EDUCAÇÃO E DESENVOLVIMENTO SOCIAL
EDUCATION AND SOCIAL DEVELOPMENT
EDUCACIÓN Y DESAROLLO SOCIAL

millenium

Millenium, 2(Edição Especial Nº24)

en

ESTUDO DOS FATORES QUE AFETAM A SATISFAÇÃO DOS ESTUDANTES RESIDENTES COM A QUALIDADE DOS SERVIÇOS DA RESIDÊNCIA UNIVERSITÁRIA

STUDYING THE FACTORS AFFECTING THE SATISFACTION OF BOARDING STUDENTS WITH THE QUALITY OF DORMITORY SERVICES

ESTUDIO DE LOS FACTORES QUE AFECTAN LA SATISFACCIÓN DE LOS ESTUDIANTES RESIDENTES CON LA CALIDAD DE LOS SERVICIOS DE LA RESIDENCIA UNIVERSITARIA

Cao Thi Sen[1] *https://orcid.org/0009-0000-0150-8242*
Huynh Thi Cam Tho[1] *https://orcid.org/0009-0003-6336-5736*
Nguyen Van Dinh[2] *https://orcid.org/0009-0008-1601-0592*

[1] Tay Do University, Can Tho City, Vietnam
2 Nam Can Tho University, Can Tho City, Vietnam

Cao Thi Sen – ctsen@tdu.edu.vn| Huynh Thi Cam Tho – htctho@tdu.edu.vn | Nguyen Van Dinh - nvdinh@nctu.edu.vn

CC BY

Corresponding Author:
Nguyen Van Dinh
Nam Can Tho University
94000 – Can Tho – Vietnam
nvdinh@nctu.edu.vn

RECEIVED: 06th October, 2025
REVIEWED: 29th July, 2026
ACCEPTED: 05th August, 2026
PUBLISHED: 29th October, 2026

DOI: https://doi.org/10.29352/mill0224e.43505

RESUMO

Introdução: Os serviços de alojamento estudantil são um componente importante da experiência estudantil, pois combinam acomodação, instalações físicas, segurança, apoio administrativo e interações contínuas com a equipe de serviço.
Objetivo: Examinar os efeitos da confiabilidade, capacidade de resposta, segurança, empatia, aspectos tangíveis e preço percebido na satisfação dos estudantes residentes no alojamento estudantil da Universidade Nam Can Tho, no Vietnã.
Métodos: Foi empregado um delineamento de pesquisa em duas etapas. Uma etapa qualitativa preliminar foi utilizada para refinar o instrumento de mensuração, seguida por uma pesquisa transversal quantitativa administrada por meio de entrevistas presenciais. Os dados foram obtidos de 218 residentes do alojamento estudantil. O Alfa de Cronbach, a análise fatorial exploratória, a correlação de Pearson e a regressão linear múltipla foram realizadas utilizando o SPSS 29.0.
Resultados: As escalas de mensuração demonstraram consistência interna satisfatória, com coeficientes Alfa de Cronbach variando de 0,813 a 0,873. A análise fatorial exploratória corroborou uma estrutura de seis fatores para as variáveis independentes e uma estrutura de um fator para a satisfação. O modelo de regressão explicou 55,0% da variância na satisfação. Todos os seis preditores tiveram efeitos positivos e estatisticamente significativos. O preço percebido teve o efeito mais forte, seguido por confiabilidade, tangibilidade, empatia, segurança e capacidade de resposta.
Conclusão: Os residentes dos dormitórios avaliam tanto o desempenho do serviço quanto a relação custo-benefício. Os resultados fornecem evidências específicas do contexto de uma universidade privada no Delta do Mekong, em vez de estabelecer o preço percebido como uma nova dimensão do SERVQUAL. Os gestores universitários devem priorizar preços transparentes, manutenção confiável, instalações adequadas e apoio respeitoso aos estudantes.

Palavras-chave: dormitório; universidade; satisfação; estudantes

ABSTRACT

Introduction: Dormitory services are an important component of the student experience because they combine accommodation, physical facilities, safety, administrative support, and continuing interactions with service personnel.
Objective: Examines the effects of reliability, responsiveness, assurance, empathy, tangibles, and perceived price on the satisfaction of students residing in the dormitory of Nam Can Tho University, Vietnam.
Methods: A two-stage research design was employed. A preliminary qualitative stage was used to refine the measurement instrument, followed by a quantitative cross-sectional survey administered through face-to-face interviews. Data were obtained from 218 dormitory residents. Cronbach's Alpha, exploratory factor analysis, Pearson correlation, and multiple linear regression were performed using SPSS 29.0.
Results: The measurement scales demonstrated satisfactory internal consistency, with Cronbach's Alpha coefficients ranging from 0.813 to 0.873. Exploratory factor analysis supported a six-factor structure for the independent variables and a one-factor structure for satisfaction. The regression model explained 55.0% of the variance in satisfaction. All six predictors had positive and statistically significant effects. Perceived price had the strongest effect, followed by reliability, tangibles, empathy, assurance, and responsiveness.
Conclusion: Dormitory residents evaluate both service performance and value for money. The findings provide context-specific evidence from a private university in the Mekong Delta rather than establishing perceived price as a new SERVQUAL dimension. University managers should prioritise transparent pricing, reliable maintenance, adequate facilities, and respectful student support.

Keywords: dormitory; university; satisfaction; students

RESUMEN

Introducción: Los servicios de residencia universitaria constituyen un componente importante de la experiencia estudiantil porque combinan alojamiento, instalaciones físicas, seguridad, apoyo administrativo e interacciones continuas con el personal de servicio.
Objetivo: Examinar los efectos de la fiabilidad, la capacidad de respuesta, la seguridad, la empatía, los elementos tangibles y el precio percibido sobre la satisfacción de los estudiantes residentes en la Universidad Nam Can Tho, Vietnam.
Métodos: Se utilizó un diseño de investigación en dos etapas. Una etapa cualitativa preliminar permitió perfeccionar el instrumento de medición. Posteriormente, se realizó una encuesta cuantitativa transversal mediante entrevistas presenciales. Se obtuvieron datos de 218 residentes. Los análisis incluyeron el Alfa de Cronbach, el análisis factorial exploratorio, la correlación de Pearson y la regresión lineal múltiple mediante SPSS 29.0.
Resultados: Las escalas mostraron una consistencia interna satisfactoria, con coeficientes Alfa de Cronbach entre 0,813 y 0,873. El análisis factorial exploratorio confirmó una estructura de seis factores para las variables independientes y una estructura unidimensional para la satisfacción. El modelo de regresión explicó el 55,0% de la varianza de la satisfacción. Los seis factores presentaron efectos positivos y estadísticamente significativos. El precio percibido tuvo el mayor efecto, seguido de la fiabilidad, los elementos tangibles, la empatía, la seguridad y la capacidad de respuesta.
Conclusión: Los estudiantes evalúan tanto el desempeño del servicio como la relación entre el valor recibido y el coste. Los resultados aportan evidencia específica de una universidad privada del delta del Mekong, sin considerar el precio percibido como una nueva dimensión del modelo SERVQUAL. Los gestores universitarios deberían priorizar la transparencia de los precios, el mantenimiento fiable, las instalaciones adecuadas y el apoyo respetuoso a los estudiantes.

Palabras clave: residencia universitária; universidade; satisfacción; estudiantes

DOI: https://doi.org/10.29352/mill0224e.43505

INTRODUCTION

In the context of continuing innovation in higher education, student satisfaction has become an important indicator of the effectiveness of educational institutions. Satisfaction is shaped not only by teaching and academic services but also by the support services that influence students' daily experiences. Among these services, university dormitories provide living, learning, safety, and social environments for students who reside away from their families. The quality of student accommodation can therefore influence students' wellbeing, social interaction, academic engagement, and overall university experience. Latif et al. (2021) further indicate that service quality and satisfaction are important foundations of students' trust and relationships with educational institutions. Student housing satisfaction is multidimensional. It may reflect physical conditions, facilities, cleanliness, privacy, safety, environmental quality, administrative procedures, maintenance, and interactions with service staff. Amole (2009) found that the physical and social attributes of student residences shaped housing satisfaction in Nigeria. Eteng et al. (2022) subsequently reported that inadequate facilities, limited privacy, and insufficient access to information and communication technologies reduced satisfaction among Nigerian students. In South Africa, Gbadegesin et al. (2022) showed that noise, residential rules, security, privacy, and maintenance were more influential than physical design standards alone. By contrast, Gong and Söderberg (2024) identified kitchen facilities, cleanliness, and access to public transport as the strongest predictors of residential satisfaction in Stockholm. These differences demonstrate that the relative importance of student housing attributes varies across countries and institutional contexts.

Service quality provides another important perspective for understanding student satisfaction. Parasuraman et al. (1988) proposed five SERVQUAL dimensions comprising reliability, responsiveness, assurance, empathy, and tangibles. These dimensions have been applied to academic and non-academic services in higher education. Kardoyo et al. (2020) found that both academic and non-academic service quality contributed to student satisfaction. More specifically, Gabbianelli and Pencarelli (2023) demonstrated that the perceived quality of on-campus accommodation services positively influenced students' overall satisfaction. Their study further confirms that student accommodation should be examined as a continuing service experience rather than only as a physical housing product.

Vietnamese studies have also investigated the quality of dormitory services. Quy et al. (2017) applied service-quality dimensions to assess dormitory satisfaction. Giao and Hoe (2018) found that price, service capability, reliability, empathy, and responsiveness influenced student satisfaction, with price producing the strongest effect. Chat et al. (2020) examined service attributes, perceived price, perceived benefits, satisfaction, and loyalty in a university dormitory context. These findings show that perceived price has already been considered in previous research. It should therefore not be presented as a completely new SERVQUAL dimension.

Nevertheless, limited evidence is available on whether perceived price remains the strongest determinant when examined alongside all five SERVQUAL dimensions in a private university dormitory in the Mekong Delta. The private university context is relevant because students evaluate not only the quality of accommodation services but also whether dormitory fees and related charges are reasonable relative to the benefits received and to alternative accommodation options. Moreover, the relative importance of service-quality dimensions may differ from that reported in public universities or other national settings.

Accordingly, this study identifies and measures the effects of reliability, responsiveness, assurance, empathy, tangibles, and perceived price on the satisfaction of students residing in the dormitory of Nam Can Tho University. The study makes a contextual empirical contribution in three ways. First, it provides evidence from a private university in the Mekong Delta, a context that remains underrepresented in the student housing literature. Second, it compares the relative effects of perceived price and the five SERVQUAL dimensions within a single model. Third, it identifies service-management priorities based on the magnitude of the estimated effects. The findings are expected to support improvements in dormitory services and students' residential experiences.

1. THEORETICAL FRAMEWORK

1.1. Theoretical Background

Service quality refers to the degree to which a service meets or exceeds users' expectations. Parasuraman et al. (1985) conceptualised service quality as the discrepancy between customers' expectations before using a service and their perceptions after experiencing it. Parasuraman et al. (1988) subsequently developed the SERVQUAL framework with five dimensions: reliability, responsiveness, assurance, empathy, and tangibles.

Based on the definition provided by Zeithaml et al. (2013), dormitory services comprise behaviours, processes, and activities that create value by satisfying students' needs and expectations. A dormitory service is an action or benefit provided by the university to students that is essentially intangible and does not result in the ownership of a physical product

Dormitory service quality is understood as the level of service provided by the university in student communal living spaces, encompassing physical facilities like rooms, sanitation, and security, as well as intangible factors such as the attitude of administrative staff, support, and responsiveness to student requests. According to Zeithaml et al. (2013), dormitory services must address intangibility, the impossibility of storage, the difficulty of measurement, and a significant dependence on interaction between service providers and recipients.

DOI: https://doi.org/10.29352/mill0224e.43505

Student satisfaction is the degree of positive or negative perception students have regarding their experiences within the academic and living environment. In the dormitory sector, satisfaction is expressed through perceptions of the living environment, safety, convenience, and service quality. Olorunniwo et al. (2006) indicate that customer satisfaction is an intermediary factor between service quality and behavioural intentions, such as loyalty or positive word-of-mouth.

Student Satisfaction with Dormitory Service Quality: Numerous studies in Vietnam have shown that student satisfaction with dormitory services depends on room conditions, support services, security, sanitation, and social relationships (Chat et al., 2020; Quy et al., 2017). Specifically, the SERVQUAL model continues to provide an appropriate theoretical framework for assessing student satisfaction with dormitory service quality.

Relationship between Service Quality and Student Satisfaction: Empirical studies have demonstrated a strong relationship between service quality and student satisfaction. When students perceive that dormitory services fully meet their academic, living, and personal safety needs, they tend to be more satisfied and remain with the dormitory longer (Tsoukatos & Rand, 2006; Windasari et al., 2021). This relationship is further affirmed by studies using Structural Equation Modeling (SEM), such as those conducted at Hanoi University of Industry (Chat et al., 2020), which show that the components of service quality directly influence student satisfaction and loyalty.

1.2. Literature Review

Previous research consistently shows that service quality is an important antecedent of student satisfaction. Annamdevula and Bellamkonda (2016) found that higher-education service quality influenced satisfaction, which subsequently contributed to student loyalty. Latif et al. (2021) similarly demonstrated that service quality, satisfaction, and trust were closely related in the university context. In the more specific context of student accommodation, Gabbianelli and Pencarelli (2023) found that students' perceptions of individual accommodation services positively affected their overall satisfaction.

Nevertheless, student housing satisfaction cannot be explained exclusively by general service-quality dimensions. Amole (2009) emphasized the combined importance of physical, social, and management characteristics of student residences. Ning and Chen (2016) found that adequate physical facilities did not necessarily ensure high satisfaction when supporting services were insufficient. Gbadegesin et al. (2022) organized the determinants of student housing satisfaction into physical design, psychosocial factors, service quality, and environmental quality. These studies suggest that SERVQUAL provides a useful service-management framework, but student housing also contains characteristics associated with a continuing residential environment.

Empirical findings vary across national contexts. Eteng et al. (2022) found that students in Nigerian hostels were only moderately satisfied and identified weaknesses in privacy, facilities, and access to information and communication technologies. Gbadegesin et al. (2022) reported that noise, rules, security, privacy, and maintenance played particularly important roles in South Africa. Gong and Söderberg (2024), in contrast, identified kitchen facilities, cleanliness, and public transport accessibility as the strongest predictors in Stockholm. The variation across these studies indicates that the relative importance of satisfaction determinants depends on local housing conditions, institutional arrangements, and students' expectations.

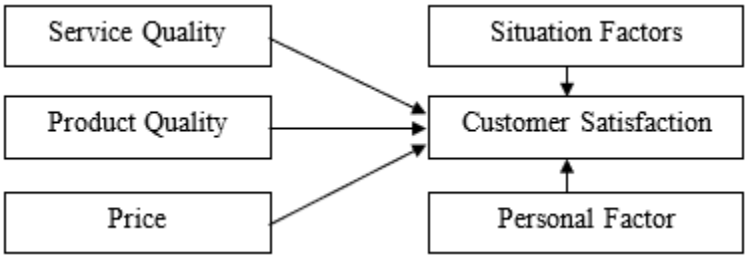
In Vietnam, Quy et al. (2017) confirmed that service-quality attributes were associated with dormitory satisfaction. In an Indonesian university setting, Putri and Anggraini (2018) also demonstrated the importance of tangibles, reliability, empathy, and responsiveness. Giao and Hoe (2018) found that price had the strongest effect on satisfaction in a Vietnamese university dormitory. Chat et al. (2020) further incorporated perceived price and perceived benefits into a model of satisfaction and loyalty. Therefore, perceived price has already been examined in earlier studies. The unresolved issue is not whether price can be included, but whether it remains dominant when assessed alongside all five SERVQUAL dimensions at a private university in the Mekong Delta.

Zeithaml and Bitner (2000) argue that service quality and price can jointly shape perceived value and customer satisfaction. In this study, perceived price refers to students' assessment of whether dormitory fees and related charges are reasonable in relation to the quality and benefits received. Taken together, previous studies consistently indicate that service quality is an important antecedent of student satisfaction in higher education settings (Annamdevula & Bellamkonda, 2016; Chat et al., 2020; Dhnachpiyathund & U-on, 2024; Rani & Nugraha, 2021; Trisela, 2022; Yen & Tiep, 2022).

1.3. Hypotheses and Proposed Research Model

Building on the theoretical arguments and empirical evidence reviewed above, this study examines whether the five SERVQUAL dimensions and perceived price influence dormitory residents' satisfaction. Figure 1 illustrates the general relationship between service quality and customer satisfaction proposed by Zeithaml and Bitner (2000).

DOI: https://doi.org/10.29352/mill0224e.43505



Source: Zeithaml and Bitner (2000)

Figure 1 Relationship between Service Quality and Customer Satisfaction

This general relationship provides the conceptual basis for developing the proposed model in the context of university dormitory services. Accordingly, the following subsections explain the expected effects of reliability, responsiveness, tangibles, assurance, empathy, and perceived price on student satisfaction.

Reliability is the ability to perform the promised service dependably and accurately. In the context of dormitory services, reliability is reflected in the dormitory management's adherence to service schedules and timely responses to student requests and complaints. Numerous studies have shown that reliability is positively and statistically significantly related to user satisfaction. Chat et al. (2020) also affirm that the dormitory's consistent adherence to basic standards and service commitments significantly increases boarding students' satisfaction.

Hypothesis H1: Reliability positively influences the satisfaction of boarding students with dormitory service quality.

Responsiveness refers to the willingness and promptness of service personnel in assisting students and addressing their requests or complaints. In the dormitory context, responsiveness is reflected in the ability of management staff to respond promptly to problems involving electricity, water, sanitation, internet access, healthcare, security, and administrative procedures. Quy et al. (2017) found that responsiveness was an important component of dormitory service quality. Giao and Hoe (2018) also identified responsiveness as a significant determinant of student satisfaction in a Vietnamese university dormitory. Prompt assistance reduces inconvenience and demonstrates that students' needs receive appropriate attention.

Hypothesis H2: Responsiveness positively influences the satisfaction of boarding students with dormitory service quality.

Tangibles are the visible, physical elements experienced during service consumption, such as infrastructure, equipment, rooms, common areas, restrooms, dining facilities, and surrounding landscapes. In dormitory services, this factor is crucial in shaping students' initial impressions and continuous perceptions of service quality. Quy et al. (2017), Gong and Söderberg (2024), and Eteng et al. (2022) also show that inadequate or poorly maintained facilities can reduce students' residential satisfaction.

Hypothesis H3: Tangibles positively influence the satisfaction of boarding students with dormitory service quality.

Assurance refers to the competence, courtesy, and ability of service personnel and the organisation to inspire trust and confidence among service users. In the dormitory context, assurance is demonstrated through the professional conduct of management personnel, regular security inspections, clear regulations, transparent procedures, and effective incident resolution. Chat et al. (2020) emphasised the importance of service capability and safe facilities in students' evaluations of dormitory services. Gbadegesin et al. (2022) also found that security and residential rules were important determinants of student housing satisfaction. These conditions strengthen students' confidence in the safety and reliability of the residential environment.

Hypothesis H4: Assurance positively influences the satisfaction of boarding students with dormitory service quality.

Empathy refers to the care, attentiveness, and individualised consideration that service personnel provide to students. In dormitory services, empathy is reflected in respect for residents, attention to their wellbeing, willingness to listen to their concerns, flexibility in addressing difficulties, and understanding of individual circumstances. Chat et al. (2020) identified empathy as an important element in students' evaluations of dormitory services. Giao and Hoe (2018) also found that empathy positively influenced student satisfaction. Supportive and respectful interactions can therefore contribute to a more favourable residential experience.

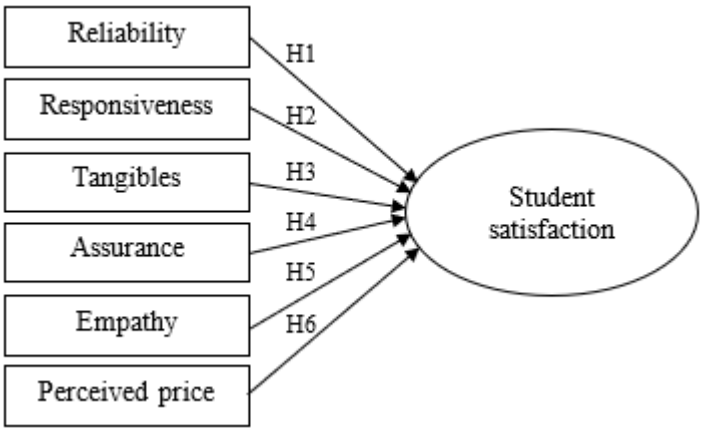
Hypothesis H5: Empathy positively influences the satisfaction of boarding students with dormitory service quality.

Perceived price refers to students' evaluation of whether the financial sacrifices associated with dormitory residence are reasonable relative to the quality and benefits they receive. It includes the affordability of room rates, the reasonableness of utility charges, price competitiveness, and value for money. Vietnamese dormitory studies have identified price-related evaluations as important determinants of student satisfaction (Chat et al., 2020; Giao & Hoe, 2018).

Hypothesis H6: Perceived price positively influences dormitory residents' satisfaction.

The six hypothesized relationships are integrated into the proposed research model presented in Figure 2.

DOI: https://doi.org/10.29352/mill0224e.43505



Source: Authors' proposal

Figure 2 - Proposed research model

2. METHODS

2.1. Research design and questionnaire development

The study employed a cross-sectional quantitative design preceded by a preliminary questionnaire-refinement stage. The preliminary stage involved consultations with four university managers and lecturers selected for their experience in student services and dormitory management. In addition, one focus group discussion was conducted with 10 current dormitory residents. The discussions examined item clarity, contextual relevance, and the coverage of facilities, management services, student support, and accommodation costs. The comments were grouped by topic and used to clarify wording, remove overlapping content, and adapt the measurement items to the university context. This stage was used for instrument refinement rather than as an independent qualitative investigation.

The final questionnaire comprised 26 items measuring six predictors and four items measuring overall satisfaction. The five service-quality dimensions were adapted from SERVQUAL and related service-quality studies, while perceived price and satisfaction items were adapted from prior dormitory and higher-education research (Parasuraman et al., 1988; Cronin & Taylor, 1992; Dabholkar et al., 2000; Giao & Hoe, 2018; Chat et al., 2020). Responses were recorded using a five-point Likert scale ranging from 1, strongly disagree, to 5, strongly agree.

2.2. Sampling and data collection

The target population consisted of students residing in the Nam Can Tho University dormitory. Participants were recruited using convenience sampling among students who were residing in the dormitory during the data-collection period. Data were collected in November 2024 through a questionnaire administered in face-to-face interviews. A total of 218 usable questionnaires were retained for analysis.

Hair et al. (2010) recommend a minimum ratio of five observations per item for exploratory factor analysis. The 26 predictor items, therefore, required at least 130 observations. The final sample of 218 exceeded this minimum requirement and was also adequate for a regression model containing six predictors.

2.3. Data analysis

Data were coded, screened, and analysed using SPSS 29.0. Internal consistency was assessed using Cronbach's Alpha and corrected item-total correlations. Exploratory factor analysis was performed using principal component extraction and Varimax rotation with Kaiser normalisation. Factor suitability was evaluated using the Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity. Pearson correlation analysis was used to examine bivariate relationships, followed by multiple linear regression to test the six hypotheses. Multicollinearity was assessed using tolerance and variance inflation factor statistics.

2.4. Ethical considerations

Participation was voluntary. Students were informed about the study's purpose, the confidentiality of their responses, and their right to decline to participate or withdraw before submitting the questionnaire. No personally identifying information was included in the analysis, and the results were reported in aggregate form.

3. RESULTS

3.1. Descriptive statistics

Table 1 presents the demographic and residential characteristics of the 218 respondents. Female students constituted the majority of the sample, with 165 respondents (75.7%), while 53 male students accounted for 24.3%. First-year students formed the largest academic-year group at 52.8%, followed by third-year students at 21.1%, second-year students at 16.1%, and fourth-year students at 10.1%.

DOI: https://doi.org/10.29352/mill0224e.43505

Regarding residential duration, 47.2% of the respondents had lived in the dormitory for between six months and less than one year. A further 22.5% had stayed for one to two years, 15.6% for more than two to three years, and 14.7% for more than three years.

Table 1 - Characteristics of the Respondents

	Criteria	Frequency	Percent
Gender	Female	165	75.7
	Male	53	24.3
Academic Year	first-year	115	52.8
	second-year	35	16.1
	third-year	46	21.1
	fourth-year	22	10.1
Length of Stay in Dormitory	From 6 months to under 1 year	103	47.2
	From 1 to 2 years	49	22.5
	From over 2 to 3 years	34	15.6
	Over 3 years	32	14.7

Source: Survey data analysis results

3.2. Reliability Testing of the Scales

The measurement scales were adapted from Parasuraman et al. (1988), Cronin and Taylor (1992), Dabholkar et al. (2000), Chat et al. (2020), and related service-quality studies. The reliability results for the seven constructs are reported in Table 2.

Cronbach's Alpha coefficients ranged from 0.813 to 0.873, exceeding the recommended threshold of 0.70. Corrected item-total correlations ranged from 0.610 to 0.823 and were above the minimum criterion of 0.30. These results indicate satisfactory internal consistency. Therefore, all measurement items were retained for exploratory factor analysis.

Table 2 - Reliability Results for the Measurement Scales

Symbol	Observation variable	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Tan1	The room area is sufficient to ensure space, and the construction meets standards.	0.611	0.775	0.813
Tan2	The provided electricity and water services are stable.	0.651	0.757	
Tan3	The in-room equipment is fully provided and modern.	0.610	0.776	
Tan4	The drying area is convenient, and the exercise grounds are spacious.	0.657	0.754	
Rel1	When facilities are damaged, the Dormitory Management Board always adheres to the repair schedule.	0.661	0.846	0.867
Rel2	The cafe's food and beverage services are suitable for students' needs.	0.702	0.836	
Rel3	You trust the commitment of the dormitory staff.	0.702	0.836	
Rel4	The signage within the dormitory is consistent and clear.	0.680	0.841	
Rel5	The process for dormitory admission applications is quick and accurate.	0.704	0.835	
Res1	Healthcare and medical services for students are fully provided.	0.694	0.826	0.859
Res2	Dining, beverage, and library services are suitable for student needs.	0.729	0.811	
Res3	Internet services at the dormitory adequately meet student needs.	0.701	0.822	
Res4	The dormitory management board serves students promptly.	0.696	0.824	
Ass1	Security guards regularly inspect the security situation within the dormitory.	0.641	0.810	0.838
Ass2	The dormitory management board is very enthusiastic about their work, creating a positive impression on students.	0.680	0.791	
Ass3	The library staff are very cheerful and friendly when serving.	0.686	0.789	
Ass4	The university consistently organizes necessary extracurricular activities that effectively serve students in the dormitory.	0.677	0.793	
Emp1	Dormitory staff always respect students.	0.704	0.806	0.849
Emp2	The university regularly dispatches personnel to the dormitory to inquire about students' well-being and solicit their feedback.	0.630	0.826	
Emp3	Dormitory staff consistently address students' difficulties.	0.648	0.821	
Emp4	The dormitory management frequently organizes programs for students.	0.679	0.813	
Emp5	The dormitory's opening and closing hours are reasonable.	0.633	0.825	
Per1	The pricing is commensurate with the quality of dormitory services and facilities.	0.823	0.798	0.873
Per2	The dormitory's pricing is competitive compared to other rental accommodations.	0.743	0.832	
Per3	The prices of various services at the dormitory (electricity, water, study room, parking) are reasonable.	0.670	0.860	
Per4	Room rates are commensurate with students' affordability.	0.680	0.856	
Sat1	I am satisfied with the quality of dormitory services provided.	0.742	0.783	0.848
Sat2	I am satisfied with the dormitory's facilities and equipment.	0.650	0.823	
Sat3	I am satisfied with the dormitory's regulations and procedures.	0.734	0.786	
Sat4	I am satisfied with the service attitude of the Dormitory Management Board.	0.621	0.834	

Source: Authors' calculations based on survey data

DOI: https://doi.org/10.29352/mill0224e.43505

3.3. Exploratory Factor Analysis

Table 3 summarises the exploratory factor analysis results for the independent variables. For the 26 items measuring the independent variables, the Kaiser-Meyer-Olkin value was 0.851, indicating that the data were suitable for factor analysis. Bartlett's test of sphericity was statistically significant, $\chi^2 = 2809.956$, df = 325, $p < 0.001$.

Six components had eigenvalues greater than one and jointly explained 68.070% of the total variance. After Varimax rotation, factor loadings ranged from 0.608 to 0.875. All 26 items had loadings above 0.50 and were retained. The six extracted factors corresponded to reliability, empathy, responsiveness, assurance, tangibles, and perceived price.

For the four satisfaction items, the Kaiser-Meyer-Olkin value was 0.814. Bartlett's test was statistically significant, $\chi^2 = 362.290$, df = 6, $p < 0.001$. One factor with an eigenvalue of 2.754 was extracted and explained 68.842% of the total variance. The factor loadings ranged from 0.781 to 0.867, supporting the unidimensional structure of the satisfaction scale.

Table 3 - Exploratory Factor Analysis Results for Independent Variables

Construct	Item	Factor loading
Reliability	Rel5	0.815
	Rel3	0.806
	Rel2	0.805
	Rel4	0.758
	Rel1	0.757
Empathy	Emp4	0.800
	Emp1	0.795
	Emp5	0.768
	Emp2	0.763
	Emp3	0.761
Responsiveness	Res2	0.825
	Res3	0.810
	Res4	0.809
	Res1	0.806
Assurance	Ass4	0.824
	Ass2	0.805
	Ass3	0.786
	Ass1	0.705
Tangibles	Tan4	0.815
	Tan2	0.797
	Tan1	0.762
	Tan3	0.742
Perceived price	Per2	0.875
	Per1	0.861
	Per3	0.659
	Per4	0.608

Source: Survey data analysis results

Table 4 - Exploratory Factor Analysis Results for the Dependent Variable.

Construct	Item	Factor loading
Satisfaction	Sat1	0.867
	Sat3	0.863
	Sat2	0.804
	Sat4	0.781

Source: Survey data analysis results

3.4. Correlation Analysis Results

Pearson correlation coefficients are presented in Table 5. All six independent variables were positively and significantly correlated with student satisfaction. The correlations with satisfaction ranged from 0.368 for empathy to 0.620 for perceived price. The correlations among the independent variables ranged from 0.118 to 0.475. These coefficients indicate that the constructs were related but not excessively correlated.

DOI: https://doi.org/10.29352/mill0224e.43505

Table 5 - Pearson Correlation Matrix

		Tan	Rel	Res	Ass	Emp	Per	Sat
Tan	Pearson	1						
Rel	Pearson	0.202**	1					
Res	Pearson	0.211**	0.199**	1				
Ass	Pearson	0.270**	0.246**	0.300**	1			
Emp	Pearson	0.118	0.207**	0.148*	0.243**	1		
Per	Pearson	0.382**	0.383**	0.422**	0.475**	0.258**	1	
Sat	Pearson	0.429**	0.461**	0.409**	0.479**	0.368**	0.620**	1
	Sig. (2-tailed)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
	N	218	218	218	218	218	218	218

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Source: Survey data analysis results

3.5. Multiple Regression Analysis

The overall regression results are reported in Tables 6 and 7. The model was statistically significant, $F = 43.032$, $p < 0.001$. The R^2 value was 0.550, and the adjusted R^2 was 0.538. Thus, reliability, responsiveness, tangibles, assurance, empathy, and perceived price jointly explained 55.0% of the variance in student satisfaction. The remaining variance may be attributable to factors not included in the model and to random variation.

The Durbin-Watson statistic was 2.176, which was sufficiently close to two to indicate no serious residual autocorrelation. Table 8 presents the regression coefficients and collinearity statistics. Variance inflation factors ranged from 1.108 to 1.702, while tolerance values ranged from 0.587 to 0.903. These results indicate that multicollinearity did not threaten the regression estimates.

Table 6 - Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.742a	0.550	0.538	0.455	2.176

Source: Survey data analysis results

Table 7 - Analysis of Variance for the Regression Model

	Sum of Squares	df	Mean Square	F	Sig.
Regression	53.365	6	8.894	43.032	0.000b
Residual	43.611	211	0.207		
Total	96.976	217			

Source: Survey data analysis results

All six predictors had positive and statistically significant effects on satisfaction. Perceived price had the strongest standardised effect, $\beta = 0.295$, $p < 0.001$, followed by reliability, $\beta = 0.211$, $p < 0.001$; tangibles, $\beta = 0.184$, $p < 0.001$; empathy, $\beta = 0.169$, $p = 0.001$; assurance, $\beta = 0.157$, $p = 0.004$; and responsiveness, $\beta = 0.131$, $p = 0.012$. Therefore, H1, H2, H3, H4, H5, and H6 were supported. Table 8 presents the estimated regression coefficients and collinearity statistics for the six independent variables.

Table 8 - Multiple Regression Coefficients

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-0.839	0.286		-2.935	0.004		
Tan	0.214	0.059	0.184	3.650	< 0.001	0.840	1.191
Rel	0.246	0.059	0.211	4.181	< 0.001	0.834	1.199
Res	0.143	0.056	0.131	2.547	0.012	0.806	1.241
Ass	0.175	0.060	0.157	2.926	0.004	0.738	1.354
Emp	0.194	0.056	0.169	3.469	0.001	0.903	1.108
Per	0.298	0.061	0.295	4.904	< 0.001	0.587	1.702
a. Dependent Variable: Sat							

Source: Survey data analysis results

DOI: https://doi.org/10.29352/mill0224e.43505

4. DISCUSSION

The regression results show that all six proposed determinants positively influence student satisfaction. However, the magnitude of their effects differs, indicating that dormitory residents do not assign equal importance to all dimensions of their experience. Perceived price produced the strongest effect, followed by reliability, tangibles, empathy, assurance, and responsiveness.

Reliability had a positive and statistically significant effect on satisfaction, with $\beta = 0.211$ and $p < 0.001$. Therefore, H1 was supported. This finding is consistent with Chat et al. (2020), who emphasize the importance of dependable service delivery in the dormitory context. Students expect maintenance, administrative procedures, and other promised services to be completed accurately and according to announced schedules. Consistent service performance strengthens students' confidence in dormitory management and enhances their overall satisfaction.

Responsiveness had a positive and statistically significant effect on satisfaction, with $\beta = 0.131$ and $p = 0.012$. Therefore, H2 was supported. This result is consistent with Quy et al. (2017) and Giao and Hoe (2018), who identified responsiveness as an important component of dormitory service quality. Students value the willingness and ability of dormitory personnel to respond promptly to requests concerning electricity, water, internet services, sanitation, healthcare, and administrative procedures. Timely assistance reduces inconvenience and improves students' evaluations of their service experience.

Tangibles had a positive and statistically significant effect on satisfaction, with $\beta = 0.184$ and $p < 0.001$. Therefore, H3 was supported. This finding is consistent with the findings of Quy et al. (2017), Eteng et al. (2022), and Gong and Söderberg (2024), who emphasize the importance of physical facilities and residential conditions. Room size, electricity and water supply, equipment, common areas, sanitation facilities, and recreational spaces are directly experienced by residents in their daily lives. Adequate and properly maintained facilities, therefore, contribute to more favourable evaluations of dormitory service quality.

Assurance had a positive and statistically significant effect on satisfaction, with $\beta = 0.157$ and $p = 0.004$. Therefore, H4 was supported. This result is consistent with Chat et al. (2020) and complements the findings of Gbadegesin et al. (2022), who highlighted the importance of security, residential rules, and confidence in student housing management. Students are more likely to be satisfied when personnel demonstrate competence, courtesy, and professionalism. Regular security inspections, clear procedures, and effective incident resolution also strengthen confidence in the residential environment.

Empathy had a positive and statistically significant effect on satisfaction, with $\beta = 0.169$ and $p = 0.001$. Therefore, H5 was supported. This result is consistent with Chat et al. (2020) and Giao and Hoe (2018), who found that understanding, respect, and attentive service contributed to students' positive evaluations of dormitory services. Students expect personnel to respect them, listen to their concerns, and provide appropriate support when they encounter personal, academic, or residential difficulties. Empathetic interaction contributes to a more supportive living environment.

Perceived price had a positive and statistically significant effect on satisfaction, with $\beta = 0.295$ and $p < 0.001$. Therefore, H6 was supported. This finding is consistent with Chat et al. (2020) and Giao and Hoe (2018), who identify price-related evaluations as important determinants of satisfaction in Vietnamese dormitory settings. Students assess whether room rates and charges for electricity, water, parking, and other services are reasonable in relation to the quality and benefits received. When these costs are perceived as affordable, transparent, competitive, and commensurate with service quality, students are more likely to report higher satisfaction.

The dominance of perceived price should not be interpreted as evidence that the present study has created a new SERVQUAL dimension. Perceived price has already been incorporated into earlier satisfaction models. The contribution of the current study is more specific. It shows that perceived price has the largest relative effect when examined alongside all five SERVQUAL dimensions in the dormitory of a private university in the Mekong Delta.

The finding may reflect the importance of value for money in students' accommodation decisions. Unlike the five SERVQUAL dimensions, perceived price reflects the comparison between the financial sacrifice and the benefits received. Students may evaluate a fee negatively when services are unreliable or facilities are inadequate, even when the nominal amount is relatively low. Conversely, a higher fee may be accepted when services are transparent, safe, dependable, and visibly beneficial.

The results also show that the hierarchy of satisfaction determinants differs across national contexts. Gong and Söderberg (2024) identify kitchen facilities, cleanliness, and access to public transport as leading predictors in Stockholm. Gbadegesin et al. (2022) report that noise, rules, security, privacy, and maintenance are central in South Africa. Eteng et al. (2022) emphasise facilities, privacy, and access to information and communication technologies in Nigeria. In the current Vietnamese context, perceived price and reliability rank first and second. Table 9 compares the findings of the current study with those of previous studies conducted in Vietnam and other national contexts.

DOI: https://doi.org/10.29352/mill0224e.43505

Table 9 - Comparison of Findings with Previous Studies

Study	Context	Key Determinants of Satisfaction	Strongest Predictor	Consistency with Current Study
Giao and Hoe (2018)	University dormitory in Vietnam	Perceived price, service capability, reliability, empathy, and responsiveness	Perceived price	Highly consistent. Both studies identify perceived price as the strongest determinant of student satisfaction
Chat et al. (2020)	Hanoi University of Industry dormitories, Vietnam	Safe facilities, service capability, empathy, perceived price, and perceived benefits	Facilities and reliability of service commitments	Partially consistent. Both studies support the roles of service quality and perceived price, although the relative importance of the determinants differs
Eteng et al. (2022)	Student hostels at three tertiary institutions in Nigeria	Housing quality, environmental conditions, facilities, privacy, and access to information and communication technologies	Not estimated	Partially consistent. The study supports the importance of tangible and environmental conditions but does not test perceived price or compare regression effects
Gbadegesin et al. (2022)	On-campus and off-campus student housing at a South African university	Noise, residential rules, security, privacy, and maintenance quality	Environmental and management-related factors	Complementary. The study highlights residential and management conditions beyond the SERVQUAL dimensions
Gong and Söderberg (2024)	Student housing in Stockholm, Sweden	Kitchen facilities, cleanliness, public transport accessibility, residential duration, and room type	Kitchen facilities	Partially consistent. The study confirms the importance of tangible conditions, but perceived price was not identified as the leading predictor
Current study	Nam Can Tho University, Vietnam	Reliability, responsiveness, tangibles, assurance, empathy, and perceived price	Perceived price	Confirms the combined importance of service quality and students' evaluation of value for money in a private university dormitory

Source: Authors' synthesis based on previous studies and the current findings

The comparison presented in Table 9 shows that student housing satisfaction is influenced by different combinations of economic, physical, environmental, and service-related factors. The current findings are most closely aligned with Giao and Hoe (2018), as both studies identify perceived price as the strongest determinant in a Vietnamese dormitory context. However, studies conducted in Nigeria, South Africa, and Sweden place greater emphasis on facilities, privacy, security, maintenance, cleanliness, and accessibility. These differences indicate that the relative importance of satisfaction determinants depends on institutional conditions, housing characteristics, and students' expectations.

The findings yield several implications for university administrators:

Strategic Pricing: Universities should adopt transparent and tiered pricing structures that reflect room conditions and available services, ensuring affordability and perceived fairness.

Reliability Enhancement: Establish routine maintenance schedules and feedback systems to strengthen trust in service consistency.

Facility Modernisation: Investments in tangible aspects such as cleanliness, lighting, and common spaces significantly improve satisfaction.

Empathy and Staff Training: Continuous professional development programmes for dormitory managers can improve responsiveness and empathy in student interactions.

Communication of Value: Communicate what the dormitory fee covers, such as security, internet, water, and sanitation, to enhance perceived value and justify pricing.

By integrating economic and service-quality dimensions, universities can develop a more balanced and student-centred dormitory management strategy that enhances student satisfaction and the overall residential experience.

CONCLUSION

This study examined the effects of reliability, responsiveness, assurance, empathy, tangibles, and perceived price on the satisfaction of students residing in the dormitory of Nam Can Tho University. All six factors had positive and statistically significant effects. Perceived price had the strongest standardised effect, followed by reliability, tangibles, empathy, assurance, and responsiveness. Together, the six predictors explained 55.0% of the variance in student satisfaction. The findings do not establish perceived price as a new SERVQUAL dimension. Instead, they demonstrate that students' economic evaluation of value for money complements the five service-quality dimensions. The study provides context-specific evidence from a private university in the Mekong Delta and indicates that dormitory satisfaction depends on the combined management of pricing, service consistency, facilities, security, and interpersonal support. For university administrators, the main priority is to align charges with the visible and dependable value of service. Transparent pricing should be accompanied by reliable maintenance, adequate facilities, clear procedures, and respectful student support. These measures can improve the residential experience. Outcomes such as student

DOI: https://doi.org/10.29352/mill0224e.43505

loyalty, retention, and institutional competitiveness should be examined in future research because they were not directly measured in the present study.

This study has several limitations. Data were collected from one private university, which limits the generalisability of the findings. The cross-sectional and self-reported design does not establish causality and may be affected by common method bias. In addition, exploratory factor analysis and multiple regression provide limited confirmation of measurement validity. Future studies should include multiple public and private universities, apply confirmatory factor analysis or structural equation modelling, and consider variables such as income, room type, length of stay, and actual accommodation costs.

AUTHORS' CONTRIBUTION

Conceptualization, C.T.S.; data curation, C.T.S.; formal analysis, N.V.D.; funding acquisition, N.V.D.; investigation, N.V.D.; methodology, N.V.D.; project administration, N.V.D.; resources, H.T.C.T.; software, H.T.C.T.; supervision, H.T.C.T.; validation, H.T.C.T.; visualization, H.T.C.T.; writing – original draft, H.T.C.T.; writing – review & editing, H.T.C.T.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

Amole, D. (2009). Residential satisfaction in students' housing. *Journal of Environmental Psychology,* 29(1), 76–85. https://doi.org/10.1016/j.jenvp.2008.05.006

Annamdevula, S., & Bellamkonda, R. S. (2016). The effects of service quality on student loyalty: The mediating role of student satisfaction. *Journal of Modelling in Management, 11*(2), 446-462. https://doi.org/10.1108/JM2-04-2014-0031

Chat, T. T., Anh, N. T. V., Hoa, N. T., Hien, N. T., & Nhung, N. T. T. (2020). Cảm nhận về chất lượng dịch vụ ký túc xá và lòng trung thành của sinh viên Trường Đại học Công nghiệp Hà Nội [Perceptions of dormitory service quality and student loyalty at Hanoi University of Industry]. *Student journal of scientific research, Hanoi University of Industry*, *10*, 304-313.

Cronin, J. J., Jr., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing, 56*(3), 55-68. https://doi.org/10.1177/002224299205600304

Dabholkar, P. A., Shepherd, C. D., & Thorpe, D. I. (2000). A comprehensive framework for service quality: An investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of Retailing, 76*(2), 139-173. https://doi.org/10.1016/S0022-4359(00)00029-4

Dhnachpiyathund, V., & U-on, V. (2024). Influence of service quality on customer loyalty of Generation Z students at private universities in Thailand. *Library Progress International,* 44(5), 230-242. https://doi.org/10.48165/bapas.2024.44.2.1

Eteng, S. U., Mfon, I. E., & Okoi, B. J. (2022). Housing satisfaction among students in tertiary institutions in Calabar, Cross River State, Nigeria. *Journal of Environmental Science and Economics, 1*(3), 15-22. https://doi.org/10.56556/jescae.v1i3.89

Gabbianelli, L., & Pencarelli, T. (2023). On-campus accommodation service quality: The mediating role of students' satisfaction on word of mouth. *The TQM Journal, 35*(5), 1224–1255. https://doi.org/10.1108/TQM-03-2022-0092

Gbadegesin, J., Marais, L., Von Maltitz, M., Cloete, J., Lenka, M., Rani, K., Campbell, M., Denoon-Stevens, S., Venter, A., Koetaan, Q., & Pretorius, W. (2022). Student housing satisfaction at a South African university. *Journal of Student Affairs Research and Practice, 59*(5), 559–579. https://doi.org/10.1080/19496591.2022.2032111

Giao, H. N. K., & Hoe, D. T. M. (2018). Sự hài lòng của sinh viên về chất lượng dịch vụ ký túc xá Trường Đại học Sư phạm Kỹ thuật Thành phố Hồ Chí Minh [Student satisfaction with dormitory service quality at Ho Chi Minh City University of Technology and Education]. *Tạp chí Công Thương*, *15*, 183–188.

Gong, A., & Söderberg, B. (2024). Residential satisfaction in student housing: An empirical study in Stockholm, Sweden. *Journal of Housing and the Built Environment*, 39, 537–555. https://doi.org/10.1007/s10901-023-10089-z

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Prentice Hall.

Kardoyo, K., Pitaloka, L. K., Rozman, R., & Hapsoro, B. B. (2020). Analyzing universities service quality to student satisfaction; academic and non-academic analyses. *International Journal of Higher Education*, *9*(1), 126–132. https://doi.org/10.5430/ijhe.v9n1p126

Latif, K. F., Bunce, L., & Ahmad, M. S. (2021). How can universities improve student loyalty? The roles of university social responsibility, service quality, and customer satisfaction and trust. *International Journal of Educational Management, 35*(4), 815–829. https://doi.org/10.1108/IJEM-11-2020-0524

DOI: https://doi.org/10.29352/mill0224e.43505

Ning, Y., & Chen, J. (2016). Improving residential satisfaction of university dormitories through post-occupancy evaluation in China: A socio-technical system approach. *Sustainability, 8*(10), 1050. https://doi.org/10.3390/su8101050

Olorunniwo, F. O., Hsu, M. K., & Udo, G. J. (2006). Service quality, customer satisfaction, and behavioural intentions in the service factory. *Journal of Services Marketing*, 20(1), 59–72. https://doi.org/10.1108/08876040610646581

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49*(4), 41–50. https://doi.org/10.1177/002224298504900403

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40.

Putri, N. T., & Anggraini, L. (2018). Improving student satisfaction of Andalas University dormitory through service quality and importance-performance analysis. *IOP Conference Series: Materials Science and Engineering*, 319, 012063. https://doi.org/10.1088/1757-899X/319/1/012063

Quy, N. T. T., Thanh, H. C., & Trang, D. H. (2017). Solutions to improve students' satisfaction with services in the dormitory at Thai Nguyen University of Economics and Business Administration. *Journal of Science & Technology*, 163(3/2), 237–242.

Rani, L. A. S., & Nugraha, J. (2021). The effect of service quality, school image, and student satisfaction on loyalty. *Economic Education Analysis Journal,* 10(3), 432–443. https://doi.org/10.15294/eeaj.v10i3.48566

Trisela, L., & Hermanto. (2022). The effect of service quality and student satisfaction on student loyalty. *Jurnal Manajemen*, 26(2), 179–199. https://doi.org/10.24912/jm.v26i2.900

Tsoukatos, E., & Rand, G. K. (2006). Path analysis of perceived service quality, satisfaction, and loyalty in Greek insurance. *Managing Service Quality*, *16*(5), 501–519. https://doi.org/10.1108/09604520610686746

Windasari, W., Soedjarwo, S., & Mutohir, T. C. (2021). Pengaruh kualitas layanan dan kepuasan terhadap loyalitas mahasiswa: Studi kasus Program Pascasarjana Fakultas Ekonomi dan Bisnis Universitas Airlangga. Kelola: *Jurnal Manajemen Pendidikan, 8*(1), 103–109. https://doi.org/10.24246/j.jk.2021.v8.i1.p103-109

Yen, T. D. K., & Tiep, L. T. (2022). The impacts of service quality and brand image on the loyalty of private university students: The mediating role of student satisfaction. *Journal of Industry and Trade*, 6, 1–7.

Zeithaml, V. A., & Bitner, M. J. (2000). *Services marketing: Integrating customer focus across the firm* (2nd ed.). McGraw-Hill.

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2013*). Services marketing: Integrating customer focus across the firm* (6th ed.). McGraw-Hill.