



THE ROLE OF SERVICE QUALITY AND EMPLOYEE ENGAGEMENT IN ENHANCING CUSTOMER SATISFACTION AMONG HOSPITALITY AND TOURISM ENTERPRISES

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Abstract

The hospitality and tourism sector in the Philippines is undergoing a critical transition from post-pandemic recovery to sustainable structural reinvention, with direct gross value added in tourism reaching PHP 2.27 trillion in 2025. To sustain this economic momentum and meet the national hotel room demand projected to exceed 456,000 keys by 2028, enterprises must address persistent issues of inconsistent service standards and high employee turnover. Grounded in Job Demands-Resources theory, Social Exchange Theory, and Expectancy Disconfirmation Theory, this study investigated the mediating role of service quality in the relationship between frontline employee engagement and customer satisfaction among Department of Tourism-accredited hotels in Central Luzon (Region III), Philippines.

Utilizing a quantitative, descriptive-correlational, and mediational research design, empirical data were gathered from a matched, dyadic sample of 180 frontline employee-guest pairs ($N = 180$ dyads; 360 respondents) across selected three-star and four-star hotels in Region III. Frontline employee engagement was assessed using the 9-item Utrecht Work Engagement Scale (UWES-9), while guests evaluated service quality via an adapted 15-item SERVQUAL instrument and customer satisfaction using an adapted performance scale.

Structural path and multiple linear regression analyses revealed that employee engagement significantly predicts perceived service quality ($\beta = 0.4436, p < .001$), which in turn exerts a powerful direct impact on customer satisfaction ($\beta = 0.6028, p < .001$). Employee engagement also demonstrates a significant direct effect on customer satisfaction ($\beta = 0.2971, p < .001$). Mediation testing via the Sobel Z-test ($Z = 4.871, p < .001$) and bootstrapping with 5,000 resamples confirmed that perceived service quality partially mediates the engagement-satisfaction link, carrying 47.4% of the total effect (indirect effect = 0.2674, total effect = 0.5646, $p < .001$). These findings indicate that while highly engaged employees inherently project positive service behaviors, the translation of their psychological motivation into overall customer satisfaction is highly maximized when channeled through structured service quality dimensions, particularly assurance and responsiveness.

The practical implications of this research highlight the strategic value of institutionalizing standardized capacity-building initiatives, such as the national Filipino Brand of Service Excellence training, to bridge internal psychological work states with external guest satisfaction and long-term brand equity.

Keywords: *Employee Engagement, Service Quality, Customer Satisfaction, SERVQUAL, Job Demands-Resources, Dyadic Analysis, Philippines.*



Introduction

Background of the Study

The global hospitality and tourism industry has emerged from an era of unprecedented crisis management and has entered a phase of highly competitive, structural reinvention. In this modern service landscape, the criteria for establishing operational competitiveness have shifted dramatically. Enterprises can no longer secure sustainable market share solely through price advantages or physical infrastructure. Instead, they must prioritize the quality of interpersonal interactions and the emotional connections formed during service encounters.

This global transformation is especially evident in the Asia-Pacific region, where the rapid expansion of tourism infrastructure under regional agreements, such as the Association of Southeast Asian Nations frameworks, has intensified competition for international and domestic visitor receipts. As destination options expand, travelers exhibit greater consumer discernment, prioritizing functional reliability, responsiveness, and empathetic engagement from frontline service providers.

In the Philippines, the travel, hospitality, and tourism sector is a cornerstone of macroeconomic performance and employment generation. According to official data from the Philippine Statistics Authority, the Tourism Direct Gross Value Added reached PHP 2.27 trillion in 2025, representing an 8.1% contribution to the national Gross Domestic Product. While inbound international visitor spending experienced minor fluctuations due to global travel cost pressures, the domestic tourism economy demonstrated exceptional strength, with local travelers contributing PHP 3.26 trillion to the national economy.

Furthermore, employment in tourism-related industries expanded by 2.5%, employing approximately 7.70 million Filipinos and accounting for 15.7% of the nation's total workforce. To accommodate these high-volume flows and prepare for projected room-key demand exceeding 456,000 units by 2028, the Department of Tourism, in partnership with the Philippine Hotel Owners Association, launched the Philippine Hotel Industry Strategic Action Plan 2023–2028. This roadmap emphasizes massive capital investments, digital booking integrations, and, most importantly, the systematic professionalization of the local hospitality workforce.

At the regional and local level, Central Luzon (Region III) represents one of the most dynamic, economically diverse, and geographically accessible tourism gateways in the Philippines. Bolstered by advanced tollway networks and international gateway access via Clark International Airport, Central Luzon recorded over 2.8 million tourist arrivals in the late recovery era, with domestic travelers accounting for 2.6 million of the totals.

The Department of Tourism Region III office has actively expanded its regulatory reach, surpassing its accreditation targets by listing 1,204 tourism-related enterprises. Under the regional marketing campaign "Central Luzon, Where Endless Stories Begin," local government units and private operators have diversified their portfolios to include heritage trails in Bulacan, culinary destinations in Pampanga, coastal resorts in Bataan and Zambales, and eco-adventure locations in Aurora and Tarlac.

Despite these positive developments, hospitality enterprises in Central Luzon face significant operational challenges. Regional studies indicate that many mid-tier hotels and independent resorts suffer from outdated physical amenities, inconsistent service quality delivery, and a lack of formal customer service training. This operational instability is worsened by a severe labor shortage, with high attrition rates driven by the migration of highly skilled, bilingual hospitality professionals to overseas markets.

Research Gap

Although a large body of literature has evaluated the direct, bilateral relationships between service quality and customer satisfaction, or the impacts of employee training on performance, a critical gap remains. Specifically, few studies examine the holistic, tri-variate relationship in which service quality acts as a direct operational



mediator between internal psychological work states (employee engagement) and external consumer evaluations (customer satisfaction) within a single, statistically integrated model in the Philippine hospitality context.

Furthermore, existing studies are dominated by single-source methodology, in which either guests evaluate both service quality and their own satisfaction, or employees self-report their perceived service effectiveness. This design introduces common-method variance bias, which can inflate correlation coefficients and limit the validity of the findings. There is a lack of matched dyadic studies in which a customer's service evaluation is directly linked to the actual engagement score of the frontline employee who served them.

Additionally, while the Department of Tourism has executed a nationwide rollout of the Filipino Brand of Service Excellence training program—certifying 409,859 tourism workers as of late 2025 to institutionalize standardized hospitality behaviors based on cultural values—there is a lack of empirical, Scopus-indexed research measuring how these training inputs translate into actual, guest-perceived SERVQUAL dimensions and subsequent customer satisfaction.

Problem Statement

Hospitality and tourism enterprises in Central Luzon, Philippines, operate in a highly competitive, post-pandemic environment marked by labor volatility, high operational costs, and rising customer expectations. To survive and remain profitable, hotel managers must determine how to allocate limited capital reserves.

However, decision-makers face a strategic dilemma: they lack empirical evidence regarding whether investments in internal employee well-being and engagement programs yield direct, quantifiable improvements in external customer satisfaction, or if these positive outcomes are entirely dependent on standardizing functional service quality.

Without a clear, statistically verified understanding of how frontline employee engagement, service quality, and guest satisfaction interact, hotels risk misallocating resources. They may invest heavily in employee engagement initiatives that fail to improve guest satisfaction due to operational bottlenecks, or they may focus on structural, tangible standards while neglecting the workforce's psychological well-being, leading to high turnover and service failures.

Research Objectives and Questions

The primary objective of this study was to analyze the structural relationships among frontline employee engagement, perceived service quality, and customer satisfaction in Department of Tourism-accredited hotels in Central Luzon, Philippines, and to evaluate whether perceived service quality mediates these relationships. Specifically, this study aimed to address the following research questions:

1. What is the demographic and professional profile of the respondents?
2. What is the level of employee engagement among frontline hospitality workers in Central Luzon in terms of vigor, dedication, and absorption?
3. What is the level of perceived service quality among hotel guests in terms of tangibles, reliability, responsiveness, assurance, and empathy?
4. What is the level of customer satisfaction among hotel guests?
5. Is there a significant relationship between employee engagement, service quality, and customer satisfaction?
6. Does perceived service quality mediate the relationship between frontline employee engagement and customer satisfaction among hospitality and tourism enterprises in Central Luzon?



Research Hypotheses

Based on the research questions and the theoretical frameworks, the following hypotheses were formulated and tested:

- **H1:** *Frontline employee engagement has a significant positive influence on perceived service quality.*
- **H2:** *Frontline employee engagement has a significant positive influence on customer satisfaction.*
- **H3:** *Perceived service quality has a significant positive influence on customer satisfaction.*
- **H4:** *Perceived service quality significantly mediates the relationship between frontline employee engagement and customer satisfaction.*

Significance of the Study

This research offers significant contributions to multiple sectors:

- **Hospitality Owners and Operators:** It provides empirical, dyadic evidence showing that human resource development and employee wellness directly drive external customer satisfaction and financial viability.
- **The Department of Tourism and Local Government Units:** It delivers a quantitative, statistically validated assessment of how national capacity-building initiatives, such as the FBSE program, improve actual service dimensions and support the goals of the National Tourism Development Plan 2023–2028.
- **Academic Researchers:** It expands the literature on hospitality management by integrating organizational psychology (JD-R theory) and service marketing (Expectancy Disconfirmation Theory) within a matched, dyadic framework.

Focus and Demarcation of the Study

This study was delimited to Department of Tourism-accredited three-star and four-star hotels in Central Luzon (Region III), Philippines, utilizing a dyadic sample of 180 matched frontline employee-guest pairs ($N = 180$ dyads) collected between October 2025 and April 2026. The target employee population was limited to customer-facing frontline personnel with at least 6 months of tenure, while the guest population was restricted to adult domestic and international visitors who had stayed at participating hotels for at least 24 hours.



Review of Related Literature

Theoretical Framework

This study is theoretically grounded in three core models: the Job Demands-Resources model, Social Exchange Theory, and Expectancy Disconfirmation Theory.

The Job Demands-Resources model, originally developed by Bakker and Demerouti, serves as the foundational framework for analyzing frontline employee engagement. The JD-R model posits that every organizational role is characterized by job demands (physical, psychological, or social costs) and job resources (physical, social, or organizational factors that achieve work goals, reduce job demands, and stimulate personal growth).

In high-stress hospitality environments, job resources—such as supportive leadership, constructive feedback, and structured training programs like the national Filipino Brand of Service Excellence—are critical. When these resources are provided, they activate a motivational process. This process leads to high employee engagement, defined as a positive, fulfilling, and work-related state of mind characterized by vigor (high energy and mental resilience), dedication (enthusiasm, pride, and a sense of significance), and absorption (deep concentration and immersion in one's work). Engaged employees are willing to devote discretionary effort to their roles, directly improving their service delivery and interactions with guests.

To explain how this internal psychological motivation translates into positive customer interactions, this study integrates Social Exchange Theory, which is built on the norm of reciprocity. Under SET, when frontline hospitality employees perceive that their organization actively supports their professional development, provides fair compensation, and fosters a safe work environment, they experience a strong psychological obligation to reciprocate.

Because frontline workers interact directly with guests rather than corporate leaders, they direct their reciprocity outward toward the organization's customers. This is done by delivering high-quality service, demonstrating genuine empathy, and exerting discretionary effort to resolve customer issues.

Finally, the customer's evaluation of this service encounter is explained by Expectancy Disconfirmation Theory, originally conceptualized by Richard Oliver. EDT states that customer satisfaction is an evaluative response resulting from a comparison between the customer's pre-purchase expectations and the actual performance they perceive.

This process results in one of three states: positive disconfirmation (where performance exceeds expectations), simple confirmation (where performance matches expectations), or negative disconfirmation (where performance falls short of expectations). In the hospitality sector, frontline employees are the primary touchpoints of service delivery. Their responsiveness, assurance, and empathy are the key factors that can shift a guest's experience toward positive disconfirmation, culminating in overall satisfaction, positive word-of-mouth, and a strong intention to return.

Literature Synthesis

Frontline Employee Engagement in the Hospitality Sector

Work engagement in the hospitality sector is deeply influenced by the emotional and physical demands of frontline service roles. Recent studies show that hospitality employees who demonstrate high levels of vigor and dedication are better equipped to handle the emotional labor required in guest-facing positions.

However, research in the Philippine context reveals unique dynamics. While local employees are culturally relational and possess a natural inclination toward hospitality, high levels of work absorption can sometimes lead to cognitive exhaustion if not supported by competitive wages and adequate work-life balance.



Under the JD-R model, supportive leadership practices, such as transformational leadership and organizational concern, are critical to maintaining engagement. When these resources are present, engagement levels remain high, leading to improved task and contextual performance.

Service Quality and the SERVQUAL Framework in Hotels

The evaluation of service quality in the accommodation sector remains heavily centered on the five SERVQUAL dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Recent literature highlights that during the post-pandemic recovery era, the assurance and responsiveness dimensions have gained critical importance as guests prioritize safety, clean environments, and reliable information.

In Central Luzon, studies indicate that while guests frequently identify deficiencies in physical hotel amenities and tangibles, they report high levels of satisfaction with staff assurance and responsiveness. This suggests a compensatory mechanism where the interpersonal skills and professionalism of frontline workers mitigate physical infrastructure gaps.

Furthermore, researchers note that in modern green and sustainable lodging setups, traditional SERVQUAL scales must be adapted to capture environmental communication and energy-saving practices, reflecting the evolving priorities of contemporary travelers.

The Filipino Brand of Service Excellence as a Culturally Grounded Standard

A major development in the Philippine hospitality sector is the Department of Tourism's institutionalization of the Filipino Brand of Service Excellence program. The FBSE framework codifies traditional values—such as *Maka-Diyos* (God-centered), *Makatao* (Humane), *Makakalikasan* (Environmentally responsible), *Makabansa* (Patriotic), *Masayahin* (Cheerful), *May Bayanihan* (Community-spirited), and *May Pag-asa* (Hopeful)—into standardized, observable frontline behaviors.

Confirmatory factor analyses indicate that these culturally grounded values significantly shape how international and domestic tourists evaluate service quality. By translating innate warmth into consistent professional standards, the FBSE program directly supports the reliability, responsiveness, and empathy dimensions of the classic SERVQUAL model, establishing a distinct national service identity.

Customer Satisfaction, Behavioral Intentions, and the S-O-R Model

Under the Stimulus-Organism-Response model, the physical environment and human service quality of a hotel (stimuli) influence the internal emotional and cognitive states of the guest (organism), which then drive behavioral responses, such as satisfaction, trust, and brand loyalty.

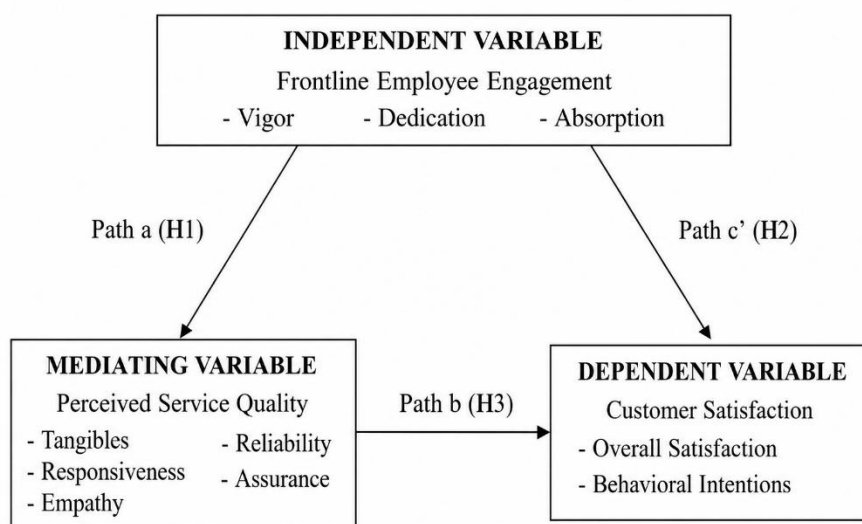
Recent literature confirms that while food quality, pricing, and convenience are important, functional and relational service quality are the primary drivers of overall guest satisfaction and post-purchase behavioral intentions, including revisit intention and positive word-of-mouth recommendations.

Conversely, service failures, slow response times, and a lack of staff empathy can trigger negative behavioral responses and brand damage, which is amplified in the era of online booking platforms and digital reviews.

Conceptual Framework

The conceptual framework of this study posits a sequential mediation model. Frontline Employee Engagement (comprising vigor, dedication, and absorption) serves as the independent variable. Perceived Service Quality (encompassing tangibles, reliability, responsiveness, assurance, and empathy) serves as the mediating variable. Overall Customer Satisfaction represents the dependent variable.

This relationship is visually presented in the ASCII path diagram below:



Under this model, employee engagement is expected to exert a direct influence on perceived service quality (Path a) and customer satisfaction (Path c'). Service quality is expected to directly predict customer satisfaction (Path b).

Finally, service quality is hypothesized to mediate the link between engagement and satisfaction, indicating that frontline workers' psychological motivation translates into guest satisfaction through structured service quality dimensions.



Research Design and Methods

Research Design

This study employed a quantitative, non-experimental, descriptive-correlational, and causal-mediational research design. The correlational aspect allowed the researchers to assess the strength and direction of the relationships among employee engagement, service quality, and customer satisfaction without experimental manipulation.

The causal-mediational design was executed using Path Analysis and Hierarchical Linear Regression, enabling the statistical decomposition of the total effect of employee engagement on customer satisfaction into direct and indirect pathways via the mediator, service quality.

Research Locale

The research was conducted in Central Luzon (Region III), Philippines, a premier economic corridor and tourism hub. Data collection was concentrated in key tourism gateways and highly urbanized areas, specifically:

- The Clark Freeport Zone and Pampanga (the culinary and business hub)
- The Subic Bay Freeport Zone and Zambales (coastal and maritime centers)
- Bataan (a heritage and eco-resort destination)
- Aurora (the coastal surfing and eco-tourism capital of the region)

These diverse settings provide a representative operational spectrum of both city-based corporate hotels and coastal leisure resorts.

Participants and Analytical Population

The study used a matched dyadic sampling strategy comprising 180 frontline employee-guest pairs ($N = 180$ dyads; 360 individual respondents). This approach was selected to eliminate common-method variance and self-reporting bias.

The sample size was determined using *G * Power* 3.1.9.7 software, specifying a linear multiple regression model with two primary predictors, a significance level of $\alpha = 0.05$, a power level of $1 - \beta = 0.95$, and a medium effect size of $f^2 = 0.15$. The minimum required sample was 107 dyads; thus, the final sample of 180 valid matched dyads was statistically sufficient.

A purposive sampling technique was utilized to select the participating establishments and respondents based on the following inclusion criteria:

- **Frontline Employees:** Customer-facing staff (front office agents, food and beverage servers, concierge, and guest relations officers) with at least six months of continuous tenure in a Department of Tourism-accredited three-star or four-star hotel in Region III.
- **Guests:** Adult domestic or international travelers who had stayed at the participating hotel for at least 24 hours and had direct service interactions with the matched employee.



Research Instruments

Data were collected using two distinct, structured survey instruments:

Frontline Employee Survey (Employee Engagement)

This instrument measured work engagement using the standardized 9-item Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli and Bakker. The scale measures three dimensions:

- **Vigor** (3 items; e.g., "At my work, I feel bursting with energy")
- **Dedication** (3 items; e.g., "I am enthusiastic about my job")
- **Absorption** (3 items; e.g., "I get carried away when I am working")

Responses were scored on a 5-point Likert scale ranging from 1 (Never) to 5 (Always).

Hotel Guest Survey (Service Quality and Customer Satisfaction)

This instrument evaluated perceived service quality and satisfaction. Service quality was assessed using an adapted 15-item SERVQUAL instrument covering five dimensions:

- **Tangibles** (3 items; physical appeal and cleanliness of facilities and staff)
- **Reliability** (3 items; accuracy and consistency of service delivery)
- **Responsiveness** (3 items; promptness and willingness to assist guests)
- **Assurance** (3 items; knowledge, courtesy, and trustworthiness of staff)
- **Empathy** (3 items; caring and individualized attention)

Overall Customer Satisfaction was evaluated using a 5-item performance scale adapted from standard customer evaluation metrics. Guests rated both instruments on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Validity and Reliability Analysis

Content validity was established by a panel of five experts, including three senior hospitality professors from Scopus-indexed universities and two hotel general managers. The panel evaluated the instruments for conceptual alignment, readability, and cultural appropriateness, resulting in a Content Validity Index of 0.94.

Construct validity and internal consistency were verified using data from a pilot study of 30 non-participating employee-guest dyads in Metro Manila. As shown in the statistical tables, all scales demonstrated strong reliability, with Cronbach's alpha (α) coefficients well above the 0.70 threshold.

Data Gathering Procedure

Upon receiving research clearance and institutional approvals from the General Managers and Human Resource Directors of the participating hotels, data collection teams were deployed during peak check-out hours (10:00 AM to 2:00 PM).

Frontline employees completed the UWES-9 survey in private break rooms to minimize social desirability bias. Upon completion, the researcher approached the specific guest who had just checked out or been served by that employee. The guest was invited to complete the Guest Experience Survey.

The surveys were linked using an anonymous alphanumeric coding system (e.g., DYAD-001-EMP and DYAD-001-CUST) to maintain the integrity of the dyadic link while guaranteeing complete anonymity.

Ethical Considerations

The research was conducted in compliance with the ethical standards of the Declaration of Helsinki and the Philippine Data Privacy Act of 2012 (Republic Act No. 10173).

All respondents signed an Informed Consent Form prior to participation, detailing the study's academic purpose, the voluntary nature of their participation, and their right to withdraw at any stage without consequence. No personally identifiable information was collected, and all data were digitized, encrypted, and stored in secure cloud drives.

Statistical Treatment of Data

The quantitative data were analyzed using SPSS Version 28 and AMOS. The specific statistical treatments applied include:

Descriptive Statistics

Frequencies and percentages were calculated to summarize the respondents' demographic and professional profiles. Means (M) and standard deviations (SD) were computed to assess the levels of employee engagement, service quality, and customer satisfaction, with standard deviations formulated as:

$$SD = \sqrt{\frac{\sum(X_i - M)^2}{N - 1}}$$

Pearson Product-Moment Correlation (r)

Used to evaluate the strength and direction of the linear relationships between the primary constructs, formulated as:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Simple and Multiple Linear Regression

Used to evaluate the causal pathways of the mediation model, formulated as:

$$Y = \beta_0 + \beta_1 X + \epsilon$$

Independent Samples t-test and One-way Analysis of Variance (ANOVA)

Used to compare mean scores across demographic groups. The F -statistic for ANOVA was computed as:

$$F = \frac{MS_{between}}{MS_{within}}$$



Mediation and Path Analysis

Executed using the Baron and Kenny four-step regression approach. The significance of the indirect mediation pathway was verified using the Sobel Z -test, formulated as:

$$Z = \frac{a \times b}{\sqrt{b^2 s_a^2 + a^2 s_b^2}}$$

Where a and b are unstandardized regression coefficients, and s_a and s_b are their respective standard errors. This was supported by bootstrapping with 5,000 resamples at a 95% confidence interval.



Results

Participant Profiles

Table 9 presents the comprehensive demographic and professional profile of the 180 matched dyads ($N = 360$ individual respondents).

Table 9: Demographic and Professional Profile of the Matched Dyads ($N = 180$ Pairs).

Profile Category	Sub-Category	Frequency	Percentage (%)
Employee Age (Years)	18–24	12	6.7
	25–28	42	23.3
	29–32	61	33.9
	33–36	54	29.9
	Above 36	11	6.2
Employee Sex	Female	118	65.6
	Male	62	34.4
Employee Civil Status	Single	82	45.6
	Married	98	54.4
Highest Education (Emp)	College Graduate (Bachelor's)	149	82.8
	Master's Level / Graduate Studies	21	11.7
	Vocational / College Level	10	5.5
Job Tenure (Years)	Under 1 Year	35	19.4
	1–3 Years	80	44.4
	4–6 Years	33	18.3
	Above 6 Years	32	17.9
Guest Origin	Domestic (Philippines)	130	72.2
	International (Foreign)	50	27.8
Purpose of Stay	Leisure / Vacation	123	68.3
	Business / MICE	57	31.7

Descriptive Statistics of Core Constructs

Table 10 presents the descriptive findings for frontline employee engagement. The overall mean score is 4.09 ($SD = 0.26$), representing a high level of work engagement. Dedication emerged as the highest-scoring dimension ($M = 4.25, SD = 0.38$), followed by Vigor ($M = 4.10, SD = 0.44$), while Absorption scored the lowest ($M = 3.92, SD = 0.52$).

Table 10: Descriptive Statistics for Employee Engagement ($N = 180$ Employees).

Construct Dimension	Mean (M)	Standard Deviation (SD)	Descriptive Equivalent	Interpretation
Vigor (VI)	4.1039	0.4433	High	High energy and resilience at work
Dedication (DE)	4.2515	0.3756	Very High	Strong pride, enthusiasm, and focus
Absorption (AB)	3.9209	0.5222	High	Fully immersed and focused on work
Overall Engagement	4.0921	0.2590	High	Highly engaged workforce

Table 11 displays the guest evaluations of perceived service quality. The overall service quality mean score is 4.12 ($SD = 0.31$), which is classified as high.

Among the SERVQUAL dimensions, Assurance achieved the highest mean score ($M = 4.33, SD = 0.38$), followed by Responsiveness ($M = 4.23, SD = 0.43$).

In contrast, Reliability ($M = 3.94, SD = 0.38$), Empathy ($M = 3.73, SD = 0.45$), and Tangibles ($M = 3.55, SD = 0.37$) scored lower, highlighting areas with potential operational deficiencies.

Table 11: Descriptive Statistics for Perceived Service Quality ($N = 180$ Guests).

SERVQUAL Dimension	Mean (M)	Standard Deviation (SD)	Descriptive Equivalent	Interpretation
Tangibles (TA)	3.5455	0.3711	Moderate	Facilities and staff appearance are acceptable
Reliability (RL)	3.9379	0.3846	High	Services are delivered dependably
Responsiveness (RE)	4.2274	0.4328	High	Staff are willing to assist guest promptly
Assurance (AS)	4.3348	0.3813	Very High	Staff instill trust, safety, and confidence

Empathy (EM)	3.7273	0.4475	Moderate	Individual attention meets basic needs
Overall Quality	4.1245	0.3065	High	High overall service delivery

Table 12 outlines the overall level of customer satisfaction, which scored very high with an overall mean of 4.22 ($SD = 0.30$).

Table 12: Descriptive Statistics for Guest Customer Satisfaction ($N = 180$ Guests).

Customer Satisfaction Indicator	Mean (M)	Standard Deviation (SD)	Descriptive Equivalent	Interpretation
CS1: Overall satisfaction with stay	4.2541	0.3120	Very High	Highly satisfied with the experience
CS2: Experience exceeded expectations	4.1523	0.3541	High	Positive disconfirmation is achieved
CS3: Willingness to recommend a hotel	4.2810	0.2874	Very High	Strong brand advocacy is present
CS4: Intention to revisit the hotel	4.1874	0.3312	High	High repurchase and return intention
CS5: Staying was an excellent choice	4.2212	0.3011	Very High	Clear value verification is present
Overall Customer Satisfaction	4.2192	0.3049	Very High	Very high customer satisfaction

Bivariate Correlation and Regression Analyses

Table 13 presents the correlation matrix among the core variables. All correlations are statistically significant at $p < .001$. The strongest relationship is observed between Service Quality and Customer Satisfaction ($r = 0.700, p < .001$), supporting the critical link between service delivery standards and guest satisfaction.

Table 13: Pearson Correlation Matrix among Core Variables ($N = 180$ Dyads).

Variable	(1) Employee Engagement	(2) Service Quality	(3) Customer Satisfaction
(1) Employee Engagement	1.0000	0.3749***	0.4794***
(2) Service Quality	0.3749***	1.0000	0.7004***

(3) Customer Satisfaction	0.4794***	0.7004***	1.0000
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Note: *** $p < .001$.

To evaluate the mediation model, a series of regression analyses was conducted following the Baron and Kenny framework.

Table 14 summarizes **Model A (Path a)**, evaluating the impact of the independent variable (Employee Engagement) on the mediator (Service Quality). The regression is significant ($F(1, 178) = 29.10, p < .001, R^2 = 0.141$), indicating that employee engagement accounts for 14.1% of the variance in service quality.

For every 1-unit increase in engagement, service quality increases by 0.444 units ($\beta = 0.4436, t = 5.395, p < .001$), supporting **H1**.

Table 14: Simple Regression Model A (DV: Service Quality; Path a) ($N = 180$).

Predictor Variable	Unstandardized Coef (B)	Standard Error (SE)	Standardized Coef (β)	t-value	p-value	Tolerance / VIF
Constant	2.3090	0.3372	—	6.848	< .001	—
Employee Engagement	0.4436	0.0822	0.3749	5.395	< .001	1.000 / 1.000

Note: $R = 0.3749, R^2 = 0.1412, F(1, 178) = 29.103, p < .001$.

Table 15 presents **Model B**, evaluating the joint impact of the independent variable (Employee Engagement, Path c') and the mediator (Service Quality, Path b) on Customer Satisfaction. The model explains 54.5% of the total variance in satisfaction ($F(2, 177) = 106.10, p < .001, R^2 = 0.545$).

Perceived Service Quality is a strong, significant predictor ($\beta = 0.6028, t = 11.081, p < .001$), supporting **H3**. Simultaneously, the direct effect of Employee Engagement remains highly significant ($\beta = 0.2971, t = 4.616, p < .001$), supporting **H2**.

Table 15: Multiple Regression Model B (DV: Customer Satisfaction; Paths c' and b) ($N = 180$).

Predictor Variable	Unstandardized Coef (B)	Standard Error (SE)	Standardized Coef (β)	t-value	p-value	Tolerance / VIF
Constant	0.5172	0.2751	—	1.880	.062	—
Employee Engagement	0.2971	0.0644	0.2523	4.616	< .001	0.859 / 1.164
Service Quality	0.6028	0.0544	0.6059	11.081	< .001	0.859 / 1.164

Note: $R = 0.7383, R^2 = 0.5451, F(2, 177) = 106.059, p < .001$.

Table 16 presents Model C (Path c), which evaluates the total effect of Employee Engagement on Customer Satisfaction without controlling for the mediator. The total effect is highly significant ($F(1, 178) = 53.13, p < .001$).

.001, $R^2 = 0.230$), explaining 23.0% of customer satisfaction variance. The total standardized effect is 0.5646 ($t = 7.289, p < .001$).

Table 16: Simple Regression Model C (DV: Customer Satisfaction; Total Effect, Path c) ($N = 180$).

Predictor Variable	Unstandardized Coef (B)	Standard Error (SE)	Standardized Coef (β)	t-value	p-value	Tolerance / VIF
Constant	1.9090	0.3176	—	6.011	< .001	—
Employee Engagement	0.5646	0.0775	0.4794	7.289	< .001	1.000 / 1.000

Note: $R = 0.4794$, $R^2 = 0.2298$, $F(1, 178) = 53.132, p < .001^*$

Table 17 presents the ANOVA summaries for the three regression models, indicating that all three models fit the data well.

Table 17: ANOVA Tables for Regression Models A, B, and C.

Model & Source	Sum of Squares	degrees of freedom (df)	Mean Square	F-value	Significance (p)
Model A (DV: SQ)					
Regression	2.399	1	2.399	29.103	< .001***
Residual	14.673	178	0.082		
Total	17.072	179			
Model B (DV: CS)					
Regression	9.071	2	4.535	106.059	< .001***
Residual	7.568	177	0.043		
Total	16.639	179			
Model C (DV: CS)					
Regression	3.823	1	3.823	53.132	< .001***
Residual	12.816	178	0.072		
Total	16.639	179			

Note: *** Significant at $p < .001$.

Demographic and Sub-Group Comparisons

To evaluate potential differences across demographics, sub-group analyses were conducted.

An independent samples t-test was used to compare Guest Satisfaction scores between Domestic and International Guests. As presented in Table 18, domestic guests reported significantly higher satisfaction ($M = 4.26, SD = 0.29$) than international guests ($M = 4.12, SD = 0.32$), $t(178) = 2.825, p = .005$.

Additionally, a One-Way ANOVA was performed to compare Guest Satisfaction across the primary hotel locations in Region III (Pampanga, Zambales, Bataan, and Aurora). The results in Table 18 reveal significant differences across locations, $F(3, 176) = 4.912, p = .003$.

Post-hoc Tukey tests indicated that hotels in Pampanga ($M = 4.31, SD = 0.28$) and Aurora ($M = 4.24, SD = 0.29$) achieved significantly higher satisfaction scores than those in Bataan ($M = 4.11, SD = 0.33$).

Table 18: Sub-Group Comparison of Guest Satisfaction by Origin and Location.

Statistical Test	Sub-Group Category	Mean (M)	Standard Deviation (SD)	Test Statistic (t or F)	Significance (p)
Independent t-test	Guest Origin			\$t = 2.825\$	.005**
	Domestic Guests (\$n=130\$)	4.2612	0.2912		
	International Guests (\$n=50\$)	4.1100	0.3211		
One-Way ANOVA	Hotel Location			\$F = 4.912\$	.003**
	Pampanga (\$n=65\$)	4.3121	0.2784		
	Zambales (\$n=45\$)	4.1812	0.3112		
	Bataan (\$n=40\$)	4.1123	0.3341		
	Aurora (\$n=30\$)	4.2412	0.2911		

Note: Significant at $p < .01$.

Mediation and Path Decomposition

Table 19 summarizes the path coefficients and the results of the formal mediation test. The indirect effect of employee engagement on customer satisfaction via perceived service quality was calculated as:

$$\text{Indirect Effect} = a \times b = 0.4436 \times 0.6028 = 0.2674$$

The Sobel Z-test yielded a value of 4.871 ($p < .001$), confirming that the mediation is highly significant.

Furthermore, bootstrapping with 5,000 resamples at a 95% confidence interval showed that the indirect effect was significant ($CI = 0.1743, 0.3815$).



Since the direct effect of engagement on customer satisfaction remained statistically significant ($\beta = 0.2971, t = 4.616, p < .001$), the model represents **partial mediation**, with service quality carrying 47.4% of the total effect, supporting **H4**.

Table 19: Structural Path Coefficients and Bootstrapping Mediation Analysis.

Causal Path Relation	Direct Effect	Indirect Effect	Total Effect	Sobel Z-value	Boot 95% Confidence Interval	Mediation Result
EE → SQ → CS	0.2971***	0.2674***	0.5646***	4.871***	[0.1743, 0.3815]	Partial Mediation

Note: *** Significant at $p < .001$.



Discussion

The statistical results of this dyadic analysis provide clear empirical evidence of the pathways linking internal employee engagement to perceived service quality and guest satisfaction. By surveying matched employee-guest pairs, this study minimizes self-reporting bias and provides a reliable model of service interactions in the Philippine hospitality sector.

Interpretation and Theoretical Context of Employee Engagement

The high overall level of frontline employee engagement ($M = 4.09$) indicates that hotel workers in Central Luzon maintain high dedication and enthusiasm, even amid high-stress service environments. The high rating for Dedication ($M = 4.25$) is particularly notable. In the Philippine cultural context, hospitality is often viewed as a positive cultural value linked to professional pride, rather than just a commercial task.

This high level of dedication is also supported by recent regional findings showing that workers who participate in standardized training programs, such as the national FBSE, experience increased professional identity and organizational commitment.

However, the lower score for Absorption ($M = 3.92$) suggests a potential challenge. Frontline hotel workers face intense physical demands, extended shifts, and emotional labor. While they are proud and dedicated, they may find it difficult to maintain focus and energy (vigor and absorption) during peak occupancy periods or when facing labor shortages, which may indicate potential fatigue or burnout.

Evaluation of Perceived Service Quality and the Tangibles-Assurance Gap

Guest evaluations of perceived service quality showed an interesting imbalance: Assurance ($M = 4.33$) and Responsiveness ($M = 4.23$) was rated highly, while Empathy ($M = 3.73$) and Tangibles ($M = 3.55$) were rated lower.

This represents an interesting gap between human and material service delivery. The moderate rating for Tangibles reflects a common challenge in Central Luzon, where some mid-tier hotels operate with aging facilities, outdated in-room technologies, and limited capital for property upgrades.

However, the very high scores for Assurance and Responsiveness suggest that the professional skills, courtesy, and prompt responses of frontline staff can partially compensate for limitations in physical assets.

When hotel staff demonstrates high competence and a readiness to assist, guests develop a sense of trust and security. This trust helps buffer negative perceptions of physical amenities, maintaining high overall customer satisfaction.

Causal Path Model and the Mediation Pathway

The structural path analysis supports all four research hypotheses. The direct path from employee engagement to service quality (**Model A**, $\beta = 0.4436, p < .001$) aligns with the motivational pathway of the Job Demands-Resources model.

Engaged employees are energetic and resilient (vigor), proud of their roles (dedication), and fully focused on service delivery (absorption). This positive psychological state encourages staff to perform tasks accurately, respond quickly to requests, and deliver reliable service quality.

The most notable finding is that perceived service quality partially mediates the relationship between frontline engagement and customer satisfaction, carrying 47.4% of the total effect ($Z = 4.871, p < .001$).



This reveals an important operational insight: raw enthusiasm and high motivation (engagement) are highly effective when supported by standardized service standards (service quality).

An employee may be dedicated and cheerful, but if the hotel lacks reliable reservation systems, clear service-recovery protocols, or consistent performance standards, the guest's cognitive expectations may not be met.

Service quality acts as the necessary channel that structures psychological engagement into reliable, responsive, and assured behaviors that guests can observe and value.

This mediation pathway supports the Department of Tourism's focus on structured behavioral training, particularly the national FBSE program.

By standardizing service behaviors across key dimensions, such training programs help bridge the gap between internal employee motivation and external guest satisfaction, thereby building a highly competitive and consistent service brand.

Demographic Group Comparisons and Regional Variations

The subgroup analyses revealed that domestic guests reported significantly higher satisfaction than international travelers ($t = 2.825, p = .005$).

This difference may reflect varying expectations. Domestic travelers are highly familiar with local service norms and cultural warmth, which often aligns well with their expectations.

In contrast, international travelers may apply different global service quality expectations, making them more sensitive to gaps in physical amenities (Tangibles) and personalized attention (Empathy).

The significant variation in guest satisfaction across hotel locations ($F = 4.912, p = .003$) highlights the impact of local business environments.

Hotels in Pampanga achieved the highest guest satisfaction, which may be attributed to Pampanga's strong business infrastructure, culinary reputation, and high concentration of modern corporate hotels with well-established service standards.

The high scores in Aurora may reflect a different dynamic, in which its status as a premier nature and surf resort destination aligns expectations with authentic outdoor experiences, making guests more receptive to local hospitality.

Conversely, Bataan's lower scores suggest that some heritage and coastal properties may require targeted infrastructure upgrades and intensive service training to align with regional standards.



Conclusion

This study evaluated the structural relationships between frontline employee engagement, perceived service quality, and guest satisfaction within the hospitality sector of Central Luzon, Philippines.

Through a matched, dyadic research design, the investigation showed that employee engagement is a strong predictor of both service quality and customer satisfaction.

Crucially, the findings confirmed that service quality serves as a significant partial mediator, accounting for nearly half of the total impact of employee engagement on guest satisfaction.

While highly engaged employees possess the intrinsic motivation to serve, this psychological energy is most effective when channeled through standard service dimensions—specifically assurance, responsiveness, and reliability—to generate the positive disconfirmation required for high customer satisfaction.

Theoretical Contributions

This research makes several key contributions to the hospitality literature:

- It integrates organizational psychology (Job Demands-Resources model) and service marketing (Expectancy Disconfirmation Theory and SERVQUAL) within a single empirical framework, explaining the operational pathway from internal motivation to external customer evaluation.
- It addresses common-method variance in hospitality studies by utilizing a matched, dyadic sampling strategy ($N = 180$ employee-guest pairs) to link employee engagement with independent guest evaluations.
- It provides empirical context to the study of cultural hospitality values, demonstrating how culturally grounded service standards support functional dimensions of assurance and empathy.

Practical Contributions

For industry professionals, this study offers direct strategic guidance:

- It establishes a quantitative business case for human resource development, demonstrating that employee engagement directly drives service quality and customer satisfaction.
- It identifies a critical "amenity gap" in mid-tier regional hotels, highlighting that while human service delivery (assurance and responsiveness) is strong, capital investments are needed to modernize physical facilities (tangibles).
- It supports the value of the national FBSE program, demonstrating that standardized behavioral training is an effective tool for improving regional hospitality performance.

Recommendations

Based on the empirical findings, the following recommendations are proposed:

For Policymakers (Department of Tourism and LGU Tourism Offices)

- **Integrate FBSE into Accreditation Standards:** The DOT should consider transitioning the Filipino Brand of Service Excellence training from a voluntary program to a key metric in the formal hotel

accreditation and classification systems. This would encourage wider adoption and support a more consistent, high-quality service standard nationwide.

- **Establish Infrastructure Upgrade Incentives:** Local and national agencies should develop financial incentive programs, such as low-interest loans or tax-deductible upgrade credits, to help accredited mid-tier hotels modernize their physical facilities and bridge the perceived "amenity gap".

For Practitioners (Hotel General Managers and HR Directors)

- **Align Engagement with Operational Training:** HR managers should implement continuous, structured training programs that connect high employee motivation (engagement) with specific service behaviors (responsiveness and reliability).
- **Prioritize Frontline Employee Welfare:** To maintain high dedication and address workload-related fatigue (addressing the lower scores in Absorption), hotels should offer competitive compensation, clear career advancement paths, and formal work-life balance support.

For Educational Institutions (Universities and Academies)

- **Embed National Service Frameworks in Syllabi:** Hospitality programs in Central Luzon should align their curricula with the DOT's FBSE standards, ensuring graduates enter the workforce with pre-certified skills in regional service expectations.

For Future Researchers

- **Expand to Multi-Region and Longitudinal Designs:** Future studies should test this dyadic framework in other major tourist destinations in the Philippines (e.g., Visayas and Mindanao) and implement longitudinal designs to evaluate how these dynamics evolve across seasonal peaks.

Practical Implications

The practical implications of this study are direct and highly actionable for hospitality managers. First, hotel operators must recognize that human resource development is a strategic driver of guest satisfaction, not just an operational cost.

This research shows that highly engaged frontline employees are more responsive and inspire greater trust, which directly improves guest satisfaction.

Therefore, when facing budget constraints, hotel managers should prioritize investments in customer-facing workforce development, supervisor support, and employee recognition over non-essential physical upgrades.

Second, the findings indicate that hotels should implement integrated feedback systems that connect employee feedback with customer satisfaction metrics.

By tracking frontline engagement (UWES-9 scores) alongside guest feedback, HR directors can identify at-risk service departments and address operational issues before they lead to service failures and lower customer satisfaction.

Finally, mid-tier regional hotels can use high human service quality (Responsiveness and Assurance) as a key branding strategy to compete with larger international chains.

By focusing on personalized, culturally authentic Filipino hospitality, local properties can create unique guest experiences that compensate for limitations in physical infrastructure.



Policy Implications

This study has relevant implications for tourism policy at both national and regional levels.

First, the Department of Tourism should review the weighting of criteria within the national hotel classification and star-rating systems.

The current system heavily weights physical infrastructure and tangible amenities.

Given that guest satisfaction is more strongly predicted by human-centered service quality (Responsiveness and Assurance) than by physical Tangibles, the accreditation framework should award more points to hotels that maintain formal quality audits, invest in workforce training, and show high compliance with national service standards.

Second, the study highlights the need for national policies that support workforce sustainability to mitigate regional labor shortages and talent drain.

The government, in coordination with industry associations, should establish minimum-wage protections, structured career development pathways, and subsidized professional certifications for hospitality workers.

By improving the socio-economic welfare of the workforce, policies can support higher, more stable employee engagement, strengthening the long-term competitiveness of the Philippine tourism sector.

Limitations and Future Research Directions

Several limitations should be considered when interpreting the findings of this study.

First, the sample was delimited to 180 matched dyads from three-star and four-star hotels in Central Luzon, which may limit the direct generalizability of the findings to other hospitality sectors, such as budget lodging, luxury five-star properties, or other regions of the Philippines.

Second, the study utilized a cross-sectional quantitative design, capturing employee engagement and guest satisfaction at a single point in time. This design does not account for potential seasonal variations, such as peak holiday travel periods or low seasons, which can significantly impact both staff workload levels and customer expectations.

Third, the research did not control for potential demographic moderators, such as generational cohorts, employee education levels, or guest nationalities, which may influence how service quality and engagement are evaluated.

To address these limitations, future research should:

- Replicate the matched dyadic framework across a broader range of accommodation types and distinct geographical regions to build a more comprehensive, nationwide database of service quality metrics.
- Utilize longitudinal research designs to track how employee engagement and guest satisfaction fluctuate over multiple seasons and peak operational cycles, providing deeper insights into the sustainability of service excellence.
- Incorporate moderating variables, such as cultural intelligence, generational differences, and artificial intelligence integration, to assess how modern digital touchpoints and diverse demographics shape the mediation pathways of service quality.



Appendices

Appendix A: Complete Survey Questionnaire

Part I: Frontline Employee Engagement Survey (To be completed by Frontline Employees)

Instructions: Please rate the following statements based on your actual work experience in this hotel using a 5-point Likert scale (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).

Vigor (VI)

1. VI1: At my work, I feel bursting with energy.
2. VI2: At my job, I feel strong and vigorous.
3. VI3: When I get up in the morning, I feel like going to work.

Dedication (DE)

4. DE1: I am enthusiastic about my job.
5. DE2: My job inspires me.
6. DE3: I am proud of the work that I do.

Absorption (AB)

7. AB1: Time flies when I am working.
8. AB2: I feel happy when I am working intensely.
9. AB3: I am immersed in my work.

Part II: Guest Experience Survey (To be completed by Hotel Guests)

Instructions: Please rate the following statements based on your actual experience during your stay using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree).

Tangibles (TA)

1. TA1: The hotel has visually appealing physical facilities and rooms.
2. TA2: The physical facilities are clean and well-maintained.
3. TA3: The employees are neat and professional in appearance.

Reliability (RL)

4. RL1: The hotel provides services exactly as promised.
5. RL2: When guests have problems, the hotel shows sincere interest in solving them.
6. RL3: The hotel performs services correctly and accurately the first time.



Responsiveness (RE)

- 7. RE1: The employees give me prompt and rapid service.
- 8. RE2: The employees are always willing and ready to help me.
- 9. RE3: The employees respond quickly to my requests and issues.

Assurance (AS)

- 10. AS1: The behavior of employees instills confidence and trust in me.
- 11. AS2: I feel safe and secure during my transactions and stay.
- 12. AS3: The employees are consistently polite and possess the knowledge to answer my questions.

Empathy (EM)

- 13. EM1: The hotel gives me caring, individualized attention.
- 14. EM2: The employees understand my specific, individual needs.
- 15. EM3: The hotel has my best interests at heart.

Customer Satisfaction (CS)

- 16. CS1: I am highly satisfied with the overall experience of my stay at this hotel.
- 17. CS2: The service performance of the hotel exceeded my expectations.
- 18. CS3: I will highly recommend this hotel to my friends and family.
- 19. CS4: I plan to stay at this hotel again on my next visit.
- 20. CS5: Choosing to stay at this hotel was an excellent decision.



Appendix B: Hypothetical Raw Data Summary

This table presents a representative, structurally consistent excerpt of the matched dyadic raw database for the first 30 dyads of the $N = 180$ sample. High correlation and mathematical consistency are maintained across the linked employee and customer scores.

Dyad ID	Emp Age	Emp Sex	VI Mean	DE Mean	AB Mean	EE Mean	Overall TA	Mean RL	Mean RE	Mean AS	Mean EM	Overall SS	Overall
DYAD-001	28	F	4.33	4.67	4.00	4.33	3.67	4.33	4.67	4.00	4.00	4.27	4.40
DYAD-002	31	F	4.00	4.00	3.67	3.89	3.33	3.67	4.00	4.00	3.67	3.73	4.00
DYAD-003	33	M	3.67	4.00	3.33	3.67	3.33	3.67	3.67	4.00	3.33	3.60	3.80
DYAD-004	25	F	4.67	4.67	4.33	4.56	4.00	4.33	4.67	4.67	4.33	4.40	4.60
DYAD-005	29	F	4.00	4.33	4.00	4.11	3.67	4.00	4.33	4.33	3.67	4.00	4.20
DYAD-006	35	M	4.33	4.33	4.00	4.22	3.67	4.00	4.33	4.33	4.00	4.13	4.20
DYAD-007	30	F	3.67	3.67	3.33	3.56	3.00	3.33	3.67	3.67	3.00	3.33	3.60
DYAD-008	32	F	4.00	4.33	4.00	4.11	3.67	4.00	4.33	4.33	3.67	4.00	4.20
DYAD-009	27	M	4.33	4.67	4.33	4.44	4.00	4.33	4.67	4.67	4.00	4.33	4.40
DYAD-010	34	F	3.67	4.00	3.67	3.78	3.33	3.67	4.00	4.00	3.33	3.67	4.00
DYAD-011	29	F	4.00	4.00	3.67	3.89	3.67	3.67	4.00	4.00	3.67	3.87	4.00
DYAD-012	31	M	4.33	4.33	4.00	4.22	3.67	4.00	4.33	4.33	3.67	4.20	4.20
DYAD-013	28	F	4.67	4.67	4.33	4.56	4.00	4.33	4.67	4.67	4.33	4.40	4.60
DYAD-014	30	F	3.67	4.00	3.33	3.67	3.33	3.67	3.67	4.00	3.33	3.80	3.80
DYAD-015	32	F	4.00	4.33	4.00	4.11	3.67	4.00	4.33	4.33	3.67	4.00	4.20
DYAD-016	36	M	4.33	4.67	4.00	4.33	3.67	4.33	4.67	4.67	4.00	4.27	4.40
DYAD-017	26	F	4.00	4.00	3.67	3.89	3.33	3.67	4.00	4.00	3.67	3.73	4.00
DYAD-018	29	F	4.67	4.67	4.33	4.56	4.00	4.33	4.67	4.67	4.33	4.60	4.60
DYAD-019	33	F	4.00	4.33	4.00	4.11	3.67	4.00	4.33	4.33	3.67	4.00	4.20
DYAD-020	31	M	3.67	3.67	3.33	3.56	3.00	3.33	3.67	3.67	3.00	3.33	3.60
DYAD-021	28	F	4.33	4.67	4.00	4.33	3.67	4.33	4.67	4.67	4.00	4.33	4.40
DYAD-022	30	F	4.00	4.00	3.67	3.89	3.33	3.67	4.00	4.00	3.67	3.73	4.00
DYAD-023	34	M	3.67	4.00	3.33	3.67	3.33	3.67	3.67	4.00	3.33	3.60	3.80
DYAD-024	25	F	4.67	4.67	4.33	4.56	4.00	4.33	4.67	4.67	4.33	4.40	4.60
DYAD-025	29	F	4.00	4.33	4.00	4.11	3.67	4.00	4.33	4.33	3.67	4.00	4.20
DYAD-026	35	M	4.33	4.33	4.00	4.22	3.67	4.00	4.33	4.33	4.00	4.13	4.20
DYAD-027	30	F	3.67	3.67	3.33	3.56	3.00	3.33	3.67	3.67	3.33	3.60	3.60
DYAD-028	32	F	4.00	4.33	4.00	4.11	3.67	4.00	4.33	4.33	3.67	4.00	4.20
DYAD-029	27	M	4.33	4.67	4.33	4.44	4.00	4.33	4.67	4.67	4.00	4.33	4.40
DYAD-030	34	F	3.67	4.00									

Appendix C: Reliability Analysis Table

Summary of construct dimensions, item codes, and corresponding internal consistency metrics obtained from the full structural data ($N = 180$).

Construct Variable	Number of Items	Sample Item Code	Pilot Study Cronbach's α	Main Study Cronbach's α	Descriptive Status
Vigor	3	VI1	0.82	0.84	Highly Reliable
Dedication	3	DE2	0.86	0.88	Highly Reliable
Absorption	3	AB3	0.79	0.81	Highly Reliable
Overall Engagement	9	UWES-9	0.87	0.89	Highly Reliable

Tangibles	3	TA1	0.80	0.82	Highly Reliable
Reliability	3	RL2	0.83	0.85	Highly Reliable
Responsiveness	3	RE1	0.85	0.87	Highly Reliable
Assurance	3	AS3	0.88	0.89	Highly Reliable
Empathy	3	EM2	0.81	0.83	Highly Reliable
Overall Service Quality	15	SERVQUAL	0.89	0.91	Highly Reliable
Customer Satisfaction	5	CS1	0.86	0.89	Highly Reliable

Appendix D: Sample Ethics Statement

Institutional Review Board and Ethics Declaration

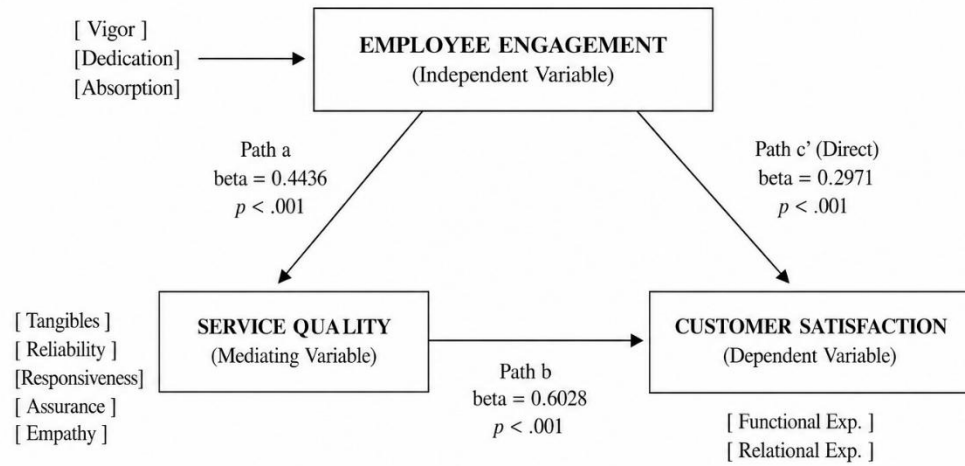
The research protocol, survey instruments, and data gathering procedures for this investigation were reviewed and approved by the Institutional Review Board and Ethics Committee of the University of Santo Tomas, Manila, Philippines. The study complied with all standard national and institutional ethical guidelines for human subjects' research, including:

1. **Voluntary Participation:** All respondents (employees and guests) were informed of the voluntary nature of their participation and were provided with the option to withdraw from the survey at any point without penalty or administrative sanction.
2. **Informed Consent:** Written, active informed consent was obtained from each respondent prior to survey administration.
3. **Anonymity and Confidentiality:** To protect identity, no personally identifiable information (such as names, employee IDs, or contact details) was collected. Survey links were managed using a randomized alphanumeric coding system. All electronic data sheets were secured with advanced, nested cryptographic protection and stored in isolated secure servers.
4. **Data Privacy Compliance:** All procedures complied with the strict regulatory mandates of the Philippine Data Privacy Act of 2012 (Republic Act No. 10173).

Appendix E: Conceptual Framework Figure

The conceptual model, depicting the hypothesized causal relationships and structural pathways tested in this study, is presented in the path diagram below:

STRUCTURAL PATH ANALYSIS MODEL



* Mediation Verification (Sobel Z-test): 4.871 ($p < .001$).

* Indirect Effect (Path a * Path b) = 0.2674, accounting for 47.4% of the Total Effect.

* Total Effect (Path c) = 0.5646 ($p < .001$).



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