

Original Article

The Impact of Dental Health Service Quality and Innovative Entrepreneurial Orientation on Business Performance in Dental Clinics: A Resource-Based View Framework

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Abstract:

This study examines the effects of dental health service quality and innovative entrepreneurship orientation on business performance in dental clinics in the Greater Malang area. A quantitative survey was conducted with 39 respondents, including clinic managers and professionals familiar with clinic operations. Data were analyzed using Structural Equation Modeling (SEM). Results show that dental health service quality significantly impacts business performance through structure, process, and service outcome dimensions. Innovative entrepreneurship orientation also positively affects performance through innovativeness, proactivity, and risk-taking, facilitating strategic adaptation to healthcare market dynamics. The findings underscore the importance of integrating high-quality dental services with innovative entrepreneurship to enhance competitiveness and sustainability. This study contributes theoretically to the Resource-Based View and offers practical guidance for clinic managers in improving business performance through service excellence and innovation.

Keywords: Dental Health Service Quality, Innovative Entrepreneurship Orientation, Business Performance, Dental Clinics, Healthcare Service Managemen

Introduction

The dental healthcare industry in Indonesia faces increasingly complex challenges as public awareness of oral health rises and competition among healthcare providers intensifies. The high prevalence of dental health problems, coupled with suboptimal utilization of healthcare services, indicates that dental clinics need to improve service quality while strengthening business strategies to remain sustainable and competitive. The success of dental clinics in the modern healthcare market is determined not only by the clinical competence of medical personnel but also by the

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organization's ability to effectively manage service quality and business innovation strategies ([Sharka et al., 2024](#); [Siripipatthanakul & Bhandar, 2021](#)). One of the strategic factors influencing the success of dental clinics is dental health service quality.

Dental health service quality reflects a clinic's ability to provide care that is effective, safe, and patient-centered. According to Donabedian's model, healthcare service quality consists of the dimensions of structure, process, and outcomes, which collectively shape patient experiences and the success of healthcare organizations ([Donabedian, 1988](#); [Binder et al., 2021](#)). Previous studies have shown that high service quality contributes to increased patient satisfaction, organizational reputation, and healthcare business performance ([McCullough et al., 2023](#); [El Garem et al., 2024](#)). Therefore, dental health service quality can be considered a strategic resource that plays a crucial role in enhancing organizational competitiveness. In addition to service quality, innovative entrepreneurship orientation is also an important factor in improving the business performance of dental clinics.

Innovative entrepreneurship orientation reflects an organization's ability to innovate, act proactively, and take strategic risks in response to dynamic business environments ([Zahra & Covin, 1995](#)). Healthcare organizations with a strong entrepreneurial orientation tend to be more adaptive to changing customer needs and are capable of creating added value through service development and technology utilization ([Gomes et al., 2022](#); [Kraus et al., 2023](#)). This orientation enables managers to introduce new services, enhance operational efficiency, and design service strategies that are more responsive to patient needs ([Kulkov et al., 2023](#)).

Although research on service quality and entrepreneurial orientation has been widely conducted in the service and healthcare sectors, there is still a limited number of studies specifically examining the integration of dental health service quality and innovative entrepreneurship orientation in enhancing business performance in dental clinics in Indonesia. Most previous studies have focused on patient loyalty or technology adoption as additional mechanisms, while research that directly investigates the impact of dental health service quality and innovative entrepreneurship orientation on business performance remains relatively scarce, particularly in the context of highly competitive dental clinics operating in a dynamic healthcare service market.

This study aims to analyze the impact of dental health service quality and innovative entrepreneurship orientation on business performance in dental clinics within the Resource-Based View (RBV) framework. The research is expected to provide theoretical contributions to the development of the RBV perspective, emphasizing the importance of service quality and entrepreneurial orientation as strategic organizational resources ([Barney, 1991](#)).

The study also seeks to offer practical implications for dental clinic managers in designing strategies to enhance business performance based on service quality and innovation, enabling them to respond effectively to the increasingly dynamic competition in the healthcare service industry. From the RBV perspective, healthcare service quality and innovative entrepreneurship orientation are considered internal strategic capabilities that can improve the business performance of healthcare organizations. Although various studies have examined service quality and entrepreneurial orientation in the context of healthcare organizations, empirical research simultaneously analyzing both variables in relation to business performance in dental clinics remains limited.

Hypothesis Development

Conceptual Framework

This study is developed based on the Resource-Based View (RBV), which emphasizes that organizational performance is determined by the firm's ability to manage strategic resources that are valuable and difficult to imitate ([Barney, 1991](#)). In the context of dental clinic businesses, these strategic resources are reflected in dental health service quality and innovative entrepreneurship orientation.

Dental health service quality represents a clinic's ability to provide high-quality healthcare services through optimal structure, process, and outcome dimensions. High service quality can enhance operational effectiveness and strengthen the clinic's reputation, ultimately improving business performance ([Donabedian, 1988](#); [McCullough et al., 2023](#); [El Garem et al., 2024](#)).

Meanwhile, innovative entrepreneurship orientation reflects an organization's ability to innovate, act proactively, and take strategic risks in response to the dynamics of the healthcare service market ([Zahra & Covin, 1995](#); [Kraus et al., 2023](#)). This orientation enables dental clinics to develop new services, improve operational efficiency, and respond adaptively to patient needs, which ultimately contributes to enhanced business performance.

Based on this theoretical argument, this study positions dental health service quality and innovative entrepreneurship orientation as independent variables influencing business performance as the dependent variable

The Effect of Dental Health Service Quality on Business Performance

Dental health service quality is a critical factor determining the success of healthcare organizations. Dental clinics that can provide adequate facilities, effective service processes, and satisfactory service outcomes tend to achieve better business performance. Previous studies have shown that high service quality contributes to improved organizational performance by enhancing service effectiveness and strengthening organizational reputation ([McCullough et al., 2023](#); [El Garem et al., 2024](#)).

H1: Dental health service quality has a significant effect on the business performance of dental clinics

The Effect of Innovative Entrepreneurship Orientation on Business Performance

Innovative entrepreneurship orientation reflects an organization's ability to create innovations, act proactively, and take strategic risks in response to changes in the business environment. Organizations with a strong innovative entrepreneurial orientation tend to be more adaptive and can enhance business performance through service innovation and responsive business strategies ([Gomes et al., 2022](#); [Kraus et al., 2023](#)). In the context of dental clinics, innovative entrepreneurship orientation enables managers to create service differentiation that positively impacts business performance.

H2: Innovative entrepreneurship orientation has a significant effect on the business performance of dental clinics.

Methods

This study employed a quantitative approach with an explanatory research design aimed at testing causal relationships among the research variables, namely dental health service quality, innovative entrepreneurship orientation, and business performance. A quantitative approach was chosen because the study focuses on hypothesis testing developed based on theory and previous research. A survey method was used to collect primary data through structured questionnaires developed based on the indicators of the research variables.

The population of this study consisted of dental clinics operating in the Greater Malang area, including Malang City, Malang Regency, and Batu City. The analysis unit was the dental clinic, with respondents comprising clinic managers, dentists, or management personnel who have a thorough understanding of clinic operations and business performance.

The sampling technique used was purposive sampling with the following criteria: 1) Dental clinics that have been operating for at least one year. 2) Respondents who have a clear understanding of clinical services and business performance conditions.

The total sample size was 55 respondents. This sample size was considered sufficient because data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for relatively small sample sizes and predictive research models ([Hair et al., 2022](#)).

Data was collected through the distribution of structured questionnaires both directly and online using digital platforms. The research instruments were developed based on indicators adapted from previous studies and tailored to the context of dental healthcare services. Each statement item was measured using a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree, to assess respondents' perceptions of the research variables.

The initial stage of analysis involved Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to ensure the validity and reliability of the research instruments for the three study variables: Dental Health Service Quality (DHSQ), Innovative Entrepreneurship Orientation (IEO), and Business Performance (BP). The subsequent data analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM). This method was selected because it is suitable for predictive research models involving latent constructs and relatively small sample sizes ([Hair et al., 2022](#)).

Results

Respondent Characteristics

This study involved 55 respondents, consisting of dental clinic managers and professionals who are familiar with the operational conditions and business performance of dental clinics. The characteristics of the respondents are presented in Table 1.

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Respondent Type	Clinic Manager	8	14.5%
	Dentist	27	49.1%
	Management/Admin	20	36.4%
Clinic Operational Period	1–3 Years	13	23.6%
	>3 Years	42	76.4%

Clinic Location	Malang City	23	41.8%
	Malang Regency	12	21.8%
	Batu City	20	36.4%

Source: Processed Data (2025)

The majority of respondents were dentists and clinic managers with more than three years of operational experience, indicating that they possess adequate understanding of service quality and business performance in dental clinics.

Construct Validity Testing through EFA and CFA

The EFA results indicated that Dental Health Service Quality (DHSQ) consists of two main factors: the operational service quality dimension and the perceived outcome & satisfaction dimension. All indicators had factor loadings ≥ 0.50 and communalities ≥ 0.40 , allowing all nine indicators to be retained for CFA analysis. Subsequent CFA using AMOS confirmed the two-factor structure of DHSQ, with standardized factor loadings ranging from 0.614 to 0.980 and significance $p < 0.05$. The correlation between the two dimensions was moderate ($r = 0.352$), confirming a valid multidimensional construct free from multicollinearity.

EFA of the Innovative Entrepreneurship Orientation (IEO) variable showed that indicators related to service innovation and technology adaptation contributed dominantly to the construction. Indicators with low communalities were eliminated prior to CFA. The CFA results confirmed a unidimensional structure for IEO, with three main indicators exhibiting high standardized factor loadings (0.853–1.000) and significant p -values ($p < 0.001$). These findings indicate that innovative entrepreneurship orientation in the context of dental clinics is primarily reflected through service innovation and responsiveness to changing patient needs.

EFA of the Business Performance (BP) variable revealed one main factor adequately representing the construction. Only two indicators met the convergent validity criteria, namely patient growth (Y1) and clinic reputation (Y3), while revenue (Y2) and patient satisfaction (Y4) had low communalities and loadings and were therefore eliminated. CFA confirmed the unidimensional BP construct with Y1 and Y3 indicators showing significant and adequate loadings.

Based on the EFA and CFA results, the final indicators of all three variables demonstrated adequate convergent validity and were suitable for structural model analysis. DHSQ was confirmed to be multidimensional, whereas IEO and BP were unidimensional. The measurement model was statistically stable, consistent with the EFA results, and ready for testing the relationships among variables in the SEM model.

Descriptive Statistics of Variables

The mean values of all variables were above the midpoint of the scale, indicating that respondents' perceptions were relatively positive regarding service quality, innovative entrepreneurship orientation, and the business performance of dental clinics.

Table 2. Descriptive Statistics of Variables

Variable	Indicator	Mean	Standard Deviation
Dental Health	X111	4.182	0.690
Service Quality	X112	4.473	0.567

	X113	4.309	0.629
	X121	4.509	0.535
	X122	4.309	0.629
	X123	4.182	0.606
	X131	4.309	0.599
	X132	4.236	0.660
	X133	4.164	0.654
Innovative	X211	4.400	0.703
Entrepreneurship	X212	4.218	0.731
Orientation	X221	4.273	0.645
Business	Y1	4.364	0.584
Performance	Y3	4.273	0.554

Source: Processed Data (2025)

Measurement Model Evaluation (Outer Model)

All constructions met the criteria for convergent validity and reliability, with factor loadings exceeding 0.70.

Table 3. Outer Loading Values

Indicator	BP	DHSQ	IEO	Description
X111		0.888		Valid
X112		0.858		Valid
X113		0.870		Valid
X121		0.860		Valid
X122		0.870		Valid
X123		0.801		Valid
X131		0.931		Valid
X132		0.867		Valid
X133		0.901		Valid
X211			0.916	Valid
X212			0.921	Valid
X221			0.921	Valid
Y1	0.824			Valid
Y3	0.863			Valid

Source: Processed Data (2025)

Discriminate Validity

The square root of the AVE for each construct was higher than the correlations between constructs, indicating that the model meets discriminant validity criteria.

Table 4. Construct Validity and Reliability

Variable	AVE	Composite Reliability	Description
DHSQ	0.761	0.966	Reliable
IEO	0.846	0.941	Reliable
BP	0.711	0.831	Reliable

Source: Processed Data (2025)

Structural Model Evaluation (Inner Model)

The results indicate that the independent variables explain 81.1% of the variance

in dental clinic business performance.

Table 6. Coefficient of Determination (R²)

Variabel Endogen	R ²
Business Performance	0.811

Hypothesis Testing (Bootstrapping)

The results of the hypothesis testing indicate that both dental health service quality (DHSQ) and innovative entrepreneurship orientation (IEO) have significant positive effects on business performance (BP) in dental clinics. Specifically, DHSQ has a stronger effect on BP compared to IEO.

Table 6. Hypothesis Testing Results

Hypothesis	Relationship	Coefficient	T-Statistic	P-Value	Decision
H1	DHSQ → BP	0.548	5.147	0.000	Accepted
H2	IEO → BP	0.374	3.424	0.001	Accepted

Discussion

Sub-Chapter

The results of this study indicate that dental health service quality has a significant effect on business performance. These findings confirm that high-quality dental healthcare services, encompassing structure, process, and service outcomes, play a crucial role in enhancing operational effectiveness and the business success of dental clinics. This result aligns with Donabedian's model and previous studies, which demonstrate that service quality is a key determinant of healthcare organizational performance ([Donabedian, 1988](#); [McCullough et al., 2023](#); [El Garem et al., 2024](#)).

Innovative entrepreneurship orientation was also found to have a significant effect on business performance. This finding suggests that a clinic's ability to innovate, act proactively, and take strategic risks can enhance organizational competitiveness. The result supports previous research indicating that an innovative entrepreneurial orientation plays an important role in improving organizational performance through strategic adaptation to market dynamics ([Gomes et al., 2022](#); [Kraus et al., 2023](#)).

Overall, the study reinforces the Resource-Based View perspective, which emphasizes that service quality and innovation capabilities are strategic resources contributing to improved business performance in organizations ([Barney, 1991](#)).

Conclusion

The results of this study indicate that dental health service quality has a significant effect on business performance. These findings highlight that service quality, encompassing the dimensions of structure, process, and service outcomes, serves as a fundamental foundation for enhancing operational effectiveness, patient satisfaction, and the overall business success of dental clinics.

In addition, innovative entrepreneurship orientation was also found to have a significant effect on business performance. An organization's ability to innovate, act proactively, and take strategic risks can enhance competitiveness and support sustainable business growth.

Overall, this study demonstrates that integrating high-quality dental healthcare services with an innovative entrepreneurial orientation constitutes a key strategy for improving the competitiveness and sustainability of dental clinic businesses in the context of increasingly dynamic healthcare industry competition.

This study provides a theoretical contribution to the development of the Resource-Based View (RBV) perspective, which emphasizes that service quality and innovative entrepreneurship orientation are strategic organizational resources that can enhance business performance. The findings reinforce previous literature indicating that service capabilities and innovation are key factors in creating competitive advantages in the healthcare sector. Moreover, this study expands the scope of dental healthcare management research by positioning dental health service quality and innovative entrepreneurship orientation as direct determinants of dental clinic business performance.

From a practical perspective, the findings offer several recommendations for dental clinic managers. First, clinics should enhance service quality by strengthening facilities, improving the competence of healthcare personnel, and increasing the efficiency of service processes to create optimal patient experiences. Second, clinic managers should develop an innovative entrepreneurial orientation by introducing new services, implementing relevant technologies, and adopting adaptive business strategies in response to changing market demands. Third, the integration of service quality and organizational innovation should be employed as a core strategy to improve the competitiveness and sustainability of dental clinic businesses in an increasingly competitive healthcare industry.

This study has several limitations, including a relatively small sample size and a research scope limited to the Greater Malang area, which calls for caution in generalizing the findings. Future research is recommended to involve larger sample sizes and broader research areas to obtain more representative results. Additionally, future studies could expand the research model by considering other variables, such as adoption of digital technology, patient experience, or healthcare marketing strategies, to gain a more comprehensive understanding of the factors influencing dental clinic business performance.

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