

## **DIGITAL SERVICE DELIVERY AND MARKETING PERFORMANCE OF HOTELS IN PORT HARCOURT**

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### **ABSTRACT**

**T**his study conducted an empirical investigation into the correlation between the supply of digital services and the performance of hotels in Rivers State. The research philosophy utilized was the nomothetic and quantitative methodological approach. The study strategy employed was a quasi-experimental approach using cross-sectional data. The research population consists of personnel working in four-star hotels in Rivers State. The sample size for the study includes a total of 120 designated employees selected from 12 hotels. In addition, a total of 10 hypotheses were formulated and subjected to statistical testing using the Spearman's Rank Correlation Coefficient tool. The findings revealed a robust correlation between digital service delivery and organizational performance, indicating a strong positive relationship. Based on the information provided, we determined that digital service delivery is a strategic management instrument that enhances the performance of hotels. Therefore, this study suggests that hotel management should use computerized services in the front-office to generate invoices and bills, facilitate guest check-in and check-out, track guest expenses, and facilitate information sharing within and between different areas of the hotel. Through the utilization of computerized front-office systems, clients may engage in real-time communication with front-office workers, resulting in quick attention to their demands. This research has proved that these offerings enhance the quality of hotel service and increase worker productivity.

**Keywords:** Digital Service Delivery, Organizational Performance, Reservation Systems.

**JEL Classification Code:** M31, O31

## 1. INTRODUCTION

The hospitality business has emerged as a significant sector on a worldwide level and is anticipated to have further expansion. The hotel business has played a significant role in various economies by providing a substantial number of jobs and generating substantial money (Nwakanma *et al.* 2020). According to the United Nations Conference on Trade and Development (UNCTAD, 2020), the worldwide hospitality industry generated more than \$2 trillion in revenue for enterprises in the United States, or 11.3% of global consumption in 2010. There is no doubt that the hotel sector in Nigeria has seen significant development. In 2016, the industry made up more than 48.8% of Nigeria's Gross Domestic Product (GDP) and employed 1.6% of the country's population, according to Kinetic Consulting (2020). Remarkably, these efforts have had favourable outcomes in the nation's economy, consequently assisting in redefining and enhancing the value of the hotel business.

The hotel industry has emerged as a significant economic endeavour, with increasing demands for the use of leisure time (Williams, 2018). As stated by the Hospitality Guild (2020), the hospitality sector encompasses several types of institutions such as hotels, restaurants, fast food chains, food service management, and coffee shops. It is regarded as a subsidiary sector within the tourist supply chain. As to the Hospitality Guild (2020), a hotel can be described as an institution that provides temporary accommodation in exchange for payment. A standard hotel offers essential lodging amenities, such as a room furnished with a bed, along with supplementary amenities like a telephone, Wi-Fi access, a television, or a mini-bar. Additionally, it may offer luxurious amenities such as bathrobes and slippers. In addition, larger hotels may provide additional amenities for guests, including a fitness facility, childcare services, a swimming pool, a business centre, conference facilities, and social function services. The hotel's quality and services are often assessed using a star-rating system, with ratings ranging from one to five stars being the most prevalent (Bilgihan *et al.*, 2021).

The implementation of Information and Communication Technology (ICT) plays a crucial role in the success of hotels, since it enables digital service delivery. It is well recognized that ICT has a significant influence on many cultures and enterprises. Hotels allocate a significant amount of money into developing digital service delivery solutions, with a focus on designing services and products, as well as enhancing hotel performance (Richard 2021). Presidential Hotels in Port Harcourt have implemented a guest satisfaction system in order to enhance the quality of client accommodation and boost marketing efficiency. The utilization of digital service delivery in hotels is becoming increasingly significant in the present era of hospitality (Nwakanma *et al.*, 2020). In the current day, the provision of digital services has emerged as a primary means of gaining a lasting competitive edge and a strategic tool that hotels depend on due to intense competition in the market. Indeed, several scholars argue that the implementation of digital service delivery may enhance customer happiness, improve the quality of service delivery, increase staff productivity, boost profitability, and enhance return-on-investment (Aziz *et al.* 2016).

Prior research has been conducted on the subject of digital service delivery and its impact on organizational performance in several sectors of the economy (Williams 2018; Aziz *et al.*, 2016; Kim & Brymer, 2020; Sirirak *et al.*, 2018). However, the majority of these studies have primarily concentrated on analyzing the impact of digital service delivery on various aspects of hotel performance, such as competitive advantage and customer purchasing behaviour. To the best of the researcher's knowledge, there is a scarcity of research on the correlation between digital service delivery and the overall organizational performance of hotels in advanced countries like the US, UK, Germany, China, and others. The existing literature on the organizational performance of hotels primarily concentrates on specific research areas such as marketing strategy, guest satisfaction, and loyalty. However, there is a limited number of studies that assess organizational performance in terms of service quality, productivity, and marketing effectiveness in the hospitality industry (Lin *et al.*, 2010; Sirirak *et al.*, 2018). This research differed from previous studies by using front-office systems and reservation systems as components of digital service delivery and service quality, and marketing effectiveness as indicators of marketing success, specifically in relation to hotels in Rivers State.

### **1.1 Statement of the Problem**

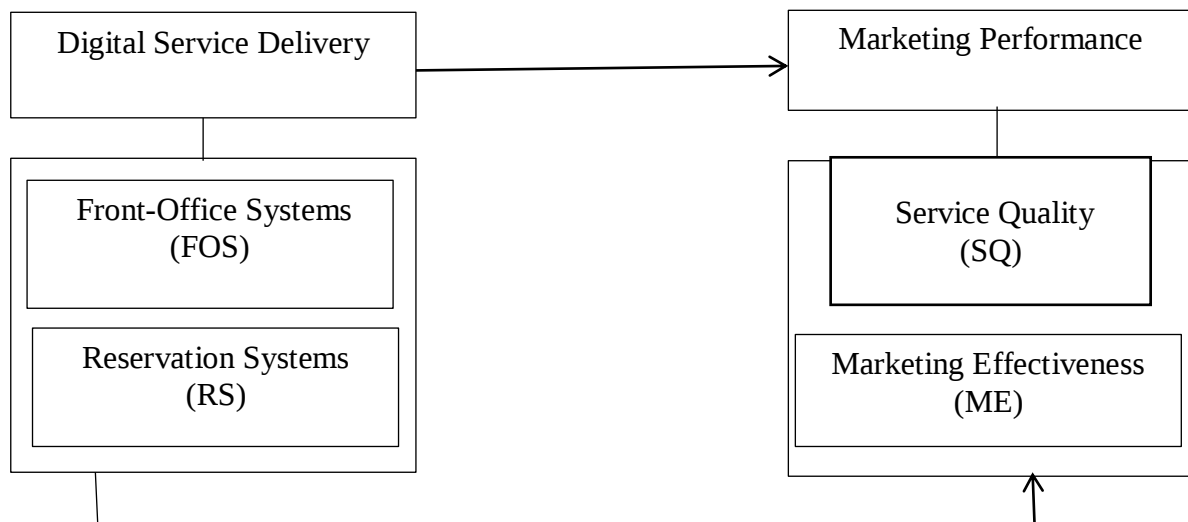
Many hotels strive to implement tactics aimed at enhancing marketing performance as a primary objective. Nevertheless, the problem of sustained productivity and performance in the majority of hotels in Rivers State, particularly during the initial three years of operation, has emerged as a significant factor contributing to hotel failures (Small and Medium Enterprises & Development Agency in Nigeria, SMEDAN, 2020). Not in the Reference List

SMEDAN (2020) reports that the majority of hotels in Rivers State face challenges in consistently enhancing their performance, particularly after three years of operation. Once again, the problem of maintaining consistent quality in service delivery has resulted in a reduction in performance, namely in the ability to continuously provide exceptional value over a period of time. The challenges encompass deficient interpersonal communication, inadequate security infrastructure, diminished efficiency rates, insufficient quality control and customer service, absence of standardisation in operations, sluggish intelligence sharing, elevated operation costs, and a general deterioration in quality service delivery. (SMEDAN, 2020). The aforementioned difficulties have adversely affected hotels' capacity to enhance service quality, productivity, marketing efficacy, and performance. Despite implementing various methods such as lowering hotel rates and beverage pricing, as well as hiring new workers, particularly at the administrative and supervisory level, the issue continues to exist.

Given the issues and conclusions mentioned above, this study aims to examine whether the propositions and findings of previous research on digital service delivery are applicable in the hotels industry in Rivers State. The essential question of whether the successful implementation of digital service delivery will result in enhanced marketing performance demands a response. Can digital service delivery potentially address the aforementioned issues? By using this technique, it is possible that problems such as subpar service quality, decreasing performance, low productivity, inadequate communication with stakeholders, and overall service failures can be eliminated. The resolution to these inquiries constitutes the theoretical and empirical expedition of this investigation.

## 2. LITERATURE REVIEW

### 2.1 Conceptual Framework



**Fig 1.1: Conceptual Framework on Digital Service Delivery and Organisational Performance**

**Sources:** Adopted from Williams 2018; Aziz *et al.*, 2016; Kim & Brymer, 2020; Sirirak *et al.*, 2018

#### 2.1.1 Concept of Digital Service Delivery

The concept of digital service serves as a first stage in comprehending technology as an active participant with the ability to take action, rather than viewing technology just as a tool (Salminen, 2011). The digital service is intended to function as a reliable intermediary between the perspectives of the tool and the user in relation to technology. The suggested notion of digital service can serve as a representation and encapsulation of technological systems with agency in service science, regardless of the implementation technology used. A digital service is a service that is fully implemented by a technological system. It is invoked by a user through a digital Information, Computing, Communication, and Automation Technology (ICCAT) based system, which collaboratively generates the intended output.

Rust and Kannan (2002) define digital services as offers that possess a combination of features often associated with both products and services. The authors posited that digital services revolve on four fundamental qualities, namely intangibility, high

technology, invariance, and scalability (referred to as the "IHIS model"). These features suggest that marketing digital services allows for the advantageous combination of the best aspects from two different worlds. The digital services idea is based on four distinct features, which are outlined below. The list is exploratory in nature and is not intended to be comprehensive. However, its goal is to encompass the most fundamental features.

#### **2.1.1.1 Front-Office Systems**

The front-office department at the hotel is very visible and focuses on facilitating and assisting with guest services and transactions from the moment guests arrive until they depart. The use of digital service delivery in the front-office is rapidly increasing, resulting in streamlined work processes (Ansah *et al.*, 2012). Presently, front-office functions are conducted via a computerised system. Front-office systems are the primary systems that operate continuously, every day of the year. According to Kim *et al.* (2008), hotel staff should use front-office systems while interacting with customers. Front-office systems offer a range of information to staff who directly interact with customers. These systems aim to expedite and secure transactions, with the goal of minimising the time spent on the system and maximising the time devoted to client care. Front-office systems are often developed utilising a user-friendly language and technology (Kim *et al.*, 2008). Digital service delivery is employed in the front-office operations of hotels for tasks such as generating invoices and bills, facilitating guest check-in and check-out, managing bookings and reservations, tracking visitor expenses, and facilitating information sharing within and across hotel departments (Choi & Kimes 2002).

#### **2.1.1.2 Reservation Systems**

As stated by Scaglione and Schegg (2015), a reservation system is a tool that provides precise information to the right people at the right time and place, allowing them to make a purchasing decision and reserve and pay for the desired products. The effective allocation of perishable inventory is vital for hotels, making the progress in these systems the subject of substantial study on digital service delivery in the hospitality industry. The introduction of Computer Reservation Systems (CRS) in the 1970s, Global Distribution Systems (GDS) in the 1980s, and the rise of the Internet in the 1990s drastically transformed the sales processes in the hotel industry (Buhalis & Law 2008). Utilising the Internet as a means of making bookings may be

advantageous for both hospitality establishments and customers. It facilitates instantaneous exchange of information and contributes to cost reduction for both parties (Kim & Kim 2004). In small boutique hotels, the room inventory can be managed and accessed using a basic reservation module offered by a Property Management System (PMS) software. The reservation module possesses the capacity to exhibit the rooms that are now accessible in the hotel, as well as manage the input, storage, and retrieval of bookings. This specific module is located at the property level.

### **2.1.2 Marketing Performance**

Several writers have conducted extensive debates on marketing performance, including Sainaghi (2010) and Dhillon and Vachhrajani (2012). Marketing performance is an often-used dependent variable in marketing research literature. However, it is also a notion that is often ambiguous and weakly defined. Nevertheless, it is crucial to differentiate between overall performance and marketing performance. Performance refers to a collection of financial and non-financial indicators that provide information about the level of success in achieving results (Dhillon & Vachhrajani, 2012). Marketing performance refers to a company's capacity to achieve its goals by efficiently and effectively utilising its available resources. Lambe (2014) defines organisational performance as the capacity of a company to attain preset objectives, such as generating high profits, delivering excellent products, capturing a significant market share, achieving favourable financial outcomes, and ensuring survival, via the implementation of appropriate strategies and activities.

### **2.1.3 Digital Service Delivery and Marketing Performance**

The impact of digital service delivery on the performance of hospitality businesses. The initial implementation of digital service delivery in the tourist industry can be traced back to the 1950s when airlines began utilising the CRS (Ma *et al.* 2003). Nevertheless, the adoption of digital service delivery in the hotel industry did not commence until the late 1970s. In the 1980s, hotels began using GDS, PMS, and hotel CRS systems to improve interoperability and connectivity (Ma *et al.*, 2003). Following that, the analysis of the impact of digital service delivery on the hotel industry has advanced. In his literature analysis on information technology in tourism, Frew (2000b) noted that there were no mentions of the Internet or the Web's impact on tourism before to 1994. According to Ip *et al.* (2011), the introduction of digital service

delivery has led to an unprecedented progress in the hotel industry. Mihalič *et al.* (2015) have identified three unique correlations between digital service delivery and performance in their research. Multiple studies (e.g Ham *et al.* 2005; Lam *et al.* 2007; Piccoli 2008; Karadag & Dumanoglu 2009) have recognised different digital service delivery systems as important assets that can offer a significant competitive edge. Specialists in this domain contend that digital service delivery systems can exert a direct or indirect influence on competitiveness. Additionally, they recognise that allocating resources to digital service delivery may effectively decrease expenses and enhance efficiency.

## **2.2 Theoretical Framework**

### **2.2.2 Diffusion of Innovation Theory**

Everett Rogers introduced the diffusion of innovations hypothesis in 1995, which elucidates the mechanisms, reasons, and pace at which novel ideas and technologies disseminate. This theory, which has been effectively used in the social sciences, is considered one of the oldest theories in communication. The idea elucidates the process by which humans become cognizant of a message via repeated exposure, and then behave in a manner consistent with that message. Rogers (1995) defines innovation as an idea, activity, or thing that is considered novel by a person or another adopting entity (Rogers, 1995). The diffusion of innovation theory elucidates the process by which new business ideas, goods, and services are effectively conveyed to members of a social system through certain channels in a consistent manner. Diffusion, as defined by Boden & Miles (2000), is the transmission of an invention through certain channels over a period of time among individuals within a social system. The theory of Diffusion of Innovations studies and elucidates the process of how a new innovation is adopted. The diffusion of innovation theory relies on four key elements: the social system, invention, communication channels, and time (Rogers, 2003). According to Calvo & Rahrig (1997), the spread of innovation first progresses at a sluggish pace and gradually gains momentum, leading to more positive communication. After implementing an online marketing plan, business leaders establish a social infrastructure that facilitates ongoing engagement with workers, stakeholders, and consumers.

### 3. METHODOLOGY

This study has adopted a philosophical position that is in line with a realist view of existence and an objectivist view of knowledge. This study primarily concentrated on quasi-experimental research, utilising ideas derived from the social and behavioural sciences. Thus, the study utilised a cross-sectional survey strategy to evaluate the various research elements. Primarily, this study will focus just on four-star hotels in Rivers State. This limitation is due to their close proximity and convenience. Additionally, it is worth noting that there are no five-star hotels in the state at the time of this study. As per the Hotel Association of Nigeria (HAN, 2023), there are precisely twelve (12) four-star hotels in Rivers State. They include; Presidential Hotel, Echelen Heights Hotel, Golden Tulip Hotel, Novotel Hotel, Le Meridien Hotels, Beverly Hills Hotels, Habitat Hotel, Swiss International Mabisel, Limewood Hotels, Swiss Spirit, Genesis Raventon, and Best Western Hotels.

This research will specifically focus on specific positions within each of the hotels. The positions encompassed in this include general managers, assistant managers, head of IT, human resource managers, marketing manager, operations manager, procurement manager, food & beverage manager, accountant/auditor, and store officers. The research target population consists of the top ten positions across the twelve hotels. According to the analysis provided, the research includes a total of 120 senior staff members. Given the reasonable target population size of 120, there was no necessity to conduct sample drawing. Therefore, the researcher will directly approach or contact individuals who hold the positions of interest at the hotels mentioned, providing them with copies of the questionnaire.

The instrument consisted of parts A to C. Section A gathered information on the demographics of the respondents, section B gathered information regarding the independent factors, and section C focused specifically on the dependent variables. Section A consists of 4 questions, whereas section B, which includes two variables, contains a total of 8 statement items. Section C has two variables and yields eight statement items. A total of 16 statement items were included in the questionnaire. The variables were measured using a 5-point Likert Scale style, with 5 representing "strongly agree," 4 representing "agreed," 3 representing "not sure," 2 representing "disagree," and 1 representing "strongly disagree." The scale was adjusted to align with the specific aims of this study. The Likert-type scale was selected as a

measurement tool due to its ease of construction, time efficiency, and perceived reliability. This scale allows respondents to answer each statement in the questionnaire, even if the statements do not directly relate to the attitude being studied (Kothari, 2009).

Furthermore, this study largely concentrated on evaluating the accuracy and relevance of the data collection tool. The tool underwent a comprehensive evaluation by experts in the disciplines of management and ICT. With respect to face validity, the instrument contains statement items that clearly and accurately describe the elements in each situation and are easily understood and readable by respondents.

### Factor Analysis

This sub-part presents factor loading values of all studied instruments and loadings were above the value of 0.60. The standardized factor loadings ranged from 0.70 to 0.99 as they appeared in tables below. Additionally, composite reliability (CR) and average variance extracted (AVE) will be calculated. All these values were above the threshold value of 0.70. The AVE values were above 0.50, which was acceptable (Hair *et. al*, 2010). It is also expected that CR is higher than AVE.

**Table 3.2: Discriminant Validity**

| Construct | FOS         | RS          | SQ          | ME          |
|-----------|-------------|-------------|-------------|-------------|
| FOS       | <b>0.95</b> | 0.353       | 0.381       | 0.401       |
| RS        | 0.353       | <b>0.94</b> | 0.268       | 0.444       |
| SQ        | 0.381       | 0.268       | <b>0.96</b> | 0.343       |
| ME        | 0.401       | 0.444       | 0.343       | <b>0.94</b> |

**Source: Computed from Pilot Study CFA results**

Table 3.2 shows that the average variance retrieved above the criterion of 0.5 in all situations. Specifically, the front office system has a variance of 0.95, the reservation system has a variation of 0.94, the service quality has a variance of 0.96, and the marketing effectiveness has a variance of 0.94. The table clearly demonstrates that the square root of average variance retrieved (shown in bold) for each construct is much greater than the off-diagonal components of the correlation matrix, which indicate the correlation between the constructs. Consequently, the achievement of discriminant validity has been confirmed.

The reliability of the instruments was assessed using the Cronbach Alpha test. Existing research indicates that a coefficient alpha of 0.7 (70%) or above is seen to be credible, as stated by Kumar (2010). Nunnally (1978) advocated for a widely acknowledged standard of 0.70 (70%) for assessing the reliability of measurement devices using Cronbach Alpha. Sekaran (2003) states that reliabilities within the range of 0.7 are generally regarded acceptable, while reliabilities beyond 0.8 are considered good. The findings of this examination were presented in the subsequent section of this investigation.

In addition, this study utilised Spearman's Rank Correlation Coefficient to examine the four hypotheses that were suggested. This tool was utilised to determine the existence of a correlation between the independent and dependent variables, as well as to discover the magnitude and direction (positive or negative) of the connection. All analyses will be conducted using Statistical Package for the Social Sciences (SPSS) version 25.

#### 4. RESULTS AND DISCUSSION

##### 4.1 Response Rate

One hundred and twenty (120) copies of questionnaires were administered to respondents as explained in the methodology. The results of the questionnaire distribution and retrieval are shown in table 4.1.

**Table 4.1: Questionnaire Response Rate**

| Questionnaire        | Frequency | Percent |
|----------------------|-----------|---------|
| Distributed          | 120       | 100%    |
| Retrieved and Usable | 98        | 82%     |
| Not retrieved        | 10        | 8%      |
| Discarded            | 12        | 10%     |

**Source: Survey Data 2024**

Table 4.1 above shows a total of one hundred and twenty (120) copies of questionnaires distributed. Ninety-eight (98) of 82% copies of questionnaires were retrieved. Twelve (12) copies of questionnaires of 16.2% were discarded. Ninety-

eight (98) representing 82% of the total copies of questionnaires distributed was useful in the study.

## 4.2 Test of Hypotheses using Spearman Rank Order Correlation

### Test of Hypothesis One

**H<sub>01</sub>:** There is no significant relationship between front-office systems and service quality of hotels in Rivers State.

**Table 4.2: Correlation Analysis showing the relationship between of front-office systems and service quality.**

|                |                                      | Correlations         |                 |
|----------------|--------------------------------------|----------------------|-----------------|
|                |                                      | Front-Office Systems | Service Quality |
| Spearman's rho | Corr Coefficient                     | 1.000                | .912**          |
|                | Front-Office Systems Sig. (2-tailed) | .                    | .000            |
|                | N                                    | 98                   | 98              |
|                | Corr Coefficient                     | .912**               | 1.000           |
|                | Service Quality Sig. (2-tailed)      | .000                 | .               |
|                | N                                    | 98                   | 98              |

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

*Source: Field Survey Data, 2024, SPSS 22.0 Output*

**Decision:** The result above indicates a Spearman Rank Correlation Coefficient of 0.912 and a probability value of 0.000. This finding suggests a robust and positive correlation between front-office systems and the level of service provided by hotels in Rivers State. Thus, we reject the null hypothesis and accept the alternative hypothesis based on the probability value (0.000) being less than the significance threshold of 0.05. Front-office systems have a substantial impact on the service quality of hotels in Rivers State.

### Test of Hypothesis Two

**H<sub>02</sub>:** There is no significant relationship between front-office systems and marketing effectiveness of hotels in Rivers State.

**Table 4.3: Correlation Analysis showing the relationship between of front-office systems and marketing effectiveness**

| Correlations      |                            |                      | Front-Office<br>Systems | Marketing<br>Effectiveness |
|-------------------|----------------------------|----------------------|-------------------------|----------------------------|
| Spearman's<br>rho | Front-Office<br>Systems    | Corr.<br>Coefficient | 1.000                   | .908**                     |
|                   |                            | Sig. (2-tailed)      | .                       | .000                       |
|                   |                            | N                    | 98                      | 98                         |
|                   | Marketing<br>Effectiveness | Corr.<br>Coefficient | .908**                  | 1.000                      |
|                   |                            | Sig. (2-tailed)      | .000                    | .                          |
|                   |                            | N                    | 98                      | 98                         |

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

*Source: Field Survey Data, 2024, SPSS 22.0 Output*

**Decision:** The result above indicates a Spearman Rank Correlation Coefficient of 0.908 and a probability value of 0.000. This finding suggests a robust and favourable correlation between front-office systems and the marketing success of hotels in Rivers State. Thus, we reject the null hypothesis and accept the alternative hypothesis, as the probability value (0.000) is less than the significance threshold of 0.05. Front-office systems have a substantial impact on the marketing success of hotels in Rivers State.

### Test of Hypothesis Three

**H<sub>03</sub>:** There is no significant relationship between reservation systems and service quality of hotels in Rivers State.

**Table 4.4: Correlation Analysis showing the relationship between of reservation systems and service quality**

| Correlations   |                         |  | Reservation Systems | Service Quality |
|----------------|-------------------------|--|---------------------|-----------------|
| Spearman's rho | Correlation             |  | 1.000               | .958**          |
|                | Reservation Coefficient |  |                     |                 |
|                | Systems Sig. (2-tailed) |  | .                   | .000            |
|                | N                       |  | 98                  | 98              |
|                | Correlation             |  | .958**              | 1.000           |
|                | Service Coefficient     |  |                     |                 |
|                | Quality Sig. (2-tailed) |  | .000                | .               |
|                | N                       |  | 98                  | 98              |

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

*Source: Field Survey Data, 2024, SPSS 22.0 Output*

**Decision:** The result above indicates a Spearman Rank Correlation Coefficient of 0.958 and a probability value of 0.000. This finding demonstrates a robust and positive correlation between reservation systems and the quality of service provided by hotels in Rivers State. Thus, we reject the null hypothesis and accept the alternative hypothesis, as the probability value (0.000) is less than the significance threshold of 0.05. There is a strong correlation between reservation systems and the level of service provided by hotels in Rivers State.

#### **Test of Hypothesis Four**

**H<sub>04</sub>:** There is no significant relationship between reservation systems and marketing effectiveness of hotels in Rivers State.

**Table 4.5: Correlation Analysis showing the relationship between of reservation systems and marketing effectiveness**

| Correlations   |                         |                 | Reservation Systems | Marketing Effectiveness |
|----------------|-------------------------|-----------------|---------------------|-------------------------|
| Spearman's rho | Reservation Systems     | Correlation     | 1.000               | .829**                  |
|                |                         | Coefficient     |                     |                         |
|                |                         | Sig. (2-tailed) | .                   | .000                    |
|                | Marketing Effectiveness | N               | 98                  | 98                      |
|                |                         | Correlation     | .829**              | 1.000                   |
|                |                         | Coefficient     |                     |                         |
|                |                         | Sig. (2-tailed) | .000                | .                       |
|                |                         | N               | 98                  | 98                      |

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

*Source: Field Survey Data, 2024, SPSS 22.0 Output*

**Decision:** The result above shows a Spearman Rank Correlation Coefficient of 0.829 and a probability value of 0.000. This finding suggests that there is a robust and favourable correlation between reservation systems and the marketing performance of hotels in Rivers State. Thus, we reject the null hypothesis and accept the alternative hypothesis based on the probability value (0.000) being less than the significance threshold of 0.05. There is a strong correlation between reservation systems and the marketing performance of hotels in Rivers State.

### 4.3 Discussion of the Findings

This section of the chapter discusses the stated findings of the study on the relationship between supply chain agility and performance.

- i. **Front office systems significantly and positively correlate with marketing performance and as such enhances indices such as service quality and marketing effectiveness.**

Overall, the results of hypothesis one, two, and three suggest that front office systems have a favourable and substantial correlation with marketing success, including factors such as service quality and marketing effectiveness. Contrary to this, existing investigations have shown comparable results when compared to these findings. Piccoli (2008) and Karadag and Dumanoglu (2009) discovered that digital service

delivery systems can have a direct or indirect effect on competitiveness. They also acknowledge that investing in digital service delivery can cut costs and improve productivity, making it a valuable capacity. According to studies conducted by Karadag and Dumanoglu (2009) and Kettinger *et al.* (1994), it has been argued that investments in front office systems do not have a significant impact on a company's value, performance, or competitive advantage. These findings generally support the theory of the digital service delivery paradox. The authors said that implementing digital front office systems has a favourable impact on company performance. They suggest that during the period of implementing digital service delivery, businesses often face decreases in market share or profit, which may be attributed to competition.

- ii. **Reservation systems have a significant and positive relationship with marketing performance and as such enhances indices such as service quality and marketing effectiveness.**

The results from hypotheses seven, eight, and nine indicate that there is a strong and statistically significant correlation between the reservation system and marketing performance. The primary purpose of utilizing reservation systems in the hotel business is to enhance performance (Ham *et al.*, 2005). Research on the correlation between reservation systems and company success in hospitality organizations is growing. Existing literature has shown a clear and positive correlation between reservation systems and both organizational production and efficiency. For example, Byrd and Turner (2001) and Sahadev and Islam (2005) have demonstrated this association.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The findings indicate that the dimensions of digital service delivery, including front-office systems and reservation systems, have a major role in enhancing the marketing effectiveness of hotels. The results on the dimensions of digital service delivery, including front-office systems and reservation systems, have a substantial favourable impact on the attainment of marketing performance in hotels, particularly in terms of service quality and marketing effectiveness.

- i. The findings on the correlation between front-office systems and marketing performance (namely service quality and marketing effectiveness) demonstrated a significant and favourable influence.

- ii. Based on the third and fourth hypotheses, the study indicates that there is a large and favourable influence between reservation systems and the performance of hotels in terms of service quality, productivity, and marketing effectiveness.

Based on the aforementioned findings and conclusions, the following recommendations were proposed:

- i. Hotel management should implement computerized systems in the front-office to generate invoices and bills, facilitate guest check-in and check-out, track guest expenses, and facilitate information sharing within and across hotel departments. Through the utilization of computerized front-office systems, clients are able to engage in real-time communication with front-office workers, resulting in quick attention to their demands. This research has verified that these offerings enhance the quality of hotel service and increase worker productivity.
- ii. Hotel strategists should implement comprehensive guest service systems, including electronic door locks, electronic notifications for do-not-disturb/make-up-room requests, in-room telephones, in-room entertainment options, electronic minibars, internet access, in-room printing capabilities, energy management systems, and energy switches. These gadgets are particularly intended to offer extra services and features within hotel rooms. They have been proven to enhance visitors' perception of service quality and act as an effective marketing method to promote the hotel through good word-of-mouth and referral marketing. These factors contribute to the enhancement of marketing effectiveness and overall performance of the hotel.
- iii. Hotel management have to establish and utilize Computer Reservation Systems (CRS) for managing their online sales and marketing. Additionally, it enables hotel management to promote their prices and room availability to be accessed by sales channels that are employing the CRS, such as travel agents. The CRS serves as a primary tool for disseminating information, namely on the availability of rooms and corresponding pricing, among hotels within a specific geographical area. Using the internet as a reservation method may be advantageous for both hospitality businesses and clients. It allows for real-time information

transmission, reduces expenses, and improves service quality for both sides. Networking the CRS enhances hotel efficiency, marketing effectiveness, speedier communications, and efficient administration of data and effective flow of information.

**Competing Interest:** The authors declare that there is no competing or conflicting interest in this manuscript.

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