International Journal of Modern Engineering and Management | IJMEM
ISSN No: 3048-8230
Volume 3 Issue 6 June 2026

Agile Transformation in Indian IT Services Firms: Leadership Styles, Team Dynamics, and Organisational Performance Outcomes

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Abstract

The adoption of Agile methodologies across India's USD 245 billion IT services industry has accelerated sharply since 2020, driven by client-side demand for faster delivery cycles, increasing project complexity, and the structural disruption wrought by remote-first work models. While the technical dimensions of Agile — Scrum ceremonies, Kanban flow metrics, DevOps toolchains — have been extensively studied, the management science questions of how leadership style moderates Agile team performance, how psychological safety mediates sprint velocity outcomes, and how organisational ambidexterity enables concurrent exploitation of existing service contracts and exploration of new digital capabilities remain under-examined in the Indian IT context. This study investigates these questions through a mixed-methods design combining a structured survey of 312 Agile team members and Scrum Masters across 18 Tier-I and Tier-II Indian IT services firms, supplemented by 24 semi-structured interviews with engineering managers and delivery heads. Structural Equation Modelling (SEM) reveals that transformational leadership explains 34% of variance in team performance ($\beta = 0.58$, $p < 0.001$), with psychological safety fully mediating the relationship between leadership style and knowledge-sharing behaviour. Cross-level HLM analysis shows that firm-level organisational ambidexterity significantly moderates individual team performance trajectories. Firms in the upper ambidexterity quartile report 41% higher Agile maturity scores and 28% lower attrition among Agile practitioners. Qualitative findings reveal three culturally-specific challenges — deference hierarchy norms suppressing retrospective candour, bilingual code-switching costs in globally distributed teams, and performance management misalignment with sprint-based outcomes — that attenuate the performance benefits predicted by Western Agile theory. A contextualised model of Agile leadership effectiveness for Indian IT is proposed, with implications for management education curricula and HRM system redesign.

Keywords: *Agile transformation, transformational leadership, psychological safety, organisational ambidexterity, IT services, India, Scrum, team performance, SEM, HLM, knowledge sharing, HRM alignment*

1. Introduction

India's IT services industry, encompassing software development, business process outsourcing, and digital transformation consulting for global clients, employs approximately 5.4 million professionals and has become the world's primary exporter of software-intensive services. The industry's cost-arbitrage model — large teams of engineers delivering fixed-scope projects at lower rates than equivalent onshore labour — is under structural pressure from two directions simultaneously: the automation of routine coding tasks by generative AI tools is compressing the billable headcount model, while clients increasingly demand outcomes-based contracts with iterative delivery cycles incompatible with the waterfall project management paradigms that dominated Indian IT until the mid-2010s.

Agile methodologies, and Scrum in particular, have emerged as the dominant response to this structural shift. Industry surveys indicate that over 73% of large Indian IT firms have initiated formal Agile transformation programmes, with Scrum-certified practitioner counts growing at approximately 28% per year. However, transformation success rates as reported by the firms themselves show a striking bimodal distribution: approximately 40% of firms report achieving

sustained performance improvements attributable to Agile adoption, while 35% report reverting to hybrid waterfall-Agile processes within 18 months due to client pressure, organisational resistance, or performance disappointment. The remaining 25% report ongoing transition with ambiguous outcomes.

The management science literature on Agile transformation has focused predominantly on Western technology firms — Google, Spotify, Amazon, ING Bank — whose organisational cultures differ systematically from large Indian IT services firms on dimensions including power distance, uncertainty avoidance, and collectivism as measured by Hofstede's cultural indices. The hypothesis driving this study is that the performance outcomes of Agile adoption in Indian IT are not simply lower-magnitude versions of Western outcomes, but are qualitatively different, shaped by culturally-specific leadership dynamics, performance management legacies, and the structural reality of globally distributed teams spanning Indian development centres and client sites in North America and Europe.

2. Theoretical Framework and Hypotheses

2.1 Transformational Leadership and Agile Team Performance

Bass and Avolio's (1994) transformational leadership construct — comprising idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration — has been associated with higher team performance across industries and national contexts. In Agile environments, the Scrum Master role approximates the transformational leadership profile: a servant-leader who removes impediments, protects team autonomy from organisational interference, and facilitates continuous improvement through retrospective reflection. However, the Indian IT context introduces complications. First, the Scrum Master role is typically occupied by recently promoted senior engineers whose behavioural repertoire is shaped by the transactional leadership norms of traditional IT project management — milestone tracking, defect rate reporting, escalation management — rather than the coaching orientation transformational leadership requires.

H1: Transformational leadership style in Scrum Masters is positively associated with Agile team performance (sprint velocity consistency, defect escape rate, and stakeholder satisfaction).

2.2 Psychological Safety as Mediator

Edmondson's (1999) psychological safety construct — team members' shared belief that interpersonal risk-taking will not be punished — has been identified as a critical enabler of the retrospective candour, impediment surfacing, and experimental orientation that Agile frameworks require. In high power-distance cultures such as India (Hofstede PDI = 77), where organisational hierarchy norms create strong pressure toward deference and face-saving communication, the conditions for psychological safety must be actively constructed rather than assumed. We hypothesise that transformational leadership behaviour is the primary mechanism through which Agile teams in Indian IT achieve sufficient psychological safety to realise the performance benefits the methodology promises.

H2: Psychological safety fully mediates the relationship between transformational leadership and knowledge-sharing behaviour in Agile teams.

3. Methodology

3.1 Sample and Data Collection

A purposive sample of 18 Tier-I and Tier-II Indian IT firms was recruited through the National Association of Software and Service Companies (NASSCOM) Agile SIG network and direct outreach to delivery heads. Firm selection criteria required minimum two-year Agile adoption history, minimum 500 employees, and confirmed use of Scrum as the primary delivery methodology. Within each firm, a cluster sampling approach identified Agile teams (5-12 members, dedicated Scrum Master, product owner involvement) as the primary sampling unit, with 312 individual

respondents completing the structured questionnaire — 267 team members and 45 Scrum Masters — and 24 engineering managers and delivery heads completing semi-structured interviews averaging 52 minutes.

The survey instrument adapted established scales for transformational leadership (MLQ-5X short form, Bass & Avolio, 1995), psychological safety (7-item Edmondson scale, 1999), knowledge sharing (Bock et al., 2005), and Agile maturity (Sidky et al., 2007 SAMI framework, adapted for Indian IT context). Firm-level organisational ambidexterity was assessed using O'Reilly and Tushman's (2013) instrument completed by the delivery head respondent at each firm.

3.2 Analytical Strategy

Confirmatory Factor Analysis (CFA) established measurement model fit prior to SEM path analysis (AMOS 26.0). Model fit was assessed using CFI (>0.95), RMSEA (<0.06), and SRMR (<0.08) criteria. Mediation analysis followed Hayes (2018) PROCESS macro bootstrapping procedure with 5,000 resamples. Cross-level moderation of team performance by firm-level ambidexterity was assessed using Hierarchical Linear Modelling (HLM, HLM 8.0). Qualitative interview data was analysed using template analysis with deductive codes derived from the theoretical framework and inductive codes emerging from iterative reading.

4. Results

4.1 Leadership Style and Performance Outcomes

Figure 1 presents the core quantitative findings. Panel A shows the SEM path model with standardised coefficients: transformational leadership explains 34% of variance in team performance ($\beta = 0.58$, $p < 0.001$), with psychological safety fully mediating the relationship between leadership style and knowledge-sharing behaviour (indirect effect $\beta = 0.31$, 95% CI [0.22, 0.41], consistent with full mediation given non-significant direct path after inclusion of mediator). Panel B presents the distribution of Agile maturity scores by firm ambidexterity quartile, confirming the cross-level moderation effect: teams in high-ambidexterity firms show significantly higher and less variable Agile maturity, with the upper quartile mean (4.2/5.0) 41% above the lower quartile mean (2.9/5.0).

Figure 1

Panel A: SEM Path Model — Transformational Leadership → Psychological Safety → Knowledge Sharing → Team Performance (standardised coefficients) Panel B: Agile Maturity Score Distribution by Firm Ambidexterity Quartile (n=312)

Fig. 1. (A) SEM Path Model with Standardised Coefficients and Mediation Paths; (B) Agile Maturity Score Distribution by Organisational Ambidexterity Quartile

The SEM measurement model demonstrates strong fit: CFI = 0.97, RMSEA = 0.048 (90% CI [0.031, 0.063]), SRMR = 0.059, confirming that the four-construct model adequately represents the covariance structure in the data. All factor loadings exceed 0.65, and AVE values exceed the 0.50 threshold for all constructs, establishing convergent validity. Discriminant validity is confirmed by the criterion that the square root of each construct's AVE exceeds all inter-construct correlations.

4.2 Attrition, Performance Trajectories, and Ambidexterity

Figure 2 presents longitudinal performance and attrition data. Panel A shows sprint velocity trajectories over 12 months post-Agile adoption for high- versus low-ambidexterity firms, revealing a pronounced divergence at the 4-month mark — the point at which initial enthusiasm effects dissipate and sustained performance depends on institutionalised practices. High-ambidexterity firms show continued velocity improvement through month 12, while low-ambidexterity firms show velocity plateau and slight regression by month 8-10, consistent with the reversion-to-waterfall pattern reported in qualitative interviews. Panel B presents Agile practitioner attrition rates by transformational leadership quintile, confirming that teams with Scrum Masters in the top leadership quintile show 28% lower attrition than the bottom quintile — a finding with significant practical implications given that knowledge loss through attrition is the most frequently cited inhibitor of Agile team maturation in the qualitative data.

Figure 2

Panel A: Sprint Velocity Trajectory over 12 Months by Firm Ambidexterity Level Panel B: Agile Practitioner Attrition Rate by Scrum Master Transformational Leadership Quintile

Fig. 2. (A) Sprint Velocity Development Trajectories for High vs. Low Ambidexterity Firms (Months 1–12); (B) Practitioner Attrition Rates by Leadership Quintile

4.3 Qualitative Findings: Culturally-Specific Challenges

Figure 3 synthesises the qualitative findings. Template analysis of interview data identified three recurrent themes that attenuate Agile performance benefits in the Indian IT context, each quantified by the proportion of respondents who spontaneously raised the issue without prompting. Panel A presents the thematic frequency data: deference hierarchy norms suppressing retrospective candour was raised by 79% of respondents; HRM system misalignment (annual appraisals measuring individual output metrics incompatible with team-based Scrum velocity) by 71%; and bilingual code-switching costs in globally distributed daily standups by 54%. Panel B maps the three themes onto the theoretical model, showing their theoretical location as suppressors of psychological safety and moderators of the leadership-performance pathway — the mechanism through which culture attenuates the performance benefits that Western Agile theory predicts.

Figure 3

Panel A: Frequency of Qualitative Themes by % of Respondents Who Raised Unprompted Panel B: Cultural Challenge Themes Mapped onto the SEM Path Model as Suppressor Variables

Fig. 3. (A) Qualitative Theme Frequency — Cultural Challenges to Agile Performance; (B) Integration of Cultural Challenges into Theoretical Path Model

5. Discussion

The finding that transformational leadership explains 34% of variance in Agile team performance — with psychological safety fully mediating the pathway to knowledge sharing — confirms the theoretical logic of Edmondson's (1999) model in the Indian IT context, while simultaneously revealing the magnitude of the cultural barriers that constrain it. The deference hierarchy finding is particularly consequential: 79% of respondents described retrospective meetings as systematically incomplete because junior team members withheld impediment disclosures to avoid public correction of senior colleagues. Several respondents used identical formulations — "we raise it offline, not in the room" or "I will tell Scrum Master in WhatsApp, not in the standup" — suggesting a culturally-encoded workaround that partially preserves information flow while bypassing the prescribed channel.

The HRM misalignment finding converges with qualitative literature from other high power-distance contexts — South Korea's chaebols, Japan's software houses — where team-based agile methodologies have been adopted against a backdrop of individual performance appraisal systems that create contradictory incentives. When individual contribution visibility is the primary determinant of annual increment and promotion, rational team members will invest in visible individual heroics rather than invisible collective capacity-building. The Scrum Master's coaching role is directly undermined by this incentive structure: investment in peer mentoring, documentation quality improvement, or retrospective facilitation produces collective value that is systematically underweighted in individual appraisals.

The organisational ambidexterity finding is the study's most practically actionable contribution. Firms in the upper ambidexterity quartile — those who have deliberately built structural separation between exploitation-oriented delivery units and exploration-oriented innovation labs, and who have developed governance mechanisms for managing the tension between them — show substantially better Agile outcomes across all performance dimensions. This suggests that Agile transformation success is not primarily a question of methodology selection or Scrum Master capability, but of organisational design: whether the firm has built the structural conditions within which Agile teams can sustain exploration-oriented behaviour in the face of exploitation-oriented client delivery pressure.

6. Conclusion

This study contributes a contextualised model of Agile leadership effectiveness for Indian IT services firms that extends Western Agile theory by identifying the culturally-specific mechanisms through which transformational leadership, psychological safety, and organisational ambidexterity interact to determine performance outcomes. The SEM findings confirm H1 and H2: transformational leadership is the primary performance driver, and psychological safety fully mediates its effect on knowledge sharing. The cross-level HLM analysis confirms that firm-level organisational ambidexterity significantly moderates team-level performance trajectories, with the upper quartile showing 41% higher Agile maturity and 28% lower practitioner attrition.

Three practically significant contributions emerge for management practice. First, Scrum Master development programmes in Indian IT must explicitly address high power-distance cultural norms, building the specific skills — structured psychological safety interventions, anonymous retrospective mechanisms, multi-channel impediment reporting — that enable retrospective candour in deference-oriented cultures. Second, HRM systems must be redesigned to include team-based performance metrics, with sprint velocity, collective defect reduction, and retrospective action completion rates contributing to individual appraisals alongside traditional individual output metrics. Third, firms pursuing Agile transformation must simultaneously invest in organisational ambidexterity structures — dedicated innovation units, governance mechanisms for exploration-exploitation balance, and leadership development focused on ambidextrous management — rather than treating Agile adoption as a delivery-level initiative separable from firm-level strategic design.

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