

A FRAMEWORK TO ASSESS THE LEADERSHIP QUALITY OF CONSTRUCTION LEADERS

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ABSTRACT

Leadership effectiveness in construction is not merely a function of technical acumen or tenure-based experience; it is fundamentally shaped by a constellation of psychological competencies that determine project outcomes across safety, quality, cost, and schedule dimensions. Despite this recognition, prevailing leadership evaluation frameworks within the construction industry remain anchored to formal qualifications and observable technical performance, systematically omitting the psychological architecture that underpins sustained high performance in complex, high-risk project environments. This doctoral research addresses that gap by developing and empirically validating a comprehensive Leadership Quality Index (LQI) — a composite, data-driven diagnostic instrument calibrated to the operational realities of the Indian construction industry.

Grounded in a mixed-methods epistemology that integrates interpretivist and positivist paradigms, the study synthesises a broad theoretical landscape — spanning classical trait and behavioural models to transformational and adaptive leadership theories — with parallel advances in positive psychology. Five psychological dimensions are posited as antecedents and moderators of construction project performance: Emotional Quotient (EQ), Leadership Style (LS), Resilience (RE), Spiritual Quotient (SQ), and Flow State (FS). Through a structured expert and a three-stage quantitative survey of 256 construction professionals engaged in major building and infrastructure projects in India, the research operationalises these constructs with rigour. Partial Least Squares Structural Equation Modelling (PLS-SEM) was deployed to test hypothesised relationships. At the same time, the Analytic Network Process (ANP) was employed to derive empirically weighted contributions of each dimension to the composite index.

Findings reveal that a leader's emotional maturity and sensitivity are significant predictors of both safety and quality outcomes, while a democratic leadership style demonstrably enhances these performance dimensions. Resilience exhibits a strong covariance with flow state — indicating that adaptive coping mechanisms sustain optimal cognitive engagement under operational pressure — and a meaningful association with spiritual quotient, which anchors purpose-driven and ethical decision-making. ANP-derived

weights assigned to the five dimensions (EQ: 0.270; SQ: 0.216; LS: 0.200; RE: 0.185; FS: 0.129) yielded the LQI, upon which k-means clustering identified three empirically distinct leader archetypes: top-quality (n = 118), moderate-quality (n = 85), and low-quality (n = 53), each characterised by differentiated psychological profiles and measurable performance correlates.

The LQI constitutes a theoretically coherent and practically deployable instrument for leadership identification, targeted developmental intervention, and performance monitoring in construction organisations. It advances leadership theory by integrating psychological constructs — long studied in isolation — into a unified, sector-specific framework. It provides a replicable methodology for analogous applications across diverse geographic and cultural contexts. Future research trajectories include longitudinal validation, the incorporation of adversity quotient and servant leadership constructs, and technology-mediated deployment through integrated human resource and decision-support platforms.

Keywords: *Construction Leadership, Leadership Quality Index, Emotional Quotient, Spiritual Quotient, Resilience, Flow State, PLS-SEM, Analytic Network Process, Project Performance, Leadership Development*