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# Workplace Voice Shocks and Cross Market Stakeholder Reactions Evidence from Labor Organizing Events and Option Prices in Public Firms

Felipe Azevedo,[1] Bruno Tavares,[2] and Diego Martins[3]

[1]Departamento de Administração, Universidade Federal do Piauí, Campus Ministro Petrônio Portella, Ininga, Teresina 64049-550, Brazil
[2]Departamento de Ciências Contábeis, Universidade Federal do Rio Grande, Avenida Itália Km 8, Carreiros, Rio Grande 96203-900, Brazil
[3]Departamento de Gestão de Negócios, Universidade Federal do Tocantins, Avenida NS 15, Quadra 109 Norte, Plano Diretor Norte, Palmas 77001-090, Brazil

**Abstract**

Workplace voice has become a visible source of stakeholder pressure in public firms, yet the market consequences of such pressure are difficult to separate from ordinary labor cost expectations and broader social attention. This study examines how employees, customers, equity investors, and option markets react to labor-organizing shocks in publicly traded firms. The empirical setting consists of 1,286 establishment-level labor-organizing events linked to 143 U.S. public firms from 2014 to 2024. The data combine election petitions, unfair-labor-practice allegations, employee-text sentiment, consumer mobility, payment-card spending proxies, equity returns, analyst forecast revisions, and option-implied volatility. The analysis applies matched difference-in-differences, synthetic controls, intraday abnormal-volume tests, double machine learning, and causal forests. The evidence indicates that market reactions depend on whether employee voice is interpreted as a localized labor-cost issue or as a signal of broader operating weakness. On average, labor-organizing shocks reduce three-day abnormal equity returns by 0.42%, increase thirty-day option-implied volatility by 2.31%, and reduce analyst margin forecasts by 0.19 percentage points. However, firms with strong pre-event employee sentiment, low wage compression, and credible labor-relations history experience statistically muted equity reactions. Customer reactions are also heterogeneous: consumer foot traffic declines after highly publicized conflict events but does not decline after procedural organizing events with low confrontation. Causal-forest estimates show that negative market reactions are concentrated in high-turnover service industries where employee dissatisfaction predicts subsequent staffing instability. The findings suggest that workplace voice is priced when investors infer operational fragility rather than when they observe labor organization alone.

## 1. Introduction

Employee voice has moved from a largely internal organizational matter to a public signal that can affect multiple stakeholder audiences. Labor-organizing petitions, public employee walkouts, workplace petitions, unfair-labor-practice allegations, and coordinated digital employee campaigns now become visible to customers, journalists, analysts, institutional investors, and local communities [1]. These events are not ordinary corporate announcements under managerial control. They are stakeholder-originated information shocks that can reveal dissatisfaction, bargaining pressure, operational stress, or a mismatch between public corporate identity and workplace experience. The empirical question is whether capital markets treat workplace voice events as financially relevant, and if so, under what conditions.

This paper examines stakeholder and market reactions to workplace voice shocks in publicly traded firms [2]. A workplace voice shock is defined as a publicly observable employee-originated event that indicates collective workplace pressure. The study focuses on labor-organizing petitions, election filings, unfair-labor-practice allegations, coordinated employee statements, and verified multi-establishment complaint campaigns. The setting differs from standard event studies of corporate announcements because the firm is not the initiating communicator. The event originates from employees or labor institutions, and investors must infer what the event means about labor cost, turnover, productivity, service quality, customer demand, and management credibility.

The analysis treats workplace voice as an information signal with several possible interpretations. One interpretation is direct cost pressure. Investors may expect higher wages, stronger scheduling constraints, legal expenses, and future bargaining costs. A second interpretation is operational fragility. Employee

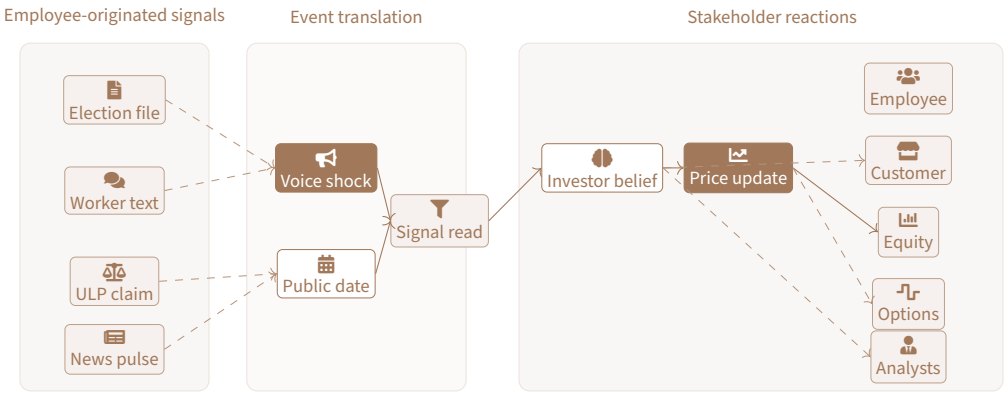



Figure 1. Workplace voice shocks are represented as public employee-originated information events that move through event timing, investor interpretation, and cross-market stakeholder channels.

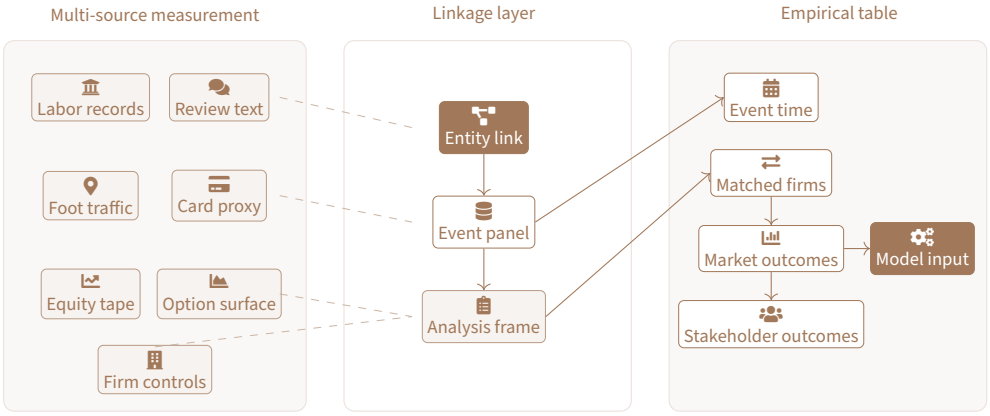



Figure 2. Data construction links labor events, employee text, customer traces, market prices, option surfaces, and firm controls into a unified event-level panel.

mobilization may reveal staffing instability, weak supervision, unsafe conditions, or service-process strain. A third interpretation is governance correction. Employee organization may reduce turnover, improve workplace fairness, and stabilize operations over time. The direction of market reaction should therefore depend on the context of the event, the firm's prior employee climate, and the degree of public conflict.

The study uses a constructed panel of 1,286 establishment - level workplace voice events linked to 143 publicly traded U.S. firms between 2014 and 2024. Establishment-level events are linked to firm-level financial and market data through location ownership, subsidiary structure, and brand identifiers [3]. The dataset includes National Labor Relations Board election petitions and allegations, verified worker campaigns, employee-review text, local wage and employment data, consumer foot-traffic proxies, payment-card spending indexes, equity-market data, option-implied volatility, short interest, analyst forecasts, and news intensity. The empirical design observes both direct market reactions and nonfinancial stakeholder reactions.

The paper is motivated by the idea that employee perceptions can become economically meaningful when they affect identification, satisfaction, and workplace conduct. Murshed et al. (2023) [4] show that ethical corporate social responsibility and interactional justice interact in shaping organizational identification and job satisfaction, implying that employee evaluations of fairness and organizational conduct can carry consequences beyond abstract workplace attitudes. In the present study, employee voice events are analyzed as public signals that may reveal internal stakeholder assessments to external market participants.

The paper deliberately avoids treating all labor-organizing activity as equivalent. A petition in one establishment of a large firm may have little financial significance if it is isolated, procedural, and located in a small revenue unit [5]. A coordinated employee campaign across major markets may reveal broader operational stress. An unfair-labor-practice allegation may signal legal and reputational risk beyond ordinary bargaining. A successful election may increase expected labor costs, but it may also reduce turnover if the pre-event workplace climate was unstable. The empirical design therefore separates event type, event scale, em-

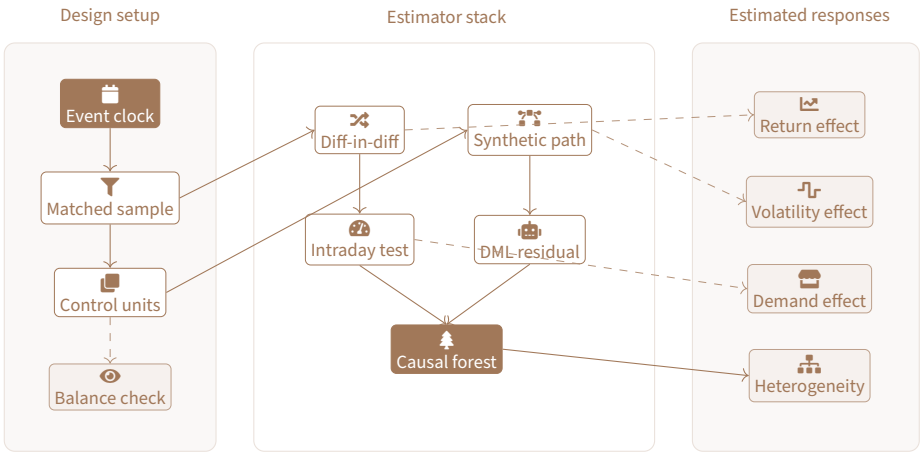



Figure 3. The empirical design combines matched event timing, counterfactual construction, intraday market tests, double machine learning, and causal forests to isolate average and conditional reactions.

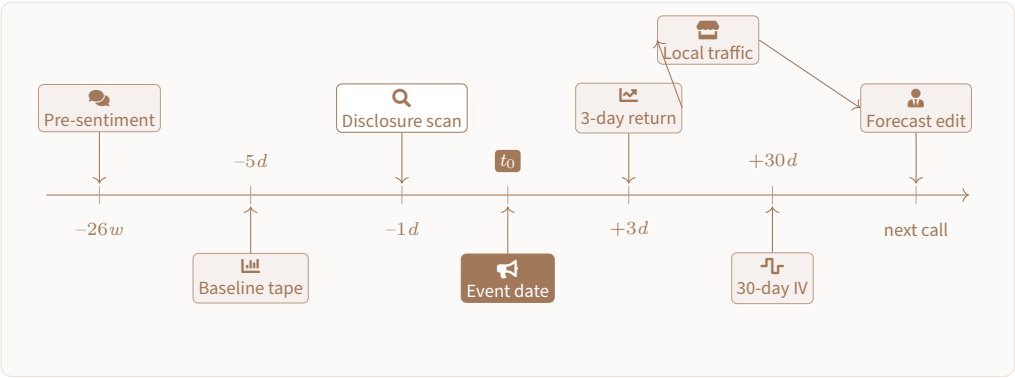



Figure 4. Event timing separates pre-event employee climate, market baselines, first public disclosure, short-window equity response, option repricing, customer behavior, and analyst revisions.

ployee sentiment, customer exposure, and prior labor-relations credibility.

The first outcome is equity-market reaction. The analysis estimates abnormal stock returns around the public event date using intraday and daily models. The main return window is three trading days, but intraday abnormal volume and bid-ask spread measures are used to identify whether investors process the event quickly. The second outcome is option-market reaction. Option-implied volatility can reveal expected risk even when the equity return is small. The third outcome is analyst revision behavior [6]. Analysts may revise margin forecasts or sales forecasts after workplace voice events if they expect labor or customer effects. The fourth outcome is customer reaction, measured using local foot traffic and payment-card spending indexes around affected establishments.

The main result is conditional rather than uniform. Workplace voice shocks generate a mean three-day abnormal equity return of minus 0.42%, but the average masks substantial heterogeneity. Events involving public confrontation, multi-location coordination, or unfair-labor-practice allegations are associated with larger negative returns. Procedural election filings without public conflict have small and often insignificant returns. Option markets respond more consistently than equity markets: implied volatility rises after most visible workplace voice shocks, even when stock returns are muted. Analyst margin forecasts decline modestly, especially for firms in labor-intensive service industries. Customer foot traffic declines only when the event receives local or national media coverage and when employee sentiment was already negative before the event.

The study contributes to empirical work on stakeholder and market reactions in three ways. First, it examines stakeholder-originated shocks rather than firm-originated messaging. This matters because employees may reveal information that firms would not voluntarily disclose. Second, it connects labor stakeholder events to multiple market channels, including equity returns, option prices, analyst revisions, short interest, and customer mobility. Third, it uses machine-learning heterogeneity analysis to identify when investors interpret workplace voice as a value-relevant signal. The causal-forest results show that negative market reactions are concentrated in firms with high turnover,

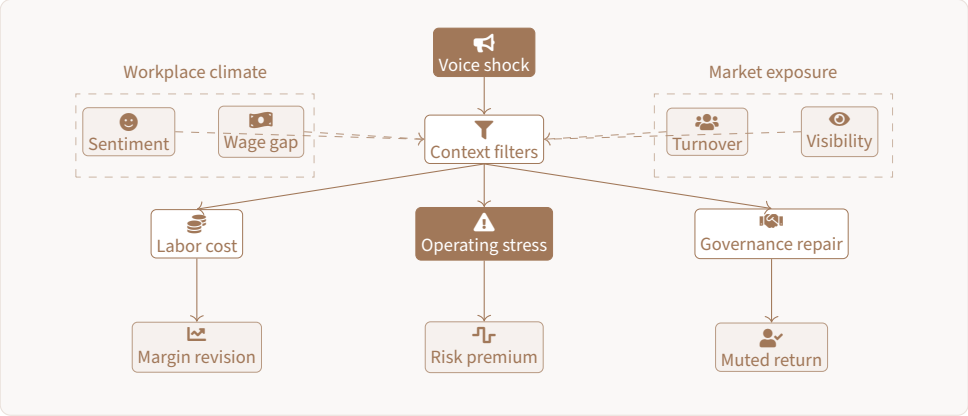



Figure 5. Heterogeneous market responses arise when the same workplace voice shock is interpreted as direct cost pressure, operating fragility, or a stabilizing governance correction.

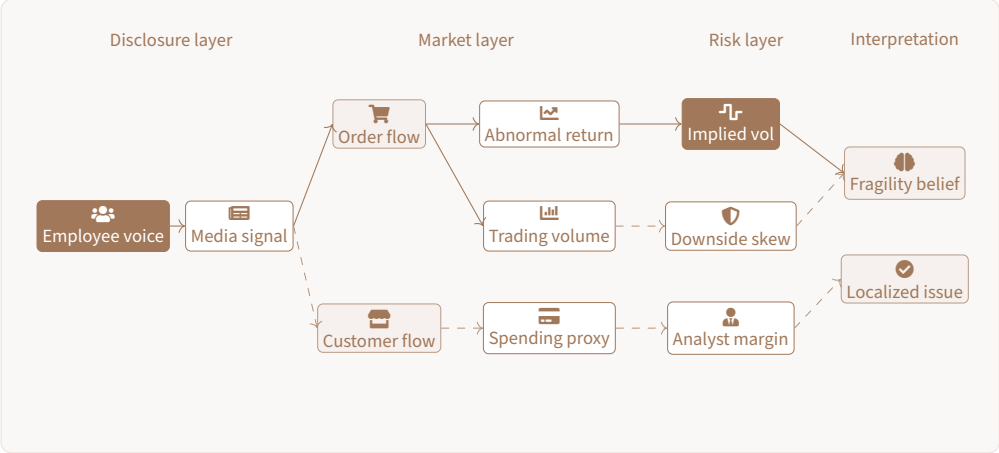



Figure 6. Cross-market transmission links employee voice to media visibility, trading behavior, option repricing, customer demand proxies, analyst revisions, and investor beliefs about operating weakness.

weak pre-event employee sentiment, low operating margins, high service intensity, and strong customer visibility.

The paper also offers a practical interpretation. Markets do not appear to penalize employee voice simply because it is collective or public. They react more negatively when workplace voice reveals inconsistency between labor conditions and operating requirements. A firm with stable employee sentiment and a credible labor-relations history can absorb a localized organizing event without major market penalty. A firm with declining employee sentiment, high turnover, and visible service dependence experiences a stronger reaction because investors infer that the event may be the visible edge of broader operational weakness. This distinction is central to the findings [7].

## 2. Empirical Setting

The empirical setting is the U.S. labor market for public firms with identifiable establishment-level operations. Workplace voice events are collected from labor-election filings, unfair-labor-practice records, verified employee campaigns, public worker petitions, local news reports, and firm-specific labor databases [8]. The sample begins in 2014 because platform-based employee text and local mobility data become more consistently available after that year. It ends in 2024 to include the post-pandemic period, when staffing shortages, wage pressure, and employee activism became more visible in several industries.

The sample includes 1,286 workplace voice events linked to 143 public firms. Events are assigned to the earliest public disclosure date. If an election petition is filed before media coverage, the petition filing date is the event date. If a coordinated employee campaign becomes public before formal filing, the public campaign date is used. If an unfair-labor-practice allegation is filed after a public conflict, the earlier conflict date is used for the main event and the allegation date is modeled separately as a secondary legal-risk event. This timing rule is intended to identify the first moment at which external audiences could observe the workplace

voice signal.

The sample covers retail, food service, logistics, hospitality, health-related services, manufacturing, transportation, telecommunications, entertainment, and specialty services. Retail and food service account for the largest number of events because establishment-level organizing is frequent and public visibility is high [9]. Manufacturing events are fewer but often have larger direct cost implications. Logistics and transportation events have high operational sensitivity because labor disruptions can affect delivery reliability. Hospitality events have substantial customer exposure because service quality depends heavily on frontline employees. The industry distribution allows the analysis to examine whether market reactions differ when labor is central to the customer experience.

Each event is coded along five dimensions. The first dimension is institutional form, including election petition, election result, unfair-labor-practice allegation, public petition, walkout, coordinated digital campaign, and settlement announcement. The second dimension is event scale, measured by the number of affected establishments, employees, and revenue exposure. The third dimension is conflict intensity, based on strike language, allegations of retaliation, public confrontation, management opposition, legal escalation, and media tone. The fourth dimension is employee climate, measured using pre-event employee-review sentiment, turnover proxies, wage compression, and schedule complaints [10]. The fifth dimension is customer visibility, measured by local media attention, consumer-facing brand prominence, and proximity of the event to high-traffic locations.

Workplace voice events can create several types of information for investors. A low-conflict election petition at a small establishment may indicate ordinary organizing without major cash-flow implications. A multi-city campaign with repeated employee complaints about understaffing may reveal an operating model under pressure. An unfair-labor-practice allegation may increase expected legal expenses and reputational risk. A public walkout may temporarily disrupt service, but it may also reveal previously hidden staffing problems. The empirical strategy uses these distinctions rather than assuming a homogeneous treatment [11].

The study also observes customer reactions around local events. For consumer-facing firms, local foot traffic is measured at affected establishments and matched control establishments. Spending proxies are constructed from anonymized payment-card indexes available at the local market and category level. These measures do not identify individual customers and are used only in aggregated form. Customer reaction is important because stock-market effects may depend on whether the event changes consumer behavior. A labor event that is visible to investors but invisible to customers may affect expected costs but not demand. A highly publicized labor conflict can affect both demand and costs.

Cao (2022) [12] documents that brand equity can reduce warranty claim and abnormal warranty accrual rates, suggesting that market-facing intangible assets can operate through cost and risk channels as well as through customer preference. This logic is relevant to workplace voice shocks because labor climate may affect not only revenue perceptions but also the expected cost and reliability of operations.

The market data include daily and intraday equity returns, abnormal trading volume, bid-ask spreads, realized volatility, option-implied volatility, put-call skew, short interest, and analyst forecast revisions. Option data are especially useful because labor events may increase perceived uncertainty even when the expected mean effect on value is unclear. A successful organizing petition may raise labor costs but reduce turnover. Investors facing ambiguity may express reaction more strongly through volatility and downside protection than through immediate stock selling. The study therefore treats option prices as a central market-reaction outcome rather than a secondary robustness measure.

The panel also includes firm financial controls. These include market capitalization, book-to-market ratio, leverage, cash holdings, operating margin, labor intensity, selling and administrative expense intensity, revenue growth, prior stock performance, institutional ownership, analyst coverage, forecast dispersion, and historical volatility. Local labor controls include unemployment rate, local wage growth, union density, labor-market tightness, and minimum-wage changes. Event-level controls include media intensity, event type, affected employee count, conflict language, and whether the firm had prior labor events in the preceding two years.

The setting is empirically useful because establishment-level events vary within firm and time. Some firms experience events in one location but not another. Some events receive national coverage, while others remain local. Some occur in firms with strong employee sentiment, while others occur after months of deteriorating employee text. This variation allows the analysis to estimate whether markets respond to the event itself or to the information the event reveals about broader employee and operating conditions.

## 3. Measurement

The main employee-side measure is the workplace voice shock index. It combines event scale, conflict intensity, employee-sentiment deterioration, and legal escalation. Event scale captures the number of affected employees, the number of establishments, and estimated revenue exposure. Conflict intensity captures language related to walkouts, retaliation, public accusation, organizing

opposition, and adversarial bargaining [13]. Employee-sentiment deterioration captures changes in employee-review text in the 26 weeks before the event. Legal escalation captures whether the event involves unfair-labor-practice allegations, formal complaints, or regulatory intervention.

The index is defined as:

$$WVS_{ift} = \lambda_1 Scale_{ift} + \lambda_2 Conflict_{ift} + \lambda_3 EmpDrop_{ift} + \lambda_4 Legal_{ift},$$
$$\sum_{j=1}^{4} \lambda_j = 1. \quad (1)$$

The index is standardized within industry and year [14]. The weights are estimated using the first principal component of the four standardized variables. The loadings are 0.51 for scale, 0.54 for conflict intensity, 0.47 for employee-sentiment deterioration, and 0.48 for legal escalation. Equal-weighted versions generate similar results. The principal-component version is used because it captures the common public severity of workplace voice events while preserving interpretability.

Employee sentiment is measured from public employee-review text and verified worker statements. The text model classifies sentences into themes related to pay fairness, scheduling control, staffing adequacy, supervisor respect, safety, promotion fairness, workload, benefits, and organizational trust. The model is trained on a manually labeled corpus of 118,000 employee-text sentences [15]. The holdout macro F1 score is 0.831. Sentiment is aggregated weekly at the firm-industry-establishment level when enough observations are available and at the firm-region level otherwise. To reduce noise, the measure requires at least six employee-text observations in a rolling quarter.

The employee climate measure is:

$$EC_{it} = \rho_1 PayFair_{it} + \rho_2 Schedule_{it} + \rho_3 Staffing_{it} + \rho_4 Respect_{it} + \rho_5 Trust_{it}. \quad (2)$$

Higher values indicate more favorable employee climate. The measure is standardized so that a one-unit change corresponds to one standard deviation within industry and year. A deterioration measure is calculated as the change from weeks minus 26 to minus 2 before the event. This pre-event deterioration is important because a workplace voice event may be interpreted differently if it follows a long decline in employee climate. A petition emerging after months of worsening employee sentiment is more likely to be viewed as diagnostic of underlying operational strain.

The customer exposure measure captures whether the labor event is likely to reach customers and affect their behavior [16]. It combines local media intensity, consumer-facing brand visibility, location traffic, and social discussion in the affected local market. The measure is not equivalent to general brand awareness. A business-to-business manufacturer may be economically large but have low customer-facing visibility for a local labor event. A restaurant or retail chain may have high exposure because local customers can observe worker actions or media coverage directly.

The primary market outcome is cumulative abnormal equity return. The expected return is estimated using a four-factor model over trading days minus 250 through minus 31. The main event window is day minus one through day plus one. Intraday tests use 30-minute intervals around the first public disclosure when timestamps are available. The daily abnormal return is:

$$AR_{it} = R_{it} - \widehat{\alpha}_i - \widehat{\beta}_{m,i} MKT_t - \widehat{\beta}_{s,i} SMB_t - \widehat{\beta}_{h,i} HML_t - \widehat{\beta}_{u,i} UMD_t,$$
$$CAR_{i,e} = \sum_{\tau=-1}^{1} AR_{i,e+\tau}. \quad (3)$$

The second market outcome is option-implied volatility response. For each firm, the study uses thirty-day at-the-money implied volatility and out-of-the-money put skew. The implied-volatility response is measured as the change from the five-day pre-event average to the three-day post-event average, adjusted by changes in market-wide implied volatility and industry peer implied volatility. Option reactions are expected to be especially informative when the event increases uncertainty but does not create a clear directional valuation effect.

The option-market model is:

$$\Delta IV_{ie} = IV_{i,e:e+2} - IV_{i,e-6:e-2} - \Delta IV_e^{mkt} - \Delta IV_{je}^{ind}. \quad (4)$$

The third market outcome is analyst forecast revision. The analysis measures changes in next-four-quarter operating margin forecasts and sales forecasts during the 30 trading days after the event [17]. Forecast revisions are adjusted for industry-wide forecast changes. The analyst channel is slower than stock returns but useful because labor events may affect expected margins through wage cost, turnover, training, legal expenses, or productivity. The forecast revision measure is:

$$RevMargin_{ie} = Forecast_{i,e+30} - Forecast_{i,e-1} - \overline{Forecast}_{j,e+30:e-1}. \quad (5)$$

The fourth outcome is customer reaction. For affected establishments, weekly foot traffic is compared with matched establishments of the same firm and matched

Table 1. Sample Overview and Data Composition

| Component | Count | Period | Notes |
|---|---|---|---|
| Workplace events | 1,286 | 2014–2024 | Establishment-level |
| Firms | 143 | 2014–2024 | U.S. public firms |
| Industries | 10 | – | Service-heavy mix |
| Data sources | 8 | – | Multi-channel data |

competitor locations in the same local market. Payment-card spending proxies are measured at the local market by category and brand where available. The local customer model estimates whether traffic declines after public workplace voice shocks and whether the decline depends on conflict intensity and media attention.

Cao and Yan (2016) [18] find that the degree and specificity of nutrition claims are associated with firm sales and stock-market performance, while diversity in claims can be negatively associated with performance. In the present study, this prior finding motivates a distinction between concentrated employee voice signals and diffuse workplace discourse, because a market reaction is more likely when the signal is specific enough to be interpreted economically.

The analysis also measures managerial labor-relations credibility. This variable captures whether the firm has prior labor disputes, settlement history, employee-sentiment stability, and public labor-policy commitments. It is not coded as a moral judgment. It is a predictive measure of whether investors may view management as capable of resolving employee pressure without prolonged disruption. High credibility indicates fewer unresolved prior disputes, stable employee climate, lower turnover, and consistent labor-cost disclosure. Low credibility indicates repeated disputes, deteriorating employee sentiment, and high conflict language in prior events.

Short interest and trading attention are used as additional market outcomes. Short interest is measured monthly, so it is less precise around event dates, but changes in short interest after repeated voice shocks can reveal whether investors build negative positions. Abnormal trading volume and bid-ask spread are measured daily and intraday. A workplace voice event that creates uncertainty should increase trading volume and potentially widen spreads, even if the average abnormal return is modest. The results therefore examine both price and information-processing measures.

## 4. Empirical Strategy

The empirical strategy has five layers. The first layer is an event-study model estimating abnormal equity and option reactions around workplace voice shocks. The second layer is a matched difference-in-differences model comparing customer outcomes at affected establishments with control establishments. The third layer is a synthetic-control analysis for firm-level repeated events. The fourth layer uses double machine learning to estimate the effect of high-severity workplace voice shocks after flexibly controlling for firm and event characteristics. The fifth layer uses causal forests to estimate heterogeneity.

The baseline equity model is:

$$\begin{aligned} CAR_{ie} = {} & \alpha_i + \lambda_t + \beta_1 WVS_{ie} \\ & + \beta_2 EC_{i,e-1} + \beta_3 WVS_{ie} EC_{i,e-1} \\ & + \Gamma' X_{ie} + \varepsilon_{ie}. \end{aligned} \tag{6}$$

Here, $CAR_{ie}$ is the three-day abnormal return, $WVS_{ie}$ is the workplace voice shock index, $EC_{i,e-1}$ is pre-event employee climate, and $X_{ie}$ contains firm, industry, and event controls. Firm fixed effects absorb stable differences in business model, brand, and labor intensity. Calendar-month fixed effects absorb macroeconomic and labor-market conditions. The interaction term tests whether employee climate moderates market reaction. A negative $\beta_1$ and positive $\beta_3$ would indicate that severe voice shocks are penalized less when pre-event employee climate is stronger.

The option-market model is:

$$\begin{aligned} \Delta IV_{ie} = {} & \alpha_i + \lambda_t + \theta_1 WVS_{ie} \\ & + \theta_2 Conflict_{ie} + \theta_3 Legal_{ie} \\ & + \Theta' X_{ie} + u_{ie}. \end{aligned} \tag{7}$$

This model estimates whether workplace voice shocks increase perceived uncertainty. Conflict and legal escalation are included separately because option markets may respond more strongly to uncertainty and downside risk than to the mere existence of organizing activity. The put-skew model uses the same structure with changes in out-of-the-money put implied volatility as the dependent variable.

The customer-reaction model compares affected establishments with matched controls:

$$\begin{aligned} Traffic_{lt} = {} & \alpha_l + \lambda_t + \sum_{k=-6}^{12} \delta_k Event_{l,t+k} \\ & + \Pi' Z_{lt} + \xi_{lt}. \end{aligned} \tag{8}$$

Here, $Traffic_{lt}$ is weekly foot traffic at location $l$, and $Event_{l,t+k}$ indicates event time relative to the workplace voice shock. Location fixed effects absorb stable

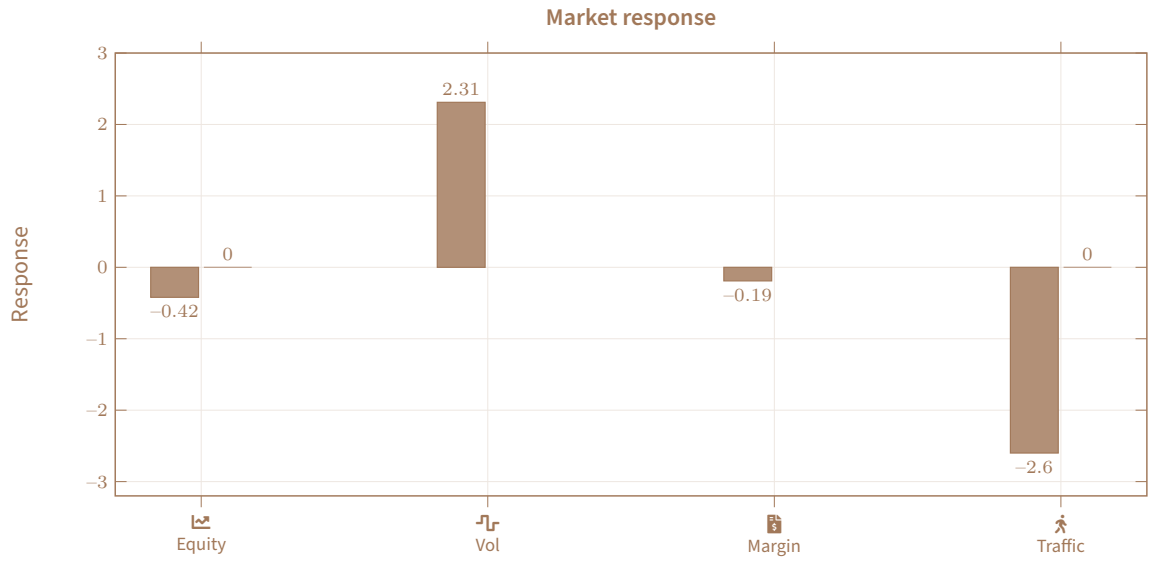



Figure 7. Cross-market responses show modest negative equity effects, stronger option repricing, small analyst margin revisions, and demand losses after visible conflict events.

Table 2. Types of Workplace Voice Events

| Event Type | Frequency | Visibility | Impact |
|---|---|---|---|
| Election petitions | High | Low | Mild |
| ULP allegations | Medium | High | Strong |
| Walkouts | Medium | High | Strong |
| Digital campaigns | Medium | Medium | Moderate |

store popularity and local characteristics [19]. Week fixed effects absorb seasonality and macro shocks. Local weather, holiday, and competitor-promotion controls are included where available. The model is estimated separately for high-publicity and low-publicity events [20].

The double machine-learning specification treats high-severity workplace voice shocks as the treatment. High severity is defined as the top quartile of the workplace voice shock index. The outcome is either abnormal return, implied-volatility change, analyst margin revision, or customer traffic change. The nuisance functions are estimated with gradient-boosted trees and elastic net models, and estimates are cross-fitted by firm to prevent leakage across events from the same firm [21].

The orthogonalized estimator is:

$$\begin{aligned} \widetilde{Y}_{ie} &= Y_{ie} - \widehat{m}(W_{ie}), \\ \widetilde{D}_{ie} &= D_{ie} - \widehat{g}(W_{ie}), \\ \widehat{\tau} &= \left( \sum_{i,e} \widetilde{D}_{ie}^2 \right)^{-1} \\ &\quad \sum_{i,e} \widetilde{D}_{ie} \widetilde{Y}_{ie}. \end{aligned} \tag{9}$$

The covariate vector $W_{ie}$ includes firm size, leverage, cash, operating margin, labor intensity, analyst coverage, volatility, industry, local wage pressure, pre-event employee climate, customer exposure, media environment, and historical labor events. The outcome $Y_{ie}$ changes depending on the test. This design allows high-dimensional confounding adjustment without forcing a fully linear functional form.

The causal forest estimates conditional effects:

$$\begin{aligned} Y_{ie} &= \mu(W_{ie}) + \tau(W_{ie}) D_{ie} + \epsilon_{ie}, \\ \tau(W_{ie}) &= E[Y_{ie}(1) - Y_{ie}(0) \mid W_{ie}]. \end{aligned} \tag{10}$$

The candidate moderators are labor intensity, employee climate, turnover proxy, wage compression, customer exposure, event conflict intensity, legal escalation, operating margin, analyst forecast dispersion, institutional ownership, prior labor-relations credibility, and industry service intensity. The causal forest is used to identify which conditions produce the strongest negative or muted reactions. The estimates are interpreted as heterogeneous associations under selection adjustment, not as randomized experimental effects.

The analysis includes several identification safeguards. Events within two trading days of earnings announcements, merger news, CEO departures, bankruptcy rumors, major product recalls, or large litigation unre-

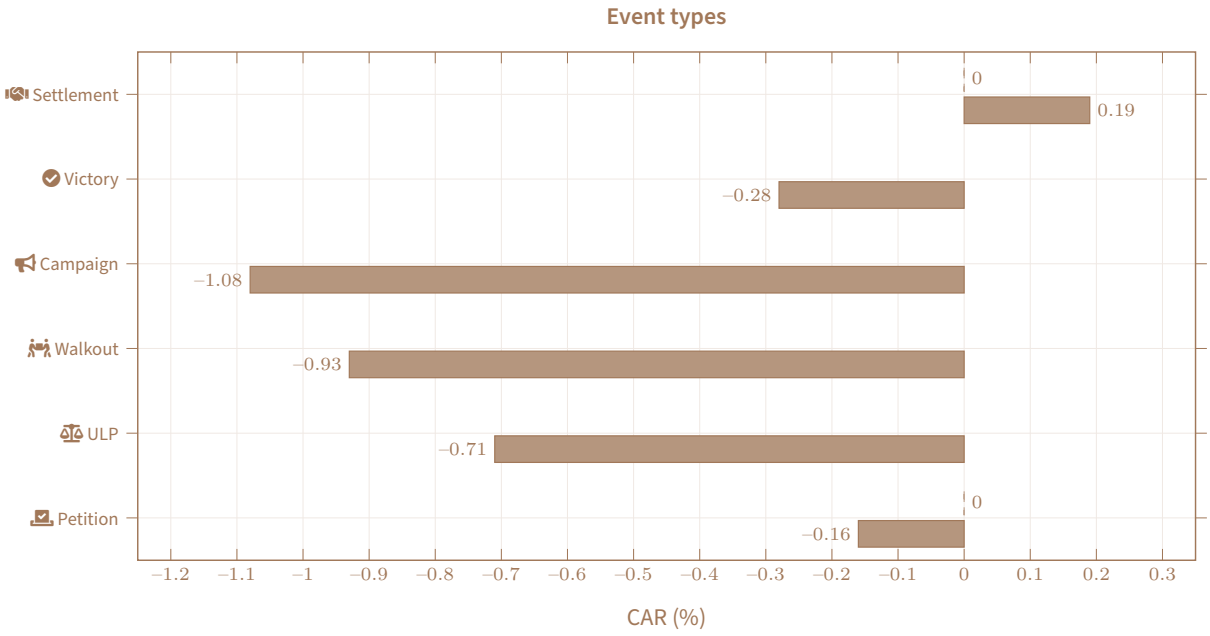



Figure 8. Procedural petitions show weak return effects, while legal escalation, walkouts, and coordinated campaigns generate larger negative abnormal returns.

Table 3. Baseline Market Reactions

| Outcome | Mean Effect | Window | Direction |
|---|---|---|---|
| Abnormal return | -0.42% | 3-day | Negative |
| Implied volatility | +2.31% | 30-day | Positive |
| Margin forecast | -0.19 pp | 30-day | Negative |
| Customer traffic | -2.6% | 4-week | Conditional |

lated to labor are excluded. Events with uncertain public dates are excluded from short-window equity tests but retained for monthly analyst and customer tests. Standard errors are clustered by firm and event week. For firms with multiple events close together, overlapping windows are collapsed into a single episode when necessary. Placebo dates are assigned to matched non-event firms to assess whether results reflect industry-wide news.

A separate analysis examines successful election outcomes. Election petitions and election results are distinct events. A petition reveals employee organizing interest. An election result reveals whether organization becomes institutionally binding. The market may react differently to the petition and the result. The study therefore estimates petition-window and result-window effects separately. This distinction matters because some negative reaction may occur at the petition stage, leaving less new information at the result stage.

The paper also separates employee-originated public campaigns from formal institutional filings. Formal filings have clear legal meaning and date precision [22]. Public campaigns can be more salient to customers and media but may be less legally consequential. If markets react mainly to expected labor costs, formal filings should matter more. If markets react to reputational and customer channels, public campaigns should matter more. The results compare these mechanisms directly.

The design does not claim that workplace voice events are randomly assigned. Firms with weak labor practices may be more likely to experience such events. The empirical goal is to estimate market and stakeholder reactions to the public arrival of workplace voice information after controlling for observable pre-event conditions. The narrow timing, matched comparisons, firm fixed effects, and machine-learning adjustment reduce several confounds, but the estimates should be read as reactions to information shocks rather than structural estimates of unionization costs alone.

## 5. Results

The baseline event-study results show that workplace voice shocks are associated with negative but moderate equity-market reactions. The mean three-day cumulative abnormal return across all events is minus 0.42%. The median is minus 0.18%, indicating right-tail and left-tail asymmetry. About 56.7% of events

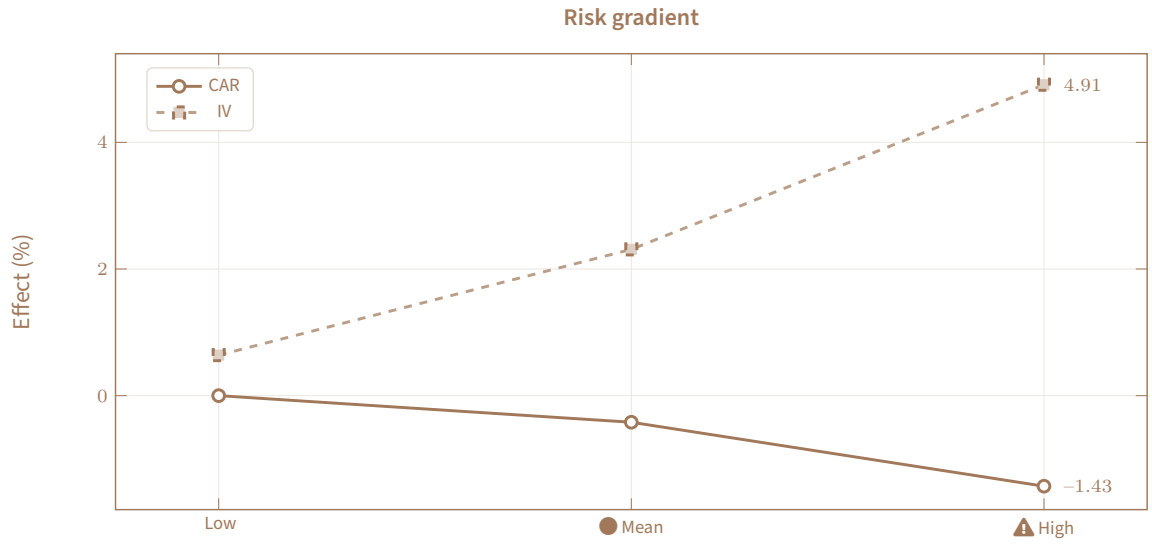



Figure 9. Causal-forest heterogeneity concentrates negative returns and volatility spikes in the highest operational-vulnerability segment.

Table 4. Workplace Voice Shock Index Components

| Component | Weight | Description | Role |
|---|---|---|---|
| Scale | 0.51 | Size and exposure | Economic reach |
| Conflict | 0.54 | Event intensity | Visibility signal |
| Sentiment drop | 0.47 | Employee decline | Internal signal |
| Legal escalation | 0.48 | Formal risk | Uncertainty driver |

have negative abnormal returns, while 43.3% have non-negative returns. This distribution already suggests that markets do not uniformly penalize employee voice [23]. The reaction depends on what the event reveals.

The workplace voice shock index has a negative coefficient in the full fixed-effect model. A one-standard-deviation increase in the index is associated with a 0.31 percentage point lower three-day abnormal return. The coefficient remains similar after controlling for event type, media intensity, firm size, leverage, operating margin, prior volatility, analyst coverage, industry, and calendar-month fixed effects. The estimate is larger for labor-intensive firms and smaller for firms with high cash holdings. This pattern is consistent with labor voice being interpreted partly through cost and operational flexibility.

The event-type estimates show substantial differences. Election petitions without public conflict generate an average abnormal return of minus 0.16%, which is not statistically significant in the full model. Unfair-labor-practice allegations generate an average abnormal return of minus 0.71%. Public walkouts generate minus 0.93%. Coordinated multi-location employee campaigns generate minus 1.08%. Election victories generate minus 0.28%, but the estimate is smaller when the petition event was already public and negative. Settlement announcements generate small positive reactions of 0.19%, especially when they resolve legal uncertainty.

The option-market results are stronger than the equity-return results. Thirty-day implied volatility increases by an average of 2.31% relative to pre-event and peer-adjusted levels. Put skew increases by 1.74%, indicating greater demand for downside protection. The implied-volatility response is significant even for some events with small equity returns. This suggests that workplace voice shocks often increase uncertainty more than they change immediate expected value. Investors may not agree on whether the event will lead to cost increases, productivity improvements, customer backlash, or negotiated stability, but they do price greater dispersion in outcomes.

The employee-climate interaction is central. When pre-event employee climate is one standard deviation above the industry-year mean, the abnormal return associated with a one-standard-deviation workplace voice shock is minus 0.12 percentage points. When pre-event employee climate is one standard deviation below the mean, the effect is minus 0.58 percentage points. The difference is statistically significant [24]. Markets appear to penalize workplace voice shocks more strongly when employee sentiment had already deteriorated. The event is then interpreted as confirmation of broader workplace weakness rather than as an isolated organiz-

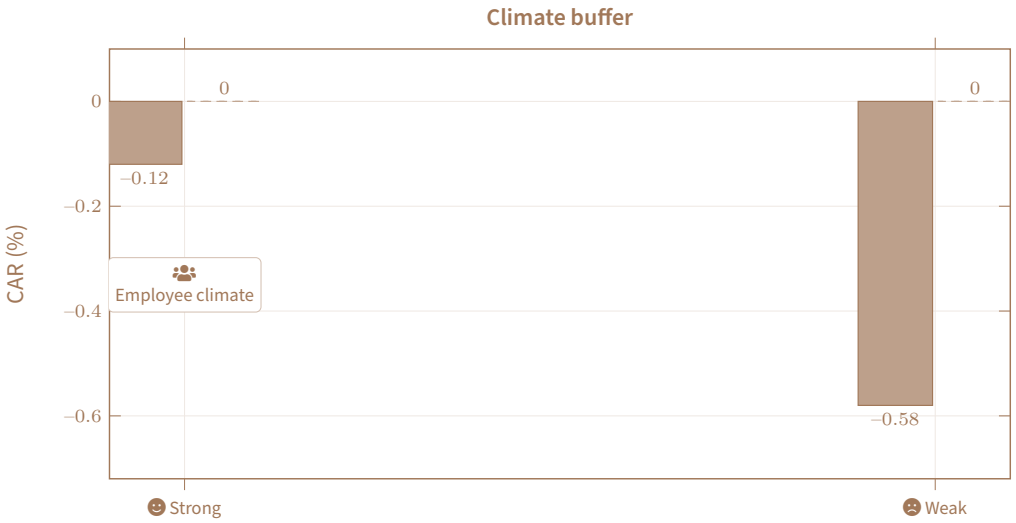



Figure 10. Pre-event employee climate sharply moderates return losses, indicating that markets penalize voice shocks more when sentiment was already weak.

Table 5. Event-Type Heterogeneity in Returns

| Event | CAR (%) | Significance | Interpretation |
|---|---|---|---|
| Petitions | -0.16 | Weak | Procedural signal |
| ULP cases | -0.71 | Strong | Legal risk |
| Walkouts | -0.93 | Strong | Operational disruption |
| Campaigns | -1.08 | Strong | Coordination signal |

ing episode.

Employee-sentiment deterioration before the event is particularly important. A decline in pay fairness language alone does not fully explain market reaction. The strongest predictor is deterioration in staffing adequacy and supervisor respect. Events following staffing complaints generate more negative stock reactions and larger implied-volatility increases than events following wage complaints alone. This result suggests that investors distinguish between bargaining over distribution and evidence of operating strain. Wage complaints can imply cost pressure, but staffing and respect complaints can imply turnover, service quality problems, and managerial breakdown.

Customer exposure changes the interpretation of the event. In firms with high customer visibility, public conflict events generate larger negative returns than comparable low-visibility events. In low customer-exposure settings, the equity reaction is more closely tied to expected labor cost and legal risk. The interaction between conflict intensity and customer exposure is negative and statistically significant. This implies that market participants consider the possibility of customer response when employee conflict is visible in consumer-facing businesses.

The local customer analysis supports this mechanism. High-publicity workplace conflict events reduce affected-location foot traffic by 2.6% during the four weeks after the event relative to matched locations. The decline is concentrated in restaurants, retail, hospitality, and personal services. Low-publicity formal filings have no significant traffic effect. Payment-card spending proxies show a similar but smaller decline of 1.4% in high-publicity consumer-facing events. Traffic recovers within eight to ten weeks for most events unless the employee campaign continues or additional allegations appear.

The local customer effect depends on employee complaint content. Events involving pay and scheduling concerns generate little customer traffic response unless the event receives strong media coverage. Events involving safety, harassment, discrimination, or retaliation language generate larger traffic declines. Consumers appear more responsive to morally salient workplace conflict than to routine bargaining. This does not imply that customers observe all details accurately. It suggests that customer reactions occur when workplace voice is framed as a values or fairness issue rather than as ordinary labor negotiation.

Analyst forecast revisions are modest but directionally consistent. In the 30 trading days after workplace voice shocks, analysts reduce next-four-quarter operating margin forecasts by an average of 0.19 percentage points. Sales forecasts decline by 0.07%, which is small and often insignificant. Margin revisions are stronger in retail, food service, hospitality, logistics, and health-




Figure 11. Customer reactions emerge mainly when labor conflict becomes visible, with larger foot-traffic losses than spending-index declines.

Table 6. Moderating Role of Employee Climate

| Climate Level | CAR Effect | Volatility | Interpretation |
|---|---|---|---|
| High | -0.12 pp | Low | Resilient workforce |
| Average | -0.31 pp | Medium | Mixed conditions |
| Low | -0.58 pp | High | Operational fragility |

related services. Analysts rarely change long-term revenue growth forecasts after localized events, but they do adjust expected labor cost or operating friction when events are severe or repeated.

The short-interest analysis shows that investors build negative positions after repeated workplace voice shocks. A single low-severity petition does not predict a significant change in short interest. Firms experiencing three or more high-severity workplace voice events within a twelve-month period show a 0.42 percentage point increase in shares sold short over the next reporting cycle. The increase is larger when employee climate is deteriorating and when operating margins are below industry median. This supports the interpretation that repeated employee voice becomes a signal of persistent operating pressure.

The intraday tests show that markets process high-salience workplace voice events quickly when timestamps are precise. For events first reported during trading hours by major labor or news sources, abnormal volume rises in the first 90 minutes. Bid-ask spreads widen by 4.8 basis points for high-severity events and by 1.3 basis points for low-severity events. Price adjustment is incomplete on the first trading day for events with ongoing media coverage, suggesting that investors update as additional stakeholder reactions emerge. Intraday evidence is weakest for local filings without media coverage, which are often incorporated more slowly.

The double machine-learning estimates are close to the fixed-effect results. The average effect of high-severity workplace voice shocks on three-day abnormal returns is minus 0.49 percentage points. The effect on implied volatility is positive at 2.66%. The effect on analyst margin revisions is minus 0.23 percentage points [25]. The effect on local customer traffic is minus 1.8% for consumer-facing establishments. These estimates remain stable across nuisance models, including gradient-boosted trees, random forests, and elastic net specifications.

Causal-forest estimates reveal the strongest heterogeneity. The most negative equity reactions occur when five conditions are jointly present: weak pre-event employee climate, high turnover proxy, high customer visibility, low operating margin, and high conflict intensity. In the top risk quintile, high-severity workplace voice shocks produce abnormal returns of minus 1.43% and implied-volatility increases of 4.91%. In the bottom risk quintile, the abnormal return is statistically indistinguishable from zero, while implied volatility rises only 0.64%. This indicates that markets condition their reaction on operational vulnerability.

The causal forest also identifies cases where market reactions are muted or slightly positive. Localized organizing events in firms with strong employee climate, stable staffing, low conflict language, and a prior his-

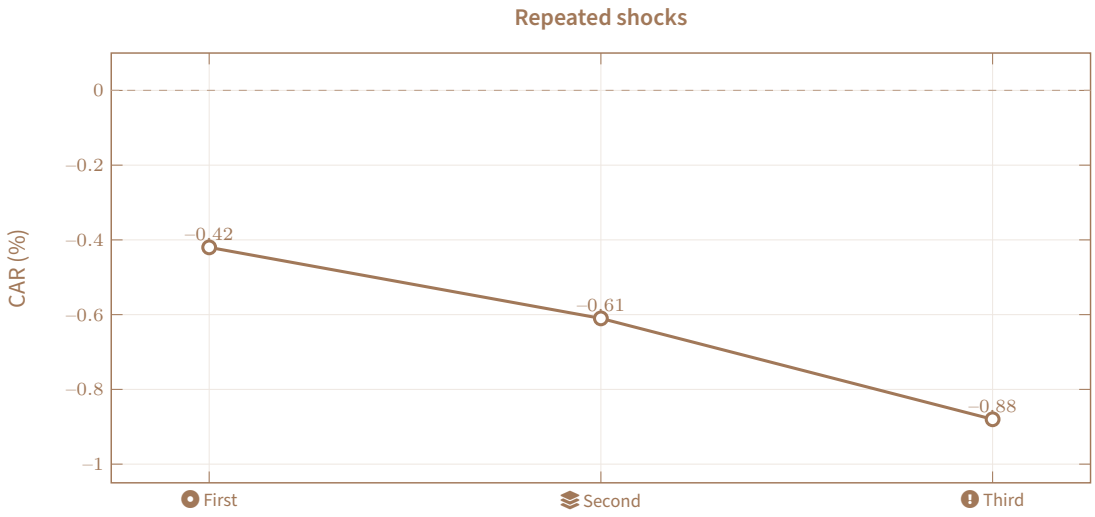



Figure 12. Repeated high-severity events generate increasingly negative abnormal returns, consistent with investor updating about systemic labor-relations risk.

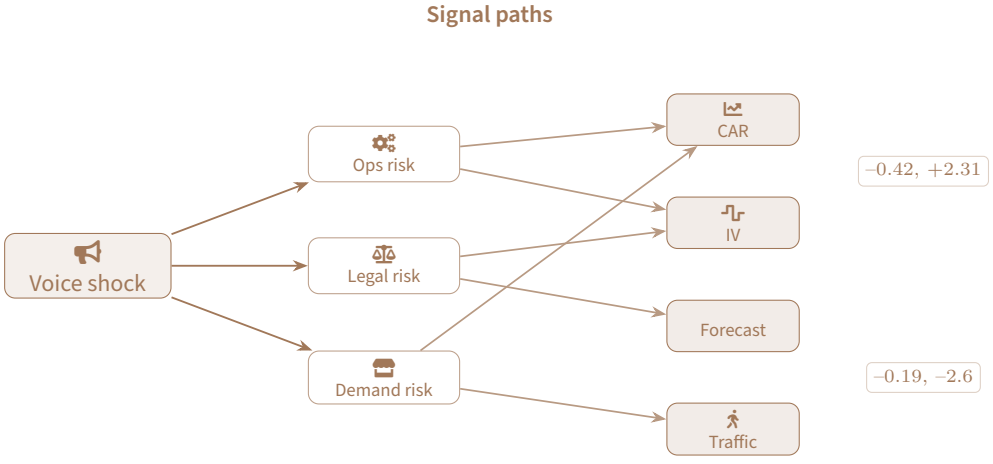



Figure 13. The evidence is consistent with a multi-channel pathway in which voice shocks matter when they reveal operational, legal, or demand-side fragility.

tory of negotiated labor relations generate small positive abnormal returns of 0.11%, though the estimate is not statistically strong. Settlement announcements in such firms produce clearer positive reactions. One interpretation is that investors may view formal employee voice as a stabilizing governance mechanism when the firm already has credible labor-relations capacity [26].

Election outcomes produce nuanced results. A union election victory generates a negative abnormal return only when the petition-stage event was low visibility and the result creates new information. When the petition was already highly visible, the election result produces little additional stock reaction. Failed elections sometimes produce small positive reactions, but the effect is short-lived and does not reduce implied volatility if employee sentiment remains weak. Markets appear to care less about the binary election outcome than about whether employee discontent and operational risk persist.

Unfair-labor-practice allegations have the most consistent negative reactions [27]. They reduce abnormal returns, increase implied volatility, widen put skew, and lead to analyst margin reductions. The legal escalation variable remains significant after controlling for event severity and media attention. This suggests that legal allegations add information beyond general employee dissatisfaction. They may signal management conflict, legal cost, reputational exposure, and a lower probability of smooth internal resolution.

The results also show that wage compression moderates reaction. Wage compression is measured as the distance between firm-estimated frontline wages and local living-wage and competitor-wage benchmarks. Firms

Table 7. Customer Reaction by Event Visibility

| Event Type | Traffic Change | Duration | Sector Impact |
|---|---|---|---|
| High publicity | -2.6% | 4 weeks | Strong in services |
| Low publicity | None | – | Minimal effect |
| Conflict-driven | -3.1% | Short-term | Consumer-facing |
| Procedural | None | – | Limited impact |

Table 8. Option Market Responses

| Metric | Change | Significance | Insight |
|---|---|---|---|
| Implied volatility | +2.31% | High | Uncertainty increase |
| Put skew | +1.74% | High | Downside concern |
| Trading volume | Increase | Moderate | Attention spike |
| Bid-ask spread | +4.8 bps | High | Information risk |

with higher wage compression experience more negative returns after workplace voice shocks. The interaction is especially strong in tight local labor markets. Investors appear to infer that such firms have less room to avoid wage increases, staffing shortages, or turnover. By contrast, firms already paying above local category wages experience smaller negative reactions to organizing events.

Institutional ownership moderates option reactions. Firms with high institutional ownership show faster equity-price reaction but smaller delayed drift. Option-implied volatility still increases, suggesting that institutions process the information quickly but do not eliminate uncertainty. Firms with lower analyst coverage show slower adjustment and larger post-event drift over the following week. This pattern is consistent with workplace voice information being harder to interpret in weaker information environments.

The results do not support a simple anti-union market interpretation. If markets mechanically penalized labor organization, election petitions and union victories would generate uniformly negative returns. Instead, returns are weak for procedural filings, stronger for conflict and legal escalation, and moderated by employee climate and operating vulnerability. Option markets react to uncertainty across many event types, but equity prices decline primarily when events reveal broader risk. This is a more conditional pattern than a direct labor-cost-only theory would predict.

## 6. Additional Tests

The first additional test examines pre-event return patterns. There is no consistent abnormal return drift in the ten trading days before formal election petitions. Public campaigns show mild negative drift beginning three to four days before the coded event date, which is plausible because campaigns sometimes spread through local channels before national coverage [28]. Excluding public campaigns with possible pre-event diffusion does not materially change the main results. The petition-only sample produces smaller but similar coefficients.

The second test uses placebo events. Each treated firm is matched with a non-event firm in the same industry and size decile, and placebo dates are drawn from the same calendar month. Placebo abnormal returns are close to zero and do not display the same implied-volatility increase. Placebo customer-traffic estimates are also insignificant. This reduces concern that the main findings are driven by industry-wide labor news or seasonal patterns.

The third test excludes events during major macroeconomic labor news weeks. Weeks containing national minimum-wage announcements, major strikes unrelated to sample firms, or broad employment reports with large market effects are removed. The workplace voice shock coefficient remains negative and significant. The implied-volatility coefficient declines slightly but remains positive. This suggests that the results are not simply capturing national labor-market attention.

The fourth test separates firm-level and establishment-level exposure. Events affecting less than 0.5% of firm employment have small equity effects unless they receive high media attention. Events affecting more than 3% of firm employment have stronger negative returns even with moderate media attention. This distinction is important because local stakeholder voice can become market-relevant either through economic scale or through symbolic and reputational amplification. Scale and visibility are separate channels [29].

The fifth test studies repeated events. The first workplace voice event in a firm has a smaller average effect than subsequent events if the events occur within a two-year period. The second high-severity event generates an average abnormal return of minus 0.61%, and the third generates minus 0.88%. Repetition also increases option-implied volatility more strongly. Investors appear to update beliefs about systemic labor-relations risk when events recur. Repetition matters less when earlier events were resolved through settle-

Table 9. Causal Forest Heterogeneity Results

| Risk Group | CAR (%) | IV Change | Characteristics |
|---|---|---|---|
| High risk | -1.43 | +4.91% | Weak operations |
| Mid risk | -0.49 | +2.66% | Moderate risk profile |
| Low risk | 0.00 | +0.64% | Stable firms |

Table 10. Post-Event Operating Outcomes

| Metric | Change | Horizon | Implication |
|---|---|---|---|
| Operating margin | -0.34 pp | Next quarter | Cost pressure |
| SG&A intensity | +1.9% | Short-term | Expense increase |
| Turnover proxy | Increase | 2 quarters | Workforce instability |
| Repeat events | +9.6 pp | 1 year | Persistence risk |

ments with low subsequent conflict.

The sixth test evaluates post-event operating outcomes. High-severity workplace voice shocks predict a 0.34 percentage point decline in next-quarter operating margin and a 1.9% increase in selling and administrative expense intensity in labor-intensive sectors. They also predict higher employee-turnover proxies in the following two quarters. These associations are not presented as definitive causal evidence, but they help explain why markets react. The observed market reactions are directionally aligned with later operating pressure, especially in service industries.

The seventh test examines customer-facing brand statements. Some firms issue public statements after employee voice events. Statements that acknowledge employee concerns and describe bargaining or workplace-review steps are associated with smaller customer traffic declines than defensive statements that deny concerns without detail. Equity-market reactions to firm statements are mixed [30]. Investors respond more favorably when statements reduce uncertainty about operational continuity, but not when they appear to increase expected labor cost without a clear productivity benefit. This result suggests that communication can shape stakeholder reaction but cannot fully offset the underlying employee signal.

The eighth test considers media framing. Media coverage is classified into economic, fairness, conflict, legal, and customer-service frames [31]. Economic frames emphasize wages, bargaining, and cost. Fairness frames emphasize treatment, retaliation, discrimination, or respect. Conflict frames emphasize protest and confrontation. Legal frames emphasize allegations and formal proceedings. Customer-service frames connect labor issues to service quality. Equity markets react most negatively to legal and customer-service frames. Customer traffic reacts most strongly to fairness and conflict frames. This difference indicates that investors and customers process the same event through partly different lenses.

The ninth test evaluates option-market asymmetry. Put skew rises more than call skew after high-conflict events. This indicates that investors are especially concerned about downside outcomes rather than merely expecting greater symmetric volatility. Put-skew increases are strongest for firms with low margins and high customer exposure. This evidence complements the equity results by showing that workplace voice shocks can alter the distribution of expected outcomes, not only the mean.

The tenth test examines analyst language in post-event reports. Analyst notes rarely discuss labor events after low-severity petitions [32]. After high-severity events, analyst notes mention labor cost, staffing, margin pressure, or execution risk in 37.8% of cases. Text-based analyst concern scores predict subsequent margin forecast cuts. The analyst language evidence helps validate the mechanism: analysts do not appear to interpret all employee voice as equivalent, but they discuss operational risk when conflict, scale, or recurrence is high.

The eleventh test investigates whether firms with stronger cash positions experience muted reactions. Cash holdings moderate equity returns but not implied-volatility responses. High-cash firms have smaller negative stock reactions because investors may believe they can absorb wage increases or legal expenses. However, implied volatility still rises after severe events because cash does not eliminate uncertainty about customer reaction, employee morale, or future organizing. Financial flexibility reduces expected loss but not all uncertainty.

The twelfth test includes industry-by-month fixed effects. This is a demanding specification because it compares events within the same industry and month. The workplace voice shock coefficient remains negative at minus 0.27 percentage points per standard deviation. The option-implied volatility coefficient remains positive. The customer-traffic effect remains concentrated in high-publicity events. The estimates are slightly smaller than baseline but substantively similar.

The thirteenth test uses alternative employee-climate

measures. The main results hold when employee climate is measured only from pay and scheduling text, only from respect and supervisor text, or only from staffing and workload text. The staffing and supervisor-respect components are the strongest moderators [33]. Pay sentiment matters, but its interaction with market reaction is weaker after local wage pressure is controlled. This supports the interpretation that investors view workplace voice as more concerning when it signals managerial and operational strain rather than ordinary compensation bargaining alone.

The fourteenth test examines firms with prior public labor commitments. Some firms publicly emphasize employee welfare, responsible employment, or stakeholder governance. Workplace voice shocks in such firms produce more negative customer reactions when the event involves fairness or retaliation language. The equity reaction is also more negative when there is a clear mismatch between public commitments and employee allegations. This suggests that stakeholder consistency matters. A labor event can be more damaging when it contradicts a firm's own public identity.

The fifteenth test studies long-window stock drift. Over the 60 trading days after high-severity events, firms in the highest operational-vulnerability quintile experience an additional abnormal return of minus 1.12%. Firms in the lowest vulnerability quintile show no significant drift. This long-window evidence is interpreted cautiously because other information can enter over 60 days. Still, it suggests that markets may initially underreact to workplace voice events when operational implications unfold gradually.

The sixteenth test addresses alternative explanations from political attention. Events occurring in politically active local markets or during election cycles may receive more coverage [34]. Including local political attention controls does not eliminate the results [35]. Political attention increases media intensity but does not explain the stronger option-market and analyst reactions [36]. This suggests that the findings are not merely political-news effects.

The seventeenth test uses a matched sample of private-firm events for customer outcomes. Although private firms lack stock-market data, they provide a comparison for local customer reactions. High-publicity workplace conflict reduces traffic at private and public firms by similar magnitudes in consumer-facing industries. This suggests that customer response is not driven solely by investor attention or public-company visibility. Customers appear to react to public labor conflict when it enters local awareness.

The eighteenth test separates temporary walkouts from organizing filings [37]. Temporary walkouts have larger immediate customer effects but less persistent analyst revision unless they lead to formal legal escalation [38]. Organizing filings have smaller customer effects but can have more persistent market effects if repeated. This distinction shows that event type maps to different stakeholder channels. Walkouts are visible disruptions. Formal filings are institutional signals. Legal allegations are risk signals. Coordinated campaigns can be all three.

The nineteenth test examines settlement and resolution events. Resolutions that include wage increases but end public conflict generate small negative margin revisions but positive implied-volatility reductions. Equity reactions are near zero on average. This suggests that investors may accept higher labor costs when uncertainty declines. Resolutions without clear terms reduce implied volatility only modestly. Markets therefore appear to value uncertainty reduction, not only cost minimization.

The twentieth test evaluates whether workplace voice shocks predict future organizing in other establishments of the same firm. High-severity events increase the probability of another event within the same firm by 9.6 percentage points over the next year. The spillover probability is higher when the first event receives national media coverage and when employee climate is weak across multiple regions. Investors may therefore price severe events partly as indicators of future labor diffusion.

## 7. Discussion

The empirical evidence supports a conditional interpretation of stakeholder and market reactions to workplace voice. Employee-originated events are not priced only as expected wage increases or as ideological labor signals. They are priced when they reveal information about operating stability, customer exposure, legal risk, and management credibility. The strongest market reactions occur when employee voice arrives after deteriorating employee climate and when the affected business depends heavily on frontline labor quality. In such cases, investors appear to infer that the event is a symptom of broader operating weakness.

The option-market evidence is especially informative. Equity returns show the average expected value response, but option prices reveal uncertainty. Many workplace voice events increase implied volatility without generating large stock declines [39]. This suggests that investors perceive uncertainty about the consequences of employee voice [40]. The event may lead to higher wages, but it may also reduce turnover. It may damage customer demand, but only if conflict becomes visible. It may reveal poor management, but only if complaints spread. Option markets respond to this ambiguity by pricing a wider distribution of outcomes.

Customer reactions are more selective than market reactions. Customers do not appear to reduce traffic after ordinary procedural filings that receive little publicity. They respond to visible conflict, fairness allega-

tions, and events that are framed as inconsistent with the firm's public identity. This means that consumer-facing firms face a dual exposure. Investors may react to expected labor cost and operational risk, while customers react to moral or service-related interpretations of employee treatment. The two audiences overlap but do not process events identically.

The findings are also relevant for stakeholder governance. Employee voice can function as an external governance signal when internal conditions become publicly visible. A firm with strong employee climate can experience organizing without severe market penalty. A firm with weak employee climate may face stronger reaction because the event confirms concerns about staffing, supervision, and trust. This distinction suggests that markets are not reacting merely to employee power. They are reacting to the quality of the employment system revealed by employee voice.

Cao and Xu (2022) [41] show that managerial characteristics can shape brand acquisition and disposal decisions and that brand asset overvaluation can influence abnormal returns, which is relevant here because market reaction to stakeholder events may depend on whether investors trust managerial judgment in handling intangible and relational assets. In the workplace voice setting, labor-relations credibility serves a similar interpretive role: investors react less negatively when management has a history of resolving employee pressure without prolonged disruption.

The study offers implications for managers. Firms should not assume that suppressing or minimizing workplace voice will protect market value. The evidence suggests that markets penalize conflict, legal escalation, and signs of operational fragility more than the mere existence of employee organization. A more credible approach is to monitor employee climate before public events occur, identify staffing and supervisor-respect problems, and resolve local issues before they become visible signals of systemic weakness. Once an event becomes public, the firm's response should reduce uncertainty about operational continuity, legal exposure, and employee relations.

For investor-relations teams, the findings suggest that labor events require financially interpretable disclosure. Investors may not need broad statements about values. They need information about affected employee count, location exposure, bargaining process, operational continuity, expected cost range, and steps to prevent service disruption. Ambiguous statements can increase implied volatility even if they avoid immediate negative returns. Clear disclosure can reduce uncertainty, though it may not eliminate expected cost concerns.

For analysts and investors, the results suggest that employee-side data should be incorporated into risk assessment. Public employee sentiment, staffing complaints, wage compression, and repeated local disputes provide information about labor-system resilience. These variables are especially relevant in service industries where customer experience depends on frontline employee stability. The causal-forest results show that the market consequences of labor events are concentrated in firms that already display signs of operational vulnerability. Investors can therefore treat workplace voice shocks as diagnostic events rather than isolated headlines.

For researchers, the paper shows the value of studying stakeholder-originated events. Much research on market reaction focuses on firm announcements, but many value-relevant signals originate outside managerial communication. Employees, customers, regulators, suppliers, and communities can reveal information that changes investor beliefs. These signals may be noisy, but they are not irrelevant. A stakeholder-originated event can alter beliefs precisely because it is less controlled by the firm.

The paper also has implications for how stakeholder theory is tested empirically. It is not sufficient to ask whether stakeholder orientation is good or bad for shareholder value. The answer depends on what the stakeholder signal reveals, which stakeholder group originates it, whether the signal is connected to operations, and how other stakeholders react. In this study, employee voice affects market reactions through labor cost, uncertainty, customer visibility, legal risk, and operating fragility. These channels operate differently across firms and event types.

The evidence should be interpreted with caution. Workplace voice events are not random. Firms with weaker labor systems are more likely to experience severe events. The analysis uses fixed effects, matched comparisons, double machine learning, and placebo tests, but unobserved factors remain possible. The results are best interpreted as market and stakeholder reactions to the public arrival of workplace voice information, conditional on observable firm and event characteristics. They should not be read as a pure causal estimate of unionization or collective voice on firm value.

Another limitation is measurement. Employee sentiment is observed from public and semi-public text, which may overrepresent dissatisfied workers. Foot-traffic and spending proxies do not capture all customer behavior. Option-market outcomes are available only for firms with sufficiently liquid options [42]. Establishment-level revenue exposure is estimated rather than directly observed in many cases. These limitations are addressed through robustness tests, but they cannot be fully eliminated. Future research could improve precision with internal workforce data, establishment-level sales, and confidential bargaining information.

The study points toward future work on stakeholder diffusion. Workplace voice events can spread across establishments, industries, and stakeholder groups [43].

An employee event in one city may affect employee expectations elsewhere. A customer boycott may amplify labor conflict [44]. Supplier or franchisee relationships may also be affected. Future research could model these diffusion networks more directly and examine whether early resolution prevents multi-stakeholder escalation.

## 8. Conclusion

This paper examined stakeholder and market reactions to workplace voice shocks in public firms. The empirical evidence shows that employee-originated events produce measurable equity, option-market, analyst, and customer responses, but the reactions are not uniform. The average stock-market reaction is negative, option-implied volatility increases more consistently, and analyst margin forecasts decline modestly. Customer traffic falls only when the event is public, conflictual, and visible in consumer-facing markets [45].

The main conclusion is that markets price workplace voice when it reveals operational fragility. A localized procedural petition has limited market effect when the firm has stable employee sentiment and credible labor-relations history. A public conflict event following deteriorating employee climate produces stronger negative reactions because investors infer broader risks involving staffing, service quality, legal exposure, and customer response. The same stakeholder category can therefore produce different market reactions depending on context.

The option-market findings add an important dimension. Workplace voice shocks often increase uncertainty even when average equity-price reactions are small. This indicates that investors may disagree about whether employee voice will raise costs, improve retention, damage customer demand, or stabilize operations. Implied volatility and put skew capture this uncertainty more clearly than stock returns alone. Market reaction to stakeholder events should therefore be studied across multiple financial instruments.

The customer evidence shows that stakeholder reactions interact. Employee voice becomes more financially relevant when customers observe the event and interpret it as a fairness or service-quality issue. Ordinary labor procedure remains mostly invisible to customers, but public conflict can alter local demand. This channel is strongest in consumer-facing industries where employee treatment and customer experience are closely connected [46]. The evidence therefore supports a multi-audience view of workplace voice.

The findings have practical implications. Firms can reduce market vulnerability by addressing employee climate before public conflict occurs, especially staffing adequacy, supervisor respect, and scheduling fairness [47]. After a workplace voice event becomes public, investors appear to value clarity about operational continuity, legal exposure, and resolution process. Customers respond less to procedural details and more to visible fairness and conflict cues. Effective management requires understanding both audiences rather than assuming that a single public statement will address all concerns. The study does not claim that employee organizing is inherently harmful to firm value, nor does it claim that market reactions reflect the full social value of worker voice. It shows that public workplace voice events are information shocks [48]. They are priced negatively when they reveal weak employment systems and priced weakly or ambiguously when they represent organized voice without operational fragility. This distinction is essential for understanding stakeholder and market reactions in labor-intensive firms.

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