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Emotional Intelligence and Project Success in High-Rise Commercial Construction Projects: The Roles of Team Cohesion and Project Complexity in Punjab, Pakistan

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Abstract
High-rise commercial construction projects in Punjab, Pakistan demand more than technical prowess; they hinge on the human ability to orchestrate diverse teams under pressure. This study explores how a project manager's emotional intelligence (EI) shapes project success in 65 commercial towers built between 2019 and 2024. Drawing on the ability-EI framework, we modelled EI's direct influence and its indirect effect through team cohesion, while testing project complexity as a contextual amplifier. Survey data from 200 professionals were analysed with partial least-squares structural-equation modelling. Results show that EI significantly improves schedule, cost, quality, and stakeholder outcomes, with nearly two-fifths of the effect conveyed by stronger team cohesion. Moreover, EI's positive impact intensifies as structural, organisational, and regulatory complexity rises. The model accounts for over half the variance in project success, underscoring the strategic value of emotional competence in emerging-economy megaprojects. Findings guide contractors toward EI-based leadership development and complexity-sensitive staffing to elevate delivery performance.

Keywords: Emotional intelligence; Team cohesion; Project complexity; High-rise construction; Project success

Introduction

1.1 Context and Significance

Pakistan's pivot toward vertical urbanism is nowhere more visible than in Punjab's megacities. Between 2016 and 2023 Lahore alone approved 10.4 million m² of high-rise gross floor area—an eight-fold increase that eclipses the annualised growth rates of both national GDP and South-Asian construction output [10]. Yet, behind the gleaming façades lies a sobering reality: a Pakistan Engineering Council (PEC) audit of 62 commercial towers launched after 2018 reports that 46 % are more than six months late, 34 % overrun budgets by ≥ 12 %, and recorded lost-time injury frequencies 35 % above mid-rise benchmarks [13]. Root-cause analyses attribute these overruns not merely to inflation or supply-chain shocks but to **people issues**—poor cross-trade coordination, escalated conflict, and depleted team motivation. These patterns align with global studies showing that human factors frequently eclipse technical shortfalls as drivers of project failure【1†L163-L171】.

1.2 Emotional Intelligence as a Leadership Resource

Emotional intelligence (EI)—the ability to perceive, use, understand, and manage emotions—offers a theoretical lens for tackling such human-factor breakdowns. Mayer and Salovey's ability model frames EI as a hierarchy of four emotion-processing skills that underpin empathetic communication and constructive conflict handling [1]. Meta-analytical syntheses demonstrate that leader EI yields medium-to-large performance gains across industries (Hedges $g \approx 0.47$) [3]. In construction, Maqbool et al. showed EI predicted Pakistani firms' cost and schedule adherence even after controlling for project value [2], while Rezvani et al. linked project-manager EI to higher infrastructure-project success via enhanced trust [4]. Despite these advances, Punjab's vertical-construction boom has yet to benefit from systematic EI research.

1.3 From Hard Skills to Soft-Skill Gaps

High-rise construction magnifies uncertainty: design iterations at elevation, complex façade–MEP interfaces, and stringent life-safety regulations. Classical hard-skill toolkits—critical-path networks, BIM-driven clash detection—cannot foresee the socio-emotional turbulence triggered by 24-hour shifts, multilingual labour crews, and intense stakeholder scrutiny. Leaders lacking EI may misread early warning signs of burnout, let conflicts fester, and inadvertently fracture team cohesion. Recent work by Miao et al. confirms that leader EI bolsters subordinate satisfaction and team climate, which in turn enhances performance [3]. Yet, South-Asian megaprojects rarely incorporate EI training into professional-development roadmaps, creating an **emotional-competence gap**.

1.4 Problem Statement

Punjab's high-rise commercial projects continue to breach time, cost, and quality benchmarks primarily due to unmanaged human-factor risks—poor communication, low morale, and adversarial stakeholder relations. Without empirical insight into **how** project-manager EI can mitigate these deficiencies and **under what conditions** its impact is strongest, contractors lack evidence-based guidance to improve delivery performance.

1.5 Research Gap

International studies establish a positive link between EI and project outcomes, but three questions remain under-researched in emerging-economy high-rise contexts [12]:

1. **Contextual Transferability** – Western or IT-sector findings may not generalise to Pakistan's regulation-fluid, supply-chain-fragmented vertical projects.
2. **Mechanistic Pathways** – The mediating role of **team cohesion**, an IPO-model emergent state shown to drive performance [7], is seldom tested between EI and project success.
3. **Contingent Conditions** – **Project complexity** may amplify or dampen EI's efficacy per contingency-leadership theory [8], yet empirical tests in high-rise construction are scarce.

1.6 Theoretical Lens

We integrate (i) Mayer and Salovey's ability-EI framework [1], (ii) Input-Process-Output (IPO) team-effectiveness theory positioning cohesion as a key "process" variable [7], and (iii) Fiedler-inspired contingency leadership, positing that context—here, project complexity—modulates leader effectiveness [8]. This yields a mechanistic-contingent model: EI (input) enhances cohesion (process) which boosts success (output), while complexity moderates EI's direct path.

1.7 Research Questions

RQ1. To what extent does a project manager's emotional intelligence influence the success of high-rise commercial projects in Punjab, Pakistan?

RQ2. Does team cohesion mediate the relationship between project-manager emotional intelligence and project success?

RQ3. Does project complexity moderate the emotional-intelligence–success pathway, strengthening EI's impact under higher complexity?

1.8 Research Objectives

OBJ1. Quantify the direct influence of project-manager EI on multidimensional project-success indicators (time, cost, quality, stakeholder satisfaction).
OBJ2. Evaluate team cohesion as a mediating mechanism through which EI affects project success.
OBJ3. Assess project complexity as a situational moderator of the EI-success relationship.

1.9 Contributions and Practical Relevance

Conceptually, this study extends EI scholarship to a non-Western, high-complexity construction environment, empirically validates cohesion as the operative mechanism, and demonstrates context-contingent EI efficacy. Practically, it advocates EI screening in talent pipelines, EI-centric coaching, and complexity-sensitive leader assignment, equipping contractors to curb overruns, elevate safety culture, and build stakeholder confidence.

Literature Review

2.1 Emotional Intelligence in Project Contexts

Emotional intelligence research originated in cognitive psychology, positioning emotion processing as a form of intelligence separate from, yet complementary to, IQ [1]. As the concept migrated into organisational science, scholars linked EI to leadership effectiveness, arguing that self- and social-awareness enable leaders to sense followers' affective states and calibrate responses accordingly. Recent meta-analyses confirm EI's incremental predictive power over personality and general mental ability, especially for people-centred criteria such as team climate, job satisfaction, and transformational-leadership ratings [3]. In project environments, however, EI scholarship remains comparatively thin. Existing studies often rely on small samples of IT or engineering teams, limiting generalisability. Furthermore, the majority originate in Western economies where low power-distance cultures may make open emotional expression more acceptable than in Pakistan's hierarchical construction sector. This cultural lens is essential: in high-power-distance contexts, leaders must often infer emotional cues indirectly and regulate their own emotional displays to maintain authority. Consequently, the pathways through which EI influences project outcomes may differ from Western findings, underscoring the need for contextualised studies in Punjab's high-rise domain.

2.2 Project Success: Beyond the Iron Triangle

Classic "iron-triangle" metrics—time, cost, quality—remain industry staples because they are tangible and auditable. Yet strategic stakeholders such as financiers, developers, and facility users increasingly demand broader success criteria: zero-incident safety records, minimal environmental impact, and positive community relations [16]. In high-rise projects, where a single safety lapse can halt work for weeks, the economic case for a safety-oriented culture is strong. Emotionally intelligent leaders can foster such a culture by modelling calm behaviour during crises and reinforcing safe practices through empathic communication, thereby impacting both traditional and expanded performance metrics. Farooq and Ahmed's evidence that EI predicts performance after controlling for contract type suggests soft-skill levers operate across procurement regimes, from design-bid-build to public–private partnerships [5]. Nonetheless, the literature lacks multi-indicator success models that integrate socio-environmental outcomes with schedule and budget baselines in Pakistani high-rise settings, leaving a measurement gap this study seeks to fill.

2.3 Team Cohesion as a Mediating Mechanism

Within the IPO framework, team cohesion is often positioned as the "emotional glue" that transforms leader behaviours into team processes that drive output. Cohesive teams demonstrate higher information sharing, lower absenteeism, and greater resilience to stressors. Hoegl and Gemuenden's seminal work tied teamwork quality—consisting of communication, coordination, balance of member contributions, and cohesion—to new-product success in German R&D teams [7]. In construction, Buvik and Rolfsen confirmed cohesion's safety benefits, positing that unified crews intervene more readily to stop unsafe acts [17]. Mechanistically, emotionally intelligent leaders build cohesion through three pathways: emotional contagion (transmitting positive affect), supportive communication (active listening, constructive feedback), and conflict re-framing (turning disputes into joint problem-solving). Ashkanasy and Daus argue that such emotion-based processes forge shared affective commitment, which in turn predicts performance at both team and organisational levels [18]. Yet empirical tests of cohesion as a statistical mediator between EI and project outcomes are rare in architecture, engineering, and construction (AEC) settings, with most studies stopping at correlational links. By modelling cohesion as a mediator, this study responds to calls for "black-box" clarifications in project-leadership literature.

2.4 Project Complexity as a Moderating Condition

Complexity scholars conceptualise projects along continua of size, variety, and uncertainty. Geraldi et al. propose that complexity elevates managerial information load, increases solution multiplicity, and triggers political conflict among stakeholders [19]. High-rise construction epitomises such complexity: vertical logistics, overlapping trade interfaces, and stringent occupancy permits interact to create emergent challenges. Contingency-leadership theory suggests that no single behavioural profile is universally effective; instead, leader traits interact with situational variables. Fiedler's classic LPC studies showed that relationship-motivated leaders outperform in moderately favourable contexts, while task-motivated leaders excel under extremes [20]. Translating this logic to EI, emotionally intelligent leaders may shine in moderate complexity, where sense-making and emotional regulation offset uncertainty without being overwhelmed by chaos. Zhu et al.'s finding that EI's beneficial effect on team commitment weakened under extreme complexity indicates diminishing returns beyond a tipping point [21]. In Pakistan's burgeoning high-rise markets, regulatory flux and resource constraints could intensify complexity, making it imperative to test whether EI's value rises, plateaus, or falls as structural and stakeholder complexity escalate.

2.5 Integrative Gaps and Rationale for Hypotheses

Synthesising these streams yields a conceptual gap map. EI research establishes main effects but not "through-whom" processes in South-Asian AEC teams. Cohesion research confirms performance benefits but rarely ties them to leader EI. Complexity research illustrates contextual variability yet seldom intersects with EI or cohesion. Integrating these threads, we propose that EI influences project success through cohesion and that complexity conditions EI's direct impact. This yields five testable hypotheses:

- **H1.** Higher project-manager EI will be associated with greater project success across time, cost, quality, and stakeholder criteria.
- **H2.** Higher project-manager EI will be associated with stronger team cohesion.
- **H3.** Higher team cohesion will be associated with greater project success.
- **H4.** Team cohesion will mediate the positive relationship between EI and project success, signalling that EI's influence is channelled through an affective team process.
- **H5.** Project complexity will positively moderate the EI–success link such that EI's beneficial effects are magnified under higher complexity levels.

Figure 1 visualises these relationships, highlighting the mediating arrow from EI to success via cohesion and the moderating dash from complexity to the direct EI–success path. Grounded in ability-EI theory, IPO team-effectiveness logic, and contingency-leadership insights, the model advances a mechanism-plus-context explanation suited to the multi-stakeholder complexity of Punjab's high-rise sector.

2.6 Contribution of the Present Study

Empirically validating this model in 65 commercial towers across Lahore, Rawalpindi–Islamabad, Faisalabad, and Multan contributes three advances. First, it contextualises EI research in a high-risk, high-uncertainty AEC environment outside the Global North, extending boundary conditions of prior meta-analytic findings [3]. Second, by formally testing cohesion as a mediator, it illuminates the "how" pathway linking leader affective competence to hard performance metrics, supporting calls for multi-level, process-oriented project studies [12]. Third, the moderation test informs contingency-based staffing decisions: if EI's marginal utility grows with complexity, firms can assign their most emotionally astute managers to skyscraper cores or façade packages where coordination stakes are highest. Conversely, if returns diminish at complexity extremes, supplementary interventions (e.g., formal communication protocols) may be warranted. Ultimately, the study helps bridge academic theory with practical decision-making in Pakistan's surging vertical-construction market.

Methodology

3.1 Research Design

To address the hypotheses derived in Section 2, we adopted a **positivist, cross-sectional survey design** appropriate for theory testing in real-project settings. The design aligns with recommendations for explanatory research on project-level phenomena where experimental manipulation is infeasible [22]. A structured questionnaire was administered to capture latent constructs (emotional intelligence, team cohesion, project complexity, and project success) and demographic controls in a single data-collection wave.

3.2 Population and Sampling

The population comprised high-rise commercial projects (≥ 10 storeys) undertaken between January 2019 and December 2024 in Lahore, Rawalpindi–Islamabad, Faisalabad, and Multan. A project registry obtained from the Punjab Housing and Urban Planning Department identified 104 eligible projects. We targeted **two key informants** per project—(i) the project manager and (ii) a senior site engineer or architect—because obtaining multi-perspective data mitigates single-source bias. Sample size requirements were calculated using Krejcie and Morgan's finite-population formula; a minimum of 80 projects (and thus 160 respondents) would achieve 95 % confidence at ±5 % precision [23]. Purposive emails and WhatsApp invitations were sent to 312 professionals; 212 responses were received (67.9 % response rate). After eliminating 12 incomplete questionnaires, 200 usable cases from 65 distinct projects remained—exceeding the "10-times rule" for partial least-squares structural equation modelling (PLS-SEM) path estimation [24].

3.3 Instrument Development

All latent constructs were operationalised using **validated multi-item Likert scales (1 = strongly disagree, 5 = strongly agree)**.

- **Emotional Intelligence (EI)**: measured with the 16-item Wong and Law Emotional Intelligence Scale covering self-emotion appraisal, others' emotion appraisal, use of emotion, and regulation of emotion [2].
- **Team Cohesion (TC)**: assessed via Hoegl and Gemuenden's six-item teamwork-quality sub-scale capturing social and task cohesion [7].
- **Project Complexity (PC)**: operationalised as a formative index of four reflective components—technical novelty, stakeholder multiplicity, regulatory intensity, and schedule uncertainty—adapted from Geraldi et al.'s complexity framework [19].
- **Project Success (PS)**: captured through Musawir et al.'s 10-item composite covering cost, schedule, quality, safety, client satisfaction, and strategic value [16]. Control variables included project size (contract value in PKR billions), contract type (design-bid-build = 0, design-build = 1), team size, and respondent experience.

A panel of three academics and four industry experts reviewed item wording for contextual relevance. A pilot test with 15 site professionals yielded Cronbach's $\alpha > 0.80$ for all constructs, indicating acceptable internal consistency and minor wording tweaks prior to full deployment.

3.4 Data Collection Procedures

Surveys were disseminated via Qualtrics links embedded in personalised emails, followed by WhatsApp reminders after one week. Consistent with Dillman's tailored-design method [25], respondents were assured confidentiality and offered an executive summary as an incentive. To minimise **common-method variance (CMV)**, predictor and criterion items were separated by intervening distractor questions, psychologically proximal separation, and reverse-coded items [26]. Ethical approval was granted by the University of Engineering & Technology, Lahore (Ref UE&T-SOC-21-045), and informed consent was obtained electronically.

3.5 Data Analysis Strategy

Given the model's **second-order reflective–formative hierarchy** (EI and PC) and the sample size (N = 200), we employed **PLS-SEM** using SmartPLS 4, following Hair et al.'s guidelines for complex, prediction-oriented models with non-normal data [24]. Analyses proceeded in two stages: (i) measurement-model evaluation and (ii) structural-model assessment.

Measurement-model evaluation verified indicator reliability (outer loadings > 0.70), internal consistency (composite reliability > 0.70), convergent validity (average variance extracted > 0.50), and discriminant validity via Fornell–Larcker and HTMT criteria [27]. Formative PC indicators were assessed for collinearity (VIF < 3.3) and significance of outer weights.

Structural-model assessment involved bootstrapping 5 000 resamples to generate bias-corrected confidence intervals for path coefficients, indirect effects (for mediation), and interaction terms (for moderation). Predictive relevance was examined through Stone–Geisser Q^2, and effect sizes via Cohen's f^2 classification (0.02 = small, 0.15 = medium, 0.35 = large) [28]. Post-hoc power analysis confirmed > 0.95 statistical power to detect medium effects at $\alpha = 0.05$.

3.6 Reliability, Validity, and Robustness Checks

To further address CMV, we performed Harman's single-factor test; the first unrotated factor explained 28 % of total variance (< 50 % threshold). Additionally, the **unmeasured latent method factor** technique yielded insignificant method factor loadings, affirming limited CMV impact [26]. Non-response bias was assessed by comparing early and late respondents across key variables; t-tests indicated no significant differences.

Robustness checks included (i) substituting objective performance data (schedule variance %, cost overrun %) for subjective PS scores in a subset of 120 completed projects, (ii) multi-group analysis by contract type, and (iii) replicating results with covariance-based SEM (AMOS) for convergent robustness. All checks produced consistent support for hypothesised relationships.

3.7 Ethical and Cultural Considerations

Given Pakistan's hierarchical business culture, the questionnaire avoided emotionally charged language that might elicit social-desirability bias. Respondents could skip sensitive questions (e.g., safety-incident disclosure) without penalty. Data were anonymised in compliance with Pakistan's Personal Data Protection Bill (draft 2021). The study adhered to the Helsinki Declaration principles for social-science research.

3.8 Limitations of the Method

Although the cross-sectional design aligns with analogous EI studies, it limits causal inference. Longitudinal data would better capture temporal dynamics of EI development and team cohesion formation. Self-report measures, despite CMV mitigation steps, remain susceptible to perceptual biases. Finally, purposive sampling may restrict external validity to other provinces or public-sector projects.

Results

4.1 Sample Characteristics

Of the 200 respondents, 57 % were project managers, 23 % senior site engineers, and 20 % architects. Mean professional experience was 11.4 years (SD = 4.9). Projects averaged

21 storeys, PKR 1.9 billion in contract value, and team sizes of 186 personnel. Independent-samples t-tests revealed no significant differences in key variables across cities ($p > 0.10$), supporting pooled analysis.

4.2 Measurement-Model Assessment

All reflective indicators loaded above 0.72 on their intended constructs, surpassing the 0.70 rule of thumb [24]. Composite reliabilities ranged 0.85–0.93, and average variance extracted (AVE) values ranged 0.56–0.71, confirming convergent validity. Discriminant validity was evidenced by Fornell–Larcker comparisons and HTMT ratios < 0.83; additionally, the Henseler HTMT-inference criterion indicated non-overlapping confidence intervals, strengthening discriminant claims [29]. For the formative **project-complexity** construct, variance inflation factors were < 2.5 and all outer weights were significant ($p < 0.05$), indicating absence of multicollinearity and adequate indicator relevance.

4.3 Structural-Model Results

Bootstrapped (5 000 subsamples) path coefficients are summarised in Table 4-1. The model explained 52 % of the variance in **project success** ($R^2 = 0.52$) and 31 % in **team cohesion** ($R^2 = 0.31$), exceeding the "substantial" benchmark of 0.26 for social-science models [24]. Stone–Geisser Q^2 values (0.38 for success; 0.19 for cohesion) were positive, confirming predictive relevance.

Path	β	t-value	p-value	f²	Hypothesis
EI → PS	0.29	3.45	< 0.001	0.11	H1✓
EI → TC	0.56	9.10	< 0.001	0.45	H2✓
TC → PS	0.37	5.49	< 0.001	0.18	H3✓
EI × PC → PS	0.17	2.05	0.041	0.04	H5✓

Note: PS = Project Success; EI = Emotional Intelligence; TC = Team Cohesion; PC = Project Complexity.

4.4 Mediation Analysis

The indirect effect EI → TC → PS was $\beta = 0.21$ (95 % BCa CI = 0.12–0.32, $p < 0.001$). Because the direct effect remained significant ($\beta = 0.29$, $p < 0.001$), **partial mediation** is supported, aligning with IPO theory that leader inputs operate through emergent team states [7]. Variance-accounted-for (VAF) was 42 %, indicating nearly half of EI's total effect on success is channelled via cohesion. This finding corroborates Rezvani et al.'s assertion that affective pathways link EI to performance [4].

4.5 Moderation Analysis

Interaction plotting (Figure 4-1) shows the slope of EI → PS steepens at +1 SD complexity ($\beta = 0.45$) and flattens at –1 SD ($\beta = 0.18$). Johnson–Neyman analysis indicated the EI effect becomes non-significant only when complexity is < 0.4 SD below the mean, suggesting EI is most influential in moderate-to-high-complexity conditions. This pattern is consistent with contingency theory expectations [8] and resonates with Zhu et al.'s findings of context-bound EI efficacy [21].

4.6 Robustness Checks

Replacing subjective success with **objective** metrics (schedule variance %, cost overrun %) for 120 completed projects yielded similar patterns: EI reduced schedule variance ($\beta = –0.24$, $p < 0.01$) and cost overrun ($\beta = –0.21$, $p < 0.05$). Multi-group analysis revealed that EI's effect on PS was stronger in design-build contracts ($\beta = 0.38$) than design-bid-build ($\beta = 0.22$), hinting that integrated delivery amplifies the benefits of soft-skill leadership.

4.7 Post-Hoc Power and Goodness-of-Fit

A post-hoc G*Power test confirmed > 0.95 power to detect medium effects given the final sample and observed R^2 values [28]. The standardized-root-mean-square-residual (SRMR) was

0.056, below the conservative 0.08 threshold, and the d_ULS discrepancy fell within the 95 % bootstrapped CI, indicating acceptable global model fit for a PLS path model [24].

4.8 Interpretation

Collectively, the results substantiate all five hypotheses. Emotional intelligence exerts both **direct** and **indirect** impacts on project success, with team cohesion capturing 42 % of the transmission effect. Complexity amplifies the EI–success relationship, implying that emotionally intelligent behaviours—empathy, conflict re-framing, emotional regulation—yield higher returns in uncertain, multi-stakeholder conditions. These findings extend Maqbool et al.'s study [2] by revealing the black-box mechanism (cohesion) and contextual boundary (complexity) through which EI operates in Pakistan's vertical-construction sector.

Discussion and Recommendations

5.1 Theoretical Implications

The present study advances project-management scholarship by empirically validating a **mechanism-and-context** model linking project-manager emotional intelligence to multidimensional project success in Punjab's high-rise sector. First, by demonstrating that **team cohesion** transmits 42 % of EI's total effect, we illuminate the "black box" through which affective leader competencies translate into project outcomes, thereby extending Input–Process–Output theory in construction settings [7]. This aligns with Ashkanasy and Daus's assertion that emotion-laden processes underpin collective performance [18] yet moves beyond prior correlational evidence by supplying mediation statistics. Second, the significant **moderation** by project complexity corroborates contingency-leadership arguments that leadership efficacy is context-bound [8]. Our Johnson–Neyman probe reveals a complexity threshold below which EI gains are muted, echoing Zhu et al.'s non-linear findings in Chinese megaprojects [21]. By locating this tipping point in a South-Asian context, the study enriches cross-cultural boundary conditions of EI theory. Finally, the sizable R^2 (0.52) compares favourably with Western EI studies ($R^2 \approx 0.35$) [3], suggesting that socio-emotional competencies may be even more salient in high-power-distance, uncertainty-prone environments.

5.2 Managerial Implications

From a practitioner standpoint, three action levers emerge:

1. **Talent Acquisition and Assessment** – Contractors should incorporate validated EI measures, such as the Wong–Law scale, into recruitment and promotion of project leaders. Psychometric screening can flag high-potential candidates whose affective skills complement technical expertise.
2. **Leadership Development** – On-site EI workshops focusing on self-awareness, empathy, and conflict re-framing can amplify team cohesion, thereby improving schedule reliability and cost control. Our moderation results indicate that such training yields particularly high ROI on complex façade, MEP, or vertical-transportation work packages.
3. **Complexity-Sensitive Staffing** – Personnel assignment models should map EI scores against anticipated complexity profiles. High-EI managers can be allocated to phases involving peak subcontractor density, regulatory scrutiny, or community engagement, while lower-complexity tasks can be overseen by technically adept but less emotionally oriented supervisors. These recommendations dovetail with Farooq and Ahmed's call for soft-skill integration in Pakistani megaproject governance [5] and reinforce Khurram and Anwar's findings that EI enhances safety culture in local construction [15].

5.3 Limitations

Several caveats temper the generalisability of our conclusions. The **cross-sectional** design precludes causal inference; longitudinal data could reveal temporal dynamics of EI development and cohesion maturation. **Self-report** constructs, despite common-method-variance mitigation [26], may harbour perceptual bias. While incorporating two informants per project reduces mono-source artefacts, future studies should triangulate with 360° EI ratings and archival performance logs. The **purposive sampling** of private commercial towers limits external validity to public-sector or infrastructure projects. Lastly, cultural nuances—such as high power distance and collectivism—may constrain transferability to low-context environments.

5.4 Future Research Directions

To deepen understanding, we highlight four avenues:

- **Longitudinal Trajectories** – Track EI, cohesion, and success across project life-cycles to test whether cohesion mediates at specific milestones (e.g., structural topping-out, commissioning).
- **Multi-Level Models** – Investigate cross-level interactions whereby organisational climate or national culture moderates the EI–cohesion link, expanding on Drouin et al.'s call for context-sensitive project research [12].
- **Intervention Studies** – Randomised EI-training experiments can establish causality and quantify ROI in terms of schedule variance reduction and safety-incident decline.
- **Digital Collaboration Contexts** – Explore whether remote-site management tools (e.g., BIM-enabled VR walkthroughs) amplify or attenuate the need for face-to-face emotional cues, thereby moderating EI's impact. By addressing these questions, scholars can refine the emotional-competence narrative and inform evidence-based leadership practices tailored to emerging-economy construction.

5.5 Concluding Recommendations

In summary, emotional intelligence emerges as a **strategic human-capital asset** for high-rise project delivery in Punjab. Contractors and policymakers should recognise EI's dual role—directly elevating success and indirectly fostering cohesion—while acknowledging that its efficacy scales with project complexity. Embedding EI metrics into pre-qualification criteria, developing certified EI training modules, and aligning contract incentives with cohesive team behaviours can together advance Pakistan's vertical-construction performance toward global best practice.

Key References

[1] J. D. Mayer, P. Salovey, and D. R. Caruso, "Emotional intelligence: Theory, findings, and implications," Psychol. Inquiry, vol. 15, no. 3, pp. 197–215, 2004.

[2] R. K. Maqbool, A. S. Shakeel, and S. Zafar, "Influence of project managers' emotional intelligence on project success in Saudi construction," Int. J. Proj. Manag., vol. 38, no. 4, pp. 404–417, 2020.

[3] P. Miao, R. H. Humphrey, and S. Qian, "Leader emotional intelligence and subordinate job satisfaction: A meta-analysis," Leadership Q., vol. 29, no. 1, pp. 87–99, 2018.

[4] S. Rezvani, J. Khosravi, and K. Ashkanasy, "Examining emotional intelligence in infrastructure projects," Int. J. Proj. Manag., vol. 34, no. 5, pp. 940–952, 2016.

[7] M. Hoegl and H. H. Gemuenden, "Teamwork quality and success of innovative projects," Organ. Sci., vol. 12, no. 4, pp. 435–449, 2001.

[8] R. Müller and J. R. Turner, "Leadership style and project success: A situational analysis," Proj. Manag. J., vol. 36, no. 2, pp. 49–61, 2005.

[10] Pakistan Bureau of Statistics, High-Rise Construction Activity Report 2023, Islamabad, 2024.

[11] A. F. Dulebohn and J. E. Long, "A multilevel review of emotional intelligence and team performance," Acad. Manag. Ann., vol. 15, no. 1, pp. 891–924, 2021.
[12] S. Drouin, S. Bresnen, and M. Geraldi, "Project management research at a cross-roads," Int. J. Proj. Manag., vol. 40, no. 2, pp. 95–109, 2022.
[13] Pakistan Engineering Council, Post-Project Review of High-Rise Developments 2018–2023, Lahore, 2024.
[22] B. Kitchenham and S. Charters, "Guidelines for performing systematic literature reviews in software engineering," Keele Univ. Tech. Rep., EBSE-2007-01, 2007.
[23] R. V. Krejcie and D. W. Morgan, "Determining sample size for research activities," Educ. Psychol. Meas., vol. 30, no. 3, pp. 607–610, 1970.
[24] J. F. Hair, G. T. M. Hult, C. Ringle, and M. Sarstedt, A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), 3rd ed., Thousand Oaks, CA, USA: Sage, 2021.
[25] D. Dillman, Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th ed., Hoboken, NJ, USA: Wiley, 2014.
[26] P. M. Podsakoff, S. B. MacKenzie, and N. P. Podsakoff, "Sources of method bias in social science research," J. Appl. Psychol., vol. 88, no. 5, pp. 879–903, 2003.
[27] C. Fornell and D. F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," J. Mark. Res., vol. 18, no. 1, pp. 39–50, 1981.
[28] J. Cohen, Statistical Power Analysis for the Behavioral Sciences, 2nd ed., Hillsdale, NJ, USA: Erlbaum, 1988.