TOURISM LOGISTICS MANAGEMENT INFLUENCING LOGISTICS PERFORMANCE, SATISFACTION, AND LOYALTY OF TOURISMS IN SONGKHLA PROVINCE.

Piyaaon Junton¹, Sutthathip Kamthornphiphatthanakul²

Master's Degree Student¹, Advisor², Master Degree of Business Administration Logistics and Supply Chain Management, Ramkhamhaeng University

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Abstract: The objectives of this research are to (1) study the context and logistics management system for tourism (2) study the components of tourism logistics management and the efficiency of logistics management of tourist attractions in Songkhla province (3) study logistics management for tourism that affects logistics management efficiency, satisfaction, and loyalty of tourists in Songkhla province (4) study way to develop the efficiency of logistics management of tourist attractions in Songkhla province. The researcher used Mixed Methodology. The secondary data of qualitative research were analyzed with content analysis and the data of quantitative research were collected by questionnaire with 400 tourists in Songkhla province. The statistics used in data analysis were percentage, mean, standard deviation and multiple regression analysis. Quantitative research results revealed that factors of Tourism Logistics Management including Financial Flow, Physical Flow, Customer Service, and Information Flow. Factors of efficiency of logistics management including Reliability, Cost, and Time. Tourism Logistics Management in Physical Flow (β = 0.153), Information Flow (β = 0.155), Financial Flow (β = 0.195), Customer Service (β = 0.338) and efficiency of logistics management all 3 components are Cost (β = 0.229), Time (β = 0.387), Reliability (β = 0.205) are positively effect on Tourism Satisfaction significant. Tourism Satisfaction (β = 0.848) are positively effect on Loyalty of tourisms significant. Qualitative research results revealed from the secondary data, can summarize the results that have Top 5 popular tourist attractions in Songkhla province: (1) Samila Beach (2) Gimyong Market - Santisuk Market (3) Songkhla Old Town (4) Songkhla Lake, and (5) Tinsulanonda Bridge. All 5 tourist destinations have efficient logistics management for tourism. As for guidelines for developing tourism logistics management should be cooperation with relevant agencies in developing basic facilities.

Keywords: Tourism Logistics Management; Efficiency of Logistics Management; Loyalty of Tourisms; Tourism Satisfaction; Tourist Attraction; Songkhla Province

1. INTRODUCTION

Tourism is core business of service industry in the Thai economy, as it generates income and a variety of related businesses, including hotel and accommodation, restaurants, souvenir shops, and transportation services, among others. The World Tourism Organization predicted that by the year 2020, there would be 1.6 billion international tourists. The regions with a growing trend in popular tourism destinations are East Asia and the Pacific, along with countries in Southeast Asia, which have become new and continuously popular tourist destinations (Ministry of Tourism and Sports, 2011). Over the past decade, Thailand has seen a consistent increase in the number of tourists, with an average annual growth rate of approximately 5% (Ministry of Tourism and Sports, 2011). In 2014, the annual growth rate increased to around 14% compared to 2010 (Ministry of Tourism and Sports, 2015). The Department of Business Development has conducted an analysis of the tourism-related businesses in the southern region of Thailand, which consists of four popular tourist provinces and has received various government support measures. It was found that in the first quarter of the year 2022, the overall tourism-related businesses have shown growth compared to the same period in the previous year. Specifically, the restaurant and food business saw an increase of 83%, while the hotel and resort business increased by 169%. The spa business
saw a 100% increase, and businesses that provide reservation services for tourism increased by 400%. These findings indicate a clear sign of economic recovery in the tourism sector, coupled with various stimulus policies, which reflect the adaptability of the Thai business sector to the evolving situation of the COVID-19 pandemic (Thansetthakit, 2022).

In addition, Songkhla province has improved its quality and basic infrastructure to support tourism, which has driven an increase in tourism within the province. The development includes enhancing the city's cleanliness, improving viewpoint landscapes, distinctive road signs, waste management, and upgrading facilities such as restaurants, souvenir shops, and parking areas for tourists (Songkhla Provincial Public Relations Office, 2015). Songkhla province is thus one of the noteworthy tourist destinations for study and learning.

Furthermore, tourism is a tool for improving the quality of life, well-being, and the preservation of local culture and the environment. Developing sustainable tourism through development tools is vital in achieving efficient tourism goals (TAT Review, 2018). Additionally, effective logistics management can serve a diverse range of routes within Thailand to assist tourists in reaching various regional destinations (Wasna Jaroensri-choatkamjorn et al., 2020). Moreover, to accommodate both domestic and international tourists visiting Songkhla province, it is essential to leave a positive impression with well-organized management. This can lead to repeat visits, subsequently generating income for the local community, increasing the contribution to the Gross Domestic Product (GDP), and ultimately raising the national GDP (Thekingsak Chainan, 2012).

Based on the above context, the researcher is interested in studying the impact of logistics management on tourism. This study aims to assess the efficiency of logistics management, tourist satisfaction, and the overall experience of tourists in Songkhla province. The researcher hopes that this research will be beneficial to public organizations, such as the Tourism Authority of Thailand, the Songkhla Provincial Administrative Organization, and private entities. The findings can be used to develop and enhance tourist destinations in Songkhla province, improving logistics management, fostering collaborations with partners for promoting hotel package deals, and facilitating regional tourism through domestic airlines. This can meet the needs of tourists, increase satisfaction, and encourage them to return for future visits.

2. LITERATURE REVIEW

Tourism Logistics Management

The concept and theory of logistics management in tourism involve the integration of logistics management principles with tourism management concepts. In considering the logistics management framework for tourism, it is essential to understand the supply chain of tourism. The concepts and logistics management practices impact all three dimensions of tourism logistics: Physical Flow, Information Flow, and Financial Flow. The value that tourists receive from logistics management in these three dimensions can significantly affect their satisfaction and attachment to various tourist destinations. This knowledge is useful for planning and developing tourism destinations, enhancing competitiveness in the tourism industry, and guiding the development of tourism logistics systems to meet tourists' needs.

The researcher has developed a measurement tool for logistics management in tourism based on the research by Mingsap Kaosadet and Komsan Suriya (2008). This tool combines customer service theory, comprising four dimensions as follows:

1. Physical Flow: Measured through the management of readiness and the connection of the basic infrastructure for tourists traveling to various tourist destinations in Songkhla province.
2. Financial Flow: Measured through financial management to provide services to tourists at different tourist destinations in Songkhla province.
3. Information Flow: Measured through the management of information about tourist destinations in Songkhla province in the form of maps, brochures, information signs, and the use of information technology to facilitate tourists.

Logistics Performance

Logistics Performance refers to evaluating the value of tourists traveling to a destination. It is divided into three aspects: cost, time, and trustworthiness (Department of Industrial Works and Mining, 2014; Rudi Nimran, 2010; Adisai Worathunaput et al., 2009)

The researchers studied the theory of managing logistics for tourism based on the Logistics Performance Assessment (2007) theory and developed a comprehensive tool for assessing the efficiency of logistics management. It consists of three aspects as follows:

1. Cost: Measured by the ability to manage expenses for various tourist destinations in Songkhla Province.
2. Time: Measured by the efficient time management of tourist activities in various locations in Songkhla Province.
3. Reliability: Measured by the accuracy and reliability of information at various tourist destinations in Songkhla Province. Quality products, safe and clean surroundings, and suitable food prepared with hygiene.

Tourist Satisfaction

The study of satisfaction began before 1960, and by 1980, research related to tourist market satisfaction had emerged, leading to an investigation of causal factors affecting tourist satisfaction (Wang, 2009). A good service organization must prioritize customer satisfaction and identify customer needs to plan and respond to those needs with the goal of maximizing satisfaction (Anek Suwannabandit and Paskorn Adulapankit, 2007). Customer satisfaction is critical for subsequent purchasing behavior, which is the ultimate goal of service organizations (Chaisomphol Chaoprakritch, 2009). Therefore, service organizations need to understand customer expectations, perceptions, and satisfaction (Gregorius, 2009), and develop suitable strategies to ensure that tourists' perceptions align with their expectations to maximize satisfaction and encourage repeat business with the organization (Wang, 2016).

The researchers studied the theory of tourist satisfaction based on Cooper and Boniface's theory (1998) and developed a tool to measure tourist satisfaction, which can be assessed through the expression of feelings or emotional responses to various tourist destinations in Songkhla Province.

Loyalty of Tourisms

Loyalty of Tourisms is a key driver of revenue and sustainable existence of organizations in the tourism sector (Robinson and Etherington, 2006). However, nowadays the behavior of tourists has changed from before. There is an increased desire to receive good service quality from tourism (Bowen and Clarke, 2009) and from changes in tourist behavior. This has resulted in many studies of the loyalty of tourists (Wang and Hsu, 2010). Since Loyalty of Tourisms is expressed by repeating tourists and recommending to other for traveling (Chen and Chen, 2010). The nature of Loyalty can change over time (Hayes, 2008), and creating loyalty among tourists is the ultimate goal of success in operations of Tourism industry (Robinson and Etherington, 2006). When tourists are Loyalty, it will lead to growth and sustainability in the tourism industry and contributes to an overall improvement in the quality of life. Therefore, studying the influence of factors affecting tourist loyalty is very important to tourism service organizations (Chen and Tsai, 2007).

The researcher studied the theory of Loyalty of Tourist based on Robinson and Etherington's (2006) and developed a tool to measure loyalty of tourist. This tool measures tourists' attitudes toward various tourist destinations in Songkhla Province, including their likings, being impressed, and responding with various behaviors such as returning and repeat travelling, bringing friends or acquaintances to visit, or recommending others to
visits.

Conceptual framework

![Conceptual Framework Diagram]

**Figure 1: Research Conceptual Framework**

**Research Hypothesis**

<table>
<thead>
<tr>
<th>Research Hypothesis</th>
<th>References</th>
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<tbody>
<tr>
<td>H1 Physical Flow positively affects Tourist Satisfaction</td>
<td>Kringkarn Dokphutsanon and Saiyarot</td>
</tr>
<tr>
<td>H2 Information Flow positively affects Tourist Satisfaction</td>
<td>Mekkaw (2022); Thanapat Nakaja (2020); Phisitwong Saisin and Pat Phisitkasem (2022); Wasna Jaroensri-choatikamjorn et al (2017); Hansakorn Rodrisamut et al (2019); Adisai Warratmapuphrir (2020)</td>
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<tr>
<td>H3 Financial Flow positively affects Tourist Satisfaction</td>
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<td>H4 Customer Service positively affects Tourist Satisfaction</td>
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<td>H5 Tourist satisfaction positively affects the cost efficiency of Logistics Performance</td>
<td>Kanok Boonsak et al (2018); Thekingsak Chainan (2012); Thanapat Nakaja (2020); Malivan Pinna (2015)</td>
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<td>H6 Tourist satisfaction positively affects the time efficiency of Logistics Performance</td>
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<tr>
<td>H7 Tourist satisfaction positively affects the reliability efficiency of Logistics Performance</td>
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<tr>
<td>H8 Tourist satisfaction positively affects the Loyalty of Tourisms</td>
<td>Kanok Boonsak et al (2018); Puangpen Sobkhontod (2018); Sunisa Penso and Puwanart Saengsirirote (2012); Sutthathip Kamthornphiphatthanakul (2015)</td>
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**Research Methodology**

This research is a mixed-method study, combining qualitative and quantitative research. In the quantitative research, the researcher collected data from a convenience sample of 400 tourists traveling to Songkhla province. The questionnaire was structured into five parts:

Part 1: Questions related to personal factors and tourist behavior.
Part 2: Questions related to logistics management factors for tourism.
Part 4: Questions related to factors affecting the cost efficiency of logistics management.
Part 5: Questions related to factors affecting tourist loyalty.
Parts 2 to 5 used a 5-level Likert scale. The content validity of the questionnaire was verified using the Index of Content Validity (IOC) by three qualified experts, with an IOC value exceeding 0.5. The pre-test was conducted with a sample group of 30 individuals, and the variables had Cronbach’s alpha values greater than 0.70, demonstrating both validity and reliability.

Descriptive statistics, such as percentages, means, and standard deviations, were used to analyze the data. Normality and Multicollinearity of data distribution were also checked. Inferential statistics, specifically Multiple Regression Analysis, were employed to test the research hypotheses. In qualitative research, content analysis was used to identify new findings related to the research objectives.

3. RESEARCH RESULT

The research findings on general information and tourist behavior reveal that most respondents are male, aged between 20-29 years, single, holding a bachelor's degree, employed in the private or state enterprise sector, with an average monthly income exceeding 30,000 Baht. They have frequently visited Songkhla province in the past 2-3 years, with 1-3 visits. Most of them travel to multiple tourist destinations in Songkhla, have not stayed overnight, and prefer private transportation, with a preference for Cape Samila.

The research objectives yield the following results:

Objective 1: Popular Tourist Destinations

The top 5 popular tourist destinations are (1) Cape Samila, (2) Kimyong Market – Santisuk Market, (3) Old Town Songkhla, (4) Songkhla Lake, and (5) Tinsulanonda Bridge. All five destinations have clear signage along the routes, effective promotion, distribution of maps showing access routes and connections to other tourist destinations. Additionally, there are tourism service centers providing information daily, convenient facilities such as restrooms, gender-specific restrooms, souvenir shops, parking spaces, and ATMs for tourists' cash needs.

Objective 2: Logistics Management for Tourism

The overall opinion of respondents on the efficiency of tourism logistics management, including the four components, is high ($X = 3.85$). When considering the average score for each component, financial flow has the highest average ($X = 3.90$), followed by physical flow ($X = 3.86$), customer service ($X = 3.83$), and information flow with the lowest average ($X = 3.81$). The overall opinion of tourists regarding the efficiency of logistics management is high ($X = 3.87$). Looking at the average score for each component, trustworthiness has the highest average ($X = 3.90$), followed by cost ($X = 3.87$), while time has the lowest average ($X = 3.85$).
Note: *Statistical significance at the 0.05 level (1.96 ≤ t-value < 2.576), **Statistical significance at the 0.01 level (2.576 ≤ t-value < 3.290), ***Statistical significance at the 0.001 level (t-value ≥ 3.290)

**Figure 2: Results of multiple regression analysis**

From picture 2; Objective 3: Relationship between Logistics Management and Tourist Satisfaction

Regarding Physical flow ($\beta = 0.153$) and information flow ($\beta = 0.155$), there is a statistically significant positive impact on tourist satisfaction at a significance level of 0.05. Financial flow ($\beta = 0.195$) also has a statistically significant positive impact on tourist satisfaction at a significance level of 0.01. Customer service ($\beta = 0.338$) has the most substantial statistically significant positive impact on tourist satisfaction at a significance level of 0.001. The overall variance explained ($R^2$) is 0.610. In terms of logistics management efficiency for tourism, cost ($\beta = 0.229$) and time ($\beta = 0.387$) both have statistically significant positive impacts on tourist satisfaction at a significance level of 0.001. Trustworthiness ($\beta = 0.205$) also has a statistically significant positive impact on tourist satisfaction at a significance level of 0.01. The overall variance explained ($R^2$) is 0.600. Tourist satisfaction ($\beta = 0.848$) has a statistically significant positive impact on the overall well-being of tourists at a significance level of 0.001. The overall variance explained ($R^2$) is 0.719. Details are presented in Figure 2.

**Objective 4: Recommendations for Logistics Management Improvement**

The development strategies to enhance the efficiency of logistics management for tourist destinations in Songkhla include the need to collaborate with relevant individuals or organizations to develop basic infrastructure. This involves improving mass transportation systems, increasing the installation of ATMs, enhancing various security systems, and implementing effective promotional activities. Training programs for employees or relevant personnel should also be conducted to improve tourist services.

**Results Discussion**

Hypothesis 1: The logistics management for tourism, specifically physical flow, has a positive impact on tourist satisfaction. The regression coefficient is **0.153**, which is statistically significant at the **0.05** level. This suggests that physical flow, such as diverse transportation options, contributes significantly to the efficiency and added value for tourists. Varied transportation routes empower tourists to choose efficient and effective travel paths. Songkhla province, with its diverse infrastructure, provides numerous travel options, including private cars and public transportation. This leads to increased accessibility to various tourist destinations. Although these locations may not be far from each other, a well-connected infrastructure is crucial. This finding aligns with the study by Thekingsak Chaiyak (2012), where tourists expressed the need for improvements in logistics management for tourism, especially in enhancing road conditions, increasing the number of roads, and providing various transport modes. In summary, the study supports the hypothesis that physical flow, represented by efficient transportation options and well-connected infrastructure, significantly contributes to the satisfaction of tourists in Songkhla province. The recommendations for improvement include enhancing existing road conditions, increasing the number of roads, providing various transport modes such as bike lanes, improving drainage systems on access routes, and adding lighting for safer travel at night. Additionally, improving public transportation options, ensuring punctuality, and offering fair car rental prices were suggested by tourists for a more equitable travel experience.

Hypothesis 2: Logistics management for tourism, specifically information flow, has a positive impact on tourist satisfaction. The regression coefficient is **0.155**, which is statistically significant at the **0.05** level. This indicates that information flow, such as readily available and accessible data, significantly contributes to tourist satisfaction. Nowadays, tourists can quickly perceive and access information in various locations. They can efficiently search
for tourist attractions, accommodations, and restaurants, enabling them to plan their travels more effectively. This finding aligns with the study by Thekingsak Chainan (2012), where tourists expressed the need for improvements in logistics management for tourism, such as enhanced information services during travel, increased recommendations for nearby attractions, improved internet publicity, and more informative brochures. In conclusion, the study supports the hypothesis that information flow, represented by improved information services during travel, increased recommendations for nearby attractions, enhanced internet publicity, and more informative brochures, significantly contributes to tourist satisfaction in Songkhla province. Recommendations for improvement include enhancing information services during travel, providing more recommendations for nearby attractions, increasing internet publicity, and producing more informative brochures to facilitate efficient travel planning.

Hypothesis 3: Logistics management for tourism, specifically financial transactions, positively influences tourist satisfaction. The regression coefficient is 0.195, and it is statistically significant at the 0.01 level. This suggests that the financial flow, including convenient payment options such as credit cards, QR code applications, and accessible ATMs, significantly contributes to tourist satisfaction. The abundance of financial services, including payment methods for accommodations, hotels, resorts, and entrance fees to attractions, supports the convenience of payment for tourists. The financial landscape in Songkhla province facilitates various payment options, aligning with the findings of Vorathanaputhi et al. (2020), which highlighted the necessity of providing convenient financial services for tourists. The availability of diverse payment channels, including credit card transactions, QR code applications, and accessible ATMs, fulfills the convenience needs of tourists for easy transactions during their travels. This aligns with the current societal trend towards a cashless society, where tourists increasingly prefer online payment methods for goods and services, contributing to a more secure and efficient travel experience. In conclusion, the study supports Hypothesis 3, indicating that the financial flow, characterized by various payment options and financial services convenience, significantly influences tourist satisfaction in Songkhla province. Recommendations for further improvement include continuously enhancing and diversifying financial services, ensuring the security and ease of payment methods, and aligning with the evolving preferences of tourists in the digital era.

Hypothesis 4: Customer service in tourism logistics positively influences tourist satisfaction. The regression coefficient is 0.338, and it is statistically significant at the 0.001 level. This indicates a strong positive relationship between customer service and tourist satisfaction. The importance of customer service in the contemporary societal context is highlighted, as evident from the high average rating for food and beverage vendors, suggesting that tourists find satisfaction in the convenience of available amenities. The findings align with the research by Thekingsak Chainan (2012), which emphasized the significance of tourist satisfaction with tourism facilities and services, including cleanliness, safety, parking, rest areas, and hygiene of restrooms. Additionally, the study indicates that tourists have a desire to provide feedback or suggestions for service improvement. In conclusion, Hypothesis 4 is supported by the data, indicating a substantial positive impact of customer service in tourism logistics on tourist satisfaction. Recommendations for further enhancement involve continuous efforts to improve and maintain facilities and services, encourage customer feedback, and foster collaboration for effective tourism management.

Hypothesis 5: Tourist satisfaction positively influences the efficiency of logistics management in terms of cost. The regression coefficient is 0.229, and it is statistically significant at the 0.001 level. This implies a noteworthy positive association between tourist satisfaction and the cost efficiency of logistics management. The satisfaction of tourists contributes significantly to the perceived value of the visit, suggesting that the cost of accommodation in Songkhla province is perceived as reasonable. The results are in line with the perceptions of tourists, indicating that visiting Songkhla province is considered a worthwhile investment. However, there is room for improvement in the perception of accommodation costs, as reflected by the lowest average rating in this aspect. This corresponds with the findings of Adisai Warratnapuphrit et al. (2020), emphasizing the importance of tourists planning their travel, accommodation, and dining choices efficiently within their budget constraints. In conclusion, Hypothesis 5 is supported by the data, signifying the positive impact of tourist satisfaction on the cost efficiency of logistics management. Recommendations for further enhancement involve strategic planning to
optimize the perceived value of the tourist experience and addressing any concerns regarding accommodation costs to improve overall satisfaction.

Hypothesis 6: Tourist satisfaction positively influences the efficiency of logistics management in terms of time. The regression coefficient is 0.387, and it is statistically significant at the 0.001 level. This indicates a substantial positive relationship between tourist satisfaction and the time efficiency of logistics management. Tourists' contentment plays a crucial role in minimizing travel time-related expenses, suggesting that prices for goods, products, food, and services are perceived as reasonable. The results align with the notion that efficient travel, marked by short travel durations, contributes to cost-effective logistics management. Furthermore, the standardization of prices for various goods and services, along with the development of well-connected tourist routes, is crucial. This includes creating efficient one-day travel models for each route, each characterized by unique features, such as the one-day tour route in Songkhla province. These efforts aim to provide diverse and appealing options for tourists, in line with the recommendations of Worrathanapun et al. (2020), emphasizing the importance of tourists being able to quickly purchase goods, food, and services during their travels. In conclusion, Hypothesis 6 is supported by the data, indicating the positive impact of tourist satisfaction on the time efficiency of logistics management. Recommendations include further development of well-connected tourist routes and the standardization of prices to enhance the overall satisfaction and efficiency of tourist experiences.

Hypothesis 7: Tourist satisfaction positively influences the reliability of logistics management. The regression coefficient is 0.205, and it is statistically significant at the 0.01 level. This indicates a statistically significant positive association between tourist satisfaction and the reliability of logistics management. The results suggest that the efficient and reliable management of tourist destinations contributes to overall tourist satisfaction. Well-managed tourist sites, including accurate and up-to-date information about tourism, clear signage, reliable public transportation schedules, and well-maintained facilities, are likely to enhance the credibility and trustworthiness of the tourist experience. This aligns with the findings of Ohtakarn and Patumthong (2013), emphasizing that the most influential factor in shaping tourists' behavioral intentions is the perceived quality of service in terms of reliability. In conclusion, Hypothesis 7 is supported by the data, indicating that tourist satisfaction positively influences the reliability of logistics management. Recommendations include continued efforts to efficiently manage tourist destinations, providing accurate and reliable information, clear signage, and well-maintained facilities to enhance the overall tourist experience.

Hypothesis 8: Tourist satisfaction positively influences the loyalty of tourists. The regression coefficient is 0.848, and it is statistically significant at the 0.001 level. This indicates a highly significant positive relationship between tourist satisfaction and tourist loyalty. The results suggest that the satisfaction of tourists in Songkhla province significantly contributes to their loyalty. The province's strategic location, connecting various provinces and regions, along with well-developed transportation networks, has likely contributed to tourists' positive perceptions. The efficient logistics management and the short travel time have played a key role in encouraging repeat visits and positive word-of-mouth recommendations, aligning with the findings of Rudi Limaputra and Krairoek Pinkew (2015), who emphasize that satisfied tourists are more likely to engage in repeat visits. In conclusion, Hypothesis 8 is strongly supported by the data, indicating that tourist satisfaction significantly influences the loyalty of tourists.

RECOMMENDATION

Recommendations include further enhancing the logistics and transportation infrastructure, promoting efficient management of tourist destinations, and leveraging the strategic geographical location to attract more repeat visitors and positive recommendations.

REFERENCES