

Diamond Head Drill Communication, Easier Leadership, and Incentives as Drivers of Hospital Competitiveness: The Mediating Role of Performance in West Java Public Hospitals

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ABSTRACT

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Purpose — This study examines how Diamond Head Drill (DHD) communication, EASIER leadership, and incentives influence hospital performance and, in turn, how performance affects the competitiveness of public regional general hospitals (RSUD) in West Java, with performance tested as a mediating mechanism.

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Research method — A quantitative, cross-sectional survey design was applied and analyzed using AMOS-based Structural Equation Modeling (SEM). Data were collected from 397 medical, non-medical, and managerial staff across ten RSUD in West Java Province.

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Result — DHD communication, EASIER leadership, and incentives each showed positive and significant effects on hospital performance ($\beta = 0.516; 0.273; 0.494$; $p < 0.05$). Performance had a strong and significant effect on competitiveness ($\beta = 0.436$; $p < 0.001$). DHD communication also had a significant direct effect on competitiveness ($\beta = 0.546$; $p < 0.001$), whereas the direct effects of EASIER leadership and incentives on competitiveness were positive but not significant ($\beta = 0.095; 0.119$; $p > 0.05$). Mediation testing indicates performance functions as a key mediator, particularly for incentives (indirect effect = 0.215; $p < 0.05$).

Conclusion — Competitiveness improvements in West Java RSUD are primarily achieved through strengthening internal performance. DHD communication contributes both directly to competitiveness and indirectly via performance, while EASIER leadership and incentives enhance competitiveness mainly when they first improve performance outcomes. Practically, RSUD management and local governments should (i) institutionalize DHD communication into clinical and cross-unit SOPs, (ii) invest in adaptive/participative leadership development, and (iii) redesign incentive systems to be transparent and explicitly performance-linked to accelerate service quality, efficiency, and public trust as broader social benefits.

Keywords: *Diamond Head Drill communication; EASIER leadership; incentives; hospital performance; hospital competitiveness.*



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INTRODUCTION

Hospitals increasingly operate in competitive service ecosystems where patients, payers, and regulators demand measurable quality, safety, responsiveness, and cost efficiency. In Indonesia, this competitive logic has been reinforced by the expansion of the National Health Insurance scheme (JKN) and the establishment of the Social Security Administering Body (BPJS), which broadened provider choice and intensified comparison across public and private hospitals (Republik Indonesia, 2011). For regional public general hospitals (Rumah Sakit Umum Daerah/RSUDs), the challenge is not only to deliver mandated public services, but also to sustain performance and legitimacy in an environment where patients can increasingly “vote with their feet” and where value-based competition is shaped by service quality, access, and efficiency (Porter, 1990; Porter & Teisberg, 2006).

West Java provides a salient setting to examine this challenge. Hospital supply in the province expanded rapidly during 2016–2024, creating more alternatives for patients and intensifying inter-hospital rivalry (Open Data Jabar, 2024). At the national level, hospital growth during 2014–2023 was also substantial, with private hospitals expanding faster than public facilities, placing RSUDs in a more contestable environment (Ditjen Pelayanan Kesehatan Kemenkes RI, 2023). Provincial service data further indicate competitive pressure: outpatient visits declined in 2020 compared with 2019, and private hospitals recorded higher outpatient volumes than RSUDs (Jabarprov, 2020). Differences in selected service indicators—such as bed occupancy (BOR), bed turnover (BTO), length of stay (LOS), and mortality indicators (GDR and NDR)—suggest that managerial and operational capabilities may translate into observable performance gaps across ownership types (Jabarprov, 2020).

In strategic management terms, competitiveness reflects an organization’s capacity to create and sustain advantages that are valuable and difficult to imitate, enabling it to maintain position and outcomes over time (Barney, 1991; Barney & Hesterly, 2019; Porter, 1990). Applied to healthcare, hospital competitiveness can be understood as the ability to deliver high-quality, effective, and efficient services, adapt to environmental change, attract and retain patients, and remain financially sustainable relative to competitors (Ginter et al., 2018; Porter, 2010; Renz et al., 2024). Building on the resource-based view, this study treats internal organizational capabilities—particularly coordination routines, leadership practices, and

incentive governance—as strategic resources that may strengthen RSUD competitiveness by improving performance (Barney, 1991).

Performance is the mechanism through which capabilities become visible and consequential. Hospital performance is commonly assessed through multiple dimensions, including clinical quality and safety outcomes, patient experience, and operational and financial efficiency (Rate, 2012; Cierniak et al., 2021; Patil et al., 2024). In the RSUD context, these dimensions are reflected in both service indicators (e.g., BOR, LOS, TOI, BTO, GDR, NDR) and broader managerial outcomes such as patient satisfaction, resource utilization, and process reliability (Cierniak et al., 2021). Conceptually, sustained improvements in performance should strengthen competitiveness by enhancing perceived value, reputation, and the hospital's ability to meet evolving demand under resource constraints (Porter, 2010; Renz et al., 2024).

This study focuses on three managerial levers that are practically salient yet seldom integrated into a single explanatory model for RSUD competitiveness: structured communication, enabling leadership, and incentive governance. First, communication is central to high-reliability performance in complex clinical systems because coordination failures can translate into delays, duplication, and safety risks. The Diamond Head Drill (DHD) communication model emphasizes experiential learning cycles—experience, reflection, conceptualization, and experimentation—so that teams can standardize message clarity while continuously improving coordination (Kolb, 1984; Beebe & Beebe, 2013). In healthcare settings, structured communication and drill-based coordination have been associated with improved teamwork and faster, more coordinated responses in critical units (Manser et al., 2013; Choque-Velasquez et al., 2017). In RSUDs, where multidisciplinary coordination is routine, DHD provides a theoretically grounded approach to reducing misinterpretation, accelerating decisions, and strengthening cross-unit alignment.

Second, leadership shapes whether communication routines are adopted, whether problems are surfaced, and whether cross-unit collaboration is sustained. The EASIER leadership model proposed by Casse and Claudel (2011) emphasizes leadership behaviors that make work “easier” for employees by creating a supportive, harmonious, and engaging environment. This orientation can be positioned within broader leadership scholarship—aligning with adaptive leadership, which focuses on mobilizing people to address adaptive challenges and adjust practices to shifting contexts (Heifetz et al., 2009), and with participative leadership, which emphasizes shared decision-making and information exchange (Somech, 2006). In RSUDs, where professional boundaries and regulatory demands often constrain change, an enabling, participative-adaptive leadership approach may be critical for sustaining performance improvements and reinforcing competitiveness.

Third, incentives remain an important but contested tool for performance improvement in healthcare. Evidence suggests that financial incentives do not automatically improve care quality; their impact is often realized through changes in internal processes, teamwork behaviors, and performance management systems (Glickman et al., 2007; Petersen et al., 2006). Motivational theory helps explain why incentive effects are conditional. Expectancy theory argues that incentives influence effort when individuals perceive a credible link between effort, performance, and rewards (Vroom, 1964), while two-factor theory suggests that extrinsic rewards can reduce dissatisfaction but may not generate sustained performance gains without deeper motivators (Herzberg, 1968). Self-determination theory similarly cautions that external rewards may undermine intrinsic motivation if not designed to support autonomy and competence (Deci & Ryan, 2000). Empirical work in organizational settings indicates that incentives become more effective when complemented by recognition, development opportunities, and supportive work environments (Gieter & Hofmans, 2015; Robbins & Judge, 2019). For RSUDs, this implies that incentive governance is likely to strengthen competitiveness primarily by improving performance—rather than by producing immediate market effects.

Despite the recognized importance of communication, leadership, and incentives, evidence in Indonesian public hospital settings remains fragmented. Prior work often examines these determinants separately, limiting understanding of how they jointly shape competitiveness and through what mechanism. Addressing this gap, this study develops and tests an integrated model in which DHD communication, EASIER leadership, and incentives influence hospital performance, and performance acts as a mediator linking these managerial practices to hospital competitiveness among RSUDs in West Java. By clarifying these pathways, the study contributes to hospital management scholarship and offers actionable guidance for RSUD managers and policymakers on designing communication routines, leadership development, and incentive governance that strengthen performance and, ultimately, competitiveness. The remainder of this dissertation is structured as follows: the next chapter reviews the literature and develops the conceptual framework and hypotheses; the subsequent chapters describe the method, present the empirical results, and discuss implications, limitations, and directions for future research.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

A. Literature Review

2.1 Resource-Based View as the Theoretical Lens

This study is grounded in the Resource-Based View (RBV), which explains sustained competitiveness as a function of firm-specific resources and capabilities. According to RBV, resources become strategic when they are valuable, rare, difficult to imitate, and non-substitutable (Barney, 1991). Subsequent RBV work emphasizes that advantage is not only about owning resources, but also

about the ability to combine, deploy, and renew resources through organizational routines and capabilities (Barney, 2001; Grant, 1996; Peteraf & Bergen, 2003).

In healthcare organizations, particularly hospitals, many strategic resources are intangible and embedded in day-to-day operations—such as leadership routines, communication systems, service culture, and learning mechanisms—making them harder to copy and potentially capable of producing sustained performance (Barney & Hesterly, 2019). RBV is therefore suitable for explaining how internal managerial practices can translate into performance improvements and ultimately strengthen a hospital's competitive position.

2.2 Hospital Competitiveness: Concept and Dimensions

Hospital competitiveness can be conceptualized as the hospital's ability to maintain and improve its position relative to alternatives by delivering high-quality, safe, timely, and patient-centered services while managing resources efficiently and sustaining legitimacy. Strategy theory suggests competitiveness is achieved through differentiation and operational effectiveness (Porter, 1990). In healthcare, competitiveness is tightly related to value creation, where hospitals compete by improving outcomes and experience at an efficient cost for defined patient groups (Porter, 2010; Porter & Teisberg, 2006).

In empirical research, hospital competitiveness is typically multidimensional and may include: service quality and safety, patient satisfaction/loyalty, accessibility/responsiveness, innovation and learning, and financial sustainability (Ginter et al., 2018; Renz et al., 2024). In public hospital settings, competitiveness is also shaped by governance and accountability requirements, but internal capabilities remain decisive because they determine how effectively the organization meets standards and adapts to environmental pressures (Ginter et al., 2018; Renz et al., 2024).

2.3 Hospital Performance: Conceptualization and Measurement

Hospital performance refers to the degree to which a hospital achieves clinical, service, operational, and financial objectives. Performance theory stresses that performance is multidimensional and context-dependent, requiring measurement beyond a single indicator (Campbell, 1990). In hospital management literature, common performance domains include:

1. Clinical quality and patient safety,
2. Patient experience,
3. Operational efficiency, and
4. Financial stability (AHRQ, 2017; Kaplan & Norton, 1996; Rate, 2012).

Operational performance is often monitored through service-utilization indicators such as BOR, LOS, BTO, TOI, and outcome-related indicators such as mortality metrics (where applicable). Patient experience is frequently assessed through satisfaction and responsiveness measures (Patil et al., 2024). Additionally, workforce-related outcomes—motivation, teamwork, and retention—are performance-relevant because they influence continuity of care and reliability of service delivery (Aiken et al., 2002).

2.4 Diamond Head Drill Communication (DHD): Structured Communication as an Organizational Capability

Communication is a central coordination mechanism in hospitals, where services depend on rapid information exchange across professional boundaries and units. Organizational communication scholarship emphasizes that shared meaning, message clarity, and feedback loops reduce ambiguity and align collective action in complex systems (DeVito & DeVito, 2007; Kreps, 2012).

The Diamond Head Drill (DHD) communication model is theoretically aligned with experiential learning cycles—concrete experience, reflective observation, abstract conceptualization, and active experimentation—which formalize learning from real encounters and continuously refine communication and coordination routines (Kolb, 1984, 2007). In high-complexity environments, structured feedback and disciplined reflection can strengthen reliability, reduce errors caused by miscommunication, accelerate problem-solving, and improve responsiveness.

From an RBV perspective, DHD communication can be positioned as an intangible capability: once embedded into routines (e.g., SOPs, team huddles, handoff protocols, reflective briefings), it becomes difficult to imitate and can improve operational effectiveness and service quality, thereby improving performance and strengthening competitiveness (Barney, 1991; Barney & Hesterly, 2019).

2.5 EASIER Leadership: Enabling Leadership to Strengthen Execution and Service Reliability

Leadership is consistently recognized as a strategic determinant of organizational performance because leaders shape priorities, allocate attention, establish norms, and influence psychological safety and accountability. Transformational leadership theory highlights inspiration, intellectual stimulation, and individualized consideration as mechanisms that increase commitment and discretionary effort (Bass, 1986; Bass & Riggio, 2006). Ethical and authentic leadership theories further emphasize integrity, transparency, and value-based decision-making—attributes particularly important in public-sector organizations and healthcare services where trust is central (Brown et al., 2005; Walumbwa et al., 2008).

The EASIER leadership model conceptualizes enabling leadership as a practical set of behaviors defined by Empathy, Awareness, Support, Involvement, Example, and Recognition (Casse & Claudel, 2011). In hospital settings, these behaviors can reduce friction in coordination and execution, strengthen teamwork, improve compliance with standards, and support continuous improvement—thus contributing to performance. In RBV terms, EASIER leadership can be treated as a managerial capability that mobilizes human resources and institutionalizes improvement routines, thereby supporting competitiveness through performance (Barney & Hesterly, 2019; Ginter et al., 2018).

2.6 Incentives: Motivation, Governance, and Alignment with Performance

Incentives are rewards or benefits intended to influence behavior and align effort with organizational goals. Expectancy theory explains that incentives increase effort when employees perceive a credible link among effort, performance, and reward (Vroom, 1964). However, motivation research cautions that incentives can be less effective—or even counterproductive—if perceived as controlling or unfair; self-determination theory argues that sustainable motivation requires support for autonomy and competence (Deci & Ryan, 2000).

In hospital organizations, incentives may influence performance by strengthening goal-directed behavior, reducing turnover, and encouraging consistent service quality. HRM literature emphasizes that incentives are most effective when governance is transparent, evaluations are fair, and rewards are meaningfully linked to measurable performance outcomes (Luthans et al., 2021; Mathis & Jackson, 2016; Robbins, 2015). Incentives may also indirectly support competitiveness by improving workforce attraction and retention in competitive labor markets (Mahadi et al., 2020).

2.7 Integrative Framework: From Managerial Practices to Competitiveness Through Performance

Integrating RBV and healthcare strategy, this study positions DHD communication, EASIER leadership, and incentives as internal practices that strengthen hospital performance. Performance then functions as the mechanism that converts internal capabilities into externally visible value—quality, responsiveness, and efficiency—thereby improving competitiveness (Porter, 1990; Porter, 2010). This logic motivates both direct relationships (managerial practices → competitiveness) and mediated relationships (managerial practices → performance → competitiveness).

B. HYPOTESIS DEVELOPMENT

2.8 DHD Communication and Hospital Performance

DHD communication emphasizes disciplined learning cycles and feedback, enabling teams to refine how information is exchanged and acted upon. Experiential learning theory suggests that organizations improve practice when they systematically reflect on experience and test improvements (Kolb, 1984, 2007). Because hospital work is interdependent and time-sensitive, structured communication should strengthen coordination and reduce delays and errors, improving performance.

H1: DHD communication positively influences hospital performance.

2.9 EASIER Leadership and Hospital Performance

Transformational and enabling leadership behaviors increase motivation, clarity, and collaboration, which are essential in complex service operations (Bass, 1986; Bass & Riggio, 2006). EASIER leadership operationalizes enabling leadership through empathy, support, involvement, role modeling, and recognition, which can strengthen execution discipline and psychological safety (Casse & Claudel, 2011). These mechanisms should improve service reliability and organizational performance.

H2: EASIER leadership positively influences hospital performance.

2.10 Incentives and Hospital Performance

Expectancy theory predicts that incentives improve effort and persistence when employees believe performance is rewarded (Vroom, 1964). When incentive governance is transparent and fair, incentives can strengthen performance by aligning behavior with targets and reducing turnover (Luthans et al., 2021; Mathis & Jackson, 2016). Thus, incentives are expected to improve performance.

H3: Incentives positively influence hospital performance.

2.11 Hospital Performance and Hospital Competitiveness

Healthcare strategy argues competitiveness is strengthened when hospitals deliver superior value—better outcomes and experiences at efficient cost (Porter, 2010; Porter & Teisberg, 2006). Higher performance should improve reputation, trust, responsiveness, and efficiency, which increase patient demand and stakeholder confidence, strengthening competitiveness (Porter, 1990; Renz et al., 2024).

H4: Hospital performance positively influences hospital competitiveness.

2.12 Direct Effects of Managerial Practices on Competitiveness

Some internal practices may affect competitiveness directly. Communication capability can increase responsiveness and coordination across interfaces (e.g., referrals and internal service flow), while enabling leadership strengthens adaptation and trust, which can enhance competitive positioning (Ginter et al., 2018; Porter, 2010). Incentives may also have direct competitive implications by strengthening workforce attraction and retention, which affects service capacity and stability (Mahadi et al., 2020).

H5: DHD communication positively influences hospital competitiveness.

H6: EASIER leadership positively influences hospital competitiveness.

H7: Incentives positively influence hospital competitiveness.

2.13 The Mediating Role of Hospital Performance

RBV implies internal resources and capabilities generate sustained advantage primarily by improving performance outcomes that stakeholders can observe and value (Barney, 1991; Barney & Hesterly, 2019). In hospital settings, communication routines, enabling leadership, and incentive governance are expected to strengthen competitiveness mainly through improved service quality, safety, responsiveness, and efficiency—i.e., performance.

H8: Hospital performance mediates the relationship between DHD communication and hospital competitiveness.

H9: Hospital performance mediates the relationship between EASIER leadership and hospital competitiveness.

H10: Hospital performance mediates the relationship between incentives and hospital competitiveness.

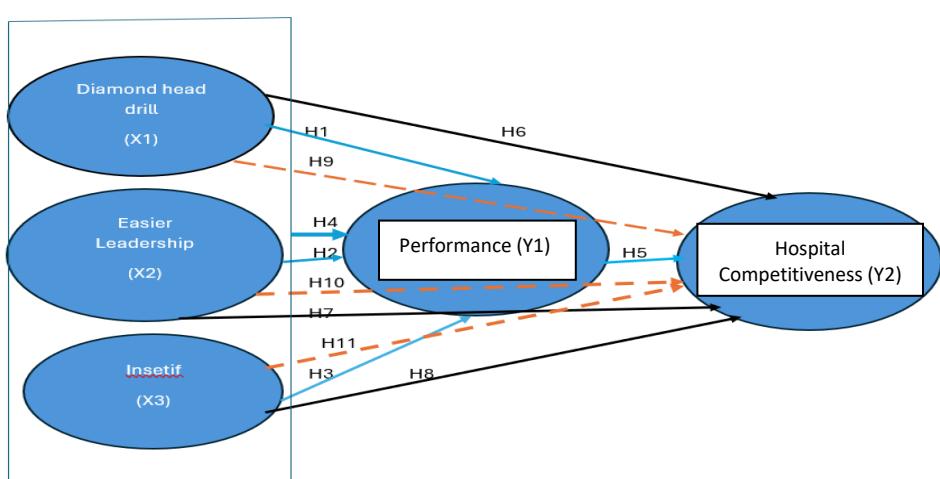


Figure 1. Research Framework

METHOD

Methodological principle

In both quantitative and qualitative research, the use of appropriate methods of participant sampling, study design, measures, and statistical analysis critically influences methodological soundness. A robust methodology should be both clean and clear: clean in its use of valid, appropriate, and unflawed sampling, instruments, procedures, and analyses; and clear in its reporting, so that another researcher can replicate the study.

Study design

This study employed an explanatory sequential mixed-methods design, in which a quantitative phase was conducted first and followed by a qualitative phase to elaborate and explain the quantitative findings (Creswell & Plano Clark, 2018). The quantitative strand used a cross-sectional survey to test hypothesized relationships among Diamond Head Drill (DHD) communication, EASIER leadership, incentives, hospital performance, and hospital competitiveness. The qualitative strand used focus group discussions (FGDs) and semi-structured in-depth interviews to contextualize the statistical results and generate practice-oriented explanations (Creswell & Poth, 2018; Krueger & Casey, 2015; Kvale & Brinkmann, 2015).

Setting and study population

The empirical setting consisted of Regional General Hospitals (Rumah Sakit Umum Daerah/RSUDs) in West Java Province, Indonesia. The target population for the quantitative phase included employees working in 27 Type-B RSUDs with paripurna (highest-level) accreditation status. The sampling frame covered 23,066 employees across the participating RSUDs.

Sampling strategy and sample size

For the quantitative survey, proportional allocation was applied so that each RSUD contributed respondents in proportion to its employee population. The required sample size was determined using the Slovin formula and resulted in a target of 397 respondents. The final sample included 397 employees across professional groups (medical, non-medical, administrative, and managerial staff). The achieved sample size exceeded common minimum recommendations for structural equation modeling (SEM) and supported stable model estimation (Hair et al., 2019; Kline, 2016).

Data sources and collection procedures

Primary data were collected through (1) structured observations, (2) a self-administered questionnaire survey, (3) FGDs, and (4) semi-structured in-depth interviews. Secondary data were gathered from institutional documents and official sources (e.g., provincial health statistics, RSUD performance reports, accreditation information, and relevant public datasets).

Quantitative data collection (survey)

A structured questionnaire was used to measure the five latent constructs in the model. Items were compiled and adapted from relevant theories and prior research, and were presented on a five-point Likert scale ranging from 1 (Very poor/strongly not aligned with respondents' conditions) to 5 (Very good/strongly aligned). The survey was distributed to employees in each RSUD according to the proportional sample allocation. The questionnaire cover letter stated that responses would be kept confidential and used for research purposes only.

Qualitative data collection (FGDs and interviews)

Following the quantitative analysis, FGDs were conducted to discuss how DHD communication, EASIER leadership, and incentive governance operate in RSUD settings and how they shape performance and competitiveness. Participants were selected based on expertise and role relevance, including RSUD executives/directors, HR/people management leaders, senior clinicians and unit heads, non-medical health professionals, and (where available) academics or health-policy experts. FGDs were moderated using a structured guide (Krueger & Casey, 2015).

In addition, 10–12 key informants were interviewed using semi-structured protocols to deepen explanations of the quantitative findings. Informants were purposively selected to represent variation across RSUD contexts (e.g., geographical distribution and staffing size) and included RSUD directors/vice directors, HR heads, clinical department/installation heads, senior staff representatives, and quality/service leaders. Interviews followed semi-structured principles to enable comparability while allowing probing for detail (Kvale & Brinkmann, 2015).

Measures

All constructs were modeled as latent variables measured by multiple indicators.

Diamond Head Drill (DHD) communication.

DHD communication was operationalized as a structured experiential-learning communication routine grounded in experiential learning theory (Kolb, 1984). Items reflected aspects of experiential engagement, reflective learning, and conceptualization that support disciplined communication and continuous improvement in practice.

EASIER leadership.

EASIER leadership was operationalized as enabling leadership behaviors drawing on established leadership perspectives—transformational, ethical, authentic, distributed, and servant leadership—adapted to the RSUD context (Bass & Riggio, 2006; Brown et al., 2005; Walumbwa et al., 2008). Indicators captured leader behaviors that clarify direction, provide support and autonomy, strengthen integrity and transparency, distribute leadership, and serve staff needs to improve execution reliability.

Incentives.

Incentives were conceptualized as compensation and reward governance (financial and non-financial) that influences motivation, satisfaction, retention, and goal attainment. The measurement drew on human resource management and organizational behavior literature (Luthans et al., 2021; Mathis & Jackson, 2016; Milkovich et al., 2014; Noe et al., 2017; Robbins, 2015).

Hospital performance.

Hospital performance was measured as perceived service performance across three dimensions: service quality, efficiency, and productivity (Ciemins et al., 2021). Indicators reflected the hospital's ability to deliver reliable service outcomes, use resources efficiently, and maintain productivity in operations.

Hospital competitiveness.

Hospital competitiveness was measured as the hospital's ability to sustain and improve position through cost efficiency, quality-based advantage, innovation, and organizational learning. Measures were adapted from healthcare operations and competitiveness literature (Ozcan, 2008; Langabeer, 2008; Ali Mohamad et al., 2023; Kornelius, 2023).

Instrument quality assurance: validity and reliability

Construct validity and reliability were evaluated using confirmatory factor analysis (CFA) within the SEM framework. Convergent validity was assessed through standardized factor loadings (≥ 0.50 as acceptable and ≥ 0.70 as preferable), composite reliability ($CR \geq 0.70$), and average variance extracted ($AVE \geq 0.50$) (Bagozzi & Yi, 1988; Fornell & Larcker, 1981; Hair et al., 2019; Hair et al., 2021). Discriminant validity was examined using criteria based on inter-construct distinctiveness, including the heterotrait–monotrait ratio (HTMT) as recommended in contemporary measurement literature (Henseler et al., 2015; Hair et al., 2021).

Quantitative data analysis

The quantitative data analysis proceeded in three steps. First, descriptive statistics were computed to summarize respondent characteristics and the distribution of responses. Second, the measurement model was tested using CFA to confirm indicator validity and construct reliability. Third, the structural model was estimated to test the hypothesized paths simultaneously using SEM. A two-step SEM approach—measurement model followed by structural model—was applied to ensure that structural inferences relied on an acceptable measurement model (Anderson & Gerbing, 1988).

Model fit was evaluated using multiple goodness-of-fit indices. Consistent with SEM reporting standards, fit evaluation considered indices such as χ^2/df , CFI, TLI, RMSEA, and SRMR/RMR, with cutoffs interpreted using established guidelines rather than a single index (Hair et al., 2019; Kline, 2016). Statistical significance for direct effects was assessed at $\alpha = 0.05$ using critical ratios ($|t| \geq 1.96$) and p-values.

Mediation analysis

To test the mediating role of hospital performance, indirect effects were assessed using the Sobel test, which evaluates whether the product of path coefficients ($a \times b$) differs significantly from zero (Sobel, 1982). Mediation was interpreted as full mediation when the indirect effect was significant while the direct effect was not, and as partial mediation when both indirect and direct effects were significant.

Qualitative data analysis and trustworthiness

FGD and interview data were transcribed and analyzed using thematic analysis, involving iterative familiarization, coding, theme development, and refinement (Braun & Clarke, 2006). Credibility was strengthened through triangulation across data sources (survey results, FGDs, interviews, and documents) and by using structured guides to maintain consistency across sessions (Creswell & Poth, 2018). The qualitative findings were used to explain patterns observed in the SEM results and to refine practical recommendations.

Mixed-methods integration

Integration occurred through connecting and explaining: quantitative results guided the selection of focal issues for FGDs/interviews, and qualitative themes were used to interpret why particular relationships were strong or weak and how managerial practices could be implemented in RSUD contexts (Creswell & Plano Clark, 2018).

RESULTS AND DISCUSSION

A. RESULTS

Sample characteristics

A total of 397 employees from Type-B Regional General Hospitals (RSUDs) with paripurna accreditation in West Java participated in the survey ($N = 397$). Table 1 summarizes respondent characteristics.

Table 1. Respondent characteristics ($N = 397$)

| Category | n | % |
|-----------------|----------|----------|
| Gender | | |
| Male | 176 | 44.3 |
| Female | 221 | 55.7 |
| Age (years) | | |

| Category | n | % |
|----------------------------|-----|------|
| 18–34 | 111 | 28.0 |
| 35–44 | 140 | 35.3 |
| 45–50 | 75 | 18.9 |
| >51 | 71 | 17.9 |
| Education | | |
| High school | 11 | 2.8 |
| Diploma (D3) | 128 | 32.2 |
| Bachelor | 177 | 44.6 |
| Master | 78 | 19.6 |
| Doctorate | 3 | 0.8 |
| Tenure | | |
| <2 years | 41 | 10.3 |
| 2–5 years | 42 | 10.6 |
| 6–10 years | 79 | 19.9 |
| 10–15 years | 81 | 20.4 |
| >15 years | 154 | 38.8 |
| Profession | | |
| Administration | 61 | 15.4 |
| Midwife | 10 | 2.5 |
| Physician | 32 | 8.1 |
| Managerial | 57 | 14.4 |
| Nurse | 119 | 30.0 |
| Radiographer | 1 | 0.3 |
| Other health professionals | 117 | 29.5 |

Structural equation modeling (SEM): model fit

The hypothesized model was estimated using maximum likelihood SEM in AMOS (v23). Overall model fit was evaluated using multiple indices. As shown in Table 2, most indices met commonly used thresholds (e.g., RMSEA, CMIN/df, TLI), while CFI was slightly below the conventional .90 cutoff, indicating a close but acceptable fit when considered alongside the full set of indices (Hair et al., 2019; Kline, 2016).

Table 2. Model fit indices (AMOS output)

| Fit index | Value | Recommended | Interpretation |
|-----------------------|----------|-------------|------------------------------|
| χ^2 (Chi-square) | 3142.894 | $p > .05$ | Adequate (close fit overall) |
| p-value (χ^2) | 0.189 | $p > .05$ | Good |
| CMIN/df | 1.12 | ≤ 3.00 | Good |

| Fit index | Value | Recommended | Interpretation |
|-----------|-------|-------------|---------------------------------------|
| RMSEA | 0.044 | $\leq .08$ | Good |
| RMR | 0.069 | $\leq .08$ | Good |
| GFI | 0.897 | $\geq .80$ | Good |
| AGFI | 0.896 | $\geq .80$ | Good |
| NFI | 0.888 | $\geq .80$ | Good |
| TLI | 0.932 | $\geq .90$ | Good |
| CFI | 0.842 | $\geq .90$ | Close fit (below conventional cutoff) |

Note. Standardized coefficients are shown on the paths; measurement indicators are displayed for each latent construct.

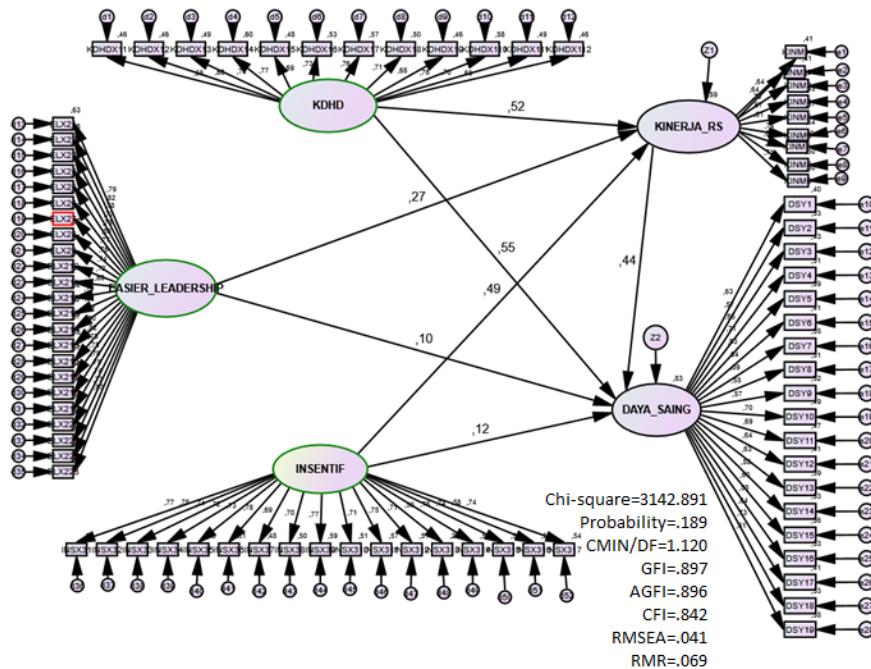


Figure 2. Full SEM model (AMOS standardized solution)

Measurement model quality (convergent validity and reliability)

Convergent validity was supported by standardized factor loadings predominantly above .50, and by AVE values above .50 across constructs. Reliability was supported by composite reliability (CR) values exceeding .70. Table 3 reports the construct-level summary.

Table 3. Construct reliability and convergent validity summary

| Construct | Items | Loading range (std.) | CR | AVE |
|--------------------------|-------|----------------------|-------|-------|
| DHD communication (KDHD) | 12 | 0.675–0.773 | 0.925 | 0.508 |
| EASIER leadership | 23 | 0.685–0.828 | 0.971 | 0.598 |
| Incentives | 17 | 0.500–0.779 | 0.947 | 0.517 |
| Hospital performance | 9 | 0.606–0.738 | 0.883 | 0.558 |
| Hospital competitiveness | 19 | 0.554–0.731 | 0.926 | 0.599 |

Explained variance (R^2)

Squared Multiple Correlations (SMC) indicate that the three managerial predictors explain 58.5% of the variance in hospital performance, and the full structural model explains 83.2% of the variance in hospital competitiveness (Table 4).

Table 4. Explained variance (Squared Multiple Correlations)

| Endogenous construct | R^2 (SMC) |
|--------------------------|-------------|
| Hospital performance | 0.585 |
| Hospital competitiveness | 0.832 |

Hypothesis testing (direct and mediated effects)

Table 5 summarizes the direct effects. DHD communication ($\beta = .516$), EASIER leadership ($\beta = .273$), and incentives ($\beta = .494$) each had significant positive effects on hospital performance. Hospital performance significantly increased hospital competitiveness ($\beta = .436$). DHD communication also had a significant direct effect on competitiveness ($\beta = .546$), while the direct effects of EASIER leadership ($\beta = .095$) and incentives ($\beta = .119$) on competitiveness were not significant.

Table 5. Direct effects (standardized coefficients)

| Path | Standardized β | Significant ($p < .05$) |
|---|----------------------|---------------------------|
| KDHD → Hospital performance | 0.516 | Yes |
| EASIER leadership → Hospital performance | 0.273 | Yes |
| Incentives → Hospital performance | 0.494 | Yes |
| Hospital performance → Hospital competitiveness | 0.436 | Yes |
| KDHD → Hospital competitiveness | 0.546 | Yes |
| EASIER leadership → Hospital competitiveness | 0.095 | No |
| Incentives → Hospital competitiveness | 0.119 | No |

Mediation (indirect effects via hospital performance)

Indirect effects were evaluated using the Sobel test. Hospital performance significantly mediated the effects of DHD communication, EASIER leadership, and incentives on competitiveness (Table 6). Given that DHD communication retained a significant direct effect on competitiveness, its mediation is interpreted as partial. In contrast, EASIER leadership and incentives showed significant indirect effects while their direct paths to competitiveness were non-significant, consistent with full mediation.

Table 6. Indirect effects via hospital performance (Sobel test)

| Indirect path | Indirect β | z/t | p |
|--|------------------|-------|-------|
| KDHD \rightarrow Performance \rightarrow Competitiveness | 0.225 | 2.639 | 0.009 |
| EASIER \rightarrow Performance \rightarrow Competitiveness | 0.119 | 2.373 | 0.018 |
| Incentives \rightarrow Performance \rightarrow Competitiveness | 0.215 | 2.776 | 0.006 |

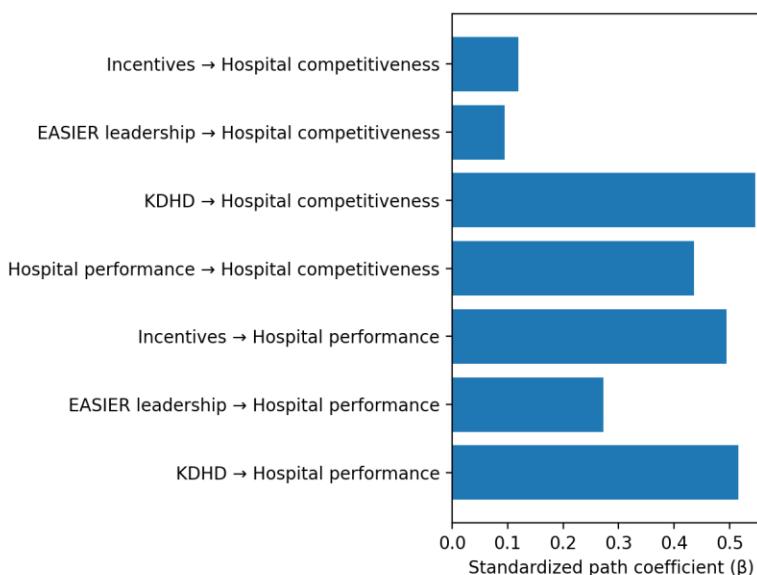


Figure 3. Standardized direct effects

Note. Total effect = direct effect + indirect effect (via performance).

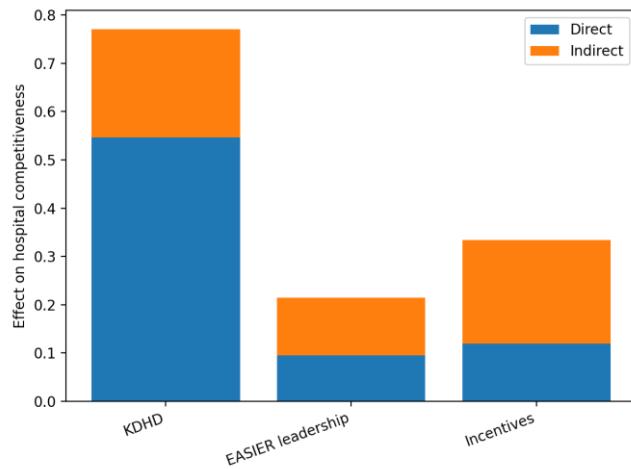


Figure 4. Decomposition of total effects on competitiveness

B. DISCUSSION

Summary of key findings

This study tested an integrated model linking structured communication (Diamond Head Drill/DHD), enabling leadership (EASIER), and incentive governance to hospital competitiveness through hospital performance. Across RSUDs in West Java, the results show three main patterns: (1) all three managerial practices significantly improved hospital performance; (2) hospital performance substantially increased hospital competitiveness; and (3) only DHD communication had a significant direct effect on competitiveness, whereas EASIER leadership and incentives affected competitiveness primarily through performance.

DHD communication as a strategic capability

The strong effect of DHD communication on performance ($\beta = .516$) and competitiveness ($\beta = .546$) suggests that disciplined communication routines function as a strategic capability. Conceptually, DHD aligns with experiential learning cycles that emphasize iterative experience–reflection–conceptualization–experimentation, which can institutionalize continuous improvement in complex work systems (Kolb, 1984, 2007). From a Resource-Based View perspective, communication routines embedded in cross-unit coordination can be valuable and difficult to imitate, thereby improving operational effectiveness and sustaining competitive advantage (Barney, 1991; Barney & Hesterly, 2019). The partial mediation found here indicates that DHD strengthens competitiveness both by improving internal performance (indirect path) and by directly enhancing coordination speed, reliability, and service responsiveness that stakeholders can perceive (Porter, 1990; Porter, 2010).

Easier leadership: performance-driven competitiveness

Easier leadership significantly improved hospital performance ($\beta = .273$), but did not directly increase competitiveness ($\beta = .095$, ns). This pattern is theoretically plausible: leadership behaviors often influence organizational outcomes through proximal mechanisms such as psychological safety, teamwork, compliance, and learning climate rather than through immediate market-facing indicators (Bass & Riggio, 2006). In public hospitals, competitiveness may be realized only after leadership-driven changes translate into sustained performance improvements that alter patient experience, service reliability, and stakeholder trust. The significant indirect effect ($\beta = .119$) supports the interpretation that EASIER leadership contributes to competitiveness primarily by strengthening execution and service performance.

Incentives: strengthening competitiveness through performance rather than direct market impact

Incentives had a strong effect on performance ($\beta = .494$) but a non-significant direct effect on competitiveness ($\beta = .119$, ns), while the indirect effect through performance was significant ($\beta = .215$). Motivation theories help explain this pattern. Expectancy theory suggests incentives increase effort when employees perceive clear links among effort, performance, and rewards (Vroom, 1964). However, incentive schemes may not directly translate into external competitiveness unless they are coupled with visible service improvements and efficiency gains, which are captured here through the performance mediator. Moreover, self-determination theory cautions that rewards can undermine intrinsic motivation if perceived as controlling; thus, incentive governance is likely most effective when it supports competence and fairness and is integrated with performance management (Deci & Ryan, 2000).

Hospital performance as the central mechanism linking capabilities to competitiveness

Hospital performance emerged as a key mechanism that converts internal managerial practices into competitive outcomes ($\beta = .436$). This finding is consistent with value-based competition arguments in healthcare, which posit that competitiveness improves when hospitals reliably deliver better outcomes and experiences at efficient cost (Porter & Teisberg, 2006; Porter, 2010). The high explained variance for competitiveness ($R^2 = .832$) also indicates that the integrated set of internal capabilities and performance dynamics provides a strong account of competitive positioning in the RSUD context.

Implications for theory and practice

Theoretically, the results extend RBV to the RSUD setting by showing that intangible managerial capabilities—communication discipline, enabling leadership, and incentive governance—are strongly associated with performance and, through performance, competitiveness (Barney,

1991). Practically, the findings suggest three priorities for RSUD management: (1) institutionalize DHD-style learning and communication routines (e.g., structured briefings, after-action reviews, standardized handoffs); (2) develop EASIER leadership behaviors to strengthen psychological safety and cross-unit execution; and (3) redesign incentive governance to strengthen expectancy clarity, procedural fairness, and alignment with measurable service performance.

Limitations and directions for future research

Several limitations should be noted. First, the study relies on cross-sectional, perception-based survey data, which may introduce common-method variance and limits causal inference. Second, competitiveness and performance were measured through perceptual indicators; future research should triangulate with objective metrics (e.g., BOR/LOS, quality indicators, patient satisfaction indices, and financial performance). Third, RSUD contexts vary by geography, case-mix, and resource constraints; future studies could test moderation (e.g., accreditation maturity, hospital size, or regional competition intensity) and conduct longitudinal designs to examine capability development over time.

CONCLUSION

Summary of findings

This study examined how Diamond Head Drill (DHD) communication, EASIER leadership, and incentives shape hospital competitiveness in West Java Regional General Hospitals (RSUDs), with hospital performance tested as a mediating mechanism. Using SEM (AMOS) on survey data from 397 RSUD employees, the findings indicate that DHD communication, EASIER leadership, and incentives each significantly enhance hospital performance. Hospital performance, in turn, significantly increases hospital competitiveness. Importantly, DHD communication also exerts a significant direct effect on competitiveness, whereas the direct effects of EASIER leadership and incentives on competitiveness are not significant. Mediation tests show that performance transmits the effects of all three managerial practices to competitiveness—partial mediation for DHD communication and full mediation for EASIER leadership and incentives.

Implications for theory

The results extend the Resource-Based View (RBV) to the RSUD context by demonstrating that intangible managerial capabilities—particularly disciplined, learning-oriented communication routines—are strongly associated with performance and, through performance, competitive outcomes. The evidence supports the view that internal capabilities translate into competitiveness primarily via performance improvements that stakeholders can perceive (e.g., service reliability, responsiveness, efficiency). The partial mediation pattern for DHD suggests

that structured communication can operate as both a performance-enhancing routine and a market-facing capability that directly strengthens coordination speed and service responsiveness.

Practical implications and recommendations

For RSUD leaders and policymakers, three priorities follow from the findings:

1. Institutionalize DHD communication routines. Embed structured briefings, standardized handoffs, and after-action reviews into SOPs and daily operations; use short learning cycles (experience–reflection–conceptualization–experimentation) to continuously refine coordination and reduce communication errors.
2. Develop EASIER leadership behaviors as enabling leadership. Strengthen empathy, awareness, support, involvement, role modeling, and recognition to improve team execution, psychological safety, and cross-unit collaboration—so leadership improvements translate into measurable performance gains.
3. Redesign incentive governance to be transparent and explicitly performance-linked. Clarify performance expectations, measurement criteria, and reward rules; combine financial incentives with recognition and development opportunities to avoid purely transactional effects and to sustain motivation.

Recommendations for methodological improvements

While the study provides strong explanatory power for competitiveness, methodological refinements could strengthen future investigations:

1. Adopt longitudinal or panel designs to better support causal inference and to capture capability development over time.
2. Triangulate perceptual measures with objective indicators (e.g., BOR/LOS, service quality and safety metrics, patient satisfaction indices, and financial performance).
3. Reduce common-method bias by using multi-source data (e.g., separating predictor and outcome sources), temporal separation, or marker-variable approaches.
4. Use bootstrapped confidence intervals for indirect effects (in addition to or instead of Sobel tests) to improve mediation inference robustness, especially under non-normality.
5. Test measurement invariance and conduct multi-group SEM (e.g., by hospital size, accreditation maturity, geographic region, or competition intensity) to assess generalizability.

Directions for future research

Future studies can build on this work by exploring boundary conditions and deepening mechanism explanations. First, moderation models could examine whether competitive intensity, case-mix complexity, resource availability, or accreditation maturity strengthen or weaken the effects of communication, leadership, and incentives on performance and competitiveness. Second, mixed-method studies can further unpack how DHD routines are implemented at the unit level (e.g., emergency, inpatient wards, outpatient services) and how they interact with clinical governance and patient-safety practices. Third, comparative studies across provinces or between public and private hospitals could clarify context-specific versus generalizable capability–performance–competitiveness pathways.

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