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The Link between Physical Evidence, Customer Satisfaction and Customer Loyalty: An Empirical Analysis



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ABSTRACT

KEYWORDS Keywords:

Physical Evidence; Customer Satisfaction; Customer Loyalty; SFM.

Conflict of Interest Statement:

The author(s) declares that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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Purpose: This study aims to examine the effect of physical evidence on customer loyalty mediated by customer satisfaction at Shadow Edge Park Jayapura Cafe. The hypothesis is that customer satisfaction mediates the impact of physical evidence on customer loyalty.

Research Design and Methodology: The method used was descriptive quantitative with a survey design. Data were collected from 120 Shadow Edge Park Jayapura Cafe consumers through questionnaires. The data were analyzed using Structural Equation Modeling (SEM) with AMOS 22 software.

Findings and Discussion: The results show that physical evidence positively and significantly influences customer satisfaction, mediating this influence on customer loyalty. The findings support the Servicescapes theory, suggesting that physical elements such as interior design, cleanliness, and ambiance of the café are key factors that influence customer satisfaction and loyalty.

Implications: Café managers should focus on managing physical evidence elements to increase customer satisfaction and loyalty. Further research is needed to explore factors such as social interaction and service quality that may influence customer loyalty. Future studies could expand geographic and cultural coverage to test the consistency of these findings.

Introduction

In the highly competitive café industry, maintaining and improving customer loyalty is not just a marketing strategy but a fundamental necessity that affects business sustainability. Loyal customers are likely to make repeat visits, recommend the café to others, and leave positive reviews, contributing to increased revenue and business reputation (Yum & Yoo, 2023). Therefore, understanding and managing the factors that influence customer loyalty is crucial for café managers. One critical factor influencing customer loyalty is the concept of physical evidence in café services. Physical evidence refers to the physical elements consumers can observe and create perceptions of service quality (Zygiaris et al., 2022). These elements include interior design, cleanliness, equipment display, ambiance, and other physical attributes in the cafe environment. Physical evidence serves as aesthetic support and directly affects consumer comfort and satisfaction (Gomez Lacap et al., 2023). For example, a comfortable and clean atmosphere can create a positive experience that makes consumers feel at home and want to return (Ryu et al., 2012).

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In the context of café services, physical evidence plays a vital role in shaping consumers' image and expectations. When physical elements are managed well, consumers feel valued and believe that the café prioritizes quality and comfort (Bujisic et al., 2014). Conversely, poor physical evidence can lead to dissatisfaction and reduce consumers' intention to return (Qin & Prybutok, 2009). Therefore, this study examines how physical evidence affects customer loyalty mediated by customer satisfaction, specifically in a Cafe Shadow Edge Park Jayapura case study. With a better understanding of these dynamics, it is hoped that cafe managers can design more effective strategies for increasing customer loyalty through optimal physical evidence management. Recent research on physical evidence and customer loyalty shows a significant relationship between physical elements in the service environment and customer satisfaction and loyalty. Several studies have highlighted the importance of physical evidence as an integral component of marketing strategy and service management. For example, research by Bitner (1992) suggests that physical evidence can influence consumers' perceptions of service quality and overall ambiance, which affects their satisfaction and loyalty. Another study by Bowe et al. (2022) examined the influence of ambiance and environmental design on visitor satisfaction in various recreational areas. The results showed that lighting, layout, and cleanliness significantly influenced consumer satisfaction, positively impacting return visit intentions. This research reinforces the argument that physical evidence is an aesthetic support and key to creating a positive consumer experience. Furthermore, a study by Kandampully et al. (2015) examined the impact of interior design and restaurant ambiance on customer satisfaction and loyalty. The results of this study show that a comfortable and attractive atmosphere significantly increases consumer satisfaction, which in turn increases their loyalty. This study confirms that physical evidence is essential in creating a pleasant consumer experience and encouraging loyal behavior. However, while this study provides valuable insights, several limitations must be noted. Many existing studies focus on a limited geographical context, often covering only a specific region without considering cultural variations and consumer preferences in other areas (Bujisic et al., 2014). In addition, most of these studies were conducted in restaurants and leisure venues, while studies specific to cafes, especially in areas such as Jayapura, are still minimal. This creates a gap in the literature that needs to be filled to gain a more comprehensive understanding of how physical evidence affects consumer loyalty in different contexts (Monferrer et al., 2019b).

This research identifies significant gaps in existing literature, specifically related to the impact of physical evidence in cafes in the Jayapura area. While much research has been conducted on service quality and consumer trust, very little has specifically explored the role of physical evidence in the context of cafes in Jayapura (Yum & Yoo, 2023). This gap is significant because physical evidence, such as interior design, cleanliness, and ambiance, can impact consumers' perceptions and purchasing decisions. Therefore, this study aims to fill this gap by providing new insights into how these elements influence consumer behavior in an under-researched area. In its contribution, this research refers to relevant previous studies to provide a richer context. Research (Hosnan, 2016) on the role of physical evidence in services and research by Bowe et al. (2022) on the service environment suggest that physical aspects are highly influential in shaping consumer perceptions. However, this study challenges these findings by showing that in the context of cafes in Jayapura, other factors, such as local culture and consumers' unique preferences, also play a significant role. Thus, this study not only extends the findings of other authors but also offers a new perspective that is more specific and contextual.

The main objective of this study is to examine the effect of physical evidence on consumer loyalty mediated by customer satisfaction at Cafe Shadow Edge Park Jayapura. This research aims to understand better how physical elements in a cafe environment can influence consumer perceptions and behavior. Thus, this research is expected to provide applicable insights for cafe managers in designing more effective service strategies to increase consumer loyalty. This research is expected to accomplish several things. First, this research will identify the elements of physical evidence that influence consumer satisfaction and loyalty the most. Second, this research will explain how customer satisfaction mediates the relationship between physical evidence and customer loyalty. Third, this study will offer practical recommendations for café managers in optimizing physical evidence elements to increase customer satisfaction and loyalty. This study differs from previous research in several significant ways. First, this study focuses on an underrepresented geographical context, namely

Jayapura, which provides a new perspective on the physical evidence and consumer loyalty literature. Second, this study not only explores the direct relationship between physical evidence and customer loyalty but also examines the mediating role of customer satisfaction, providing a more comprehensive insight into this dynamic. With a holistic and contextual approach, this research is expected to make meaningful contributions in theory and practice, offering guidance for café managers to improve service quality and customer loyalty.

Literature Review

Physical Evidence Concept

Physical evidence is the elements in the service environment that consumers can observe and shape their perception of the quality of service provided. In the café industry, physical evidence includes various components that directly affect consumer experience. Interior design, for example, serves as an aesthetic element and contributes to consumers' comfort and atmosphere. An attractive and functional design can increase positive perceptions of the café and create an inviting environment. Cleanliness is another component of physical evidence that significantly impacts consumer satisfaction. A clean environment reflects high standards in operational management and demonstrates attention to detail, increasing consumer trust and comfort (Gomez Lacap et al., 2023). In addition, ambiance, which includes lighting, music, and layout, plays a vital role in creating a pleasant and memorable experience. The right ambiance can make consumers feel more relaxed and enjoy their time at the café, ultimately increasing the likelihood of repeat visits (Monferrer et al., 2019b). The service management theories underlying the concept of physical evidence emphasize that these physical elements are an integral part of marketing strategy and quality management. Bitner (1992), in his theory of Servicescapes, explains that physical evidence is the physical environment in which services are delivered and in which providers and consumers interact. This environment includes all elements that can influence consumer perceptions, including physical design and layout. Furthermore, this theory emphasizes the importance of alignment between physical elements and consumer expectations and needs. When aspects of physical evidence are managed well, they can enhance perceptions of service quality and positively influence consumer behavior. In the context of cafes, proper interior design, cleanliness, and ambiance management can create a satisfying experience and encourage consumer loyalty. This research explores further how these physical evidence elements can be leveraged to increase consumer loyalty through the satisfaction that results from a superior service experience.

Physical evidence plays a crucial role in shaping consumers' perceptions of the quality of service a business provides, particularly in the café industry. Physical evidence includes various physical elements that consumers can see, touch, and feel, such as interior design, cleanliness, and ambiance. These elements are aesthetic attributes and quality indicators influencing consumers' overall perception and experience. Interior design, for example, can directly affect how consumers rate a café. An aesthetically pleasing and functional space arrangement can create a positive first impression, making consumers feel comfortable and valued. Studies by (Tartaglione et al., 2019) show that the physical environment can influence consumer perceptions through layout, decoration, and comfort. A well-designed environment can increase positive perceptions of service quality, increasing consumer satisfaction and loyalty. Cleanliness is also a critical aspect of physical evidence that affects consumer perception. A clean cafe reflects good management, attention to detail, and consumer health. Conversely, poor cleanliness can lower perceptions of quality and reduce consumers' intention to return (Ryu et al., 2012). Research by Bowe et al. (2022) confirms that a clean and well-maintained environment can increase consumer satisfaction and encourage loyal behavior. Ambiance, including lighting, music, and scents, shapes consumer perceptions. A study by Yum & Yoo (2023) shows that a pleasant atmosphere can increase customer satisfaction by creating a more enjoyable and memorable experience. For example, warm lighting and appropriate music can make consumers feel more relaxed and comfortable, increasing positive perceptions of service quality. As a concrete example, Cafe Shadow Edge Park Jayapura has successfully utilized physical evidence to create positive consumer experience. The cafe has built a good reputation among its customers with its modern interior design, cleanliness, and comfortable atmosphere. This study further examines how physical evidence influences consumers' perceptions of service quality at this café and how consumer satisfaction can increase loyalty. By better understanding the role of physical evidence, café managers can design more effective strategies to improve service quality and build consumer loyalty.

Customer Satisfaction as a Mediator

Consumer satisfaction is a complex and multidimensional concept that reflects the extent to which consumer expectations of a product or service are met. In general, consumer satisfaction can be defined as a feeling of pleasure or disappointment that arises after comparing the perceived performance of a product or service with its expectations. The dimensions of customer satisfaction include various aspects such as product quality, service quality, price, and emotional factors that influence the consumer experience. The theories that explain how consumer satisfaction is formed vary in their approach and focus. One of the most influential theories is the Cognitive Dissonance Theory proposed by Leon Festinger. According to this theory, consumers experience satisfaction when no gap between expectations and perceived performance exists. If there is a gap, consumers experience dissonance or discomfort, reducing satisfaction (Oliver et al., 1997).

The Expectancy-Confirmation model developed by Oli is also very relevant in explaining customer satisfaction. This model proposes that consumer satisfaction is formed by comparing pre-purchase expectations and actual performance after purchase. When actual performance matches or exceeds expectations, consumers are satisfied. Conversely, if performance does not meet expectations, consumers will feel dissatisfied. Another critical theory is the Three-Component Model, which highlights three main components of consumer satisfaction: cognitive, affective, and conative. The mental component relates to the rational assessment of service performance, the affective component relates to the emotional feelings evoked by the service, and the conative component relates to the intention or tendency to perform specific actions, such as returning or recommending the service to others.

Customer satisfaction is crucial in the relationship between physical evidence and customer loyalty. Physical evidence, including interior design, cleanliness, and ambiance, can influence consumers' perceptions of the quality of service received. However, the direct impact of physical evidence on consumer loyalty is often mediated by the level of satisfaction consumers feel. In this mechanism, physical evidence creates a satisfying experience, encouraging consumers to return and recommend the café to others. Several empirical studies have supported this mediation mechanism. For example, research by (Vieira et al., 2023) shows that well-maintained physical environment elements increase consumer satisfaction, increasing consumers' intention to return and become loyal customers. This study confirms that the positive experience created by physical evidence plays a vital role in shaping consumer satisfaction, affecting loyalty. Ryu et al. (2012) found that a pleasant atmosphere and attractive interior design significantly increase restaurant customer satisfaction. Their research shows that customer satisfaction mediates between physical evidence elements and customer loyalty, suggesting that physical elements alone cannot ensure loyalty without high satisfaction. In addition, research by Bitner (1992) on Servicescapes underscores the importance of the physical environment in creating a positive consumer experience. Bitner found that well-managed physical evidence elements can significantly increase consumer satisfaction, increasing their loyalty to the service provided (Monferrer et al., 2019).

Consumer Loyalty

Consumer loyalty is vital in the service industry, including the café business, reflecting consumer commitment to a brand or company. Consumer loyalty involves consumers' repeated behavior in choosing a particular product or service and the tendency to recommend that product or service to others. Indicators of consumer loyalty include frequency of repeat visits, increased purchase volume, recommendations to friends or family, and positive reviews provided by consumers (Lacap et al., 2023). The importance of customer loyalty in the café business cannot be ignored. Consumer loyalty not only guarantees stable and recurring revenue but also contributes to the establishment of a positive image and strong business reputation. Loyal consumers tend to be more tolerant of minor mistakes, more forgiving of shortcomings and ignore competitors' attempts to attract them. This makes

customer loyalty an asset that requires attention and strategic management from café managers (Monferrer et al., 2019).

In the context of the café business, customer loyalty is particularly relevant due to the intense competition in the industry. Consumers have many choices of cafes with unique offerings, making it a challenge to maintain their loyalty. Café managers must understand that creating a consistently satisfying experience is key to building and maintaining customer loyalty. Physical evidence, such as attractive interior design, comfortable ambiance, and cleanliness, is essential in creating a positive experience that encourages consumers to return (Yum & Yoo, 2023). A better understanding of the factors influencing loyalty will help café managers design environments and services that meet and exceed consumer expectations, creating a loyal and sustainable customer base. Consumer loyalty results from a complex interaction between various factors influencing consumer experiences and perceptions. Physical evidence and customer satisfaction are two key factors that significantly influence customer loyalty in the context of the café business. Physical evidence includes interior design, cleanliness, and ambiance, forming a strong first impression and pleasant consumer experience (Ali et al., 2016). On the other hand, consumer satisfaction results from comparing consumers' expectations and the actual performance they receive. When service performance matches or exceeds expectations, consumers will feel satisfied, which can then increase their loyalty (Monferrer et al., 2019). Studies by Oliver (1980) show that customer satisfaction is crucial in the relationship between various service attributes and customer loyalty. High satisfaction encourages repeat visits and increases the likelihood of consumers recommending services to others (Gomez Lacap et al., 2023).

Several empirical studies have highlighted the relationship between physical evidence, consumer satisfaction, and loyalty. For example, research by Bowe et al., 2022) revealed that well-maintained and attractive physical environment elements can increase consumer satisfaction, increasing their intention to return and become loyal customers. The study by Ryu et al. (2012) also showed that a comfortable atmosphere and attractive interior design significantly increase consumer satisfaction, strengthening their loyalty. Furthermore, research by Bitner (1992) on Servicescapes confirms that well-managed physical evidence can create a satisfying environment for consumers, improve their perception of service quality, and encourage loyal behavior. This research suggests that café managers should focus on managing physical elements and other aspects influencing consumer satisfaction to build a loyal customer base (Yum & Yoo, 2023).

Research Design and Methodology

This research uses a quantitative descriptive method with a survey design to explore the relationship between physical evidence, customer satisfaction, and customer loyalty at Cafe Shadow Edge Park Jayapura. Quantitative descriptive research measures and analyzes statistical data to test predetermined hypotheses. Surveys are used as a research design to collect relevant data regarding the prevalence, distribution, and relationship between variables in the population under study. This research design includes several steps, from problem identification and determining variables and indicators to data collection and analysis. This research was conducted at Cafe Shadow Edge Park Jayapura from December 2023 to January 2024. The study population included all consumers who had visited and purchased products at the cafe, with a sample size of 120 respondents. The research variables consist of dependent variables (consumer loyalty), independent variables (physical evidence), and mediating variables (customer satisfaction). Data were collected through a questionnaire measured on an interval scale and then analyzed using the SEM method operated through the AMOS program. The analysis process includes validity, reliability, and classical assumption tests to ensure the validity and reliability of the instrument. With this approach, the study aims to examine the relationship and influence between variables in depth, providing insights that can be applied to increase customer loyalty through optimal physical evidence management and customer satisfaction.

Findings and Discussion

Findings

Table 1 shows that all items on Consumer Satisfaction, Consumer Loyalty, and Physical Evidence variables have undergone validity and reliability tests with excellent results. Each item has a significant estimated value, with a high critical ratio (C.R.) value and a probability (P) that shows significance at a very low level (marked with ***). This indicates that the items are consistently able to measure the intended construct. The convergent validity value for each item is above 0.7, which means that each item strongly correlates with the measured construct. This indicates that each item is valid when measuring the dimensions established in the study. The reliability test with the estimated value shows consistent results above 0.7 for all items, indicating that the measuring instrument used has good internal consistency. This means the measurements taken can be relied upon to produce stable and reproducible data in various situations. These results indicate that the research instruments used are valid and reliable in measuring Customer Satisfaction, Customer Loyalty, and Physical Evidence. This is important because high validity and reliability increase the credibility and reliability of research results, providing a strong basis for further analysis and interpretation of results. Thus, this research can provide accurate and reliable insights into the relationship between physical evidence, customer satisfaction, and customer loyalty at Cafe Shadow Edge Park Jayapura.

Table 1. Research Instrument Test

Variables	Item	Estimate	S.E.	C.R.	Р	Convergent Validity	Reliability
Consumer Satisfaction	MORTGAGE	1.0	nan	nan	None	0.928	0.928
	KPL	0.907	0.054	16.82	***	0.895	0.895
	FE	0.855	0.064	13.412	***	0.823	0.823
	HP	0.787	0.078	10.148	***	0.716	0.716
	BK	0.946	0.051	18.392	***	0.921	0.921
Consumer Loyalty	MPB	1.0	nan	nan	None	0.826	0.826
, ,	MKO	0.93	0.087	10.672	***	0.801	0.801
	MKTP	1.173	0.09	13.037	***	0.904	0.904
Physical Evidence	PK	1.0	nan	nan	None	0.843	0.843
	PRL	0.875	0.078	11.171	***	0.815	0.815
	DSN	1.015	0.075	13.537	***	0.914	0.914
	FSL	1.017	0.083	12.306	***	0.866	0.866

Source: Data processed using AMOS 22 (2024)

Table 2. Results of Data Normality Testing and Mahalanobis Distance

Variables	Skew	c.r. Skew	Kurtosis	c.r. Kurtosis	Mahalanobis d-squared	р1	p2
FSL	-0.295	-1.320	-0.669	-1.495	29.434	0.003	0.335
DSN	-0.291	-1.300	-0.243	-0.544	29.027	0.004	0.080
PRL	-0.365	-1.633	-0.356	-0.797	26.523	0.009	0.096
PK	-0.314	-1.402	-0.240	-0.537	-	-	-
MKTP	-0.502	-2.245	-0.336	-0.751	-	-	-
MKO	-0.435	-1.947	-0.218	-0.487	<u>-</u>	-	-
MPB	-0.487	-2.178	-0.367	-0.820	• •	-	-
BK	-0.176	-0.788	-0.186	-0.416	• •	-	-
HP	-0.066	-0.297	-0.448	-1.001	-	-	-
FE	-0.206	-0.922	-0.186	-0.415	<u>-</u>	-	-
KPL	-0.380	-1.698	-0.386	-0.864	<u>-</u>	-	-
MORTGAGE	-0.210	-0.938	-0.542	-1.211	-	-	-
Observation No. 71	-	-	-	-	29.434	0.003	0.335
Observation No. 78	-	-	=	-	29.027	0.004	0.080
Observation No. 11	-	-	-	-	26.523	0.009	0.096
Observation No. 36	-	-	-	-	0.898	1.000	1.000

Source: Data processed using AMOS 22 (2024)

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significance at a very low level (marked with ***). This indicates that the items are consistently able to measure the intended construct. The convergent validity value for each item is above 0.7, which means that each item strongly correlates with the measured construct. This indicates that each item is valid when measuring the dimensions established in the study. The reliability test with the estimated value shows consistent results above 0.7 for all items, indicating that the measuring instrument used has good internal consistency. This means the measurements taken can be relied upon to produce stable and reproducible data in various situations. These results indicate that the research instruments used are valid and reliable in measuring Customer Satisfaction, Customer Loyalty, and Physical Evidence. This is important because high validity and reliability increase the credibility and reliability of research results, providing a strong basis for further analysis and interpretation of results. Thus, this research can provide accurate and reliable insights into the relationship between physical evidence, customer satisfaction, and customer loyalty at Cafe Shadow Edge Park Jayapura.

Table 2 shows the results of the model assumption test, where two main aspects are considered: data normality and multivariate outliers. The normality test results show that the data distribution for most variables has skew and kurtosis values close to zero, which means that the data distribution is symmetrical. Although some variables have c.r. Skew and c.r. Based on the context and sample size, kurtosis values outside the range of -1.96 to 1.96 are still acceptable for statistical analysis. In the multivariate outlier's test, high Mahalanobis distances on specific observations, such as numbers 71, 78, and 11, indicate the presence of significant outliers. Very low p1 values on these observations indicate statistically substantial outliers. The next step is to identify and deal with these outliers and consider data transformation, if necessary, to ensure the assumptions of further analysis are met. Overall, these results show that although there are some deviations from normality and multivariate outliers, the data are still within acceptable limits for further analysis using AMOS 22. It is essential to ensure appropriate steps are taken in dealing with these outliers to obtain more accurate and valid analysis results.

The SEM model used in this study to evaluate the relationship between Physical Evidence, Customer Satisfaction, and Customer Loyalty includes several latent variables measured by several indicators. Model fit indices displayed include Chi-square, Probability, CMIN/DF, RMSEA, CFI, TLI, GFI, and AGFI, all used to assess how much the model fits the data processed using AMOS 22. In this model, Physical Evidence is hypothesized to influence Consumer Satisfaction, which influences Consumer Loyalty. SEM allows researchers to understand how these variables are interconnected and how strong their influence is in the context of this study.

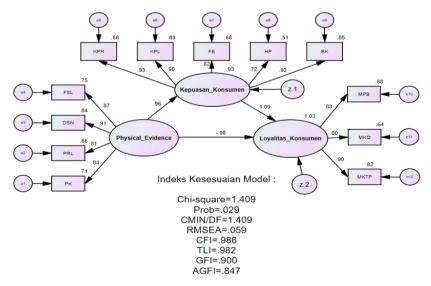


Figure 1. Structural Equation Modeling (SEM) Equation

Note:

Physical Evidence = Physical Evidence Kepuasan Konsumen = Customer Satisfaction Loyalitas Konsumen = Customer Loyalty Figure 1 shows the Structural Equation Modeling (SEM) model that illustrates the relationship between Physical Evidence, Customer Satisfaction, and Customer Loyalty, with Physical Evidence measured through the variables FSL, DSN, PRL, and PK Customer Satisfaction through the variables KPR, KPL, FE, and HP; and Customer Loyalty through the variables MPB, MKO, and MKTP. Model fit indices such as Chi-square, CMIN/DF, RMSEA, CFI, TLI, GFI, and AGFI show that this model fits well with the data. The chi-square value of 1.409 and a probability of 0.029 indicate a good fit, as well as the CMIN/DF value of 1.409, smaller than 2, and the RMSEA value of 0.059, more diminutive than 0.08. The CFI index of 0.986 and TLI of 0.982, both greater than 0.95, indicated a good model. The GFI value of 0.900 also showed a good fit, although the AGFI of 0.847 was slightly below the recommended value of 0.90. Despite some deviations, the model is acceptable and suitable for further analysis using AMOS 22.

Table 3. Regression Analysis Results

Parameters			Estimat e	S.E.	C.R.	Р	Sobel test statistic	One-tailed probability	Two-tailed probability
Consumer Satisfaction	<	Physical Evidence	1.048	0.081	12.975	***	-	-	-
Consumer Loyalty	<	Consumer Satisfactio n	0.941	0.226	4.156	***	-	-	-
Consumer Loyalty	<	Physical Evidence	-0.072	0.235	-0.306	0.76	3.96353205	3.692e-05	0.0

Source: Data processed using AMOS 22 (2024)

Table 3 shows some important things related to the relationship between variables in the tested model. First, the effect of Physical Evidence on Customer Satisfaction is highly significant, with an estimated value of 1.048, a critical ratio (C.R.) of 12.975, and a very small p-value (), indicating that this relationship is powerful and significant. Second, the effect of Customer Satisfaction on Customer Loyalty is also substantial, with an estimated value of 0.941, a C.R. of 4.156, and a very small p-value (), indicating that an increase in customer satisfaction significantly increases customer loyalty. However, the direct effect of Physical Evidence on Consumer Loyalty is insignificant, with an estimated value of -0.072, C.R. -0.306, and a p-value of 0.760. This indicates that Physical Evidence does not directly affect Customer Loyalty but mediates Customer Satisfaction. The indirect effect analysis shows that Physical Evidence affects Consumer Loyalty with an indirect effect value of 1.049, which is reinforced by the results of the Sobel test with a Sobel test statistic of 3.96353205 and tiny onetailed and two-tailed probabilities (0.00003692 and 0.00007385). This confirms that the mediation of Customer Satisfaction in the relationship between Physical Evidence and Customer Loyalty is significant. Overall, these results underscore the critical role of Customer Satisfaction as a mediator in increasing Customer Loyalty through good Physical Evidence management at Cafe Shadow Edge Park Jayapura.

Discussion

Physical Evidence on Consumer Loyalty

Physical evidence does not affect consumer loyalty because consumers of Shadow Edge Park Jayapura Cafe feel that the facilities provided by the cafe are not strong enough to be the reason for them to be loyal and make repeated product purchases. Based on the theories underlying this hypothesis, as expected, Physical Evidence, including interior design, cleanliness, and atmosphere, should significantly positively affect Consumer Loyalty. Research on the impact of physical evidence on consumer loyalty presents a complex picture. While some studies suggest that physical evidence, such as the store environment, can influence customer satisfaction and loyalty (Han & Ryu, 2009; Mukherjee & Shivani, 2013), others find that it has a limited effect (Hung et al., 2019). The role of perceived value in mediating the relationship between marketing strategy and customer loyalty is also highlighted (Li & Green, 2011). However, the relationship between physical evidence and loyalty is further complicated by factors such as sales promotions (Huang et al., 2006) and unethical behavior (Kenhove & Steenhaut, 2003). Overall, the influence of physical evidence on consumer loyalty appears to be multifaceted and context-dependent. There are several reasons why these results differ from

previous research findings or existing theories. One possibility is the specific context of this study, namely Cafe Shadow Edge Park in Jayapura. Local conditions, culture, and consumer preferences in Jayapura may differ from those in other places studied previously. For example, factors such as local culture and consumer preferences towards the cafe's physical aspects may vary, affecting how Physical Evidence is received and valued by consumers.

The implications of the results of this study are significant. Cafe managers in Jayapura, notably Cafe Shadow Edge Park, need to consider that relying solely on Physical Evidence may not be enough to build customer loyalty. They need to focus on other aspects of customer experience, such as personalized interactions, service quality, and competitive pricing (Ali et al., 2016). In addition, these results suggest that further research is needed to understand how other factors interact with Physical Evidence in influencing consumer loyalty. For future studies, it is essential to explore further the variables that affect the relationship between Physical Evidence and Consumer Loyalty. Future research could expand geographical and cultural coverage to see if these findings are consistent across different contexts. In addition, longitudinal studies that follow changes in consumers' perceptions of Physical Evidence and their loyalty over time could provide deeper insights (Yum & Yoo, 2023).

Physical Evidence of Customer Satisfaction

This study shows that Physical Evidence positively and significantly affects Consumer Satisfaction at Shadow Edge Park Jayapura Cafe. This finding reinforces the belief that physical elements such as interior design, cleanliness, and cafe ambiance play an essential role in shaping consumer experience and satisfaction. These studies align with our results, which show that physical elements at Shadow Edge Park Jayapura Cafe, such as the available products, adequate facilities, and a comfortable atmosphere, significantly increase customer satisfaction. Research consistently demonstrates physical evidence's vivacious and significant impact on consumer satisfaction in various cafe settings. Research consistently demonstrates physical evidence's vivacious and significant effect on consumer satisfaction across multiple cafe settings. Studies in Indonesia (Damayanti et al., 2020; Faisal et al., 2019; Handayani et al., 2022; Muhajirin, 2021; Putra, 2024) and Kenya (Githiri, 2016) have found that the quality of the physical environment, including factors such as cleanliness, layout, and ambiance, significantly influences customer satisfaction. This is further supported by research in the hotel industry, which found a positive relationship between place ambiance and customer satisfaction (Abdullah & Rozario, 2009). Other factors, such as social interaction and service quality, often influence customer satisfaction more than physical elements alone. This research suggests that while physical evidence is essential, other factors should also be considered to increase customer satisfaction. Nonetheless, the findings of this study show that in the context of Kafe Shadow Edge Park Jayapura, physical evidence has a significant influence and should not be ignored.

There are several reasons why the results of this study may differ from previous research findings or existing theories. First, the specific context of Shadow Edge Park Café in Jayapura may play an important role. Consumers in Jayapura may have strong preferences for physical elements such as the interior design and ambiance of the café, which differ from consumer preferences in other locations. In addition, the management of Kafe Shadow Edge Park Jayapura may have created a beautiful and adequate physical environment, significantly increasing consumer satisfaction. This suggests that the local context and management's specific efforts may influence how much physical evidence influences customer satisfaction. The implications of the results of this study are significant. For café managers in Jayapura, notably Shadow Edge Park Café, it is essential to continue to pay attention to and manage the physical elements in their service environment. Providing quality products, maintaining cleanliness, and creating a comfortable atmosphere are key to increasing customer satisfaction. In addition, these results show that investments in improving physical evidence can yield positive results in terms of customer satisfaction. Café managers can use these findings to design more effective strategies to attract and retain customers. For future studies, it is essential to explore further how elements of physical evidence interact with other factors, such as social interaction and service quality, in influencing customer satisfaction. Future research could expand geographic and cultural coverage to see if these findings are consistent across different contexts. In addition, longitudinal studies that follow changes in consumers' perceptions of physical evidence and their satisfaction over time can provide deeper insights (Yum & Yoo, 2023). Research can also focus on analyzing consumer segmentation to see if there are differences in responses to physical evidence based on demographics, psychographics, or consumer behavior. With a deeper understanding of the factors that influence consumer satisfaction, café managers can design better environments and services to meet the needs and preferences of their consumers.

Customer Satisfaction on Customer Loyalty

This study reveals that Consumer Satisfaction positively and significantly influences Consumer Loyalty at Shadow Edge Park Jayapura Cafe. This finding supports the hypothesis that consumers tend to become more loyal when they feel satisfied with the products and services they receive. Consumer satisfaction at this cafe is triggered by good product quality, adequate facilities, and a comfortable atmosphere, all of which contribute to a positive experience that increases consumer loyalty (Gomez Lacap et al., 2023). The theory underlying this hypothesis is the Consumer Satisfaction Theory, which states that satisfaction results from comparing consumer expectations and the actual performance they receive. Oliver et al. (1997) state that when service performance exceeds or matches expectations, consumers will feel satisfied, increasing their loyalty. This theory is supported by various studies that show a close relationship between satisfaction and consumer loyalty. For example, Gomez Lacap et al. (2023) found that consumer satisfaction significantly influences repurchase intentions and word-of-mouth recommendations. Similarly, research by Monferrer et al. (2019) shows that delighted customers tend to become loyal customers and contribute to increased company revenue.

A body of research consistently supports consumer satisfaction's vivacious and significant influence on consumer loyalty. Studies across various industries, including automotive (Grace et al., 2021), green products (Hur et al., 2013), and retail (Septiano & Sari, 2020)], have found that higher levels of customer satisfaction lead to increased loyalty. This relationship is further emphasized in the context of brand loyalty, with customer satisfaction being a key driver (Ghafoor et al., 2012; Vadavadagi, 2020). The mediating role of consumer satisfaction in the relationship between brand equity and brand loyalty has also been highlighted (Nam et al., 2011). These findings underscore the importance of prioritizing customer satisfaction to foster loyalty. There are several reasons why the results of this study may differ from previous research findings or existing theories. First, the specific context of Shadow Edge Park Jayapura café may play an important role. Consumers in Jayapura may have different preferences and assess satisfaction based on particular aspects, such as the local atmosphere and social interactions at the café. Second, the café management may have successfully created an environment that closely matches the needs and desires of their consumers, which significantly increases satisfaction and loyalty.

The implications of the results of this study are significant for café managers. Recognizing that customer satisfaction directly affects loyalty, café managers should improve product quality, service, and ambiance to satisfy customers. Investing in staff training, improving facilities, and maintaining product quality are some of the strategic steps that can be taken to increase consumer satisfaction. In addition, café managers should continuously monitor and measure consumer satisfaction levels to understand their evolving needs and expectations. For future studies, it is essential to explore how various interaction factors, such as perceived value, trust, and emotional attachment, play a role in consumer loyalty. Future research could expand geographic and cultural coverage to see if these findings are consistent across different contexts. Longitudinal studies that follow changes in consumers' perceptions of their satisfaction and loyalty over time could also provide deeper insights (Monferrer et al., 2019). Research can also focus on analyzing consumer segmentation to see if there are differences in satisfaction responses based on demographics, psychographics, or consumer behavior. For example, do young consumers value a modern and dynamic atmosphere more than older consumers? Or are consumers with a high number of visits more influenced by the physical aspects of the café compared to infrequent visitors? With a deeper understanding of the factors that influence consumer satisfaction and loyalty, café managers can design better environments and services to meet the needs and preferences of their consumers. This will increase satisfaction and loyalty and help build strong long-term relationships with their customers.

Physical Evidence of Consumer Loyalty Through Customer Satisfaction

This study reveals that the Consumer Satisfaction variable can mediate the effect of Physical Evidence on Consumer Loyalty at Shadow Edge Park Jayapura Cafe. These results suggest that Consumer Satisfaction plays an essential role in bridging the relationship between the physical elements of the cafe and consumer loyalty. The theories underlying this hypothesis are Consumer Satisfaction Theory and Mediation Theory. According to the Consumer Satisfaction Theory, satisfaction results from comparing consumer expectations and the performance they receive. Some literature may not fully align with these findings. Social interaction and service quality often influence consumer satisfaction and loyalty more than physical elements alone. This research suggests that while physical evidence is essential, other factors should also be considered to increase consumer satisfaction and loyalty (Monferrer et al., 2019). The difference between the results of this study and previous findings or existing theories may be due to the specific context of Shadow Edge Park Cafe Jayapura. Consumers in Jayapura may have different preferences and assess satisfaction based on particular aspects, such as the local atmosphere and social interactions at the café. The café management may have succeeded in creating an environment that closely matches the needs and wants of their consumers, which significantly increases satisfaction and loyalty.

A range of studies have explored the mediating role of consumer satisfaction in the relationship between various factors and consumer loyalty in the context of cafes and restaurants. Hamidi et al. (2022) found that experiential marketing and value directly influence loyalty, mediated by satisfaction. Mudjiyanti & Sholihah (2022) and Marso & Idris (2022) identified a direct effect of cafe atmosphere and servicescape on satisfaction and loyalty, with satisfaction mediating the latter. Faisal et al. (2019) and Senjaya (2013) also found that price, service quality, and sales location, as well as customer experience quality, influence satisfaction and loyalty, with satisfaction mediating the latter. Kim et al. (2008) and Abdullaeva (2020) both found that relationship quality, including satisfaction, mediates the effect of perceived quality and value on loyalty. Lastly, Cetinzoz (2019) found a direct impact of the physical environment on satisfaction and loyalty. These studies collectively suggest that consumer satisfaction is crucial in the relationship between various factors and consumer loyalty in the cafe and restaurant industry.

The implications of the results of this study are significant for café managers. Recognizing that customer satisfaction directly affects loyalty and plays a mediating role between physical evidence and loyalty, café managers should focus on improving the quality of products, services, and ambiance to ensure customers remain satisfied. Investing in staff training, improving facilities, and maintaining product quality are some of the strategic steps that can be taken to increase customer satisfaction. In addition, café managers should continuously monitor and measure consumer satisfaction levels to understand their evolving needs and expectations. For ongoing studies, it is essential to explore how various interaction factors, such as perceived value, trust, and emotional attachment, play a role in consumer loyalty. Future research could expand geographic and cultural coverage to see if these findings are consistent across different contexts. Longitudinal studies that follow changes in consumers' perceptions of their satisfaction and loyalty over time could also provide deeper insights. Research can also focus on analyzing consumer segmentation to see if there are differences in responses to satisfaction based on demographics, psychographics, or consumer behavior. For example, do young consumers value a modern and dynamic atmosphere more than older consumers? Or are consumers with a high frequency of visits more influenced by the physical aspects of the café compared to infrequent visitors? With a deeper understanding of the factors that influence consumer satisfaction and loyalty, café managers can design better environments and services to meet the needs and preferences of their consumers. This will increase satisfaction and loyalty and help build strong longterm relationships with their customers.

Conclusion

The conclusion of this study shows that Customer Satisfaction has a significant and positive influence on Customer Loyalty at Shadow Edge Park Jayapura Cafe. These results also reveal that the Consumer Satisfaction variable can mediate the effect of Physical Evidence on Consumer Loyalty, showing that physical elements in the cafe environment significantly contribute to satisfaction,

ultimately affecting customer loyalty. This research reinforces the hypothesis that when consumers are satisfied with the products and services they receive, they tend to become more loyal, a relationship validated through Structural Equation Modeling (SEM) testing.

This research has essential value both in the context of science and business practice. From a scientific perspective, this study adds to the existing literature by deepening the understanding of the mediating role of customer satisfaction in the relationship between physical evidence and customer loyalty. This suggests that the physical aspects of the service environment, such as interior design, cleanliness, and ambiance, cannot be underestimated in strategies to increase customer satisfaction and loyalty. This research also provides empirical evidence that supports theories such as Consumer Satisfaction Theory and service theory, underscoring the importance of physical elements in creating a positive customer experience.

However, this study is not free from limitations. One limitation is focusing on one specific location, namely Shadow Edge Park Jayapura Cafe, which may have unique characteristics that cannot be generalized to other cafes in different regions or countries. In addition, this study relied on data collected through a survey, which could have been affected by respondent bias. This study did not consider other factors influencing consumer loyalty, such as price, promotions, and social interaction at the café. Expanding geographical and cultural coverage is recommended for future research to see if the findings are consistent across different contexts. Further research could examine other factors shaping consumer loyalty, such as perceived value, trust, and emotional attachment. Longitudinal studies that follow changes in consumers' perceptions of their satisfaction and loyalty over time would provide deeper insights into the dynamics of this relationship. In addition, consumer segmentation analysis can provide a more detailed picture of how different groups of consumers respond to various physical and service elements, allowing café managers to tailor their strategies more precisely.

References

- Abdullaeva, M. (2020). Impact Of Customer Satisfaction On Customer Loyalty In Upscale Ethnic Restaurants. *Theoretical & Applied Science*, 6, 372-375.
- Abdullah, D., & Rozario, F. (2009). Influence of Service and Product Quality towards Customer Satisfaction: A Case Study at the Staff Cafeteria in the Hotel Industry. *World Academy of Science, Engineering and Technology*, 53, 185-190.
- Ali, F., Amin, M., & Cobanoglu, C. (2016). An Integrated Model of Service Experience, Emotions, Satisfaction, and Price Acceptance: An Empirical Analysis in the Chinese Hospitality Industry. Journal of Hospitality Marketing & Management, 25, 449-475. https://api.semanticscholar.org/CorpusID:168110480
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. Journal of Marketing, 56(2), 57-71.
- Bowe, M., Wakefield, J. R. H., Kellezi, B., Stevenson, C., McNamara, N., Jones, B. A., Sumich, A., & Heym, N. (2022). The mental health benefits of community helping during crisis: Coordinated helping, community identification and sense of unity during the COVID-19 pandemic. *Journal of Community & Applied Social Psychology*, 32(3), 521-535. https://doi.org/https://doi.org/10.1002/casp.2520
- Bujisic, M., Hutchinson, J., & Parsa, H. G. (2014). The effects of restaurant quality attributes on customer behavioral intentions. *International Journal of Contemporary Hospitality Management*, 26(8), 1270-1291. https://doi.org/10.1108/IJCHM-04-2013-0162
- Cetinzoz, B. C. (2019). Influence of physical environment on customer satisfaction and loyalty in upscale restaurants. *Journal of Tourism & Gastronomy Studies*, 7(2), 700-716.
- Damayanti, N., Wadud, M., & Roswaty, R. (2020). Pengaruh Kualitas Pelayanan dan Lingkungan Fisik Terhadap Kepuasan Kon sumen pada Cafe Unsilent Palembang. *Jurnal Bisnis, Manajemen, Dan Ekonomi*, 1(1), 23-31. https://doi.org/10.47747/jbme.v1i1.22

- Faisal, M. A., Wahab, Z., & Widiyanti, M. (2019). Effect of Quality Products and Service Quality On Customer Satisfaction in Cafe City Palembang. *International Journal of Scientific and Research Publications (IJSRP)*, 9(5), p8994. https://doi.org/10.29322/ijsrp.9.05.2019.p8994
- Ghafoor, M. M., Iqbal, H., Tariq, U., & Murtaza, F. (2012). Impact of Customer Satisfaction and Brand Image on Brand Loyalty. *Progress in Business Innovation & Technology Management*, 69-77.
- Githiri, M. N. (2016). Influence of Physical Environment on Customer Satisfaction and Return Intention in Kenyan Rated Restaurants. *Asian Journal of Social Science Studies*, 2(1), 11. https://doi.org/10.20849/ajsss.v2i1.82
- Gomez Lacap, J. P., Plaza, M. N., Caballero, J., & dela Cruz, M. (2023). Factors affecting consumer attitude and loyalty: evidence from a Philippine chain of fast-food restaurants' smart retailing technology. *Journal of Science and Technology Policy Management*, *ahead-of-p*(ahead-of-print). https://doi.org/10.1108/JSTPM-09-2022-0159
- Grace, E., Girsang, R. M., Simatupang, S., Candra, V., & Sidabutar, N. (2021). Product quality and customer satisfaction and their effect on consumer loyalty. *International Journal of Social Science*, 1(2), 69-78. https://doi.org/10.53625/ijss.v1i2.138
- Hamidi, R., Ainy, H. P., Rinuastuti, B. H., & Athar, H. S. (2022). The Effect of Experiential Marketing and Experiential Value on Customer Loyalty of Coffee Shops in Mataram City Through Satisfaction as a Mediation Variable. *International Journal of Social Science Research and Review*, 5(3), 67-77.
- Han, H., & Ryu, K. (2009). The Roles of the Physical Environment, Price Perception, and Customer Satisfaction in Determining Customer Loyalty in the Restaurant Industry. *Journal of Hospitality & Mamp; Tourism Research*, 33(4), 487-510. https://doi.org/10.1177/1096348009344212
- Handayani, P. T., Kepramareni, P., & Kusuma, I. G. A. E. T. (2022). The Analysis of the Quality of the Physical Environment, Service and Product on Revisit Intention through Customer Satisfaction at a Coffee Shop in Kintamani-Bali. *European Journal of Business and Management Research*, 7(6), 115-119. https://doi.org/10.24018/ejbmr.2022.7.6.1621
- Hosnan. (2016). Pendekatan Saintifik dan Konstektual dalam Pembelajaran Abad 21. Penerbit Ghalia Indonesia.
- Huang, R., Perloff, J. M., & Villas-Boas, S. B. (2006). Effects of Sales on Brand Loyalty. *Journal of Agricultural & Emp; Food Industrial Organization*, 4(1). https://doi.org/10.2202/1542-0485.1131
- Hung, S.-W., Cheng, M.-J., & Chiu, P.-C. (2019). Do antecedents of trust and satisfaction promote consumer loyalty in p hysical and virtual stores? a multi-channel view. *Service Business*, 13(1), 1-23. https://doi.org/10.1007/s11628-018-0364-y
- Hur, W., Kim, Y., & Park, K. (2013). Assessing the Effects of Perceived Value and Satisfaction on Customer Loyalty: A 'Green' Perspective. *Corporate Social Responsibility and Environmental Management*, 20(3), 146-156. https://doi.org/10.1002/csr.1280
- Kandampully, J., Zhang, T. (Christina), & Bilgihan, A. (2015). Customer loyalty: a review and future directions with a special focus on the hospitality industry. *International Journal of Contemporary Hospitality Management*, 27(3), 379-414. https://doi.org/10.1108/IJCHM-03-2014-0151
- Kenhove, P., & Steenhaut, S. (2003). The relationship between consumers' unethical behavior and customer loyalty in a retail environment. *Journal of Business Ethics*, 44, 261-278.
- Kim, G. S., Park, S., & Oh, J. (2008). An examination of factors influencing consumer adoption of short message service (SMS). *Psychology & Marketing*, 25(8), 769-786.
- Li, M.-L., & Green, R. D. (2011). A mediating influence on customer loyalty: The role of perceived

- value. Journal of Management and Marketing Research, 7(1).
- Marso, M., & Idris, R. (2022). The impact of store atmosphere on customer loyalty through perceived quality and satisfaction: An evidence from boutique industry in Tarakan. *Petra International Journal of Business Studies*, 5(2), 186-197.
- Monferrer, D., Segarra, J. R., Estrada, M., & Moliner, M. Á. (2019a). Service Quality and Customer Loyalty in a Post-Crisis Context. Prediction-Oriented Modeling to Enhance the Particular Importance of a Social and Sustainable Approach. Sustainability, 11(18), 4930. https://doi.org/10.3390/su11184930
- Monferrer, D., Segarra, J. R., Estrada, M., & Moliner, M. Á. (2019b). Service quality and customer loyalty in a post-crisis context. *Sustainability*, 11(18), 4930. https://doi.org/10.3390/su11184930
- Mudjiyanti, R., & Sholihah, M. (2022). The Effect of Cafe Atmosphere on Loyalty through Customer Satisfaction. *Innovation Business Management and Accounting Journal*, 1(1), 18-23.
- Muhajirin, A. T. dan. (2021). Pengaruh Physical Evidence Terhadap Kepuasan Konsumen (Studi Kasus Di Surf Café Kota Bima). *Journal Scientific Of Mandalika (JSM)*, 2(7), 291-298. https://doi.org/10.36312/10.36312/vol2iss7pp291-298
- Mukherjee, S., & Shivani, S. (2013). Influence of Physical Evidence on Service Brand Image Dimensions and Brand Equity. *Indian Journal of Marketing*, 43(6), 15. https://doi.org/10.17010/ijom/2013/v43/i6/36389
- Nam, J., Ekinci, Y., & Whyatt, G. (2011). Brand equity, brand loyalty and consumer satisfaction.

 Annals of Tourism Research, 38(3), 1009-1030. https://doi.org/10.1016/j.annals.2011.01.015
- Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer delight: foundations, findings, and managerial insight. *Journal of Retailing*, 73(3), 311-336.
- Putra, F. V. D. (2024). Effect of Food Quality and Physical Environment on Robucca Café Customer Satisfaction in Malang City. *Review of Management and Entrepreneurship*, 8(1). https://doi.org/10.37715/rme.v8i1.4083
- Qin, H., & Prybutok, V. R. (2009). Service quality, customer satisfaction, and behavioral intentions in fast-food restaurants. *International Journal of Quality and Service Sciences*, 1(1), 78-95. https://doi.org/10.1108/17566690910945886
- Ryu, K., Lee, H., & Kim, W. G. (2012). The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions. *International Journal of Contemporary Hospitality Management*, 24(2), 200-223. https://doi.org/10.1108/09596111211206141
- Senjaya, V. (2013). Pengaruh customer experience quality terhadap customer satisfaction & customer loyalty di kafe excelso tunjungan plaza surabaya: perspektif b2c. *Jurnal Strategi Pemasaran*, 1(1).
- Septiano, R., & Sari, L. (2020). Determination of consumer loyalty through customer satisfaction. Dinasti International Journal of Economics, Finance & Eamp; Accounting, 1(5), 865-878. https://doi.org/10.38035/dijefa.v1i5.622
- Tartaglione, A. M., Cavacece, Y., Russo, G., & Granata, G. (2019). A Systematic Mapping Study on Customer Loyalty and Brand Management. *Administrative Sciences*, 9(1), 8. https://doi.org/10.3390/admsci9010008
- Vadavadagi, P. (2020). A Study on Impact of Customer Satisfaction on Brand Loyalty. *International Journal For Multidisciplinary Research*, 4(4). https://doi.org/10.36948/ijfmr.2022.v04i04.10242

- Vieira, V. A., Wolter, J. S., Araujo, C. F., & Frio, R. S. (2023). What makes the corporate social responsibility impact on Customer-Company identification stronger? A meta-analysis. *International Journal of Research in Marketing*, 40(2), 475-492.
- Yum, K., & Yoo, B. (2023). The impact of service quality on customer loyalty through customer satisfaction in mobile social media. *Sustainability*, 15(14), 11214.
- Zygiaris, S., Alsubaie, M. A., & Rehman, S. U. (2022). Service Quality and Customer Satisfaction in the Post Pandemic World: A Study of Saudi Auto Care Industry. *Frontiers in Psychology*, 13. https://doi.org/10.3389/fpsyg.2022.842141