



The Influence of Social Responsibility on Patient Loyalty: A Case Study of An Phuoc General Hospital, Vietnam

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Abstract

This study evaluates a theoretical model exploring the relationships among four key constructs: social responsibility, reputation, loyalty, and operational performance. Using a sample of 370 patients at An Phuoc General Hospital in Phan Thiet City, Binh Thuan Province, Vietnam. The data was processed and analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with Bootstrap analysis to test the reliability of the model. The findings highlight the mediating roles of reputation and loyalty in linking social responsibility to hospital performance.



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Introduction

Most hospitals face challenges in retaining customers and expanding their market share. Customer satisfaction remains a critical outcome of marketing efforts to attract patients for examinations and treatments. However, maintaining a sustainable market share requires building a loyal customer base and fostering patient engagement with the hospital. Additionally, hospitals must focus on improving their

operational performance. While many recent studies have explored the relationship between satisfaction and service quality, less attention has been given to the roles of hospital social responsibility and operational performance in the evolving context of social development and increasing customer demands. Specifically, the mediating roles of hospital reputation and patient loyalty have not been adequately examined. This presents a significant

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challenge for researchers and hospital managers, especially as Vietnam integrates further into the global healthcare landscape.

This study focuses on two key objectives:

- Identifying the relationship between social responsibility and hospital performance.
- Applying an econometric model to investigate this relationship.

The research utilizes data collected from 370 patient observations at An Phuoc General Hospital, a well-known hospital in Vietnam's central coastal region. With a dedicated team comprising 907 staff members, including 651 women, the hospital provided over 110,000 medical examinations and admitted more than 23,000 inpatients during the first six months of 2023. The estimated average bed occupancy rate during this period was 664 beds per day (Binh Thuan Province Electronic Information Portal, 2023).

Materials and Methods

Literature Review

Foundation Theory

Corporate Reputation Theory

Corporate reputation is determined by a collection of attributes that influence buyers' perceptions of a company's identity and trustworthiness—whether it is recognized, viewed positively or negatively, or deemed reputable (Levitt, 1965). Reputation is shaped by public sentiment, which is influenced by the information or misinformation available regarding the company's operations, workplace culture, historical performance, and future outlook (Fombrun *et al.*, 2000).

Theory of Social Responsibility

Corporate Social Responsibility (CSR) pertains to the ethical conduct of businesses.

It emphasizes that enterprises are accountable not only to shareholders but to all stakeholders (Kinzey, 2013). Transparency and openness form the foundation of CSR, ensuring businesses meet stakeholder expectations while promoting social sustainability. In sectors like hospitality, CSR goals often include operational capacity and the social responsibility of destinations (Marchiori *et al.*, 2010).

Customer Loyalty Theory

Customer satisfaction occurs when buyers feel their expectations are met and do not regret their purchases. However, satisfaction alone does not guarantee loyalty. Loyal customers are consistently satisfied and remain dedicated to a company's products or services (Sysoev and Neiman, 2004). While satisfaction is a critical first step toward loyalty, it is distinct from the act of repurchase. Customer satisfaction represents an individual's evaluation of a service based on personal perceptions and expectations, which may be positive or negative. Positive evaluations strengthen repurchase intentions, thereby increasing the likelihood of loyalty (Gerpott, 2001).

Theory of Satisfaction

Boshoff and Gray (2004) argued that satisfaction is not an intrinsic characteristic of a product or service but is instead shaped by an individual's perception of its qualities. This implies that different consumers may experience varying levels of satisfaction with the same offering (Ueltschy *et al.*, 2007). In marketing, customer satisfaction is regarded as a crucial component of corporate strategy (Fombrun *et al.*, 2000) and a key driver of long-term profitability and market value (Oh *et al.*, 2013).

Relevance to This Study

These theories provide a foundation for understanding the key constructs in this research: social responsibility, corporate reputation, satisfaction, and customer loyalty. They are essential for explaining how these factors interact and influence hospital performance.

The Relationship Among Social Responsibility, Reputation, and Loyalty

Social Responsibility

According to Carroll (1991), social responsibility comprises four interconnected aspects that companies should aim to achieve: pursuing profitability, complying with legal requirements, adhering to ethical principles, and fostering a humanistic approach to business. Wu (2011), in a study on private hospitals in Taiwan, identified four dimensions of social responsibility: Economic Social Responsibility (ERES), Legal Social Responsibility (LRES), Ethical Social Responsibility (ETRES), and Philanthropic Social Responsibility (PRES).

Building on these findings, this study hypothesizes that the key components of Hospital Social Responsibility (HSR) align with the broader dimensions of the CSR: Economic Responsibility focusing on profitability and financial stability; Legal Responsibility ensuring adherence to laws and regulations; Ethical Responsibility upholding moral principles in business practices; and Philanthropic Responsibility engaging in charitable activities and contributing to societal well-being.

Hospital Reputation

Herbig and Milewicz (1993) defined corporate reputation as the trust and belief customers place in a company's ability to fulfill its promises. Similarly, Lievens (2017) noted that organizational reputation reflects stakeholders' beliefs and evaluations, forming the public's overall perception of the organization. This reputation must be cultivated, continuously improved, and preserved, as it serves as a measure of past performance and an organization's ability to deliver value (Bromley, 2002; Chun, 2005). Corporate reputation is a critical intangible asset that provides a sustainable competitive advantage (Boyd *et al.*, 2010). Sandu (2015) identified key dimensions of reputation, including Emotional Appeal driving customers while making decisions; Social responsibility and Ethics Commitment to social responsibility and ethical conduct in doing business; Leadership Capabilities; Attention to Patriotism; and Value Creation for Customers.

In the healthcare sector, reputation is especially vital for maintaining market share, securing customer loyalty, and attracting qualified employees (Hibbard *et al.*, 2005; Pilny and Mennicken, 2014). Since healthcare organizations directly serve human beings, their reputation heavily relies on patients' perceptions and experiences (Satir, 2006; Erbay and Esatoğlu, 2017). A strong reputation serves as a strategic asset, providing a competitive advantage that is difficult to replicate.

Developing a positive reputation requires significant investment in time, financial resources, and human capital. For healthcare organizations—whether private or public—prioritizing reputation management is essential to mitigate negative perceptions and build trust. As Akin and Demirel (2011) emphasized,

a well-managed image enhances public trust, promotes customer loyalty, and strengthens market positioning.

Patient Loyalty

Loyalty is a critical concept in service management, offering substantial benefits such as increased market share, reduced marketing costs, and higher profits (Chang *et al.*, 2013). In marketing, loyalty reflects a consumer's positive attitude, repurchase behavior, and long-term commitment to a specific product, service, or provider (Keller, 2016). Ellynia and Widjaja (2020) described loyal consumers as those who consistently use a product or service, make repeat purchases, and refrain from switching to competitors. In the healthcare sector, patient loyalty refers to patients' ongoing commitment to a hospital or medical service due to satisfaction with the care provided. Tosyal *et al.* (2019) highlighted that loyal patients not only continue to use a hospital's services but also act as effective advocates, recommending the hospital to their friends, family, and colleagues. These loyal patients are invaluable assets as they contribute to the hospital's economic stability through repeat visits and positive word-of-mouth. Key characteristics of loyal patients include Repurchase Behavior continued use of the hospital's services; Cross-Service Utilization willingness to use additional products and services provided by the hospital; Advocacy recommending the hospital to others; and Resistance to Competitors be low likelihood of switching to alternative providers.

Patient Satisfaction

Satisfaction represents the degree of contentment or disappointment experienced when comparing a product's perceived performance against initial expectations (Oliver, 2014). If the product or service meets or exceeds expectations, the consumer is satisfied; conversely, unmet expectations lead to dissatisfaction (Juhana *et al.*, 2015). In the healthcare context, patient satisfaction is determined by the extent to which patients perceive their needs have been met. Afthanorhan *et al.* (2018) emphasized that satisfied patients are more likely to develop loyalty, whereas dissatisfaction prevents long-term commitment. Kulsum and Syah (2017) added that when patients' expectations are not fulfilled, they may feel disappointment or frustration, hindering their trust and future loyalty to the hospital.

Corporate Social Responsibility (CSR), Reputation, and Satisfaction in Hospitals

In the hospital context, the CSR activities often include medical staff training, health seminars, and charitable programs aimed at improving public health. The CSR enhances a hospital's reputation as its CSR efforts increase. Several studies confirm this relationship:

Susanto (2012) and Gazzola (2014) established a strong connection between CSR and corporate reputation, whereas Inleh *et al.* (2011) proposed that companies adopt CSR initiatives to safeguard their public image.

Similarly, McWilliams (2000) and other studies (Morsing & Schultz, 2006; Kotler & Lee, 2008; Lai *et al.*, 2010; Singh & Misra, 2021) affirmed that the CSR enhances a company's reputation.

In the healthcare sector, Clarke and Gibson-Sweet (1999) noted that hospitals under significant public scrutiny often use annual reports to bolster their reputation. Given these findings, the following hypotheses are proposed:

- H1: Economic social responsibility (ERES) has a positive impact on hospital reputation.
- H2: Legal social responsibility (LRES) has a positive impact on hospital reputation.
- H3: Ethical social responsibility (ETRES) has a positive impact on hospital reputation.
- H4: Philanthropic social responsibility (PRES) has a positive impact on hospital reputation.

Research also demonstrates a positive link between the CSR and customer satisfaction across various sectors. Cuesta-Valiño *et al.* (2019) observed this effect in Spanish supermarkets, while Chung *et al.* (2015) found similar results regarding environmental strategies in China. Studies in Pakistan (Khokhar, 2009), China (Shi, 2020), and Vietnam (Ngoc Tu Tran, 2022) corroborate this relationship. Similarly, Islam *et al.* (2021) showed that the CSR positively influences both satisfaction and reputation. In the healthcare industry, Lubis (2018) in Indonesia, Leclercq-Machado *et al.* (2022) in Peru, Naguib *et al.* (2023) in Egypt, and Hossain *et al.* (2019) in Bangladesh found that the CSR significantly improves patient satisfaction. Based on these insights, the following hypotheses are proposed:

- H5: Economic social responsibility (ERES) has a positive impact on patient satisfaction.
- H6: Legal social responsibility (LRES) has a positive impact on patient satisfaction.
- H7: Ethical social responsibility (ETRES) has a positive impact on patient satisfaction.
- H8: Philanthropic social responsibility (PRES) has a positive impact on patient satisfaction.

Reputation and Patient Loyalty

Reputation plays a critical role in determining patient loyalty, particularly in complex service industries like healthcare. According to Yuliani (2019), a strong brand image drives hospital loyalty, while Emari *et al.* (2012) emphasized that a poor image reduces market share. Conversely, a positive reputation enhances patient loyalty and future hospital choice (Hwang & Sim, 2016). Research supports the positive relationship between reputation and loyalty (Sciulli & Missien, 2015; Ramli, 2019; Veloso *et al.*, 2018; Ishaq *et al.*, 2014; Dada, 2021). Sciulli and Missien (2015) argued that in complex service industries, brand image is a key factor driving brand loyalty. This claim is supported by Ramli (2019), Veloso *et al.* (2018), and Ishaq *et al.* (2014), who all demonstrated a positive relationship between corporate reputation and customer loyalty. In the healthcare sector, a hospital's image plays a critical role in its success, as a negative image can result in a reduced market share (Emari *et al.*, 2012). Conversely, a positive image enhances patient loyalty and increases the likelihood of patients returning to or recommending the hospital in the future (Hwang & Sim, 2016). In Jordan, Turay *et al.* (2017) found that hospital reputation significantly impacts patient loyalty. Accordingly, the following hypothesis is proposed:

- H9: Hospital reputation has a positive effect on patient loyalty at An Phuoc General Hospital.

Hospital Reputation and Patient Satisfaction

A strong reputation is closely tied to customer satisfaction. Wu (2011), Prayag and Ryan (2012), and Chen and Phou (2013) highlighted the role of brand image in enhancing satisfaction, while Kim and Holland (2013) emphasized that a positive brand image fosters better on-site experiences. Further studies show that favorable destination image significantly influences satisfaction (Wang & Hsu, 2010; Assaker *et al.*, 2011; Mohamad

et al., 2011). In healthcare, Turay *et al.* (2017) found that reputation positively affects both satisfaction and loyalty in Jordan. Based on these findings, the following hypothesis is proposed:

- H10: Hospital reputation has a positive effect on patient satisfaction at An Phuoc General Hospital.

Patient Satisfaction and Patient Loyalty

Satisfaction is a critical driver of customer loyalty. Satisfied customers are more likely to repurchase, spread positive word-of-mouth, and remain committed to a provider (Estalami *et al.*, 2007;

Mohsan *et al.*, 2011; Lovelock & Wirtz, 2015; Ganiyu, 2017). Numerous studies confirmed the significant link between satisfaction and loyalty (Dagger & O'Brien, 2010; Kassim & Abdullah, 2010; Chang *et al.*, 2013; Abozar *et al.*, 2013; Bisimwa *et al.*, 2019). In the healthcare sector, studies by Ahmed (2017) in Bangladesh and Turay *et al.* (2017) in Jordan found that patient satisfaction directly contributes to patient loyalty. Based on these findings, the following hypothesis is proposed:

- H11: Patient satisfaction positively influences patient loyalty at An Phuoc General Hospital.

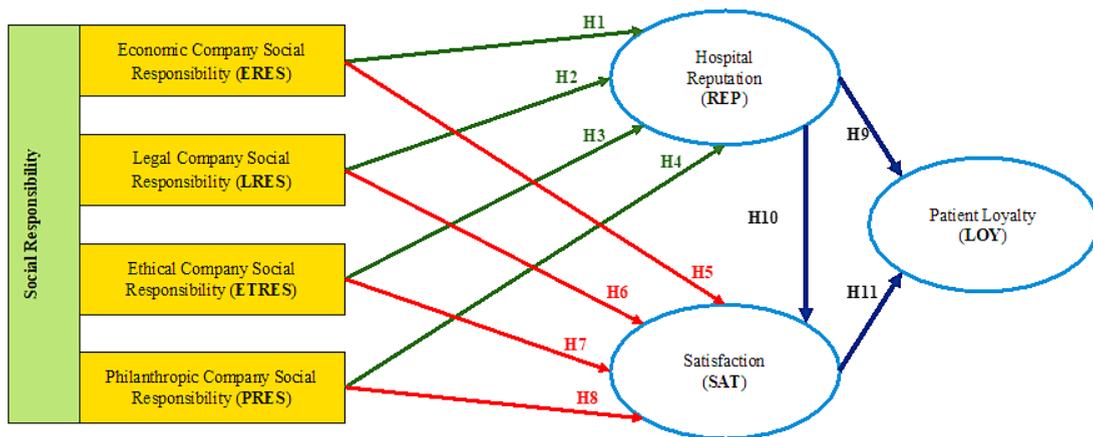


Fig. 1: Research Model

Research model

A thorough theoretical review and empirical research are crucial for enhancing current knowledge, expanding theoretical frameworks, and providing additional empirical evidence and managerial insights on social responsibility, reputation, customer loyalty, and satisfaction. While previous studies have examined these relationships using various quantitative methods—such as Exploratory Factor Analysis or separate regression models—they often lack a comprehensive analytical framework for performance evaluation. To address this gap, this study builds on prior research by integrating and analyzing these relationships within a Structural Equation Modeling (SEM) framework. Based on the literature review, a research model has been developed to achieve the study’s objectives, as summarized in Figure 1.

Research Methodology

Measurement: The scales used in this study are adapted from previous research, with modifications made to suit the healthcare context in Vietnam. The survey was conducted in three phases.

First, the expert review method was applied, involving discussions with 10 healthcare professionals, each with a minimum of five years of experience in hospitals in Phan Thiet City, Vietnam. These experts provided valuable insights and recommended adjustments to enhance the questionnaire’s relevance and applicability to the Vietnamese healthcare sector.

Second, a pilot survey was conducted with 20 hospital patients to ensure the questionnaire was error-free, clearly worded, and contextually suitable.

Participants were selected based on their willingness to take part in the study.

Third, the final survey was distributed to patients who had been hospitalized for at least three days, resulting in the collection of 390 valid responses.

A five-point Likert scale, ranging from “strongly disagree” to “strongly agree,” was used to assess all observed variables. The scale for social responsibility was primarily adapted from Lubis (2018), who conducted research in hospitals in Medan, Indonesia. To ensure relevance to the Vietnamese context, modifications were made, and additional variables were developed through expert discussions. Some of these additions include:

In the ERES scale: “The hospital has a competitive advantage over other hospitals due to its location.”

In the LRES scale: “The hospital’s electrical, water, drainage, and lighting systems meet international standards.”

In the ETRES scale: “Hospital staff and management demonstrate honesty and responsiveness to customer suggestions.” and “The hospital does not exploit any events to alter service prices or quality.”

In the PRES scale: “The hospital participates in volunteer activities to support the poor, orphans, and families of wounded soldiers and martyrs.” and “The hospital allocates a stable annual budget to programs focused on hunger eradication, poverty reduction, environmental protection, and traffic safety.”

The social responsibility scale includes a total of 16 observed variables.

The hospital reputation scale comprises 3 observed variables, while the patient loyalty scale includes 4 observed variables. The latter scales are based on Ahmed (2017) and were further refined through expert feedback.

Additional Observed Variables Include

“I generally do not consider the price when using hospital services.” and “I will speak positively about the hospital’s treatment to my relatives.”

A comprehensive measurement table outlining the scales and their corresponding observed variables can be found in Appendix A.

Data Collection and Processing

The questionnaire survey was conducted at An Phuoc General Hospital in Phan Thiet City, targeting patients who were staying at the hospital. A total of 390 survey questionnaires were distributed during the data collection period from October to December 2024. After careful data processing, 370 valid responses were retained for analysis.

Data Analysis Methodology

This study employed the Partial Least Squares-Structural Equation Modeling (PLS-SEM) approach, supported by SPSS and AMOS 22.0 software, to validate the proposed research hypotheses. The PLS-SEM is particularly suitable for analyzing complex models involving multiple constructs and simultaneous relationships (Anderson & Gerbing, 1988).

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The PLS-SEM analysis followed four key steps: Scale Quality Testing, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM). This structured approach ensures a rigorous evaluation of the measurement model and structural relationships, as recommended by Hair et al. (2006) and Kline (2011).

Results

Information about Survey Respondents

Table 1 displays the demographic profile of the 370 survey respondents.

In terms of gender, 64% of the participants were male, while 36% were female. The age distribution was divided into four groups: those under 30 years (20%), between 31–45 years (53%), 46–55 years (9%), and over 55 years (18%). Regarding occupation, the respondents included

39% government employees, 26% businesspeople and 35% others. For educational qualifications, 34% had completed higher education, 38% had attended secondary and highschool, and 28% had attained elementary. In terms of monthly income, the

participants were grouped into four income brackets: less than 8 million VND/month (18%), 8–15 million VND/month (38%), 16–25 million VND/month (31%), and over 25 million VND/month (14%).

Table 1: Characteristics of Survey Respondents (n = 370)

Category	Frequency	%	Category	Frequency	%
Gender			Educational Level		
Female	132	36	Higher education	126	34
Male	238	64	Secondary and High School	141	38
Total	370	100	Elementary	103	28
Age Group			Total	370	100
<30	76	20	Income (Million VND/month)		
31–45	196	53	<8	68	18
46–55	32	9	8–15	139	38
>55	66	18	16–25	113	31
Total	370	100	>25	50	14
Occupation			Total	370	100
Government employees	143	39			
Businesspeople	96	26			
Others	131	35			
Total	370	100			

Source: Extracted from SPSS

Table 2: Reliability of the Scale and Excluded Observed Variables

No.	Scale	Observed Variables Excluded	Cronbach's Alpha Coefficient	Result
1	ERES	None	0.805	Good quality
2	LRES	None	0.835	Good quality
3	PRES	None	0.844	Good quality
4	ETRES	None	0.831	Good quality
5	REP	None	0.851	Good quality
6	SAT	None	0.860	Good quality
7	LOY	None	0.853	Good quality

Source: Extracted from SPSS

Scale Reliability Analysis

The results in Table 2 show that all scales meet the reliability criteria, with Cronbach's Alpha values exceeding 0.6 and corrected item-total correlations above 0.3, in line with the recommendations of Nunnally and Bernstein (1994).

Exploratory Factor Analysis (EFA)

The results in Table 3 indicate the following:

- The Exploratory Factor Analysis (EFA) of the Social Responsibility scale identified three factors aligning with the theoretical model's measured variables, with a total variance extracted of 66.658% and an Eigenvalue of 1.818
- The EFA of the Reputation scale resulted in four observed variables, with a total variance extracted of 69.317% and an Eigenvalue of

- 2.773.
- The EFA of the Loyalty (LOY) scale identified three observed variables, with a total variance extracted of 77.293% and an Eigenvalue of 2.319.
 - The EFA of the Satisfaction (SAT) scale extracted four observed variables, with a total variance of 70.529% and an Eigenvalue of 2.821.
- The Exploratory Factor Analysis (EFA) was conducted using the Promax rotation method.

Table 3: Pattern Matrix

	Component						
	1	2	3	4	5	6	7
PRES3	0.856						
PRES4	0.852						
PRES2	0.804						
PRES1	0.783						
LRES3		0.831					
LRES2		0.829					
LRES1		0.806					
LRES4		0.792					
ETRES3			0.830				
ETRES4			0.817				
ETRES2			0.816				
ETRES1			0.790				
ERES4				0.827			
ERES2				0.812			
ERES3				0.783			
ERES1				0.746			
REP3					0.874		
REP1					0.866		
REP2					0.804		
REP4					0.782		
SAT3						0.868	
SAT4						0.839	
SAT2						0.836	
SAT1						0.815	
LOY2							0.904
LOY1							0.870
LOY3							0.863
Kaiser-Meyer-Olkin Measure			0.837	0.811	0.818	0.721	
Bartlett test (Sig.)			0.000	0.000	0.000	0.000	
Eigenvalues			1.818	2.773	2.821	2.319	
% of Variance			66.658	69.317	70.529	77.293	

Source: Extracted from SPSS

Note: The Kaiser-Meyer-Olkin (KMO) value falls between 0.5 and 1; Bartlett’s test is significant at a level below 0.05; factor loadings of observed variables exceed 0.3; extracted variance is greater than 50%; and Eigenvalues are above 1 (Hair *et al.*, 2006).

Confirmatory Factor Analysis (CFA)

The measurement model aligns with the actual data if it meets five key fit indices: (i) Cmin/df, (ii) TLI, (iii) CFI, (iv) NFI, and (v) RMSEA (Gefen et al., 2011).

As shown in Figure 2, the results of the Confirmatory Factor Analysis (CFA) are summarized in Table 4.

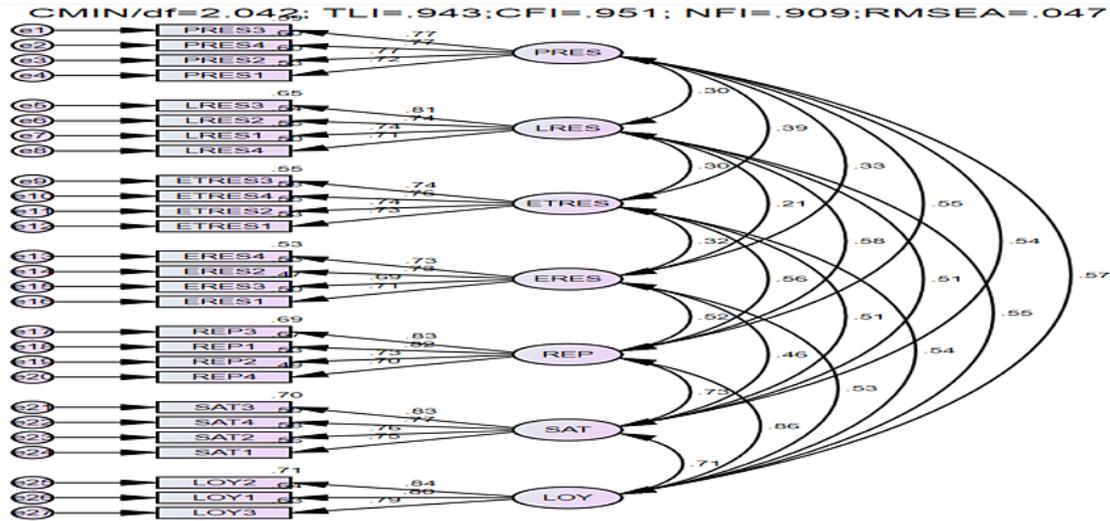


Fig. 2: CFA Analysis Results

Source: Extracted from AMOS

Table 4: Fit Indices of the CFA

No.	Measure	Standard Value	Model Value	Result
1	Chi-squared adjusted for degrees of freedom (Cmin/df)	Cmin/df ≤3 (Bentler & Bonett, 1980; Bagozzi & Yi, 1988)	2.042	Good
2	Tucker-Lewis Index (TLI)	TLI >0.90 indicates consistency; TLI ≥0.95 indicates a good fit (Hu & Bentler, 1995)	0.943	Good
3	Comparative Fit Index (CFI)	CFI >0.90; the closer to 1, the better the fit (Hu & Bentler, 1995)	0.951	Good
4	Normal Fit Index (NFI)	NFI >0.90 is acceptable; NFI >0.95 indicates a good fit (Chin & Todd, 1995; Hu & Bentler, 1995)	0.909	Good
5	Root Mean Square Error of Approximation (RMSEA)	RMSEA <0.05 indicates a good fit; RMSEA <0.08 is acceptable (Browne & Cudeck, 1993)	0.047	Good

Source: Extracted from AMOS

The results in Table 4 confirm that the measurement model aligns with the actual data.

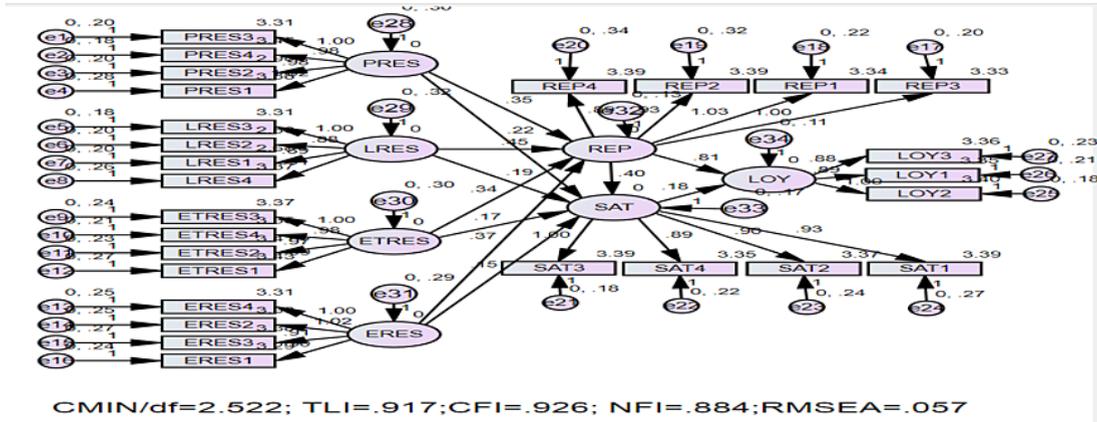


Fig. 3: Results of the Linear Structural Analysis

Analysis of Structural Equation Modeling

The results presented in Figure 3 indicate the following model fit indices: Cmin/df = 2.522; TLI = 0.917; CFI = 0.926; NFI = 0.884; RMSEA = 0.057. These values demonstrate that the integrated model achieves an acceptable fit with the actual data.

Using Bootstrap to Assess the Reliability of PLS-SEM Results

Structural function analysis methods typically require large sample sizes (Anderson & Gerbing, 1988), whereas academic research often encounters

sample size limitations. In such cases, the Bootstrap technique serves as an effective alternative (Schumacker & Lomax, 2010). Bootstrap is a resampling method that treats the original sample as the population. It generates random samples from the original data, often using 1,000 resamples. The estimated results from these samples are averaged, and this average tends to approximate the population estimate. The smaller the difference between the average Bootstrap regression coefficients and the original model estimates, the greater the reliability of the model estimates.

Table 5: Bootstrap Implementation Results

Regression Weights: (Group number 1 - Default model)								
Parameter			SE	SE-SE	Mean	Bias	SE-Bias	*CR
REP	<---	PRES	0.052	0.001	0.355	0.001	0.002	0.5
REP	<---	LRES	0.049	0.001	0.451	0.001	0.002	0.5
REP	<---	ETRES	0.054	0.001	0.344	0.000	0.002	0.0
REP	<---	ERES	0.057	0.001	0.367	0.000	0.002	0.0
SAT	<---	REP	0.094	0.002	0.401	0.001	0.003	0.3
SAT	<---	PRES	0.069	0.002	0.222	0.001	0.002	0.5
SAT	<---	LRES	0.074	0.002	0.188	0.002	0.002	1.0
SAT	<---	ETRES	0.061	0.001	0.177	0.003	0.002	1.5
SAT	<---	ERES	0.066	0.001	0.152	-0.001	0.002	-0.5
LOY	<---	REP	0.080	0.002	0.816	0.007	0.003	2.3
LOY	<---	SAT	0.068	0.002	0.174	-0.002	0.002	-1.0

Source: Extracted from AMOS

* CR (Critical Ratios) = (Bias) / (SE-Bias)

The estimated coefficients are statistically significant. However, the absolute value of CR is quite small compared to 2, which is considered very good according to Hair *et al.* (2006) for a 95% confidence level or higher. On the other hand, for a 90%

confidence level or higher, a CR value of ≤ 2.5 is considered acceptable according to Greene (1991). The regression coefficient results before Bootstrap were reliable, as shown in Table 7. In Table 5, all hypotheses have an absolute value of $CR \leq 2.5$.

Table 6: Hypothetical Results

Hypothesis	Impact			Estimate	S.E.	C.R.	P	Decision
H4	REP	<---	PRES	0.354	0.047	7.545	***	Accepted
H2	REP	<---	LRES	0.450	0.048	9.429	***	Accepted
H3	REP	<---	ETRES	0.344	0.047	7.311	***	Accepted
H1	REP	<---	ERES	0.366	0.050	7.380	***	Accepted
H10	SAT	<---	REP	0.400	0.087	4.598	***	Accepted
H8	SAT	<---	PRES	0.221	0.058	3.839	***	Accepted
H6	SAT	<---	LRES	0.186	0.062	3.005	0.003	Accepted
H7	SAT	<---	ETRES	0.175	0.057	3.067	0.002	Accepted
H5	SAT	<---	ERES	0.152	0.06	2.544	0.011	Accepted
H9	LOY	<---	REP	0.809	0.076	10.612	***	Accepted
H11	LOY	<---	SAT	0.176	0.065	2.718	0.007	Accepted

Source: Extracted from AMOS

Note: *** (Sig. = 0.000).

Table 6 shows that all paths are statistically significant at $p < 0.05$. Consequently, all hypotheses

are supported with a confidence level of 95% or higher.

Table 7: Magnitude of the Impact

Impact			Regression coefficient	%	Position
Impact on SAT					
REP = f(LRES, PRES, ETRES, ERES)					
REP	<---	PRES	0.35	23.4	3
REP	<---	LRES	0.45	29.8	1
REP	<---	ETRES	0.34	22.8	4
REP	<---	ERES	0.37	24.2	2
Total			1.51	100	
Impact on REP					
SAT = f(REP, PRES, LRES, ETRES, ERES)					
SAT	<---	REP	0.40	35.4	1
SAT	<---	PRES	0.22	19.6	2
SAT	<---	LRES	0.19	16.5	3
SAT	<---	ETRES	0.18	15.5	4
SAT	<---	ERES	0.15	13.5	5
Total			1.13	100	

Impact on LOY

LOY = f(REP,SAT)

LOY	<---	REP	0.809	82.1	1
LOY	<---	SAT	0.176	17.9	2
Total			0.985	100	

Source: Extracted from AMOS

The factors influencing “Hospital Reputation,” ranked from highest to lowest impact, are LRES, ERES, PRES, and ETRES. The factors affecting “SAT,” in descending order of influence, are REP, PRES, LRES, ETRES, and ERES. The factors impacting “LOY,” ranked by significance, are REP and SAT.

Discussion

The study defines social responsibility through four key dimensions: Economic Social Responsibility (ERES), Legal Social Responsibility (LRES), Ethical Social Responsibility (ETRES), and Philanthropic Social Responsibility (PRES). These findings align with Ahmed (2017) in the context of healthcare in Bangladesh and Pakistan while incorporating new variables, including:

- **ERES:** “The hospital has a competitive advantage over other hospitals due to its location.”
- **LRES:** “The hospital’s electrical, water, drainage, and lighting systems meet international standards.”
- **ETRES:** “Hospital staff and management demonstrate honesty and responsiveness to customer suggestions” and “The hospital does not exploit any events to alter service prices or quality.”
- **PRES:** “The hospital participates in volunteer activities to support the poor, orphans, and families of wounded soldiers and martyrs.” and “The hospital allocates a stable annual budget to programs focused on hunger eradication, poverty reduction, environmental protection, and traffic safety.”

Additionally, constructs related to customer loyalty include variables such as: “I generally do not consider the price when using hospital services” and “I will speak positively about the hospital’s treatment to my relatives.”

The study confirms that social responsibility (economic, legal, ethical, and philanthropic) positively affects reputation, consistent with findings by Lubis (2018) in Indonesian hospitals. Similarly, it influences loyalty, as shown in research by Hossain *et al.* (2019) in Bangladesh. Furthermore, both satisfaction and reputation significantly impact patient loyalty, supporting findings from Turay *et al.* (2017) on hospitals in Jordan.

The results underscore the importance of enhancing satisfaction and reputation to optimize hospital performance and management success.

Conclusion

This study enhances the theoretical framework by providing empirical evidence on the relationships between social responsibility, reputation, patient loyalty, and hospital performance, using data from a general hospital in Phan Thiet City, Binh Thuan Province, Vietnam. The findings highlight the crucial mediating roles of reputation and satisfaction in linking social responsibility to loyalty. Furthermore, structural equation analysis offers deeper insights into the interconnections among these factors.

Limitations of the Study

Despite its contributions, the study has certain limitations. The sample is limited to a single hospital in Phan Thiet City, which may restrict the generalizability of the results. Future research should expand to multiple hospitals to allow for comparative analysis and broader applicability. Additionally, while this study focuses on social responsibility and loyalty, future studies could explore other factors influencing loyalty to provide a more comprehensive understanding of performance determinants in Vietnam’s healthcare sector.

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The authors declare no conflicts of interest.

Data Availability Statement

This statement does not apply to this article.

Ethics Statement

This research did not involve human participants, animal subjects, or any material that requires ethical approval.

Informed Consent Statement

This study did not involve human participants, and therefore, informed consent was not required.

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- **Ho Dinh Phi:** Conceptualization, Methodology, Validation, Writing – Original Draft, Supervision, Project Administration, Final Approval of the Version to be Published.
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- **Minh Bui Quang:** Writing – Review & Editing and Visualization.
- **Vien Nguyen Xuan:** Investigation, Data collection, Resources, Data Curation.
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Supplementary Information

Table A: Measurement scale and observed variables

No	Scale	Code
I	Economic Company Social Responsibility	ERES
1	I see that this hospital is doing better and better	ERES1
2	Hospital staff is expanded every year	ERES2
3	The hospital always has a variety of products and new services	ERES3
4	The hospital's location provides a competitive advantage over other hospitals.	ERES4
II	Legal Company Social Responsibility	LRES
5	Hospital always ensures the legitimacy of business activities	LRES1
6	Operating hours comply with regulations issued by the People's Committee of Phan Thiet City	LRES2
7	Raw materials for processing ensure food hygiene and safety standards according to international standards	LRES3
8	The system of electrical equipment, water, drainage, lighting is guaranteed according to international standards	LRES4
III	Ethical Company Social Responsibility	ETRES
9	Hospital's voluntary activities go beyond their legal responsibilities	ETRES1
10	The hospital prioritizes environmental sustainability, social responsibility, and adherence to ethical standards in both Vietnamese and international contexts.	ETRES2
11	Hospital staff and management show honesty and progress before customers' suggestions	ETRES3
12	The hospital maintains consistent pricing and service quality, without exploiting events or circumstances for adjustments.	ETRES4

IV	Philanthropic Company Social Responsibility	PRES
13	Hospital always shows its pioneering character to become a good enterprise in the eyes of society	PRES1
14	Hospital voluntarily participates in programs to contribute to community welfare during natural disasters and epidemics	PRES2
15	Hospital participates in volunteer activities to help the poor, orphans, parents of wounded soldiers, and martyrs.	PRES3
16	The hospital allocates a stable annual budget to support programs focused on hunger eradication, poverty reduction, environmental protection, and traffic safety.	PRES4
VI	Reputation	REP
17	When using the hospital service, I usually don't care about the price	REP1
18	I am proud to use hospital services	REP2
19	This hospital is always the top hospital in Vietnam for customers	REP3
20	I am very proud to come to An Phuoc General Hospital for examination and treatment.	REP4
VII	Satisfaction	SAT
21	I am satisfied with the examination and treatment provided by the hospital	SAT1
22	I am pleased with the hospital's services.	SAT2
23	I am pleased with the staff's attitude and service.	SAT3
24	I am satisfied with the management and check-in/check-out processes in the hospital	SAT4
VIII	Customer Loyalty	LOY
25	I will share positive feedback about the hospital's treatment with my relatives.	LOY1
26	I am willing to recommend the hospital treatment to my relatives	LOY2
27	I intend to continue using the hospital's services in the future.	LOY3
