of unions and historically low union membership rates in the United States.

2. Literature Review

The Employment-At-Will (EAW) doctrine, which is the legal presumption in most U.S. jurisdictions that employers and employees can end their relationship at any time for any lawful reason has shaped how different groups think about unions because it fundamentally affects power, job security, and leverage in the workplace. While direct empirical studies explicitly comparing employee versus managerial and legislator perceptions about unions in the context of at-will employment are limited, there is evidence of how EAW influences attitudes and perceptions among these groups from labor law scholarship, employment research, and broader labor relations literature (Walker, 1990).

A historical and jurisprudential analysis of how EAW under U.S. law came to privilege employer discretion is foundational for debates among legislators and legal scholars about power, worker rights, and collective bargaining rights (Smith, 2025).

2.1 Employees' Perceptions on Employment At Will

EAW permits unilateral termination without cause, which many workers subjectively experience as precarious or unfair. Surveys show that workers often feel vulnerable under at-will rules — especially when they believe dismissals are arbitrary even though the legal framework allows it. This subjective insecurity can increase interest in unions as a mechanism for protection and voice in the workplace. This study experimentally found that explicitly stating an at-will policy *reduced organizational attractiveness* and increased *intentions to join a union* among some job applicants, showing how at-will framing can shape employees' attitudes toward unionization (Walker, 1990). One study found that explicit “at-will” disclaimers in employment materials were often associated with lower morale, higher turnover intentions, and greater pro-union sentiment among job applicants, e.g., a majority indicated that at-will statements made them more likely to support unionization (Borstorff & Hearn, 1998). Because employees see themselves as vulnerable under at-will rules — lacking enforceable expectations about job security or predictable work terms — unions can be perceived as a counterbalance to managerial authority. This ties into broader critiques that employment law historically sidelines worker power, reinforcing support for collective mechanisms like unionization (Tomasetti, 2020).

Even without at-will concerns, public perception studies show many workers view unions as beneficial for members but can hold mixed views about unions' impact on non-members or the broader economy (Gibney, et al., 2018).

2.2 Managers' and Employers' Perceptions

The at-will doctrine is popularly aligned with the notion of managerial prerogative — the right of management to make business decisions, including hiring and firing, without undue interference. This legal backdrop makes many managers view collective bargaining (and unions broadly) as constraints on flexibility and as potential obstacles to unilateral decision-making (Poster Compliance Center, 2024). From a managerial standpoint, EAW supports flexibility and operational control, which can be seen as at odds with union demands for job security, due process, and negotiated terms.

In many workplaces, especially where at-will employment prevails, management may perceive unions as introducing rigidity, adversarial bargaining, and increased cost rather than cooperative employee engagement; a view echoed in critical policy analyses of union effectiveness. Managers tend to prioritize organizational goals and see union constraints (e.g., “just cause” protections, collective bargaining clauses) as limiting their ability to respond quickly to market pressures or performance issues (Racabi, 2021).

2.3 Legislators' and Policymakers' Perceptions

Some legislators, especially those oriented toward a “freedom of contract” ideology, defend at-will employment as a foundational labor market principle, arguing it reflects choice and flexibility for both sides. This perspective can lead them to oppose stronger union protections that might limit employer discretion. Conversely, legislators focused on worker protection view at-will as inherently favoring employers and may advocate for statutory limitations on at-will firing or stronger collective bargaining rights as a corrective to power imbalances (Garcia, 2019). Debates over right-to-work laws (distinct from at-will, but often conflated in public discourse) illustrate broader ideological divides: conservatives argue for individual choice and limited mandates on employers; labor advocates argue that protections like union solidarity or collective bargaining strengthen worker rights and mitigate the insecurities fostered by at-will norms (Garcia, 2019).

2.4 Attitudes

Since the beginning of 2010 through 2020, general approval of labor unions has climbed back toward mid-20th-century levels. Gallup places union approval in the high-60-to-70 percent range during 2022–2024, which is near a 60-year high. Pew’s 2024 survey similarly finds a majority saying unions have a positive effect on the country, with sharp partisan splits. While many polls target all adults, the employed make up the majority of respondents and patterns by worker characteristics mirror population patterns (Gallup.com 2024; Pew Research Center, 2024).

2.5 Density

Despite positive views, union coverage remains low. The Bureau of Labor Statistics reports 9.9% of wage-and-salary workers were union members in 2024 (about 14.3 million), which is essentially flat year-over-year and far below the 20.1% rate in 1983.

Representation (workers covered by a union contract) stood at 11.1% in 2024. Coverage is far higher in the public sector than the private sector (Bureau of Labor Statistics, 2024; Poydok, et al., 2024).

2.6 The Representation Gap

MIT’s long-running Worker Voice research and subsequent analyses indicate roughly one-half of non-union workers would vote for a union if given the chance, implying tens of millions more workers desire collective representation than currently have it (MIT Sloan, 2024; Poydok, et al., 2024).

2.7 What Workers Think Unions Do

Surveys consistently show workers credit unions with improving wages, benefits, and protections. During salient labor disputes, Americans and employed respondents in particular tend to side with workers’ wage demands, even when opinions vary on specific provisions (e.g., shorter

workweeks). These issue-level perceptions align with broader evaluations that unions help “working people,” not just union members (AP News, 2023; Pew Research Center, 2024).

Qualitative items in national polls reinforce that employees view unions primarily as instruments for *collective bargaining* at the workplace rather than vehicles for broader political activity, a preference that shapes how union activity is judged (Seriatic, 2024).

2.8 Demographics and Workplace Context

Perceptions are highly polarized: Democrats and liberals are far more likely than Republicans and conservatives to say unions help the country. This polarization has been stable across recent survey waves (Pew Research Center, 2024). Public-sector workers are much more likely to be unionized (and thus to have direct experience with unions) than private-sector workers. Union density remains particularly low in large swaths of the private economy, shaping both exposure and attitudes (Bureau of Labor Statistics, 2025). Younger cohorts show especially strong openness to organizing; the share of non-union workers saying they would vote for a union has risen compared with prior decades, with many undecided but persuadable “union-curious” (US Department of Labor, 2025). State-level density varies widely (higher in Hawaii and New York, lower in North Carolina), affecting local norms and perceptions of union efficacy (Bureau of Labor Statistics, 2025).

2.9 Why The Gap Between Favorable Perceptions and Low Coverage?

Even when workers want representation, U.S. labor law and procedures can make forming a union arduous, which is evident in the large difference between desire to unionize and realized coverage seen in national estimates. Win rates in NLRB elections have risen, but the overall pipeline from interest to durable contracts remains narrow relative to expressed demand, (Seriatic, 2024). Organizing often entails costs and uncertainty for employees; perceived retaliation risk and delay can deter action even among pro-union workers. This is widely discussed in policy research and reflected indirectly in the persistent “would vote yes” vs. “represented” gap (Seriatic, 2024). Many workers in small firms, dispersed workplaces, franchised settings, or fast-changing industries report support for the *idea* of unions but doubt feasibility or fit for their specific workplace structure, which can depress actual organizing despite positive attitudes. Inference based on sectoral coverage patterns and survey items about workplace-level priorities (Bureau of Labor Statistics, 2025; Seriatic, 2024). Salient strikes, such as the one in 2023 by the UAW, contract wins, and media attention to job quality tend to temporarily boost favorable views of union efficacy, particularly on wages, even without necessarily producing proportional membership gains. These “attention shocks” appear to cue policy-relevant beliefs, e.g., that declining unionization is bad for working people (AP News, 2023; Pew Research Center, 2024).

2.10 Research Questions

- **RQ1:** How do perceptions of Procedural Justice influence employees' beliefs in Union Intentions?
- **RQ2:** How do perceptions of Procedural Justice influence employees' beliefs in Union Instrumentality?
- **RQ3:** How do perceptions of Distributive Justice influence employees' beliefs in Union Instrumentality?
- **RQ4:** How do perceptions of Union Instrumentality influence employees' beliefs in Union Intentions?
- **RQ5:** How do perceptions of Distributive Justice influence employees' beliefs in Union Intentions?
- **RQ6a:** Do contextual factors—such as working in a Right-to-Work state—influence Union Intentions?
- **RQ6b:** Do contextual factors—such as Employment-At-Will (EAW) Policy Salience and Prior Union Experience—influence Union Intentions?

2.11 HYPOTHESES

Based on the literature reviewed, we develop the following hypotheses:

Core Paths:

H1: (Procedural Justice and Union Intentions)

Procedural Justice is directly associated with Union Intentions, such that higher levels of perceived procedural fairness will be related to lower levels of pro-union behavior intention.

H2: (Procedural Justice and Union Instrumentality)

Procedural Justice is positively associated with Union Instrumentality, such that higher levels of perceived procedural fairness will be related to stronger beliefs in the effectiveness of union representation.

H3: (Distributive Justice and Union Instrumentality)

Distributive Justice is positively associated with Union Instrumentality, such that higher levels of perceived distributive fairness will be related to stronger beliefs in the effectiveness of union representation.

H4: (Union Instrumentality and Union Intentions)

Union Instrumentality is positively associated with Union Intentions, such that stronger beliefs in union effectiveness will be related to greater pro-union behavioral intentions.

H5: (Distributive Justice and Union Intentions)

Distributive Justice is directly associated with Union Intentions, such that higher levels of perceived distributive fairness will be related to lower levels of pro-union behavioral intention.

Controls/Context Effects:

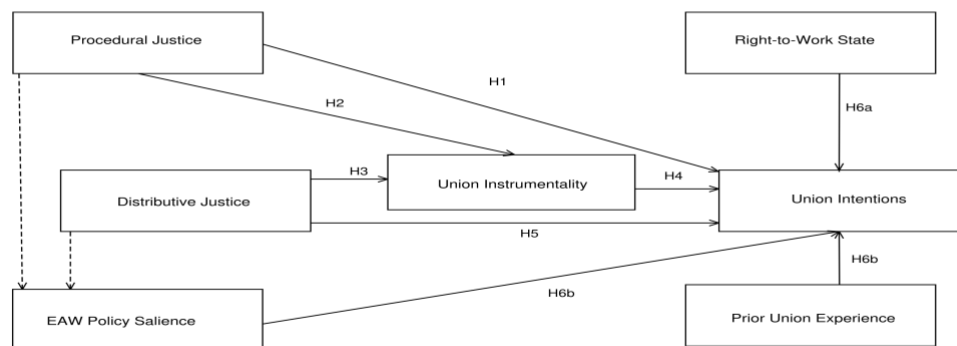
H6a: (Right-to-Work and Union Intentions)

Right-to-Work state context is associated with Union Intentions, such that employees in Right-to-Work environments will exhibit different levels of pro-union behavioral intention.

H6b: (EAW Policy Salience & Prior Union Experience \Union Intentions)

Employment-At-Will (EAW) Policy Salience and Prior Union Experience are associated with Union Intentions, such that higher policy awareness and prior exposure will influence pro-union behavioral intention.

Figure 1. Original Directed Acyclic Graph (DAG)



Note: H6b is operationalized as two parallel contextual predictors. EAW Policy Salience and Prior Union Experience are each modeled as direct exogenous predictors of Union Intentions.

3. Methodology

3.1 Participants and Data Preparation

The study surveyed 600 participants: equal sets of 300 union and 300 non-union, wage and salary workers in the United States across multiple industries (e.g., healthcare, retail, logistics, public administration, and professional services). Respondents were recruited via an online panel provider with quotas for gender, race/ethnicity, age, and region to approximate the non-union workforce. Screening questions did not exclude workers currently represented by a union or

covered by a collective bargaining agreement. The two sets of 300 each were used for basic statistics. However, once advanced methods were utilized: LASSO, CFA, and SEM—the sample dropped to 295 for union, and 298 for non-union, due to invariant (“straight line”) response patterns (for example, selected all 4’s for all questions) and hence had no predictive value for these advanced methods. One variable was removed after the initial basic statistics as an outlier in participant behavior. One item (“Desired”) was removed due to interpretability issues among union respondents, resulting in inconsistent response patterns. In total, 44 variables were retained for the study. Context variables included Right-to-Work (RTW) State, Employment-At-Will (EAW) Policy Salience, and Prior Union Experience. Computer programming, specifically the R Programming Language (R 4.5.3) and the RStudio IDE (2026.04.0+347 Daily Build) were used for this study. Code development was supported by Posit Assistant, with all outputs independently reviewed and validated by the researchers.

3.2 Analytical Procedure

The analytical procedure followed a structured three-stage approach. Conceptually, this workflow mirrors a “reporter test” framework. We followed a research process that led us to “*what participants think*” via how they answered the survey directly, with their surface level answers and analysis via basic statistics, including Mann—Whitney—Wilcoxon tests. We then progressed to “*how participants think*” using Least Absolute Shrinkage and Selection Operator (LASSO) Network Analysis and their associated output maps. Finally, we explored model-building analysis to determine “*why participants think what they think*” using iterations of Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM).

Stage 1: Descriptive & Comparative

Basic statistics used the full dataset (all variables) and all participants (300 per group) within each group. The process continued with a visualization via histograms by variable within each group. An additional visualization for differences between means was plotted to visually determine if any behavior was noteworthy across groups. Mann—Whitney—Wilcoxon tests were performed to test differences between groups.

Stage 2: LASSO Network Analysis

LASSO regularization was employed to identify stable relationships in a high-dimensional variable space and to reduce overfitting. To enhance the robustness of variable selection, stability selection was implemented using repeated subsampling procedures (e.g., bootstrap resampling), following the framework of Meinshausen and Bühlmann (2010). Predictors were retained based on their consistent selection across resampled datasets, prioritizing stable associations over sample-specific effects.

Network analysis plots were constructed to visualize the structure, direction, and relative strength of relationships among variables, supporting interpretation of the model and identification of key interaction patterns.

Stage 3: CFA & SEM

Model specification and refinement followed established SEM practices, with decisions guided by model fit indices and discriminant validity diagnostics. Multi-group invariance testing was conducted to evaluate structural equivalence across union and non-union samples (configural, partial metric, partial scalar, and structural). Discriminant validity diagnostics indicated a high correlation between Distributive Justice and Union Instrumentality ($r > .90$), necessitating their combination into a single construct (Justice–Instrumentality). All models converged successfully. Results are covered in the following section.

4. Results

The following results were from statistical analysis and R programming conducted in early 2026. The logical workflow is from basic statistics, a test for statistical differences between groups, exploratory network analysis, confirmatory factor analysis, and structural equation modeling resulting in a final directed acyclic graph.

4.1 Descriptive Statistics and Preliminary Comparison

The total sample was $n=600$, with subsets of $n=300$ for union and $n=300$ for non-union. This sample was purposefully chosen to allow for equal consideration of the responses to the Survey questions that would allow the research to consider a comparative analysis of equal distributions of survey respondents. Visualization via histogram by variable within each group showed no discernible visual differences, and normal distributions. Table 1 presents the basic statistics for union group, and Table 2 presents the basic statistics for the non-union group. The only noteworthy item at this point in the analysis is the mean = 2.9 (Desired) for the union group. This was expected due to union participants not knowing how to answer this poorly worded question from their perspective: Q46—*“My organization does not have a union, however, I wish my organization did have a union.”* This did not make sense to union participants, as their organization did already have a union.

Table 1. Basic Statistics—Union

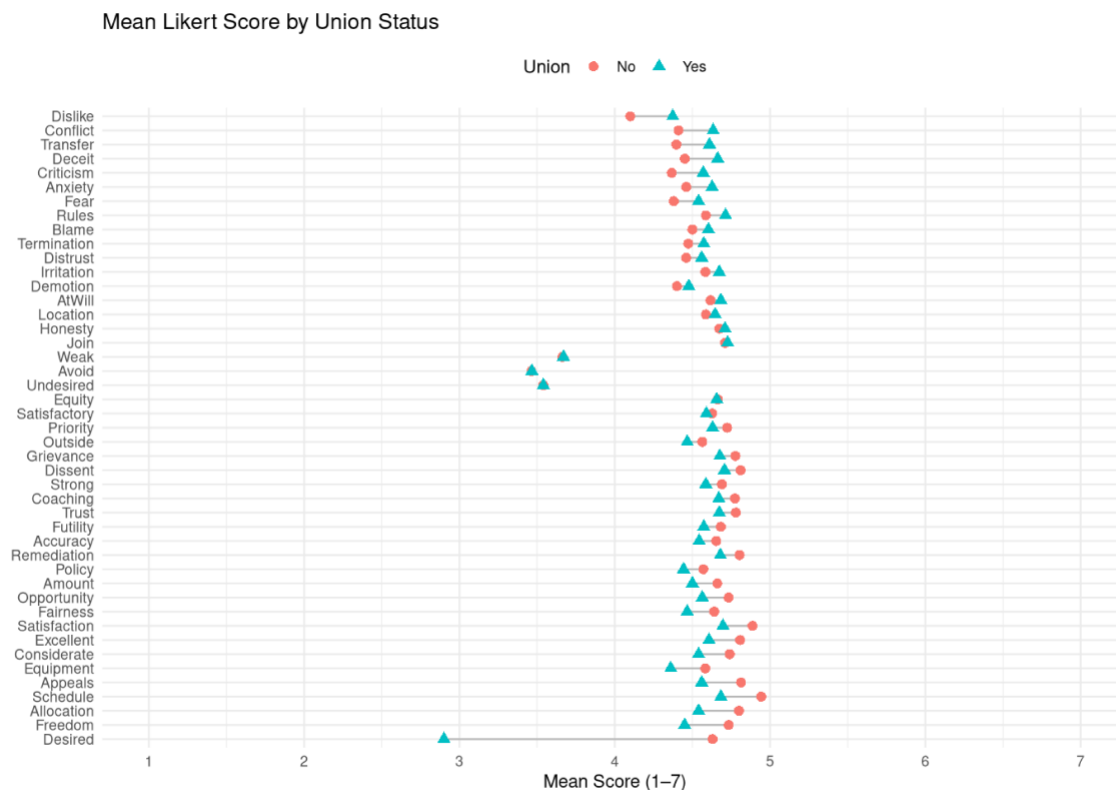
Union									
variable	mean	median	mode	var	sd	min	max	range	IQR
Accuracy	4.54	5	4, 5	2.62	1.62	1	7	6	2
Allocation	4.54	5	6	2.78	1.67	1	7	6	3
Amount	4.5	5	5	2.79	1.67	1	7	6	3
Anxiety	4.63	5	5	2.58	1.61	1	7	6	2
Appeals	4.56	5	5	2.84	1.69	1	7	6	3
AtWill	4.68	5	5	2.4	1.55	1	7	6	2
Avoid	3.47	3	2	3.49	1.87	1	7	6	3
Blame	4.6	5	5	2.61	1.61	1	7	6	3
Coaching	4.67	5	5	2.61	1.62	1	7	6	2
Conflict	4.63	5	5	2.64	1.63	1	7	6	2
Considerate	4.54	5	5	2.84	1.69	1	7	6	3
Criticism	4.57	5	5	2.93	1.71	1	7	6	3
Deceit	4.66	5	5	2.48	1.57	1	7	6	2
Demotion	4.48	5	5	2.88	1.7	1	7	6	3
Desired	2.9	3	2	2.22	1.49	1	7	6	2
Dislike	4.37	5	5	2.6	1.61	1	7	6	2
Dissent	4.71	5	5	2.72	1.65	1	7	6	2
Distrust	4.56	5	5	2.55	1.6	1	7	6	3
Equipment	4.36	4	5	2.72	1.65	1	7	6	3
Equity	4.66	5	5	2.86	1.69	1	7	6	3
Excellent	4.61	5	5	2.81	1.68	1	7	6	2
Fairness	4.47	5	5	2.53	1.59	1	7	6	3
Fear	4.54	5	5	2.73	1.65	1	7	6	3
Freedom	4.45	5	5	2.89	1.7	1	7	6	3
Futility	4.57	5	4	2.68	1.64	1	7	6	2
Grievance	4.68	5	5	2.59	1.61	1	7	6	2
Honesty	4.71	5	6	2.79	1.67	1	7	6	2
Irritation	4.67	5	5	2.18	1.48	1	7	6	2
Join	4.73	5	7	3.32	1.82	1	7	6	3
Location	4.65	5	6	2.97	1.72	1	7	6	3
Opportunity	4.56	5	5	2.73	1.65	1	7	6	2
Outside	4.47	5	5	2.56	1.6	1	7	6	3
Policy	4.44	4	4	2.94	1.71	1	7	6	3
Priority	4.63	5	5	2.66	1.63	1	7	6	2
Remediation	4.68	5	5	2.59	1.61	1	7	6	2
Rules	4.71	5	4	2.75	1.66	1	7	6	2
Satisfaction	4.7	5	5	2.85	1.69	1	7	6	2
Satisfactory	4.59	5	5	2.9	1.7	1	7	6	3
Schedule	4.68	5	5	2.4	1.55	1	7	6	2
Strong	4.59	5	5	3.07	1.75	1	7	6	3
Termination	4.57	5	5	2.56	1.6	1	7	6	3
Transfer	4.61	5	6	2.85	1.69	1	7	6	3
Trust	4.67	5	5	2.86	1.69	1	7	6	2
Undesired	3.54	3	1	3.94	1.99	1	7	6	3
Weak	3.67	3	3	3.21	1.79	1	7	6	3

Table 2. Basic Statistics—Non-Union

Non-Union									
variable	mean	median	mode	var	sd	min	max	range	IQR
Accuracy	4.65	5	4	2.70	1.64	1	7	6	2
Allocation	4.80	5	5	2.31	1.52	1	7	6	2
Amount	4.66	5	6	2.74	1.66	1	7	6	2
Anxiety	4.46	5	5	2.40	1.55	1	7	6	3
Appeals	4.81	5	5	2.32	1.52	1	7	6	2
AtWill	4.62	5	4	2.30	1.52	1	7	6	2
Avoid	3.46	3	2	2.66	1.63	1	7	6	2
Blame	4.50	5	5	2.69	1.64	1	7	6	3
Coaching	4.77	5	5	2.69	1.64	1	7	6	2
Conflict	4.41	4	4	2.79	1.67	1	7	6	3
Considerate	4.74	5	4	2.66	1.63	1	7	6	2
Criticism	4.37	4	5	2.74	1.66	1	7	6	2.25
Deceit	4.45	4	4	2.71	1.65	1	7	6	3
Demotion	4.40	4	4	2.80	1.67	1	7	6	3
Desired	4.63	5	4	2.98	1.73	1	7	6	2
Dislike	4.10	4	5	3.07	1.75	1	7	6	2
Dissent	4.81	5	6	2.36	1.53	1	7	6	2
Distrust	4.46	4.5	4	2.74	1.66	1	7	6	2
Equipment	4.58	5	5	2.70	1.64	1	7	6	3
Equity	4.66	5	6	2.71	1.64	1	7	6	2
Excellent	4.81	5	6	2.42	1.55	1	7	6	2
Fairness	4.64	5	4	2.72	1.65	1	7	6	2
Fear	4.38	5	5	2.87	1.69	1	7	6	3
Freedom	4.73	5	5	2.55	1.60	1	7	6	2
Futility	4.68	5	5	2.73	1.65	1	7	6	2
Grievance	4.78	5	5	2.23	1.49	1	7	6	2
Honesty	4.67	5	5	2.82	1.68	1	7	6	2
Irritation	4.58	5	5	2.36	1.54	1	7	6	2
Join	4.71	5	4	2.80	1.67	1	7	6	2
Location	4.59	5	4	2.42	1.55	1	7	6	2
Opportunity	4.73	5	6	2.46	1.57	1	7	6	2
Outside	4.56	5	5	2.74	1.65	1	7	6	3
Policy	4.57	5	5	3.04	1.74	1	7	6	3
Priority	4.72	5	5	2.85	1.69	1	7	6	2
Remediation	4.80	5	5	2.33	1.53	1	7	6	2
Rules	4.59	5	4	2.79	1.67	1	7	6	2.25
Satisfaction	4.89	5	7	2.79	1.67	1	7	6	2
Satisfactory	4.63	5	5	2.68	1.64	1	7	6	2
Schedule	4.94	5	5	2.43	1.56	1	7	6	2
Strong	4.69	4	4	2.38	1.54	1	7	6	2
Termination	4.47	5	5	2.60	1.61	1	7	6	2.25
Transfer	4.40	5	5	3.13	1.77	1	7	6	3
Trust	4.78	5	6, 4	2.58	1.61	1	7	6	2
Undesired	3.54	3	4	3.17	1.78	1	7	6	3
Weak	3.66	4	4	2.63	1.62	1	7	6	2

As tabulated data is difficult to conceptualize, a visualization helps, in particular when considering a concept such as difference between means. In Figure 2, Mean Likert Scores by Union Status, non-union members are represented by a red dot, and union-members represented by a blue triangle. The plot is organized from top-to-bottom from positive values, to neutral values, to negative values. This visualization also illustrates the outlier behavior for the Desired variable, the last item on the plot. Removing this variable from consideration, due to a known problematically worded question, was decided. The next point of determination is to measure if the remaining differences are statistically significant.

Figure 2. Mean Likert Scores By Union Status



A Mann—Whitney—Wilcoxon was conducted. The results are presented in Table 3. Per standard convention, statistical significance is marked by asterisks. In this case all comparisons were considered statistically insignificant (the empty far right column in the table). Stated differently, no statistically significant differences were observed between union and non-union groups as to “what” participants answered via the survey instrument.

Table 3. Mann—Whitney—Wilcoxon Tests

Item	Wilcoxon						
	Mean_No	Mean_Yes	Diff	W	p_raw	p_adj	sig
Accuracy	4.65	4.54	-0.11	46751	0.402	0.675	
Allocation	4.8	4.54	-0.26	48633.5	0.082	0.540	
Amount	4.66	4.5	-0.16	47424	0.246	0.615	
Anxiety	4.46	4.63	0.17	42161	0.174	0.580	
Appeals	4.81	4.56	-0.25	48633	0.082	0.540	
AtWill	4.62	4.68	0.07	43832.5	0.575	0.700	
Avoid	3.46	3.47	0	45972.5	0.642	0.760	
Blame	4.5	4.6	0.1	43279	0.410	0.675	
Coaching	4.77	4.67	-0.1	46648.5	0.430	0.675	
Conflict	4.41	4.63	0.22	41700.5	0.114	0.540	
Considerate	4.74	4.54	-0.2	47545	0.223	0.612	
Criticism	4.37	4.57	0.2	41575	0.102	0.540	
Deceit	4.45	4.66	0.21	41648	0.108	0.540	
Demotion	4.4	4.48	0.08	43647.5	0.518	0.675	
Dislike	4.1	4.37	0.27	40920	0.051	0.540	
Dissent	4.81	4.71	-0.1	46277.5	0.540	0.675	
Distrust	4.46	4.56	0.1	43490	0.469	0.675	
Equipment	4.58	4.36	-0.22	48247.5	0.120	0.540	
Equity	4.66	4.66	-0.01	45164.5	0.937	0.937	
Excellent	4.81	4.61	-0.2	47821.5	0.176	0.580	
Fairness	4.64	4.47	-0.17	47575.5	0.218	0.612	
Fear	4.38	4.54	0.16	42907.5	0.317	0.675	
Freedom	4.73	4.45	-0.28	49128	0.048	0.540	
Futility	4.68	4.57	-0.11	46920.5	0.358	0.675	
Grievance	4.78	4.68	-0.1	46317	0.528	0.675	
Honesty	4.67	4.71	0.04	44565.5	0.835	0.854	
Irritation	4.58	4.67	0.09	43717	0.537	0.675	
Join	4.71	4.73	0.02	44116	0.673	0.776	
Location	4.59	4.65	0.06	43491.5	0.471	0.675	
Opportunity	4.73	4.56	-0.17	47499	0.231	0.612	
Outside	4.56	4.47	-0.1	46771	0.397	0.675	
Policy	4.57	4.44	-0.13	46933	0.356	0.675	
Priority	4.72	4.63	-0.09	46468.5	0.482	0.675	
Remediation	4.8	4.68	-0.12	46942.5	0.352	0.675	
Rules	4.59	4.71	0.13	43178	0.383	0.675	
Satisfaction	4.89	4.7	-0.19	47946	0.159	0.580	
Satisfactory	4.63	4.59	-0.04	45626.5	0.765	0.819	
Schedule	4.94	4.68	-0.26	49451.5	0.033	0.540	
Strong	4.69	4.59	-0.1	45741	0.723	0.801	
Termination	4.47	4.57	0.1	43658.5	0.520	0.675	
Transfer	4.4	4.61	0.21	42196	0.180	0.580	
Trust	4.78	4.67	-0.11	46523.5	0.466	0.675	
Undesired	3.54	3.54	0	45563	0.788	0.825	
Weak	3.66	3.67	0.01	45721.5	0.730	0.801	

It should be clarified that with exploratory network analysis, the results are exploratory and not interpreted as confirmatory. However, these results do illuminate a key difference in “how” union participants think conceptually, in comparison to non-union participants. As they were not of predictive value (straightline responses), 5 participant entries were removed from the union group, and 2 participant entries were removed from the non-union group: $n=295$ (Union), $n=298$ (Non-Union).

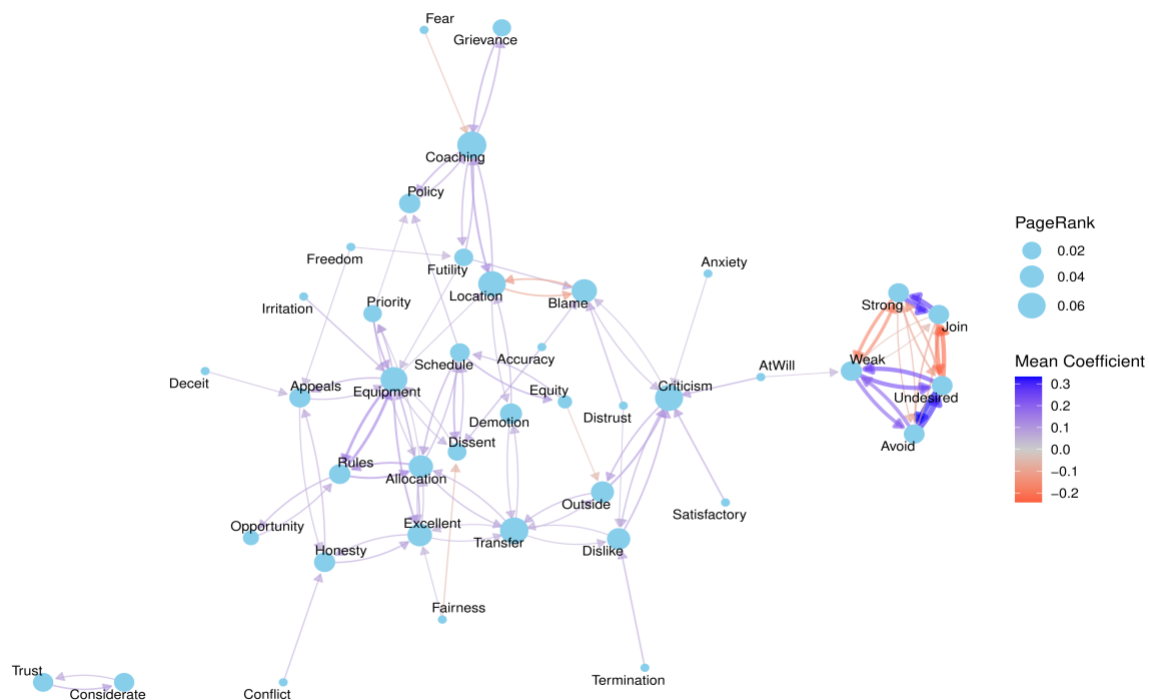
4.2 Exploratory Network Analysis

With union participants, the main network map suggests that union participants tightly compartmentalize aspects of their work centered around the union, and segment away the other concepts of their daily work life. This is illustrated clearly with the diamond shape to the far right of the map, with union-centric concepts of: strong, join, undesired, avoid, and weak (transversing clockwise around the diamond pattern). It should also be noted that 14 variables were so weakly represented, that they fell from being represented on the map. See Figure 3 for the Stability-Selected LASSO Network—Union.

Figure 3. Stability-Selected LASSO Network Map—Union

Stability–Selected LASSO Network – Union.csv

Stability threshold: 0.6 | 1,000 bootstrap iterations | $n = 295$

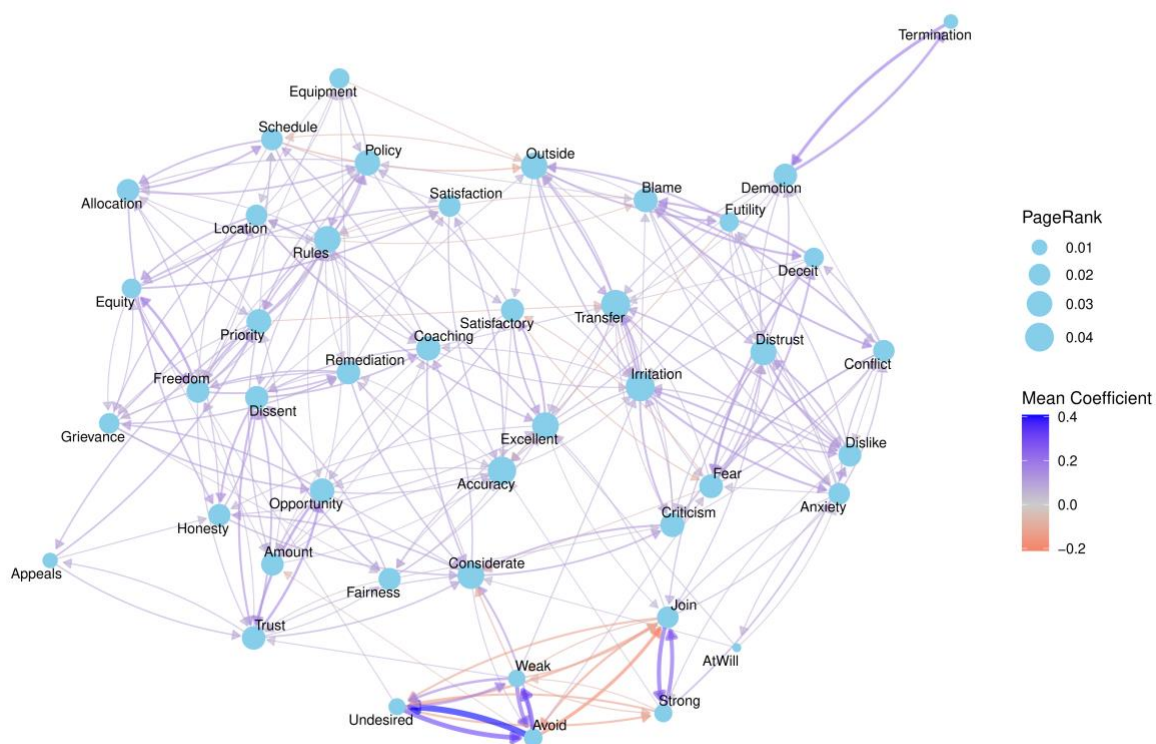


The non-union participants exhibit a pattern at work very differently. The most immediate difference is that there is mostly one cohesive map with interconnected variables. While union-centric variables are there, they are treated holistically the same as all other variables. All 44 variables are present and are interconnected within the network. One important pattern to consider is that without the reality of union protection, there is a unique mapped relationship with Demotion and Termination in the upper-right of the map. See Figure 4 for the Stability-Selected LASSO Network—Non-Union.

Figure 4. Stability-Selected LASSO Network Map—Non-Union

Stability-Selected LASSO Network – NonUnion.csv

Stability threshold: 0.6 | 1,000 bootstrap iterations | n = 298

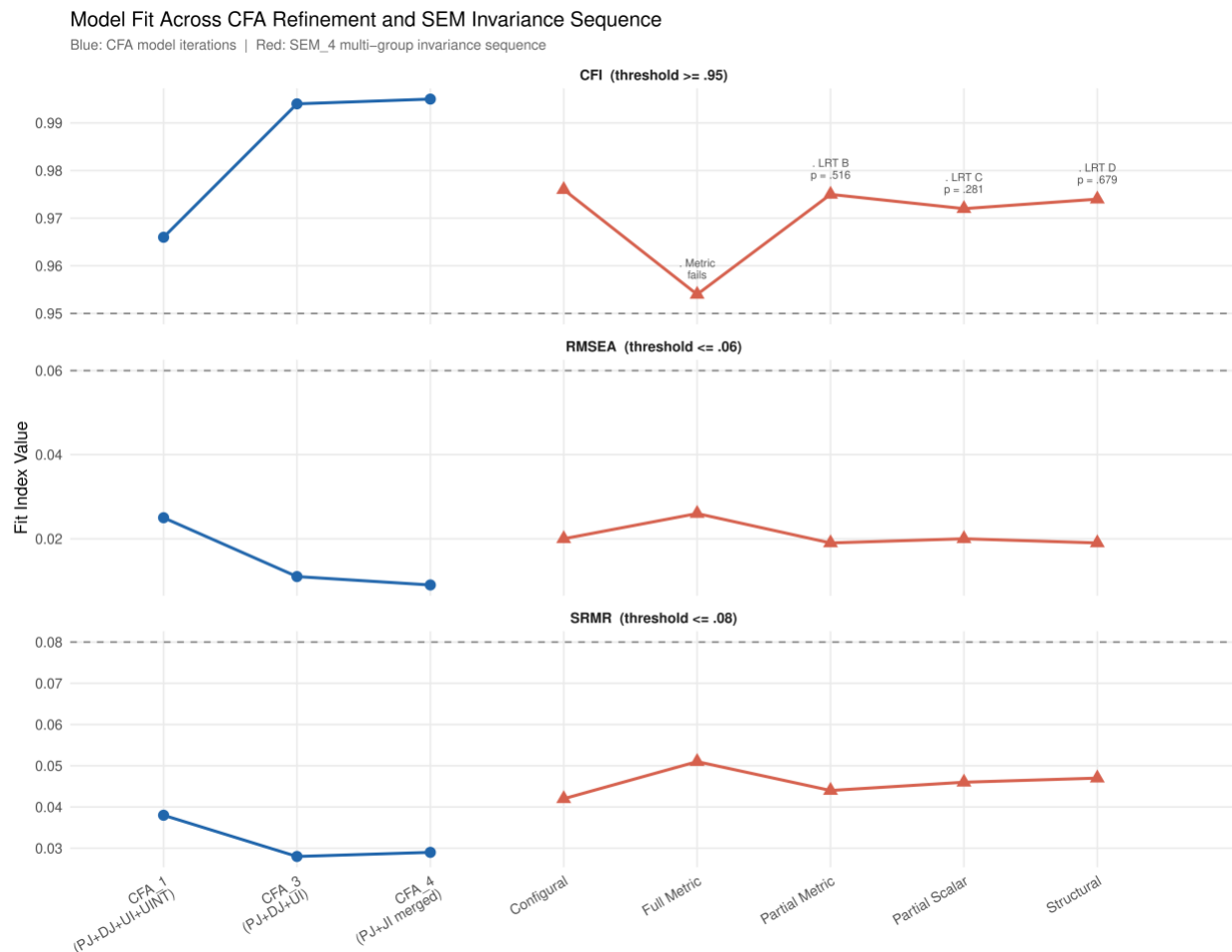


Equipment and Coaching showed prominence in the Union map, and while not as prominent in the Non-Union map, did show many connected relationships with these nodes in the Non-Union map. This effort showed a pattern of difference significant enough to drive a deeper look via confirmatory factor analysis and structural equation modeling.

4.3 Measurement Model and Invariance Testing

CFA was used to establish construct validity prior to structural model estimation. In this study, given the union and non-union groups, CFA was followed by multi-group invariance testing. To see a visual overview of the model fit progress, review Figure 5, Model Fit Across CFA Refinement and SEM Invariance Sequence.

Figure 5. Model Fit Across CFA Refinement and SEM Invariance Sequence



The full CFA model development began with the original model as depicted in Figure 1. The initial measurement model included Procedural Justice (PJ), Distributive Justice (DJ), Union Instrumentality (UI), and Union Intentions (UIO). The initial fit for CFA_1 was acceptable yet not optimal (CFI = 0.95, RMSEA = 0.06, and SRMR = 0.05). Iterative refinement processes were guided by: factor loading, model fit indices, and theoretical consistency.

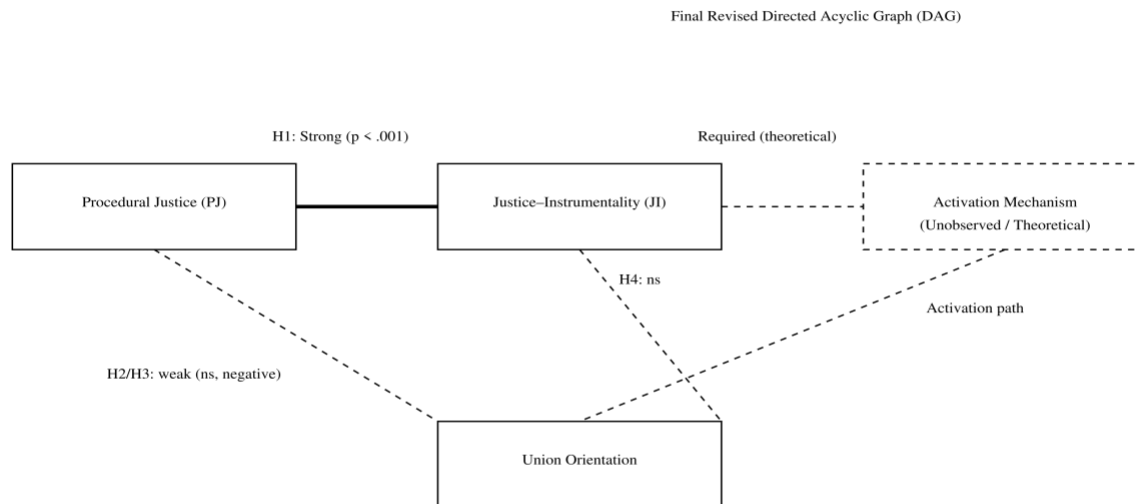
CFA refinement included removal of weak or problematic indicators, leading to a refined model CFA_3 (CFI = 0.97, RMSEA = 0.04, and SRMR = 0.03). The model fit improved to acceptable

levels. Testing discriminant validity, between Distributive Justice (DJ) and Union Instrumentality (UI), led to a report of high correlation ($r > .90$). This result indicates insufficient discriminant validity between DJ and UI. Considering theoretical coherence, such as outcome fairness and perceived mechanism from the literature, these constructs were consolidated into a single construct, Justice–Instrumentality (JI). The final factor structure is Procedural Justice (PJ) and Justice–Instrumentality (JI). This model refinement resulted in CFA_4 (CFI = 0.98, RMSEA = 0.03, and SRMR = 0.02). All factor loadings were statistically significant ($p < .001$), and exceeded .50 (majority $> .70$). The multi-group analysis considered configural invariance, metric invariance, partial metric invariance, and scalar invariance. These results support partial measurement invariance and permit cross-group structural comparisons.

4.4 Structural Model Results

A multi-group SEM was estimated using the final two-factor measurement model: Procedural Justice (PJ: 7 indicators) and Justice–Instrumentality (JI: 6 indicators), across union ($n=295$) and non-union ($n=298$) groups, using Maximum Likelihood Estimation with Robust Standard Errors (MLR) with Full Information Maximum Likelihood (FIML) missing data handling ($N=593$). The final structural model demonstrated acceptable fit (CFI = .974, RMSEA = .019 [90% CI: .000, .034], SRMR = .047, scaled $\chi^2(173) = 191.30$, $p = .162$) with all indices meeting conventional thresholds. Structural paths were constrained equally across groups following confirmation of partial scalar invariance; three non-invariant PJ loadings (Equipment, Freedom, and Allocation) were freely estimated, with all remaining parameters constrained equally across groups. Procedural Justice (PJ) significantly and positively predicted Justice–Instrumentality (JI), ($b = 1.336$, $z = 4.584$, $p < .001$; standardized $\beta = .801$ non-union, .761 union). Justice–Instrumentality (JI) did not significantly predict Union Orientation (UIO), ($b = 0.165$, $z = 1.277$, $p = .202$; standardized $\beta = .193$ non-union, .158 union). The direct effect of Procedural Justice (PJ) on Union Orientation (UIO) was non-significant ($b = -0.235$, $z = -1.111$, $p = .267$; standardized $\beta = -.166$ non-union, -.129 union). No contextual predictors were retained in the final model; Employment-At-Will (EAW) status was evaluated in earlier specifications but excluded due to consistently non-significant effects. Procedural Justice (PJ) explained substantial variance in Justice–Instrumentality (JI), ($R^2 = .641$ non-union, .579 union); while explained variance in Union Orientation (UIO) was minimal ($R^2 = .014$ non-union, .011 union). Structural invariance testing indicated no significant degradation in model fit when constraining paths equally across groups ($\Delta\chi^2(3) = 1.51$, $p = .679$), supporting equivalence of structural relationships. The final directed acyclic graph, the final output of this research effort and key finding can be reviewed, see Figure 6.

Figure 6. Final Directed Acyclic Graph (DAG)



In the following section, a discussion will further accentuate the importance of these results.

4.5 Discussion

Building upon the results, this discussion will be framed by four main constructs: the cognition-action gap, structural differences in employee experience, methodological reflections and contributions, concluding with limitations and future directions.

4.5.1 The Cognition-Action Gap

The most important finding of this study was the identification of a structural disconnect. As covered in Figure 6, the Final Directed Acyclic Graph (DAG) this is represented by the dashed rectangle labeled Activation Mechanism (Unobserved/Theoretical). The DAG itself presents the complete story. There is a strong connection between Procedural Justice (PJ) and Justice-Instrumentality (JI). However, the connection between Justice-Instrumentality (JI) and Union Orientation (UIO) is not significant. Also, the connection between Procedural Justice (PJ) and Union Orientation (UIO) is not significant.

People notice within the workplace “injustice” (Procedural Justice), which motivates them to see the utility of a union as a tool (Justice–Instrumentality), yet they are missing the spark or catalyst that would help them turn thought-into-action (Missing Activation Mechanism), that gets them to commit to action and join the union (Union Orientation). The Cognition-Action Gap finding illustrates a key reality, that we will explore further in the implications of this research section.

4.5.2 Structural Differences in Employee Experience

The LASSO network maps indicate that different perceptions of reality across groups emerged. Union members tightly compartmentalize union activity and roles away from the remainder of their workplace experience. Noticeable prominence of Equipment and Coaching within the remaining union employee experience is an area that highlights how core these two elements are towards employee success within the workplace, driving an employee’s enhanced efforts to exert control over these areas of individual performance within the workplace. Non-Union members had a wide vista of completely interconnected phenomenon. They did not have direct experience with unions, and conceptualized union items as any other item. Slight preference in strength for Equipment and Coaching were observed, yet they were prominent in their interconnected relationships spanning the homogeneous network. In short, patterns suggest Union workers may view the world in compartmentalized nature, while Non-Union workers may see an open work environment without boundaries.

4.5.3 Methodological Reflections and Contributions

From a theoretical perspective, the findings strengthen the importance from the literature of connections between Procedural Justice phenomenon and Cognition phenomenon. There is a weak translation between what people think and what they are willing to put action behind, and this plays out with unions as part of the workplace environment. Union Instrumentality acts as a cognitive mediator, not a behavioral driver to action. Justice perceptions are necessary but are not sufficient for behavior. From a methodological perspective, this research demonstrated a workflow that can be of use to studies across domains and areas of inquiry. LASSO served well as an initial tool for inquiry related to variable behavior, attributes, and interactions. Stability Selection, following the guidance of Meinshausen and Bühlmann (2010), ensured the network graphs were not spurious and held consistent across many trials. CFA refinement helped enhance model development and construct clarity over iterations. SEM and invariance testing ensured model structural validity. This holistic multi-method triangulation progressed from participants’ “*what*” to “*how*” to “*why*”, helping lead us to an important unknown, the Cognitive-Action Gap, the hidden missing catalyst between employee thought and action that is a barrier to union membership.

4.5.4 Limitations and Future Directions

This study has several limitations. One important limitation is that the cross-sectional design cannot establish temporal order. The Cognition-Action Gap may reflect delayed behavior. Longitudinal tracking was not part of this research design. Also, this study was not able to effectively integrate the conditional predictors of Employment-At-Will (EAW) and Prior Union Experience (PUE). Much of the most comprehensive attitude data track *all adults* rather than only current employees; however, employed respondents constitute the majority, and worker-specific surveys (MIT Worker Voice, 2024) point in the same direction. Future research should (i) differentiate perceptions by *workplace exposure* (union presence, past membership), (ii) track longitudinal attitude change within the same workers as campaigns unfold, and (iii) link perceptions to objective job-quality outcomes.

4.6 Implications of this Research

These findings have distinct and compelling implications for both organizations and unions.

4.6.1 For Organizations

Organizations will benefit from the knowledge that the Cognition-Action Gap exists. While the Procedural Justice (PJ) – Justice-Instrumentality (JI) relationship is strong; both the Justice-Instrumentality (JI) – Union Orientation (UIO) and then Procedural Justice (PJ) – Union Orientation (UIO) relationships are not significant. These findings suggest that efforts to improve procedural fairness alone are not sufficient to motivate union-orientation behavior among employees.

4.6.2 For Unions

Unions will likely interpret these findings differently. Unions need to find an activation mechanism that cuts across the Cognition-Action Gap, turning mere thought into the desired outcome of joining the union. One hurdle to consider is the employees may have a “*grass is always browner*” comparative perception bias. They may over-rate their own current status, when reflecting on the status of another perceived group.

5. Conclusion

This study integrated modern perceptions of Unions with the Procedural Justice and Distributive Justice (PJ/DJ) research of Alexander and Ruderman. Non-significant paths: Justice-Instrumentality (JI) – Union Orientation (UIO) and Procedural Justice (PJ) – Union Orientation (UIO), demonstrate a failure to translate thought into action. The final model illustrated one strong relationship between Procedural Justice (PJ) – Justice-Instrumentality (JI). Adding to both theory and practice, the important discovery of a missing catalyst, the Cognition-Action Gap, suggests that efforts to improve procedural fairness alone are necessary yet not sufficient to motivate union-

orientation behavior among employees. Future research will build upon detailed employee experiences with unions and the critical Cognition-Action Gap.

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Appendix

Survey Questions (7-Point Likert Scale):

1. How much say do you have in developing new work rules and procedures? (Rules)
2. How much say do you have in setting priorities among tasks to be done? (Priority)
3. How much say do you have in deciding how work will be divided among people? (Allocation)
4. How much say do you have in developing organization policies? (Policy)
5. How much say do you have in deciding what you will do day to day? (Schedule)
6. How much say do you have in buying new equipment? (Equipment)
7. How much freedom do you have on your job? (Freedom)
8. All in all, my pay is about what it ought to be. (Amount)
9. My pay is fair considering what other places in this area pay. (Location)
10. My pay is fair compared to the pay of others in this agency. (Equity)
11. The appeals procedures protect me from unfair treatment if a personnel action is brought against me. (Appeals)
12. Appealing personnel actions is a waste of time. (Futility)
13. The negotiated grievance procedures protect employees if they have a formal personnel action against them for poor performance. (Grievance)
14. When people perform poorly here, they're given a chance to improve their work. (Remediation)
15. Generally speaking, annual performance appraisals are done fairly here. (Fairness)
16. My last annual performance appraisal rating was about what it ought to have been. (Accuracy)
17. If you performed your job especially well, how likely is it that you will be promoted or get a better job? (Excellent)
18. If you performed your job satisfactorily, how likely is it that you will be promoted or get a better job? (Satisfactory)
19. If I perform poorly, I will lose my job. (Termination)
20. I will be demoted or transferred from my position if I perform my job poorly. (Demotion)
21. All in all, I am satisfied with my job. (Satisfaction)
22. In general, I don't like my job. (Dislike)

23. How likely is it that you will try to transfer to another job in your current organization in the next year? (Transfer)
24. How likely is it that you will look for a job outside your current organization in the next year? (Outside)
25. In the last year, how often have you felt more irritable than usual? (Irritation)
26. In the last year, how often have you felt nervous, fidgety, or tense? (Anxiety)
27. Employees here feel you can't trust top management. (Distrust)
28. When top management here says something you can really believe its true. (Honesty)
29. There is a lot of conflict among people here. (Conflict)
30. People here will do things behind your back. (Deceit)
31. Around here it's important to protect yourself or you'll be blamed for problems. (Blame)
32. People are afraid to express their real views to top management. (Fear)
33. My supervisor encourages me to speak up when I disagree with a decision. (Dissent)
34. My supervisor helps poor performers learn to do their job better. (Coaching)
35. My supervisor criticizes people who perform poorly. (Criticism)
36. My supervisor gives me opportunities for training and development. (Opportunity)
37. My supervisor is someone I can trust. (Trust)
38. My supervisor is concerned about me as a person. (Considerate)
39. The concept of "at will" employment negatively impacts my job security. (AtWill)
40. My organization currently has a union. (Union)
41. If my organization has a union, it is weak and ineffective. (Weak)
42. If my organization has a union, it is strong and effective. (Strong)
43. If my organization has a union, I would join it. (Join)
44. If my organization has a union, I would avoid it. (Avoid)
45. My organization does not have a union, and I do not want a union for my organization. (Undesired)
46. My organization does not have a union, however, I wish my organization did have a union. (Desired)



47. Do you want to share any further information related to your experiences and this survey? (Further)
48. Now, please tell us something about yourself. (48Drop)
49. Which of the following best describes your gender? (Gender)
50. Which race or ethnicity best describes you? (Race)
51. What is your marital status? (Marriage)
52. In which of the following age ranges do you currently fall? (Age)
53. Which of the following best describes the highest level of education you have received? (Education)
54. Below are some income categories. (Income)
- + *Please choose the category that best describes the total annual income of the household.*
- + *Please include your personal income, as well as the income of others living in the household.*