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# Effectiveness of Case Study Method in Management Education: An Empirical Investigation

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## ABSTRACT

This study empirically investigates the effectiveness of the case study method (CSM) as a pedagogical strategy in management education institutions, examining its effects on managerial decision-making competency, critical thinking development, student engagement, and post-graduation employability outcomes. Employing a sequential explanatory mixed-methods design, quantitative data were collected from 812 students, faculty members, and corporate recruiters across 21 AACSB- and nationally-accredited business schools in India, Sub-Saharan Africa, and Southeast Asia over a 22-month period (2022–2024). Structural equation modeling (SEM) results indicate that CSM deployment intensity significantly predicts improvements in managerial decision-making competency ($\beta = 0.49$, $p < 0.001$), critical thinking skills ($\beta = 0.43$, $p < 0.001$), student engagement ($\beta = 0.37$, $p < 0.001$), and employability outcomes ($\beta = 0.31$, $p < 0.01$). Moderation analyses reveal that case facilitation quality and institutional case library richness are the strongest amplifiers of CSM effects, accounting for 41% of variance in decision-making competency. The study identifies five primary barriers to effective CSM implementation: case relevance gaps, facilitation skill deficits, time and resource constraints, student preparedness variability, and cross-cultural applicability challenges. These findings offer actionable guidance for business school administrators, curriculum designers, faculty developers, and accreditation bodies navigating the pedagogical transformation of management education in emerging market contexts.

**Keywords**: case study method, management education, pedagogical effectiveness, decision-making competency, critical thinking, structural equation modeling, facilitation quality, emerging markets.

## INTRODUCTION

The case study method (CSM) has occupied a central position in management education for over a century, originating with the Harvard Business School's adoption of the Socratic case pedagogy in 1921 (Ellet, 2007; Garvin, 2003). By placing students in the analytical role of a practicing manager confronting real organizational dilemmas—ambiguous information, competing stakeholder interests, constrained resources, and urgent time pressures—the CSM ostensibly bridges the enduring theory-practice gap that critics have long identified as the defining weakness of formal business education (Mintzberg, 2004; Pfeffer & Fong, 2002). Despite its widespread adoption across MBA and postgraduate management programs globally, the empirical evidence base for the CSM's effectiveness remains surprisingly incomplete, particularly in emerging market institutional contexts.

Management education in the 21st century operates under intensifying scrutiny from corporate recruiters, accreditation bodies, and policymakers demanding demonstrable skill outcomes rather than credential proxies (Doh, 2010; Ghoshal, 2005). Employers consistently report that business school graduates exhibit strong technical knowledge but comparatively weak practical decision-making, adaptive reasoning, and cross-functional communication skills—precisely the competencies the CSM is theorized to develop (GMAC, 2023; NACE, 2022). If the CSM is to justify its curricular centrality and resource demands, its effectiveness must be established through rigorous empirical inquiry that moves beyond anecdotal endorsement and practitioner advocacy...

Despite decades of practitioner enthusiasm, scholarly investigation of CSM effectiveness has been characterized by methodological limitations: reliance on student self-report, single-institution samples, short-term outcome measurement, and near-exclusive focus on North American and Western European elite business schools (Bridgman et al., 2016; Lê & Schmid, 2022). Little is known about the magnitude of CSM effects across multiple competency dimensions, the pedagogical and institutional conditions that moderate these effects, or the specific barriers that impede effective CSM delivery in resource-constrained emerging market contexts. This study directly addresses these gaps through a large-scale, multi-regional empirical investigation.

Drawing on experiential learning theory (Kolb, 1984), constructivist pedagogy (Vygotsky, 1978; Jonassen, 1999), and the competency-based education framework (McClelland, 1973; Boyatzis, 1982), this paper reports findings from a 21-institution, multi-country study examining CSM deployment and its consequences for management education outcomes. The study makes four primary contributions: (1) it establishes the magnitude of CSM effects on a multi-dimensional competency outcome set; (2) it identifies and tests moderation effects of facilitation quality and case library richness; (3) it provides the first systematic cross-regional comparative analysis of CSM effectiveness from India, Sub-Saharan Africa, and Southeast Asia; and (4) it derives evidence-based recommendations for curriculum designers and institutional leaders.

1.1 Research Objectives

To assess the impact of case study method deployment intensity on managerial decision-making competency, critical thinking development, student engagement, and employability outcomes in management education institutions.

To identify case facilitation quality and institutional case library richness as moderators of CSM effectiveness.

To examine and categorize the principal barriers to effective CSM implementation across different institutional and regional contexts.

To develop evidence-based recommendations for management education leaders, faculty developers, and accreditation bodies seeking to optimize CSM deployment for institutional improvement.

1.2 Research Questions

RQ1: To what extent does the intensity of case study method deployment predict improvements in managerial decision-making competency within management education institutions?

RQ2: How do case facilitation quality and institutional case library richness moderate the relationship between CSM deployment and student competency outcomes?

RQ3: What are the primary barriers to effective CSM implementation in management education institutions, and how do these barriers vary across regional and institutional contexts?

RQ4: What institutional strategies are most effective in overcoming CSM implementation barriers and sustaining case-based learning cultures?

## 2. LITERATURE REVIEW

2.1 Theoretical Foundations

Three theoretical frameworks collectively inform this study. First, Kolb's (1984) Experiential Learning Theory (ELT) provides the foundational rationale for the CSM. ELT posits that knowledge is constructed through a cyclical process of concrete experience, reflective observation, abstract conceptualization, and active experimentation. The case study, as an instructional device, approximates concrete organizational experience within the safe confines of the classroom, triggering the reflective and conceptualization phases through group discussion and faculty-facilitated analysis (McCarthy & McCarthy, 2006). The degree to which the experiential cycle is completed—from case analysis through structured reflection to transferable conceptual insight—determines the learning value of any given case deployment.

Second, Constructivist Learning Theory (Vygotsky, 1978; Jonassen, 1999) situates knowledge construction as an inherently social process mediated by collaborative dialogue and expert scaffolding. The case discussion format—in which students construct meaning collaboratively under the guidance of a skilled facilitator—operationalizes precisely these constructivist mechanisms. Vygotsky's zone of proximal development (ZPD) concept is particularly apposite: effective case facilitation extends student reasoning beyond individual capacity by providing structured challenge at the boundary of existing understanding (Herreid, 2007). This theoretical lens explains why facilitation quality emerges as a central moderator in the present study's conceptual model.

Third, the Competency-Based Education (CBE) framework (McClelland, 1973; Boyatzis, 1982; Spencer & Spencer, 1993) provides the outcome structure for this investigation. CBE identifies competencies—

integrated clusters of knowledge, skills, attitudes, and behaviors that predict superior performance—as the appropriate target of professional education. Management competencies relevant to CSM outcomes include analytical reasoning, decision-making under uncertainty, interpersonal influence, and adaptive problem-solving (Boyatzis et al., 2002). The present study operationalizes managerial decision-making competency as a multi-dimensional construct reflecting these empirically established competency clusters.

2.2 The Case Study Method: Historical Development and Evidence Base

The case study method, as practiced in contemporary management education, has evolved considerably from its Langdellian origins in legal education and its early business school iterations at Harvard and Darden (Garvin, 2003; Ellet, 2007). Contemporary CSM encompasses multiple case formats—decision-forcing cases, retrospective cases, multimedia cases, and live cases—as well as diverse facilitation approaches ranging from Socratic cold-calling to structured small-group analysis and simulation-integrated hybrids (Herreid, 2007; Erskine et al., 2003). This heterogeneity complicates both the practice and evaluation of CSM effectiveness.

Empirical evidence on CSM effectiveness is growing but methodologically uneven. Lundberg et al. (2001) found that case discussion significantly enhanced students' tolerance for ambiguity—a core managerial competency—compared to lecture-based controls in a quasi-experimental study. Corey (1998) and Barnes et al. (1994) documented practitioner accounts of CSM's contributions to integrative thinking and cross-functional perspective-taking, though these relied on self-report and retrospective assessment. More rigorous recent work by Lê and Schmid (2022) found, in a systematic review of 67 CSM studies, that methodological limitations—predominantly self-report, single-institution samples, and outcome measurement proxied by grades rather than competency assessment—substantially constrain causal inference.

In management education specifically, Mintzberg and Gosling (2002) argued that case-based learning, when well-executed, develops the reflective mindset distinguishing adaptive managers from technically proficient but context-blind analysts. Conversely, Mintzberg (2004) and Ghoshal (2005) contend that poorly executed CSM—characterized by rote analysis, 'right answer' facilitation styles, and decontextualized cases—produces analytical arrogance rather than managerial wisdom. Kumar and Hsiao (2022) recently found that CSM intensity predicted significant improvements in MBA graduates' employability ratings by corporate recruiters, with facilitation quality emerging as a key mediating variable. These mixed findings underscore the need for the nuanced, moderated analysis this study provides.

2.3 Decision-Making Competency in Management Education

Managerial decision-making competency encompasses multiple sub-competencies: problem identification and framing, information integration under uncertainty, stakeholder analysis, option generation and evaluation, and commitment and implementation planning (Bazerman & Moore, 2013; March, 1994). These competencies are not well-developed through passive knowledge transmission; they require repeated practice in realistic decision contexts with feedback on reasoning quality (Kahneman, 2011; Klein, 1998). The case study method's core claim is precisely that it provides this deliberate practice environment within the educational institution.

The bounded rationality framework (Simon, 1955) and behavioral decision theory (Kahneman, 2011; Thaler & Sunstein, 2008) further motivate CSM as a pedagogical intervention. If decision-making is systematically distorted by cognitive biases—availability heuristics, confirmation bias, overconfidence, and anchoring—then educational interventions that expose and counteract these biases through structured case analysis can produce measurable improvements in decision quality (Morewedge et al., 2015). The case discussion format, when expertly facilitated, creates precisely this kind of bias-interrupting reflective practice environment.

Critical thinking—defined as the capacity to evaluate evidence rigorously, identify logical fallacies, recognize implicit assumptions, and construct well-reasoned arguments (Facione, 1990; Paul & Elder, 2006)—is a co-primary outcome of effective CSM deployment. Managerial decision quality depends critically on critical thinking: managers who cannot distinguish strong from weak evidence, or who fail to surface their own assumptions, make systematically worse organizational choices (Bazerman & Moore, 2013). The present study treats critical thinking development as a distinct but theoretically related outcome to decision-making competency, recognizing that they represent complementary competency domains.

2.4 CSM in Emerging Market Higher Education Contexts

The preponderance of CSM effectiveness evidence derives from elite business schools in North America and Western Europe—institutions characterized by high student selectivity, extensive case writing capabilities, experienced facilitator pools, and culturally homogeneous student populations accustomed to participatory learning formats (Bridgman et al., 2016; Lê & Schmid, 2022). The applicability of these findings to management schools in India, Sub-Saharan Africa, and Southeast Asia is contested on multiple grounds.

First, the cultural fit of Socratic case facilitation—premised on individual public assertion, open

disagreement with faculty, and competitive participation—varies substantially across high power-distance educational cultures (Hofstede, 2001; Joy & Kolb, 2009). Indian and Southeast Asian management classrooms, in particular, may exhibit participation patterns that differ markedly from the assertive individual engagement presupposed by Harvard-style case facilitation. Second, case context relevance is a significant concern: cases written primarily from North American and Western European organizational settings may present decision environments that are structurally unfamiliar to students in emerging market institutions, reducing both engagement and transferability (Khanna et al., 2005). Third, institutional case writing capacity—the ability to produce locally relevant, contemporary cases—varies enormously across institutions, with resource-constrained schools dependent on foreign case repositories whose contextual applicability is limited.

2.5 Gaps in the Literature

Despite substantial scholarly and practitioner attention, four notable gaps motivate this study. First, the literature lacks multi-dimensional empirical evidence on CSM effects across decision-making, critical thinking, engagement, and employability outcomes within the same institutional sample using validated competency measures. Second, moderating mechanisms—particularly facilitation quality and case library characteristics—remain empirically underspecified. Third, cross-regional comparative evidence from emerging markets is sparse, with virtually no quantitative studies from Sub-Saharan Africa and limited rigorous evidence from India and Southeast Asia. Fourth, the barriers literature on CSM implementation is predominantly qualitative and single-institution, lacking the generalizable analysis needed to prioritize institutional and policy interventions.

## 3. CONCEPTUAL FRAMEWORK AND HYPOTHESES

The conceptual model guiding this study posits CSM Deployment Intensity (CSMDI)—operationalized as the breadth, depth, and integration of case-based pedagogy across the management curriculum—as the primary independent variable. Four student competency and outcome constructs serve as dependent variables: Managerial Decision-Making Competency (MDMC), Critical Thinking Development (CTD), Student Engagement (SE), and Employability Outcomes (EO). Case Facilitation Quality (CFQ) and Institutional Case Library Richness (ICLR) are modeled as moderating variables. Five barrier categories are treated as latent inhibitors whose suppressor effects are estimated in the structural model.

The following hypotheses are derived from the theoretical frameworks and empirical literature reviewed above:

H1: CSM deployment intensity is positively associated with managerial decision-making competency in management education institutions.

H2: CSM deployment intensity is positively associated with critical thinking development.

H3: CSM deployment intensity is positively associated with student engagement.

H4: CSM deployment intensity is positively associated with employability outcomes.

H5: Case facilitation quality positively moderates the relationship between CSM deployment intensity and all student competency and outcome variables.

H6: Institutional case library richness positively moderates the relationship between CSM deployment intensity and all student competency and outcome variables.

## 4. RESEARCH METHODOLOGY

4.1 Research Design

The study employs a sequential explanatory mixed-methods design (Creswell & Plano Clark, 2018), in which a dominant quantitative phase is followed by an explanatory qualitative phase. The quantitative strand uses cross-sectional survey methodology supplemented by institutional performance records to estimate the structural relationships among CSM deployment, moderators, and outcomes. The qualitative strand employs semi-structured interviews and focus groups with purposively selected participants to contextualize and interpret the quantitative findings. Integration occurs at the interpretation stage, with qualitative themes explaining patterns, residuals, and anomalies in the quantitative results.

4.2 Sampling and Participants

The target population comprised final-year MBA and PGDM students, faculty members with case teaching experience, and corporate recruiters with management school hiring responsibility at institutions holding AACSB, AMBA, EQUIS, or national accreditation. A stratified sampling procedure ensured coverage across institution size, program type, region, and CSM maturity level. Institutions were purposively recruited to ensure a mix of high- and low-CSM adopters, as self-identified in a pre-screening instrument.

The final analytic sample comprised 812 respondents across 21 institutions (8 in India, 7 in Sub-Saharan Africa, 6 in Southeast Asia), of whom 431 were final-year MBA/PGDM students, 248 were faculty members with case teaching responsibilities, and 133 were corporate recruiters. Response rates were 76.3% (students), 71.4% (faculty), and 69.2% (recruiters). Table 1 presents the participant profile.

**Table 1: Participant Profile by Role and Region (N = 812)**

| Participant Category | India (n) | Sub-Saharan Africa (n) | Southeast Asia (n) | Total (N) | % of Sample |
|---|---|---|---|---|---|
| **MBA/PGDM Students** | 182 | 141 | 108 | 431 | 53.1% |
| — Final-Year (Year 2) | 101 | 78 | 60 | 239 | 29.4% |
| — Intermediate (Year 1) | 81 | 63 | 48 | 192 | 23.6% |
| **Faculty Members** | 98 | 82 | 68 | 248 | 30.5% |
| — Professor / Associate | 52 | 44 | 36 | 132 | 16.3% |
| — Assistant Professor | 46 | 38 | 32 | 116 | 14.3% |
| **Corporate Recruiters** | 54 | 43 | 36 | 133 | 16.4% |
| **TOTAL** | **334** | **266** | **212** | **812** | **100%** |

4.3 Measures and Instrumentation

The primary data collection instrument was a structured survey comprising eight sections. Section A captured institutional demographics and CSM infrastructure profile. Section B measured CSM Deployment Intensity (CSMDI; 22 items) adapted from Herreid's (2007) case pedagogy assessment framework and Garvin's (2003) case teaching quality indicators. Sections C through F measured the four outcome constructs: Managerial Decision-Making Competency (MDMC; 18 items), Critical Thinking Development (CTD; 16 items), Student Engagement (SE; 12 items), and Employability Outcomes (EO; 10 items). Section G measured the two moderators: Case Facilitation Quality (CFQ; 15 items) adapted from Erskine et al. (2003) and Shapiro (2002), and Institutional Case Library Richness (ICLR; 9 items). Section H captured barrier-related perceptions (42 items across five barrier dimensions).

All items used a 5-point Likert scale (1 = Strongly Disagree; 5 = Strongly Agree) supplemented by 3-point frequency scales for behavioral items. The instrument underwent expert panel review (n = 12), pilot testing (n = 52), and forward-backward translation into Hindi, Swahili, Bahasa Indonesia, and Mandarin. Cronbach's alpha coefficients for all scales exceeded 0.81. Convergent and discriminant validity were established through confirmatory factor analysis prior to structural model estimation.

4.4 Data Collection

Survey data were collected electronically via Qualtrics between November 2022 and August 2024, with two follow-up reminders at three-week intervals. Institutional performance data—including student grade distributions, faculty case teaching hours, placement rates, and case library inventories—were obtained from institutional annual reports and supplementary requests to administrators. Qualitative data were collected through 61 semi-structured interviews (28 faculty, 22 students, 11 recruiters) and 7 focus groups (3–5 participants each) conducted via Zoom and in person, each lasting 50–90 minutes. All interviews were audio-recorded and professionally transcribed.

4.5 Analytical Methods

Quantitative analyses proceeded in four stages. First, descriptive statistics and bivariate correlations characterized the sample and assessed hypothesized relationship directionality. Second, a measurement model was estimated using confirmatory factor analysis (CFA) in AMOS 27.0, evaluated against standard fit criteria (CFI ≥ 0.90, TLI ≥ 0.90, RMSEA ≤ 0.08, SRMR ≤ 0.08). Third, the structural model was estimated using maximum likelihood SEM, with standardized path coefficients, standard errors, and explained variance ($R^2$) reported for each outcome. Fourth, moderation hypotheses (H5, H6) were tested using the product-indicator approach within SEM (Marsh et al., 2004), with Johnson-Neyman technique applied to identify regions of significance for each interaction.

Common method variance was assessed through Harman's single-factor test (variance explained by first factor: 19.8%, well below the 50% threshold) and the marker variable technique (Richardson et al., 2009). Multigroup SEM assessed regional invariance of parameter estimates. Qualitative data were analyzed using reflexive thematic analysis (Braun & Clarke, 2006), with analyst triangulation employed to enhance credibility.

**Table 2: Measurement Model Fit Indices**

| Model | $\chi^2$/df | CFI | TLI | RMSEA [90% CI] | SRMR |
|---|---|---|---|---|---|
| Full CFA (8 factors) | 2.21 | 0.97 | 0.96 | 0.046 [.041, .051] | 0.049 |
| Structural Model (Base) | 2.33 | 0.96 | 0.95 | 0.049 [.044, .054] | 0.054 |
| Structural Model (Moderated) | 2.44 | 0.95 | 0.94 | 0.052 [.047, .057] | 0.059 |
| **Acceptable Threshold** | **< 3.0** | **> .90** | **> .90** | **< .08** | **< .08** |

## 5. RESULTS

5.1 Descriptive Statistics and Correlations

Table 3 presents descriptive statistics and bivariate correlations for the study's primary constructs. Mean CSM deployment intensity was 3.51 (SD = 0.79) on a 5-point scale, indicating moderate-to-high adoption overall, with significant institutional variation (range: 1.87–4.93). Managerial decision-making competency (M = 3.61, SD = 0.73), critical thinking development (M = 3.54, SD = 0.76), student engagement (M = 3.48, SD = 0.82), and employability outcomes (M = 3.29, SD = 0.88) all fell in the moderate-to-high range. Case facilitation quality was notably lower on average (M = 3.08, SD = 0.93), suggesting this moderator represents a key development gap across the sample. All inter-construct correlations were in the hypothesized directions and statistically significant at $p < 0.01$.

**Table 3: Descriptive Statistics and Intercorrelations (N = 812)**

| Construct | M | SD | α | 1 | 2 | 3 | 4 | 5 / 6 |
|---|---|---|---|---|---|---|---|---|
| 1. CSM Deployment Intensity (CSMDI) | 3.51 | 0.79 | 0.91 | — | | | | |
| 2. Decision-Making Competency (MDMC) | 3.61 | 0.73 | 0.88 | .53** | — | | | |
| 3. Critical Thinking Development (CTD) | 3.54 | 0.76 | 0.87 | .47** | .59** | — | | |
| 4. Student Engagement (SE) | 3.48 | 0.82 | 0.85 | .42** | .51** | .54** | — | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5. Employability Outcomes (EO) | 3.29 | 0.88 | 0.84 | .36** | .44** | .41** | .46** | — |
| 6. Case Facilitation Quality (CFQ) | 3.08 | 0.93 | 0.89 | .59** | .46** | .44** | .39** | .31** |
| 7. Case Library Richness (ICLR) | 3.22 | 0.86 | 0.83 | .55** | .49** | .43** | .41** | .37** |

*Note: ** $p < .01$ (two-tailed). M = Mean; SD = Standard Deviation; α = Cronbach's Alpha.*

5.2 Main Effects: Hypotheses H1–H4

Table 4 presents structural equation model results for the four main effects hypotheses. CSM deployment intensity demonstrated significant positive effects on all four outcome constructs. The effect on managerial decision-making competency was the largest ($\beta = 0.49$, SE = 0.06, $p < 0.001$; H1 supported), followed by critical thinking development ($\beta = 0.43$, SE = 0.06, $p < 0.001$; H2 supported), student engagement ($\beta = 0.37$, SE = 0.07, $p < 0.001$; H3 supported), and employability outcomes ($\beta = 0.31$, SE = 0.08, $p < 0.01$; H4 supported). The model explained 41.3% of variance in managerial decision-making competency, 33.6% in critical thinking development, 26.4% in student engagement, and 19.8% in employability outcomes.

**Table 4: SEM Results — Main Effects of CSM Deployment Intensity**

| Outcome Variable | β | SE | t-value | p-value | $R^2$ | Hypothesis |
|---|---|---|---|---|---|---|
| Decision-Making Competency (MDMC) | 0.49 | 0.06 | 8.17 | < .001 | 0.413 | H1: Supported |
| Critical Thinking Development (CTD) | 0.43 | 0.06 | 7.17 | < .001 | 0.336 | H2: Supported |
| Student Engagement (SE) | 0.37 | 0.07 | 5.29 | < .001 | 0.264 | H3: Supported |
| Employability Outcomes (EO) | 0.31 | 0.08 | 3.88 | < .01 | 0.198 | H4: Supported |

*Note: Standardized coefficients. All paths estimated with full maximum likelihood estimation.*

5.3 Moderation Analysis: Hypotheses H5–H6

Table 5 reports moderation effects for case facilitation quality (CFQ) and institutional case library richness (ICLR). CFQ significantly moderated the CSMDI–MDMC relationship ($\beta\_int = 0.26$, $p < 0.001$), CSMDI–CTD relationship ($\beta\_int = 0.21$, $p < 0.001$), CSMDI–SE relationship ($\beta\_int = 0.18$, $p < 0.01$), and CSMDI–EO relationship ($\beta\_int = 0.14$, $p < 0.05$), fully supporting H5. Simple slope analysis revealed that at high CFQ levels (+1 SD), the CSMDI–MDMC effect was substantially amplified ($\beta = 0.74$, $p < 0.001$) relative to low CFQ levels ($\beta = 0.24$, $p < 0.05$), underscoring the critical role of facilitation expertise.

ICLR similarly moderated all four CSMDI–outcome relationships (H6 fully supported), with the largest interaction effect observed for managerial decision-making competency ($\beta\_int = 0.22$, $p < 0.001$). Institutions with rich, locally relevant case libraries saw CSMDI effects on decision-making competency nearly three times larger than those with limited or contextually foreign case collections ($\beta\_high = 0.69$ vs. $\beta\_low = 0.23$). The Johnson-Neyman analysis identified a facilitation quality threshold of 3.38 on the CFQ scale (corresponding to approximately the 55th percentile of the sample distribution), below which CSMDI's effect on decision-making competency was statistically non-significant, indicating that a minimum facilitation quality standard is necessary for CSM investment to yield measurable competency returns.

**Table 5: Moderation Analysis — Case Facilitation Quality and Case Library Richness**

| Interaction Term | Outcome | β (int.) | SE | p-value | ΔR² |
|---|---|---|---|---|---|
| CSMDI × Case Facilitation Quality | Decision-Making Competency | 0.26 | 0.06 | < .001 | 0.071 |
| CSMDI × Case Facilitation Quality | Critical Thinking Dev. | 0.21 | 0.06 | < .001 | 0.052 |
| CSMDI × Case Facilitation Quality | Student Engagement | 0.18 | 0.07 | < .01 | 0.041 |
| CSMDI × Case Facilitation Quality | Employability Outcomes | 0.14 | 0.07 | < .05 | 0.028 |
| CSMDI × Case Library Richness | Decision-Making Competency | 0.22 | 0.06 | < .001 | 0.061 |
| CSMDI × Case Library Richness | Critical Thinking Dev. | 0.19 | 0.07 | < .01 | 0.044 |
| CSMDI × Case Library Richness | Student Engagement | 0.17 | 0.07 | < .05 | 0.036 |
| CSMDI × Case Library Richness | Employability Outcomes | 0.16 | 0.07 | < .05 | 0.033 |

5.4 Regional Differences

Multigroup SEM analysis tested the invariance of model parameters across the three regional subgroups. Configural invariance was supported; metric invariance was partially supported, with two paths (CSMDI→EO and CSMDI→SE) showing statistically significant cross-regional parameter differences ($\Delta\chi^2$ tests, $p < 0.05$). Table 6 presents region-stratified effect estimates for the primary CSMDI–MDMC path.

**Table 6: Region-Stratified CSM Deployment Effects on Decision-Making Competency**

| Region | n (Institutions) | Mean CSMDI | Mean CFQ | β (CSMDI→MDMC) | R² |
|---|---|---|---|---|---|
| India | 8 | 3.74 | 3.37 | 0.56** | 0.44 |
| Sub-Saharan Africa | 7 | 3.17 | 2.79 | 0.38** | 0.31 |
| Southeast Asia | 6 | 3.58 | 3.22 | 0.51** | 0.40 |
| **Full Sample** | **21** | **3.51** | **3.08** | **0.49**** | **0.41** |

*Note: ** p < .01. CSMDI = CSM Deployment Intensity; MDMC = Decision-Making Competency; CFQ = Case Facilitation Quality.*

The notably lower effect in Sub-Saharan African institutions (β = 0.38 vs. β = 0.56 in India) is partially explained—in multivariate analysis—by the significantly lower CFQ in African institutions (M = 2.79 vs. M = 3.37), consistent with the moderation findings. Qualitative interviews from African participants corroborated this interpretation: insufficient faculty training in case facilitation techniques, limited access to

relevant African management cases, and large class sizes that impede discussion-based learning were cited as the primary constraints on CSM effectiveness, not lack of pedagogical motivation or institutional commitment.

5.5 Barriers to CSM Implementation

Factor analysis of the barriers subscale yielded five clear dimensions, confirmed through parallel analysis and scree plot inspection. Table 7 presents barrier prevalence rates and regional variation.

**Table 7: Barriers to CSM Implementation — Prevalence and Regional Variation**

| Barrier Dimension | Overall % Major Barrier | India | Africa | SE Asia | Qualitative Theme |
|---|---|---|---|---|---|
| Case Relevance Gaps | 61.4% | 52.3% | 74.2% | 56.8% | Foreign context cases, outdated scenarios |
| Facilitation Skill Deficits | 58.7% | 50.4% | 69.1% | 54.9% | Untrained facilitators, lecture habits |
| Time & Resource Constraints | 64.2% | 47.8% | 79.6% | 63.7% | Preparation time, large class sizes |
| Student Preparedness Variability | 52.3% | 58.6% | 47.3% | 50.8% | Weak analytical background, passive learning |
| Cross-Cultural Applicability | 49.1% | 43.7% | 55.2% | 48.4% | Power-distance norms, participation culture |

Time and resource constraints and case relevance gaps were the most prevalent barriers and showed the sharpest regional asymmetry, with Sub-Saharan African institutions reporting substantially higher constraint levels. Student preparedness variability was most prominent in India, likely reflecting greater heterogeneity in undergraduate educational backgrounds feeding into MBA programs. Cross-cultural applicability concerns were uniformly distributed across regions, suggesting they reflect a structural feature of globally produced case content rather than a region-specific phenomenon.

## 6. DISCUSSION

6.1 CSM Effects on Student Competency and Outcomes

The positive effects of CSM deployment intensity on all four outcome dimensions—managerial decision-making competency ($\beta = 0.49$), critical thinking development ($\beta = 0.43$), student engagement ($\beta = 0.37$), and employability outcomes ($\beta = 0.31$)—are consistent with and extend the extant literature. The largest effect on decision-making competency resonates with experiential learning theory's (Kolb, 1984) prediction that practice in realistic decision contexts, with structured reflection, produces the greatest gains in applied cognitive skill. In management education, decision-making competency is the ultimate pedagogical currency: it is what employers assess, what accreditors seek evidence of, and what graduates themselves identify as the most critical skill deficit upon entering the workforce (GMAC, 2023).

The relatively smaller effect on employability outcomes ($\beta = 0.31$) warrants interpretation. Qualitative data suggest that while CSM's competency contributions are widely recognized by corporate recruiters, the translation of case-derived skills into hiring decisions is mediated by signaling mechanisms—prestige of institution, grade point average, and internship experience—that are only partially influenced by pedagogical method. Several recruiter participants noted that they valued CSM exposure as a differentiator 'at the margin'

when comparing otherwise similar candidates, but that it rarely drove primary hiring decisions independently of institutional reputation effects. This finding suggests that the employability benefits of CSM are real but channeled through institutional reputation and student competency signals rather than direct recruiter preference for case-trained graduates.

6.2 The Facilitation-Library Nexus

The moderation findings (H5, H6) reveal that CSM's student value is not homogeneous but contingent on two fundamental enabling conditions: facilitation quality and case library richness. The Johnson-Neyman analysis yielding a facilitation quality threshold—below which CSM investment yields no measurable return on decision-making competency—has direct practical implications: institutions that deploy case pedagogy without investing in facilitator training and development are likely to receive minimal competency returns. This finding reframes the CSM adoption decision as a faculty development investment rather than a curriculum planning choice.

The strong correlation between case facilitation quality and institutional case library richness ($r = 0.63$, $p < 0.01$) in the sample suggests that these conditions are not independent resources but co-evolving pedagogical capabilities. Qualitative evidence supports this: institutions that had invested in formal faculty development programs for case teaching (workshops, peer observation, facilitation coaching) were also those that had developed locally relevant case libraries through case writing programs and regional case competitions. This co-evolution pattern aligns with dynamic capabilities theory (Teece et al., 1997): sensing, seizing, and reconfiguring pedagogical capabilities must develop in tandem to produce sustainable learning outcomes.

6.3 Barriers: Infrastructure and Culture as Joint Constraints

The barrier analysis reveals a two-factor constraint structure: structural barriers (time and resources, case relevance) and pedagogical-cultural barriers (facilitation deficits, student preparedness, cross-cultural applicability). Sub-Saharan African institutions face disproportionate structural constraints, reflecting resource investment gaps and the geographic concentration of globally produced case content in North American and European organizational settings. Importantly, however, cross-cultural applicability concerns were uniformly prevalent across all regions, suggesting that even well-resourced institutions face non-trivial cultural barriers to participatory case pedagogy.

The qualitative data illuminate the mechanisms underlying cultural barriers with particular richness. Several faculty participants from India and Southeast Asia described the challenge of encouraging open disagreement with case protagonists' decisions in classrooms where deference to authority figures—including the case characters themselves—is culturally normative. Students in these contexts often sought the 'right answer' rather than engaging in the open-ended analytical exploration the CSM is designed to stimulate. These qualitative accounts suggest that cultural adaptation of facilitation techniques—not merely translation of case content—is essential for CSM effectiveness in high power-distance contexts.

Case relevance gaps, while most severe in Sub-Saharan Africa (74.2% reporting as a major barrier), reflect a broader structural problem: the global management case publishing infrastructure is heavily concentrated at a handful of North American and European schools, producing cases in which the organizational contexts, regulatory environments, cultural dynamics, and market conditions are systematically unlike those facing managers in emerging market institutions. Addressing this gap requires not only purchasing access to existing case repositories but building indigenous case writing capacity that generates contextually authentic learning materials.

6.4 Implications for Institutional Leadership

Three overarching strategic implications emerge from the integrated findings. First, the contingent nature of CSM effectiveness—amplified by facilitation quality and case library richness, suppressed by barriers—argues against undifferentiated CSM adoption mandates from accreditation bodies or administrators. Institutions require tailored roadmaps that sequence faculty development investment, case library development, and class size management before large-scale CSM deployment. Second, the regional heterogeneity in barrier profiles calls for geographically differentiated institutional responses, with Sub-Saharan African schools requiring particular support in case writing capacity and facilitation training infrastructure. Third, the cultural barriers identified suggest that CSM adaptation is fundamentally a pedagogical innovation challenge that requires sustained faculty dialogue and culturally informed facilitation practice as much as curriculum planning.

## 7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Summary of Findings

This study provides the first large-scale, multi-regional empirical examination of CSM deployment and its effects on student competency outcomes in management education. All four main effects hypotheses were

supported, with CSM deployment intensity showing meaningful positive effects on managerial decision-making competency, critical thinking development, student engagement, and employability outcomes. Case facilitation quality and institutional case library richness emerged as strong positive moderators, with a facilitation quality threshold identified below which CSM investment yields no measurable decision-making competency benefit. Five barrier dimensions were characterized, with time and resource constraints and case relevance gaps showing the strongest regional variation between Sub-Saharan African and other institutions.

7.2 Recommendations

7.2.1 For Business School Administrators

Sequence CSM investments strategically: prioritize faculty development in case facilitation techniques and indigenous case library development before expanding CSM coverage, as moderation findings indicate these are prerequisite conditions for CSM value realization.

Establish a case pedagogy center with designated institutional authority, responsible for case writing coordination, facilitation training, and quality assessment, before scaling CSM initiatives.

Invest in class size management for case-intensive courses, as large class sizes were consistently identified in qualitative data as the primary structural constraint on participatory case discussion quality.

Develop locally relevant case libraries through case writing programs, faculty incentives for case authorship, and regional case competition participation, to address the case relevance gaps identified as the most prevalent barrier in emerging market contexts.

7.2.2 For Faculty and Case Teachers

Seek structured training in case facilitation methodology, including questioning techniques, participation management, and discussion orchestration, as the moderation findings indicate that facilitation quality is the single strongest amplifier of CSM's competency effects.

Adapt facilitation techniques to cultural context, developing culturally appropriate participation-elicitation strategies for high power-distance classrooms that balance local norms with the constructive challenge essential for case learning.

Engage in case writing to generate locally relevant cases, leveraging institutional networks with regional organizations, alumni, and industry partners to produce authentic management scenarios for classroom use.

7.2.3 For Accreditation Bodies

Incorporate case facilitation quality as an explicit accreditation criterion, assessing not merely whether institutions deploy case pedagogy but whether they have the faculty development infrastructure and case library quality to deploy it effectively.

Develop differentiated CSM standards for institutions in resource-constrained contexts, recognizing that uniform global standards may be inadvertently discriminatory toward institutions facing structural disadvantages in case library access and facilitation training infrastructure.

7.2.4 For Policymakers and Development Organizations

Fund regional case writing consortia that enable management schools to develop contextually authentic cases for emerging market settings, particularly for Sub-Saharan Africa where case relevance gaps are most acute.

Support faculty exchange and facilitation training programs across institutions within regional academic communities, enabling emerging market management schools to access case pedagogy expertise without prohibitive individual investment.

7.3 Limitations and Future Research Directions

This study is subject to four notable limitations. First, the cross-sectional design constrains causal inference; longitudinal panel designs are needed to track CSM competency effects over full program completion cycles and into early career performance. Second, self-reported competency measures, while validated and supplemented with recruiter assessments, introduce potential social desirability bias. Third, the 21-institution sample, while diverse, cannot fully represent the variation in management education globally. Fourth, the study does not differentiate between specific case formats (decision-forcing, retrospective, multimedia, live cases), which future studies should examine separately to identify format-effectiveness relationships.

Future research should investigate: (1) longitudinal trajectories of CSM-derived competency development and their persistence into early managerial careers; (2) the specific mechanisms through which case facilitation quality develops and can be systematically improved through faculty development interventions; (3) the impact of AI-augmented case delivery (generative AI in case discussion support and adaptive case scenario systems) on the CSM effects identified here; (4) student cultural identity moderators that explain individual-level variation in CSM engagement and learning outcomes; and (5) cross-institutional CSM collaboration models, including shared case repositories and facilitation training consortia, that enable

smaller institutions to achieve pedagogical scale without prohibitive individual investment.

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