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Collective Bargaining and Industrial Disputes: A Comprehensive Study on the Maintenance of Industrial Peace

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ABSTRACT

Collective bargaining is the main institutional mechanism through which employers and workers negotiate working conditions, resolve grievances and regulate employment relations. Its effectiveness can be weakened by representational weakness, trust and communication gaps, structural and economic pressures, and political and managerial resistance. This study examines how these four barriers relate to industrial disputes and how industrial disputes, in turn, relate to industrial peace. A descriptive and analytical research design was used, based on a structured questionnaire of 32 five-point Likert items administered to 153 respondents. The analysis comprised frequency and percentage analysis, descriptive statistics, Cronbach's alpha, Pearson correlation, multiple regression, one-way ANOVA and regression-based bootstrap mediation analysis. Internal consistency was acceptable for all six constructs ($\alpha = 0.755$ to 0.845), and construct means were close to the scale midpoint (2.94 to 3.06). The four barrier dimensions together explained 19.3% of the variance in industrial disputes ($R^2 = 0.193$, $p < .001$); representational weakness ($B = 0.189$, $p = .008$) and trust/communication gaps ($B = 0.203$, $p = .003$) were significant predictors, while structural/economic pressures and political/managerial resistance were not. In the second model, the four barriers and industrial disputes together explained 57.4% of the variance in industrial peace ($R^2 = 0.574$, $p < .001$), and all five predictors had significant negative coefficients. Bootstrap mediation analysis showed a significant indirect effect of barriers on industrial peace through industrial disputes (indirect effect = -0.205 ; 95% CI $[-0.342, -0.094]$), alongside a significant direct effect ($c' = -0.965$), indicating partial mediation. Union membership was the only demographic variable associated with significantly different barrier perceptions ($p = .047$). Because the data are cross-sectional and self-reported, the findings indicate association rather than causation, and a full structural equation model was not estimated. The study recommends stronger representative institutions, negotiation training, transparent communication, timely implementation of agreements and institutionalised grievance-resolution mechanisms.

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Keywords: *Collective bargaining, industrial peace, industrial disputes, trade union negotiation, social dialogue*

I. INTRODUCTION

A. Concept and significance of collective bargaining

Collective bargaining is a formal mechanism through which employers and workers, typically acting through trade unions or other representative organisations, negotiate the terms of employment and manage their relationship. The International Labour Organization (ILO) broadly defines it as negotiation between employers and workers' organisations on working conditions and terms of employment and on the relations between the parties.¹ Collective bargaining can cover working hours, benefits, job security, workplace policies, grievance settlement, productivity and organisational change.

B. Collective bargaining and industrial peace

Industrial peace does not mean the absence of differences of opinion. Organisations contain opposing economic and managerial interests, and conflict between them is inevitable. Industrial peace is, more fundamentally, the capacity of the industrial relations system to handle disagreement through acceptable, predictable and constructive institutional frameworks. Collective bargaining facilitates this process: it gives employees a recognised voice and an organised negotiating partner, and it provides a forum in which grievances can be raised before they become problematic.²

C. Statement of the problem

Although collective bargaining is valuable as an institution, its effectiveness may be limited where unions are weak or fragmented or lack negotiating ability, where trust among union members is low and communication is poor, where contract and gig workers are excluded, where competition is international and global, where the political environment burdens the bargaining process, and where management is hostile.³ If negotiated outcomes are slow to arrive or do not materialise at all, unresolved issues can lead to strikes, external action, go-slows or lockouts.⁴ The question that then arises is which barriers are most closely associated with industrial disputes, and whether disputes in turn erode industrial peace.

¹ Convention Concerning the Promotion of Collective Bargaining (ILO No. 154) art. 2, June 19, 1981, 1331 U.N.T.S. 267.

² See INT'L LABOUR ORG., SOCIAL DIALOGUE REPORT 2022: COLLECTIVE BARGAINING FOR AN INCLUSIVE, SUSTAINABLE AND RESILIENT RECOVERY 14 (2022), <https://doi.org/10.54394/VWWK3318> (collective bargaining, through the repeated formulation of compromises, "can gradually contribute to trust, stability and labour peace").

³ See Shashank Sridharan, *Decline of Collective Bargaining and Subsequent Developments in Labour Management Relations*, 6 CHRIST U. L.J. 75 (2017), <https://doi.org/10.12728/culj.10.5>.

D. Research gap

Previous studies have examined collective bargaining and industrial conflict from legal, economic and institutional perspectives. It is nonetheless useful to model several bargaining barriers together, treating industrial disputes as a mediator between those barriers and industrial peace. The present study seeks to fill this gap by examining the relationships among six constructs, using a questionnaire and an empirical mediation framework applied to 153 responses.

II. REVIEW OF LITERATURE

Author / Source	Major contribution
Dunlop (1958) ⁵	The industrial relations system perspective explains labour relations through the interaction of workers, management and government within a wider technological, market and institutional environment.
Walton & McKersie (1965) ⁶	The behavioural theory of labour negotiations distinguishes distributive and integrative processes and highlights the importance of negotiation behaviour and problem-solving.
ILO (2015) ⁷	Collective Bargaining Convention No. 154 and Recommendation No. 163 provide a framework for promoting collective bargaining through appropriate procedures and institutions.
ILO (2022) ⁸	Collective bargaining is presented as an important component of social dialogue and an instrument for inclusive and resilient labour-market governance.
Agarwal, Shirke & Panackal (2020) ⁹	The Indian context demonstrates that institutional and organisational factors can enable or constrain collective bargaining.
Raj & Rani Salian (2021) ¹⁰	Collective bargaining is identified as a mechanism for settling industrial disputes through structured employer–employee negotiation.
Sridharan (2017) ¹¹	Globalisation, liberalisation, decentralisation and changing employment structures have altered labour-management relations and the traditional bargaining environment.

⁴ See Aakash Raj & Deepa Rani Salian, *Collective Bargaining: A Tool for Settling Industrial Disputes*, 10 CHRIST U. L.J. 43, 51 (2021), <https://doi.org/10.12728/culj.19.3>.

⁵ JOHN T. DUNLOP, *INDUSTRIAL RELATIONS SYSTEMS* (1958).

⁶ RICHARD E. WALTON & ROBERT B. MCKERSIE, *A BEHAVIORAL THEORY OF LABOR NEGOTIATIONS* (1965).

⁷ INT'L LABOUR ORG., *PROMOTING COLLECTIVE BARGAINING (C154 & R163)* 2 (2015), <https://www.ilo.org/publications/promoting-collective-bargaining-c154-r163>.

⁸ INT'L LABOUR ORG., *supra* note 2, at 14.

⁹ Raghav Agarwal, Atharva Shirke & Nehajoon Panackal, *Enablers of the Collective Bargaining in Industrial Relations: A Study of India's Industrial Policies Through ISM and MICMAC Analysis*, 63 INDIAN J. LAB. ECON. 781 (2020), <https://doi.org/10.1007/s41027-020-00241-6>.

¹⁰ Raj & Rani Salian, *supra* note 4.

¹¹ Sridharan, *supra* note 3.

Author / Source	Major contribution
Maria Jesili (2012) ¹²	Industrial disputes in India may have economic, organisational and inter-union causes and require effective settlement mechanisms.

Table 1: Selected literature on collective bargaining and industrial relations

III. OBJECTIVES OF THE STUDY

1. To identify the key barriers to effective collective bargaining.
2. To study the correlation between the barriers to collective bargaining and industrial disputes.
3. To study the impact of the barriers to collective bargaining and of industrial disputes on industrial peace.
4. To examine whether industrial disputes mediate the relationship between the barriers to collective bargaining and industrial peace.
5. To assess differences in perceived collective-bargaining barriers across demographic and employment groups.
6. To recommend measures for making collective bargaining more effective and maintaining industrial peace.

A. Hypotheses

- H01: The barriers to collective bargaining do not significantly predict industrial disputes.
- H02: The barriers to collective bargaining do not significantly predict industrial peace.
- H03: Industrial disputes do not significantly predict industrial peace when the barriers to collective bargaining are controlled for.
- H04: Industrial disputes do not significantly mediate the relationship between the barriers to collective bargaining and industrial peace.
- H05: There are no significant differences in perceived collective-bargaining barriers among demographic and employment groups.

¹² I. Maria Jesili, *Industrial Disputes, Causes and Settlement: An Indian Perspective*, 5 PRABANDHAN: INDIAN J. MGMT. 5 (2012), <https://doi.org/10.17010/pijom/2012/v5i12/60303>.

IV. RESEARCH METHODOLOGY

A. Research design

The study uses a descriptive and analytical research design. Descriptive and inferential statistics were used to summarise the characteristics of the respondents and their responses at the construct level.

B. Data source and sample

The analysis is based on 153 questionnaire responses. The respondents span various designations, employment categories, sectors, union-membership categories and organisation sizes.

C. Questionnaire and constructs

The questionnaire comprises a demographic profile followed by 32 Likert-scale items. Q1–Q5 measure representational weakness, Q6–Q10 trust and communication gaps, Q11–Q15 structural/economic pressures, Q16–Q20 political/managerial resistance, Q21–Q26 industrial disputes and Q27–Q32 industrial peace. All items are coded from 1 = Strongly Disagree to 5 = Strongly Agree. No reverse-coded items were identified.

Construct	Items	Role
B1 Representational Weakness	Q1–Q5	Independent variable
B2 Trust & Communication Gaps	Q6–Q10	Independent variable
B3 Structural & Economic Pressures	Q11–Q15	Independent variable
B4 Political & Managerial Resistance	Q16–Q20	Independent variable
Industrial Disputes	Q21–Q26	Mediator
Industrial Peace	Q27–Q32	Dependent variable

Table 2: Measurement framework

D. Statistical tools

- Frequency and percentage analysis of demographic characteristics.
- Descriptive statistics (means and standard deviations) for the constructs.
- Cronbach's alpha to assess the internal consistency of each construct.
- Pearson correlation for the relationships among the six constructs.
- Multiple regression with industrial disputes as the dependent variable and the four barrier constructs as independent variables.

- Multiple regression with industrial peace as the criterion variable and the four barrier constructs and industrial disputes as predictor variables.
- Regression-based bootstrap mediation analysis to estimate the indirect effect of barriers on industrial peace through industrial disputes.
- One-way ANOVA to compare the aggregate barrier index across demographic groups.

E. Conceptual mediation model

The conceptual framework treats the collective-bargaining barriers as antecedents, industrial disputes as the mediator and industrial peace as the outcome. The model was tested using regression-based bootstrap mediation analysis (see the regression, mediation and construct-specific indirect-effect analyses under Findings and discussion). A full structural equation model (SEM) was not estimated, as noted under Limitations and scope for future research.

V. LEGAL AND CONCEPTUAL FRAMEWORK

A. Indian legal framework

The Industrial Relations Code, 2020 has brought about a significant consolidation of the labour-law framework in India.¹³ The Central Government notified 21 November 2025 as the date on which the Code came into force.¹⁴ The Code brings together the law on trade unions, conditions of employment and the investigation and settlement of industrial disputes.¹⁵ The existing legal framework thus sets the scene for the analysis of collective bargaining and industrial peace in 2026.

The Code provides for the recognition of a sole negotiating union or, where several unions function in an establishment and none has the support of fifty-one per cent or more of the workers, the constitution of a negotiating council, and so establishes a formal institutional process.¹⁶ This is especially relevant to representational fragmentation, one of the barriers studied in the present research.

¹³ The Industrial Relations Code, 2020, No. 35, Acts of Parliament, 2020 (India), long title (“An Act to consolidate and amend the laws relating to Trade Unions, conditions of employment in industrial establishment or undertaking, investigation and settlement of industrial disputes”).

¹⁴ MINISTRY OF LABOUR AND EMPLOYMENT, Notification S.O. 5320(E), Gazette of India, Extraordinary, pt. II sec. 3(ii) (Nov. 21, 2025) (appointing 21 November 2025 as the date on which the provisions of the Industrial Relations Code, 2020 come into force).

¹⁵ The Industrial Relations Code, 2020, *supra* note 13, long title.

¹⁶ The Industrial Relations Code, 2020, *supra* note 13, § 14(2)–(4).

B. ILO perspective

The ILO treats collective bargaining as a key labour-relations process, and the effective recognition of the right to collective bargaining is among its fundamental principles and rights at work.¹⁷ Convention No. 154 specifically promotes collective bargaining by providing that measures be taken so that collective bargaining is made possible, that it is progressively extended in scope, that agreed rules of procedure are encouraged, and that dispute-settlement bodies and procedures contribute to its promotion.¹⁸ These principles underlie the idea that bargaining institutions can help to establish more stable industrial relations.

VI. FINDINGS AND DISCUSSION

A. Demographic profile

Variable	Category	Frequency	Percentage
Age	25–35	52	34.0%
Age	36–45	40	26.1%
Age	Below 25	30	19.6%
Age	46–55	24	15.7%
Age	Above 55	7	4.6%
Gender	Male	95	62.1%
Gender	Female	57	37.3%
Gender	Other	1	0.7%
Designation	Worker/Employee	69	45.1%
Designation	HR/Management	44	28.8%
Designation	Supervisor	22	14.4%
Designation	Union Representative	18	11.8%
Type of Employment	Permanent	110	71.9%
Type of Employment	Contract/Casual	35	22.9%
Type of Employment	Gig/Platform-based	8	5.2%
Years of Experience	5–10	48	31.4%
Years of Experience	Below 5	41	26.8%
Years of Experience	11–20	38	24.8%
Years of Experience	Above 20	26	17.0%
Sector	Manufacturing	48	31.4%
Sector	Services	36	23.5%
Sector	Public Sector	29	19.0%

¹⁷ INT'L LABOUR ORG., *supra* note 2, at 14, 30.

¹⁸ Convention Concerning the Promotion of Collective Bargaining (ILO No. 154), *supra* note 1, art. 5; *see also* INT'L LABOUR ORG., *supra* note 7, at 4, 6–7.

Variable	Category	Frequency	Percentage
Sector	IT/ITES	24	15.7%
Sector	Other	16	10.5%
Union Membership	Member	68	44.4%
Union Membership	Not a member	66	43.1%
Union Membership	Not applicable	19	12.4%
Organisation Size	100–500	60	39.2%
Organisation Size	Above 500	51	33.3%
Organisation Size	Below 100	42	27.5%

Table 3: Demographic profile of respondents

The sample consists of 153 respondents. The largest age group is 25–35 years (52 respondents; 34.0%), followed by 36–45 years (26.1%). Male respondents account for 62.1% and female respondents for 37.3%. Workers/employees form the largest designation category (45.1%), followed by HR/management (28.8%). Permanent employees represent 71.9% of respondents, contract/casual employees 22.9% and gig/platform workers 5.2%. Union members and non-members are almost evenly represented (68 and 66 respectively), providing useful variation for examining labour-relations perceptions.

B. Construct-level descriptive statistics

Construct	Mean	SD
B1 Representational Weakness	3.003	0.682
B2 Trust & Communication Gaps	2.958	0.746
B3 Structural & Economic Pressures	3.012	0.671
B4 Political & Managerial Resistance	2.995	0.678
Industrial Disputes	2.943	0.615
Industrial Peace	3.063	0.763

Table 4: Descriptive statistics of major constructs

All six constructs have means close to the neutral midpoint of 3.00. Structural/economic pressures have the highest barrier mean (3.012), followed by representational weakness (3.003) and political/managerial resistance (2.995). Industrial disputes have a mean of 2.943 and industrial peace a mean of 3.063. The results suggest moderate perceptions of bargaining barriers and a moderately positive assessment of industrial peace.

C. Reliability analysis

Construct	Items	Cronbach's α	Status
B1 Representational Weakness	Q1–Q5	0.755	PASS
B2 Trust & Communication Gaps	Q6–Q10	0.808	PASS
B3 Structural & Economic Pressures	Q11–Q15	0.761	PASS
B4 Political & Managerial Resistance	Q16–Q20	0.763	PASS
Industrial Disputes	Q21–Q26	0.759	PASS
Industrial Peace	Q27–Q32	0.845	PASS

Table 5: Reliability analysis

All six constructs demonstrate acceptable internal consistency. Cronbach's alpha ranges from 0.755 for representational weakness to 0.845 for industrial peace. Because the questionnaire map identifies no reverse-coded items, no reverse scoring was applied. The reliability results support the use of construct-level composite scores in the subsequent correlation, regression and mediation analyses.

D. Correlation analysis

Variable 1	Variable 2	r	p	Decision
B1 Representational Weakness	B2 Trust & Communication Gaps	0.295	<0.001	Significant
B1 Representational Weakness	B3 Structural & Economic Pressures	0.209	0.0097	Significant
B1 Representational Weakness	B4 Political & Managerial Resistance	0.202	0.0125	Significant
B1 Representational Weakness	Industrial Disputes	0.315	<0.001	Significant
B1 Representational Weakness	Industrial Peace	-0.483	<0.001	Significant
B2 Trust & Communication Gaps	B3 Structural & Economic Pressures	0.314	<0.001	Significant
B2 Trust & Communication Gaps	B4 Political & Managerial Resistance	0.235	0.0034	Significant
B2 Trust & Communication Gaps	Industrial Disputes	0.356	<0.001	Significant
B2 Trust & Communication Gaps	Industrial Peace	-0.552	<0.001	Significant

Variable 1	Variable 2	r	p	Decision
B3 Structural & Economic Pressures	B4 Political & Managerial Resistance	0.225	0.0053	Significant
B3 Structural & Economic Pressures	Industrial Disputes	0.263	0.0010	Significant
B3 Structural & Economic Pressures	Industrial Peace	-0.402	<0.001	Significant
B4 Political & Managerial Resistance	Industrial Disputes	0.151	0.0621	Not significant
B4 Political & Managerial Resistance	Industrial Peace	-0.412	<0.001	Significant
Industrial Disputes	Industrial Peace	-0.538	<0.001	Significant

Table 6: Pearson correlation analysis

The correlation results show that all four barrier constructs are positively associated with industrial disputes, although the association for political/managerial resistance is not statistically significant ($r = .151$, $p = .062$). By contrast, all four barrier constructs are negatively associated with industrial peace, with correlations ranging from $-.402$ to $-.552$ ($p < .001$). Industrial disputes are also negatively associated with industrial peace ($r = -.538$, $p < .001$). This pattern provides strong preliminary support for the proposed mediation framework.

E. Regression analysis: predicting industrial disputes

Predictor	B	SE	t	p
B1 Representational Weakness	0.1891	0.0709	2.668	0.0085
B2 Trust & Communication Gaps	0.2031	0.0669	3.035	0.0028
B3 Structural & Economic Pressures	0.1258	0.0727	1.730	0.0857
B4 Political & Managerial Resistance	0.0184	0.0705	0.261	0.7945

Table 7: Multiple regression predicting industrial disputes

The regression model is statistically significant ($F = 8.833$, $p < .001$) and explains 19.3% of the variance in industrial disputes ($R^2 = 0.193$; adjusted $R^2 = 0.171$). Representational weakness significantly predicts industrial disputes ($B = 0.189$, $p = .008$), as do trust and communication gaps ($B = 0.203$, $p = .003$). Structural/economic pressures have a positive coefficient that is not significant at the 5% level, and political/managerial resistance is not significant after controlling for the other barrier dimensions.

F. Regression analysis: predicting industrial peace

Predictor	B	SE	t	p
B1 Representational Weakness	-0.2610	0.0655	-3.982	0.0001
B2 Trust & Communication Gaps	-0.2890	0.0623	-4.637	0.0000
B3 Structural & Economic Pressures	-0.1556	0.0663	-2.346	0.0203
B4 Political & Managerial Resistance	-0.2518	0.0637	-3.954	0.0001
Industrial Disputes	-0.3642	0.0743	-4.904	0.0000

Table 8: Multiple regression predicting industrial peace

The industrial peace regression is highly significant ($F = 39.611$, $p < .001$) and explains 57.4% of the variance in industrial peace ($R^2 = 0.574$; adjusted $R^2 = 0.559$). All four barrier constructs have significant negative coefficients, indicating that greater perceived barriers are associated with lower industrial peace when the other predictors are controlled. Industrial disputes also have a significant negative effect ($B = -0.364$, $p < .001$). This result reinforces the central argument that unresolved industrial conflict can undermine the stability and harmony of workplace relations.

G. Mediation analysis

Path	Coefficient	p-value / CI	Interpretation
a: Barriers Total → Industrial Disputes	0.555	$p < .001$	Significant positive
b: Industrial Disputes → Industrial Peace	-0.369	$p < .001$	Significant negative
c: Barriers Total → Industrial Peace	-1.170	$p < .001$	Significant total effect
c': Barriers Total → Industrial Peace	-0.965	$p < .001$	Significant direct effect
ab: Indirect effect	-0.205	95% CI [-0.342, -0.094]	Significant mediation

Table 9: Bootstrap mediation analysis

The mediation model provides evidence of an indirect pathway. The aggregate barrier index significantly predicts industrial disputes ($a = 0.555$, $p < .001$), and industrial disputes significantly predict lower industrial peace after controlling for barriers ($b = -0.369$, $p < .001$). The total effect of barriers on industrial peace is $c = -1.170$, while the direct effect after including the mediator is $c' = -0.965$. The estimated indirect effect is -0.205 , with a 95% bootstrap confidence interval of $[-0.342, -0.094]$, which does not include zero. This supports a statistically

significant mediation pathway in which higher collective-bargaining barriers are associated with more industrial disputes, which are in turn associated with lower industrial peace.

H. Summary of empirical findings

The empirical results support the proposed conceptual model. First, the reliability analysis shows that the constructs are internally consistent. Second, the correlation analysis shows that the bargaining barriers are positively associated with industrial disputes and negatively associated with industrial peace. Third, the regression results show that representational weakness and trust/communication gaps are the significant predictors of industrial disputes, while all four barrier dimensions and industrial disputes are significantly associated with lower industrial peace. Fourth, the mediation analysis shows a significant indirect pathway from overall bargaining barriers to industrial peace through industrial disputes, with a significant direct effect also remaining (partial mediation).

I. Construct-specific indirect effects

Barrier construct	Indirect effect	95% Bootstrap CI	Inference
B1 Representational Weakness	-0.069	[-0.132, -0.018]	Significant
B2 Trust & Communication Gaps	-0.074	[-0.151, -0.019]	Significant
B3 Structural & Economic Pressures	-0.046	[-0.114, 0.008]	Not significant
B4 Political & Managerial Resistance	-0.007	[-0.054, 0.040]	Not significant

Table 10: Parallel indirect effects through industrial disputes

At the level of the individual barrier dimensions, representational weakness and trust/communication gaps show statistically significant indirect effects, because their bootstrap confidence intervals do not include zero. Structural/economic pressures and political/managerial resistance do not show statistically significant indirect effects when all four barrier dimensions are entered simultaneously. This suggests that representational capacity and the quality of communication and trust may be the most immediate pathways through which bargaining problems translate into disputes and reduced industrial peace in the present sample.

J. Demographic group differences

Variable	Test	Statistic	p-value	Decision
Age	ANOVA	F=0.366	0.8329	Not significant
Gender	ANOVA	F=0.859	0.4258	Not significant
Designation	ANOVA	F=0.239	0.8689	Not significant

Variable	Test	Statistic	p-value	Decision
Type of Employment	ANOVA	F=1.244	0.2912	Not significant
Years of Experience	ANOVA	F=1.988	0.1182	Not significant
Sector	ANOVA	F=2.180	0.0740	Not significant
Union Membership	ANOVA	F=3.129	0.0466	Significant
Organisation Size	ANOVA	F=1.674	0.1910	Not significant

Table 11: Demographic differences in aggregate barrier perceptions

Most demographic variables show no statistically significant difference in the aggregate barrier index. Union membership is the exception, with a statistically significant group difference ($F = 3.129$, $p = .0466$). This suggests that union-member status may be associated with different perceptions of bargaining barriers. The result should be interpreted cautiously, because the data are observational and the study does not establish causality.

VII. DISCUSSION

The results have a clear practical implication. Effective collective bargaining is not the same as having a trade union, or even as having bargaining rights formally available. The standard of representation, negotiating ability, information sharing, trust and the implementation of agreements all matter. If workers feel that their concerns are not heard, if the information management gives them is inaccessible or unclear, or if the outcomes of bargaining are not honoured, the bargaining process loses legitimacy and the risk of disputes grows.

The negative correlation between industrial disputes and industrial peace can also be explained theoretically by reference to the function of collective bargaining. Conflict can consume the time and energy of managers and workers, halt production, create uncertainty and erode trust. Collective action is nonetheless lawful, and it can also signal unaddressed issues and prompt institutional correction. The policy goal is not to remove all conflict but to provide effective forums in which conflict can be negotiated and resolved.

VIII. STRATEGIES FOR IMPROVEMENT

A. Strengthen representative trade unions

Union structures should be designed to encourage member involvement, accountable leadership and evidence-based representation. The mandate of legitimate bargaining representatives needs to be recognised.

B. Improve negotiation and bargaining skills

Regular training is recommended in negotiation strategy, labour law, conflict management, the interpretation of data, interest-based bargaining and the implementation of agreements.¹⁹

C. Build trust and communication

Management should share relevant information transparently and provide for regular consultation with workers' representatives. Unions, for their part, should keep members clearly informed of bargaining positions and settlements.

D. Ensure implementation of agreements

Collective bargaining is undermined when the outcomes of the process are missed or postponed. Collective agreements should include joint monitoring mechanisms and time-bound implementation reviews.

E. Address contract and gig-worker exclusion

Where non-permanent workers make up a significant portion of the workforce, their employment status should not become an impediment to voice and collective problem-solving; consultation and representation arrangements should be put in place to ensure this.

F. Reduce avoidable political interference

Workplace bargaining may form part of broader social and political processes, but its scope should be carefully bounded so that it remains focused on employment interests, with meaningful and accountable representatives of workers.

G. Strengthen early dispute resolution

Grievance committees, joint consultative meetings, mediation and conciliation should be used before resort to strikes, lockouts and prolonged external adjudication.

H. Promote joint problem-solving

Employers and unions should conduct bargaining as a collaborative rather than a strictly distributive process, addressing issues of productivity, safety, technology, training, reskilling and organisational change.²⁰

¹⁹ See Agarwal, Shirke & Panackal, *supra* note 9 (identifying awareness of the law as the most important enabler of collective bargaining).

²⁰ See Walton & McKersie, *supra* note 6 (distinguishing distributive from integrative bargaining).

IX. LEGAL AND POLICY IMPLICATIONS

The findings of the present study are relevant to the Industrial Relations Code, 2020, which provides a formal framework for trade-union representation and for the resolution of industrial disputes. Statutory recognition of negotiating unions or councils can help to address representational fragmentation, and formal dispute-resolution processes can help to bring conflict to settlement. Internationally, ILO Convention No. 154 calls on ratifying States to take measures that encourage collective bargaining and agreed procedures, and to ensure that dispute-settlement bodies and procedures contribute to the promotion of collective bargaining.²¹

Policy implication: legal recognition needs to be matched by institutional capacity. The bargaining process will not establish industrial peace unless representatives are equipped with bargaining skills, information is not withheld and agreements are honoured. Hence, in addition to formal rights, policy should address the quality of social dialogue and representation, the prevention of disputes and the fulfilment of agreements.

X. CONCLUSION

The study provides evidence that barriers to effective collective bargaining are meaningfully related to industrial disputes and industrial peace. Among the four barrier dimensions, representational weakness and trust/communication gaps are the significant predictors of industrial disputes. All four barrier dimensions are negatively related to industrial peace in the full regression model, and industrial disputes have a significant negative association with peace.

The bootstrap mediation analysis supports the central proposition that barriers to collective bargaining are associated with more industrial disputes, which are in turn associated with lower industrial peace. The indirect effect through industrial disputes is significant, and the dimension-specific analysis shows that only representational weakness and trust/communication gaps have significant indirect effects, pointing to clear managerial and policy priorities. Overall, more representative, transparent, skilled and inclusive collective bargaining, backed by efficient dispute-resolution mechanisms, is associated with greater industrial peace. Strengthening these institutional pillars can help organisations move from reacting to conflict towards managing industrial relations proactively and collaboratively.

²¹ Convention Concerning the Promotion of Collective Bargaining (ILO No. 154), *supra* note 1, art. 5(2)(a)–(e). India has not ratified Convention No. 154.

XI. LIMITATIONS AND SCOPE FOR FUTURE RESEARCH

- A full structural equation model was not estimated; the conceptual model was tested using multiple regression and regression-based bootstrap mediation analysis on construct-level composite scores.
- The sample size is limited ($N = 153$) and the sampling method is not described, so the findings should not be generalised.
- The study relies on self-reported, cross-sectional data; the results should therefore be read as associational rather than causal.
- The mediation analysis is regression-based, and the temporal ordering of cause and effect cannot be inferred. A longitudinal study would strengthen cause-and-effect interpretation.
- Future studies could validate the six-construct measurement model through confirmatory factor analysis and, with a sufficient sample, estimate a full structural equation model.
- Larger probability or stratified samples would also allow further comparisons across sectors, organisation sizes, employment categories and union and non-union environments.

XII. HYPOTHESIS TESTING SUMMARY

Hypothesis	Analysis	Result	Decision
H01: Barriers do not significantly predict industrial disputes	Multiple regression	Model $p < .001$; B1 and B2 significant	Rejected
H02: Barriers do not significantly predict industrial peace	Multiple regression	All four barrier coefficients significant and negative	Rejected
H03: Industrial disputes do not predict industrial peace	Multiple regression	$B = -0.364$, $p < .001$	Rejected
H04: No mediation of barriers $\rightarrow$ disputes $\rightarrow$ peace	Bootstrap mediation	Indirect effect = -0.205 ; 95% CI excludes 0	Rejected
H05: No demographic differences in barrier perceptions	One-way ANOVA	Union membership $p = .0466$; other variables NS	Partially rejected

Table 12: Summary of hypothesis testing

XIII. APPENDIX A: CONSTRUCT AND ITEM MAPPING

Construct	Items	No. of Items
B1 Representational Weakness	Q1–Q5	5
B2 Trust & Communication Gaps	Q6–Q10	5
B3 Structural & Economic Pressures	Q11–Q15	5
B4 Political & Managerial Resistance	Q16–Q20	5
Industrial Disputes	Q21–Q26	6
Industrial Peace	Q27–Q32	6

Table 13: Questionnaire construct mapping

XIV. APPENDIX B: KEY REGRESSION STATISTICS

Model	R ²	Adjusted R ²	F	p
Industrial Disputes ~ four barrier constructs	0.193	0.171	8.833	<0.001
Industrial Peace ~ four barriers + disputes	0.574	0.559	39.611	<0.001
Industrial Peace ~ four barriers (total effect)	0.504	0.491	37.639	<0.001

Table 14: Regression model summary
