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ANALYSIS OF THE EFFECT OF SMART TOURISM TECHNOLOGY AND MEMORABLE TOURIST EXPERIENCE ON TOURIST LOYALTY WITH TOURIST SATISFACTION AS A MEDIATING VARIABLE

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Abstract: The involvement of innovative tourism technology in life, especially in tourism activities, plays a vital role in the process. Tourists use smart tourism technology devices to determine the destinations they want to visit. In line with this, tourists who utilize innovative tourism technology will have an impressive travel experience. All experiences tourists gain will later be expressed in images to immortalize their journey or positive comments or comments on innovative tourism technology media. These positive reviews indicate tourist satisfaction, where tourists get more results than expected. Tourists' satisfaction with innovative tourism technology and impressive experiences opens up opportunities for them to consistently use smart tourism technology devices and become more in-depth with information about areas they want to revisit or visit. This research aims to determine the influence of intelligent tourism technology and memorable tourism experiences on tourist loyalty, which is mediated by tourist satisfaction. This research uses a descriptive method with a quantitative approach through questionnaire instruments. The number of respondents used as data sources was 200 using the Probability Sample technique. This research uses Exploratory (Correlational Study), which aims to investigate a phenomenon that occurs or has yet to be explained well before. Data processing in this research used SEM PLS 4.0. The research results show that Smart Tourism Technology has yet to be proven to influence Tourist Satisfaction significantly. In contrast, a Memorable Tourism Experience is proven to influence Tourist Satisfaction significantly, and Tourist Satisfaction significantly influences Tourist Loyalty.

Keywords: Smart Tourism Technology, Memorable Tourism Experience, Tourist Satisfaction, Tourist Loyalty.

INTRODUCTION

Innovative tourism technology is a mobile information system that utilizes physical information from the tourist environment to provide different tourist experiences (Dorcic et al.; S., 2019). According to Xiang et al. (2015), intelligent tourism technology is a technology-based tourism concept with straightforward, detailed, and fast information collection supported by internet access. Technology plays a vital role in collecting, processing, and storing information for future use. In this case, the information can be text, numbers, images, or even vocals. Some of the critical roles of technology in tourism are increasing the reach of information to be conveyed to more tourists, helping to reduce the investment costs made in disseminating information and reducing barriers related to time and distance (Wahab, I.N, 2017). In the cycle, tourists planning a tourist trip have used technology to search for information about tourist destinations, travel accommodations, and lodging. When tourism activities are in progress or have even ended, tourists use social media to share and talk about their experiences. This is indirectly a form of promotion of the tourist destinations they visit.

The attributes of innovative tourism technology are information, accessibility, interactivity, and personalization. According to (Lee et al., 2018), information includes the amount and frequency of information and the integrity and accuracy of information obtained by all participating users of advanced information and communication technology systems. No, and Kim (2015) said that accessibility refers to the

extent to which online travel information sources and services are available and accessible to tourists. With the help of various intelligent tourism technologies, tourists can easily access and use the information provided by tourist destinations. In contrast, interactivity helps in actions such as feedback and active communication. Personalization is the user's ability to receive complete and detailed information to meet their needs.

Examples of intelligent tourism technology that are commonly found in the form of mobile applications that can provide convenience for tourists regarding their travel plans and show the best tourist locations in an area, Q.R. codes as an integrated payment method or as quick access to a site page, a website that contains information about tourist information about the area you want to visit, social media as a means to view and share descriptions of a tourist attraction, intelligent cards, wifi. Then, it developed again into using Augmented Reality (A.R.) and Virtual Reality (V.R.) as an opportunity for tourism. The development of intelligent tourism technology in Indonesia is relatively rapid, as seen from several cities implementing it. For example, Semarang has implemented innovative tourism technology through information media such as downloadable applications, websites, and social media. This application aims to provide complete service and experience to tourists. The city of Bandung has opened the availability of wifi services in public areas, and several tourist destinations have been connected directly to the official website, which contains essential tools in providing information on the distance traveled from the tourist's central position to the destination location, and the City of South Tangerang utilizes tools such as Augmented Reality and Near Field Communication in tourism management.

Tourist experience is a person's abstract assessment of events related to tourism industry activities within themselves, starting from travel preparation, at the destination, and after the trip is completed. As a result, tourism planning must facilitate the creation of an environment for a destination that makes it more attractive to tourists to create a memorable travel experience. Experiences represent the essence and central facet of the tourism industry and have been defined as enjoyable, memorable, and exciting encounters (Kim, H., & So, K.K. F, 2022). Tourists look for authentic, practical, meaningful, multisensory, and transformative experiences when visiting destinations. From the first step, tourists prepare for their trip to the end of their trip, creating memories that will be used for learning and evaluation in the future.

A growing consensus is that tourist destinations must provide customers with memorable tourism experiences. Destinations gain benefits such as competitive advantages, increased income, and customer loyalty from memorable tourism experiences (Bigne et al., M.L., & Morini-Marrero, S, 2020). Positive word-of-mouth about a destination is more likely to come from visitors who have a memorable experience at a tourist destination; this has a positive impact on increasing revenue at a destination and also has a competitive advantage compared to destinations that do not provide memorable experiences to tourists (Chandralal et al., F. R, 2013). So, memorable tourist experiences can be helpful for destination competitiveness, especially in the current tourism era, which has experienced changes with technological developments that strongly influence tourism (Stone et al., E, 2018).

Based on individual evaluations of the travel experience, a memorable experience is constructed selectively from the traveler's experience. As a result, an unforgettable travel experience relies on at least two factors:

1) Tourist experience in a particular reality
2) The process of creating memories related to consumption or experience.

These two factors can be obtained by tourists when the destination meets the tourists' expectations or vice versa. Tourists often use advances in information technology to store or share their experiences. Social media is increasingly relevant in tourism practices influencing destinations and businesses (Munar et al., J.K. S, 2014). The existence of an adequate internet connection at a destination visited by tourists also influences the uploads made by tourists at a particular time.

Unforgettable travel experiences are personal, engage the senses, create emotional, physical, spiritual, intellectual, or social connections, and create lasting memories. Information about holiday travel and experiences is being disseminated in new ways thanks to Internet and social media developments. Travelers can now digitize and share experiences, feelings, and knowledge online more than ever, thanks to social media platforms (Munar et al., J.K. S, 2014). There are several familiar examples of memorable tourism experiences, namely reviews given by tourists or customers when visiting tourist attractions on digital platforms such as Google Maps, Tripadvisor, Traveloka, or other tourism service provider platforms. Reviews given by tourists are driven by the tourist's satisfaction and experience when visiting the place. So, customer satisfaction has an influence that can benefit the destination and also be detrimental to the tourism industry.

Customer satisfaction has been identified as an essential influence on customer loyalty (Leninkumar, V, 2017). Customer loyalty is the attitude of customers who use products or services continuously, formed based on positive experiences after they get an item or use assistance or services and pay for it. Customers

who are satisfied with their transactions will be consistent when they find comfort in the product or service. In terms of the tourism industry, the quality of service, the products provided, the facilities available, and the ease with which customers can reach their needs are some of the many indicators of customer satisfaction. The gap between what tourists expect and what happens when they use tourism products such as attractions, information, public facilities, human resources (H.R.), service, cleanliness, and accessibility is a source of satisfaction and dissatisfaction. So, to meet all customer satisfaction indicators, the tourism industry needs to synergize with technological developments.

With the rise of information technology, all companies have inevitably embraced innovations or experienced their benefits, and the tourism industry is not a particular case (Weaver, D.B.; Moyle, B.D, 2019). Smart devices are increasingly used in the tourism industry, which increases the value of tourism resources and brings significant social and economic benefits. For example, on mobile website platforms, innovative technology allows people to book plane tickets, hotels, and other tourism products (Hew, JJ; Leong, LY; Tan, WH; Lee, V.H.; Ooi, KB, 2018). The existence of reservations made by tourists to travel via smartphone proves that the tourism industry has embraced technological developments to make it easier for tourists to fulfill their tourism needs. This is also balanced by innovation in cities and tourist destinations visited by tourists, such as Smart Tourism Technology, which is being developed in big cities in Indonesia and Jakarta. Technological development has begun to be applied to the tourism industry in Jakarta, such as lodging service providers who have registered on online platforms for lodging service providers such as Traveloka, Agoda, and so on. Then, use electronic cards to access hotel entrances and provide QRIS or other cashless payments to make it easier for tourists to transact at most tourist destinations and hotels in Jakarta. Apart from that, there are several technological innovations in the form of other applications that can be used by tourists when visiting Jakarta to facilitate their tourism activities, namely JAKI and JakLingko which is a transformation of the OK-Otrip Card, which is an integrated transportation system in DKI Jakarta and has become one of the developments of technological innovation to achieve tourist satisfaction in Jakarta. So, technological developments in Jakarta and innovations that synergize with technological developments will make things easier for tourists visiting Jakarta. It can stimulate tourist loyalty to visit Jakarta in the future.

The existence of intelligent tourism technology influences tourists' actions because the four attributes of innovative tourism technology play an essential role in the process. Tourists tend to determine the choice of tourist destinations they want to visit using smart tourism technology devices, where one of the determining factors is to see whether the accessibility and informativeness are good enough. In line with this, tourists who utilize innovative tourism technology will have an impressive travel experience. All experiences tourists gain will later be expressed in images to immortalize their journey or positive comments or comments on innovative tourism technology media. These positive reviews indicate tourist satisfaction, where tourists get more results than expected. Tourists' satisfaction with innovative tourism technology and impressive experiences opens up opportunities for them to consistently use smart tourism technology devices and become more in-depth with information about areas they want to revisit or visit.

The problem in this research is to assess the influence of Smart Tourism Technology and Memorable Tourism Experience on Tourist Loyalty through Tourist Satisfaction. The limitation of this research is that it only focuses on four variables: innovative tourism technology, memorable tourism experience, tourist satisfaction, and tourist loyalty. This research aims to determine the influence of Smart Tourism Technology and Memorable Tourism Experience on Tourist Loyalty through Tourist Satisfaction.

METHOD

This research uses a descriptive and quantitative approach through questionnaire instruments to determine the influence of Smart Tourism Technology and Memorable Tourism Experience on tourist loyalty through tourist satisfaction. This research uses Exploratory (Correlational Study) to investigate a phenomenon that occurs/has not been explained well before. Data analysis uses SEM PLS to test the relationship between variables and test hypotheses. Respondents must choose the answer that suits their wishes in research using a closed questionnaire. Closed questions will help respondents answer quickly and also make it easier for researchers to carry out data analysis on all the questionnaires that have been collected. The questionnaire distribution technique is carried out by distributing questionnaires via Google Forms.

The population in scientific research plays a vital role because of its role in collecting research data and making research accountable. Apart from that, a population is a group combined because it has similar characteristics, according to the author's needs in conducting his research. The type of population used in research can be individuals, artifacts, individuals, or materials. Furthermore, the sample is part of the population. The presence of a sample is also an essential part of determining the population. If you only use the population, the data will be valid because there is no appropriate statement or measurement to describe the data. The author determined the number of respondents used as data sources at 200 people using the

Probability Sample technique. *Probability sampling* is a sampling technique that facilitates all members/individuals to become part of the sampling or sample members.

The method used in this research is Path Analysis. The data analysis method in this research uses a path analysis model, which is used to analyze relationship patterns between variables and can provide or answer mediation questions in a more complicated framework. *Path Analysis* is an analysis method that explains and adds a regression model to two or more causal models that are being compared by researchers and will show cause-and-effect relationships through the image of circles and arrows. The path analysis method is based on the theory of this method, which will use several mediator models that previously could not be understood in the presence of latent variables. Using latent variables and multiple regression analysis will help the author determine the parameter estimates (β) of the two previously determined variables. Because this research also uses SEM (Structural Equation Modeling), path analysis is the correct part of perfecting this research because, through SEM, simplification will be carried out through path analysis processes. One of them is mediation, moderation that has gone through mediation or mediation that has gone through the moderation stage; everything will be able to be tested (Sánchez AF et al., 2021), (Gargoum et al., K, 2016), (Hayes, AF, 2013). SEM simplifies analysis into path analysis, where mediation, moderation, mediated moderation, or moderated mediation can all be tested (Hayes, AF, 2013).

Table 2. Operational Variables

Variable	Dimensions	Measurement Scale
Smart Tourism Technology	STT 1. Accessibility STT 2. Informativeness STT 3. Interactivity STT 4. Personalization	Scale 1 - 5 1 = Strongly disagree 5 = Very much agree
Memorable Tourism Experience	MTE 1. Social Interaction MTE 2. Novelty MTE 3. Destination Enthusiast MTE 4. Learning	
Tourist Satisfaction	TS 1. Fun TS 2. Enjoyment TS 3. Excitement	
Tourist Loyalty	TL 1. Revisit SL 2. Recommendations	

RESULTS AND DISCUSSION

Respondent Profile

Respondents are the source of data in this research in discussing the hypotheses that have been formulated. In this study, researchers have also grouped respondents based on gender and regional origin. The author found that the number of respondents from Ulujami was the largest, with 46 respondents. Tourists from Bintaro occupied the second position, with 41 individuals; Gandaria and Senayan occupied positions 3 and 4, with 35 and 30 respondents, respectively. Kebayoran occupied the last position with 23 individuals. The author found that the number of respondents of one gender was more significant, with 101 respondents, while the number of respondents of the female gender was 74.

Reliability Test and Validity Test

Table 3. Validity and Reliability Test Results

Variable	Indicator	Original Sample	AVE	Composite Reliability	Conclusion
MTE	MTE 1	0.877	0.812	0.924	Valid

	MTE 2	0.910			Valid
	MTE 3	0.916			Valid
	MTE 4	0.901			Valid
STT	STT 1	0.899	0.798	0.918	Valid
	STT 2	0.899			Valid
	STT 3	0.884			Valid
	STT 4	0.890			Valid
TL	SL 1	0.955	0.894	0.902	Valid
	SL 2	0.936			Valid
T.S	TS 1	0.897	0.818	0.897	Valid
	TS 2	0.894			Valid
	TS 3	0.923			

Source: Processed Data, 2023

The convergent validity test is carried out to determine the validity of each relationship between the indicator and the construct or latent variable. Based on Table

Discriminant Validity Test

Table 4. Fornell Larcker Criterion

	MTE	STT	TL	T.S
MTE	0.901			
STT	0.871	0.893		
TL	0.776	0.748	0.946	
T.S	0.854	0.795	0.754	0.905

Source: Processed Data, 2023

Discriminant validity aims to test to what extent the latent construct is genuinely different from other constructs. A high discriminant validity value indicates that a construct is unique and can explain the measured phenomenon. A construct is valid by comparing the root value of AVE with the correlation value between latent variables. The root value of AVE must be greater than the correlation between latent variables. In Table X, all constructs are proven to have high discriminant validity. This can be seen from the AVE value of each construct being higher than the correlation of that construct with other constructs.

Table 5. Cross Loading

	MTE	STT	TL	T.S
MTE1	0.877	0.748	0.697	0.767
MTE2	0.910	0.790	0.680	0.735
MTE3	0.916	0.766	0.715	0.752
MTE4	0.901	0.831	0.703	0.818
STT1	0.801	0.899	0.654	0.751
STT2	0.797	0.899	0.649	0.675

STT3	0.702	0.884	0.652	0.665
STT4	0.805	0.890	0.715	0.742
TL1	0.792	0.772	0.955	0.770
TL2	0.665	0.632	0.936	0.646
TS1	0.842	0.818	0.728	0.897
TS2	0.706	0.629	0.592	0.894
TS3	0.756	0.694	0.713	0.923

Table 5 shows the Discriminant Validity Test using cross loading. Based on the table above, it can be proven that the correlation between constructs and measurement items is greater than with other constructs. So all constructs are proven to have high discriminant validity.

Classic assumption test
Multicollinearity Test

Table 6. Multicollinearity Test Results

	VIF
MTE	3,311
STT	2,984
TL	2,660
T.S	2,711

Based on table .

Multiple Regression

In carrying out the calculations, this research used a multiple regression test assisted by the Smart PLS version 4 program. The process of producing the analysis was carried out in 2 stages. The first stage is to analyze the data using the PLS Algorithm. After that, analyze the data using Bootstrapping. These two stages have different functions, where the PLS Algorithm functions to display research instrument tests. Meanwhile, PLS Bootstrapping functions to display multiple regression tests. The output results of the coefficient values in the regression model after going through data processing can be seen in Figure 10 below:

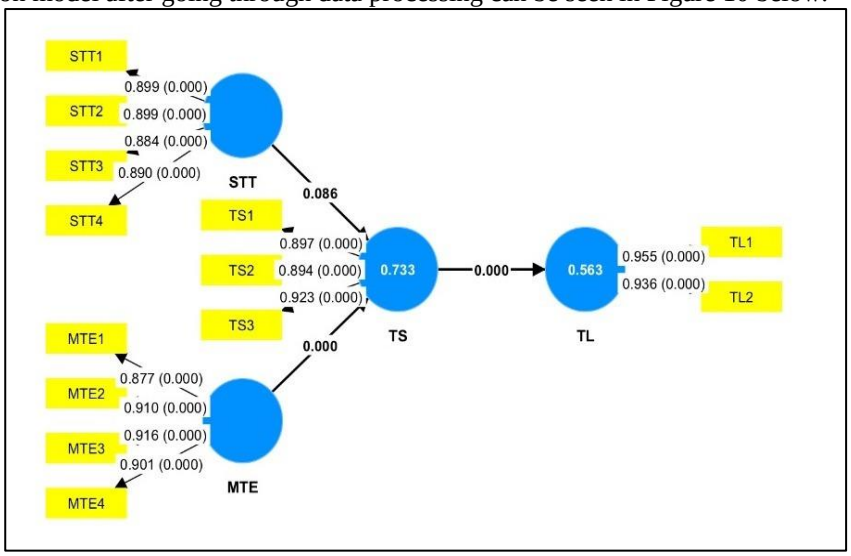

Figure 1. Path Model Results of Regression Analysis (Coefficients)

After obtaining the coefficient value output in the regression analysis model above, the next step is to carry out a regression analysis test by displaying the t-test output obtained from the PLS Bootstrapping results.

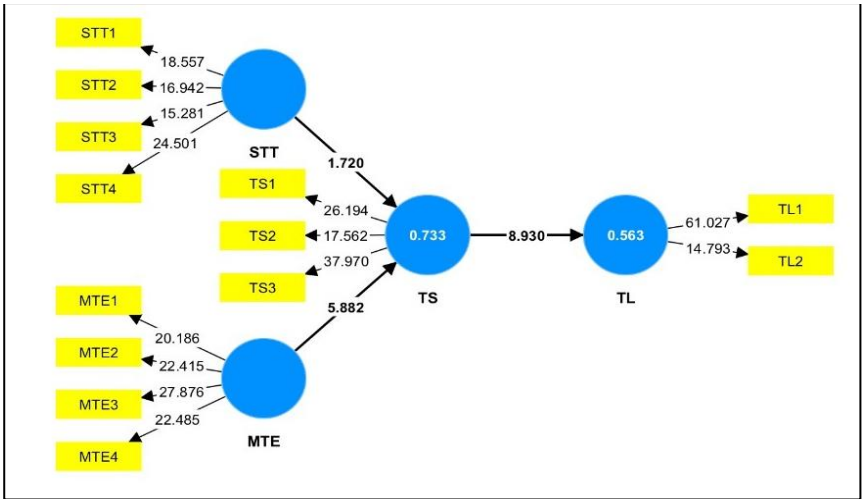

Figure 2. Path Model Results of Regression Analysis (T-Test)

With a significance level (α) used of 5% (0.05). The results of the multiple regression analysis test for the significance value (P-Value) can be seen in the output of Figure x and the following table.

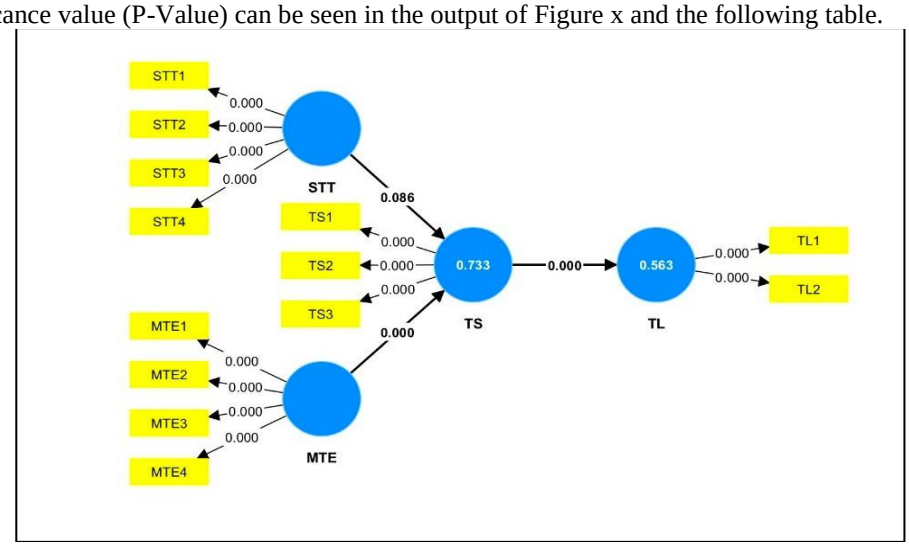

Figure 3. Path Model Results of Regression Analysis (P-Value)

Table 7. Multiple Regression Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STEDEV)	T statics (O/STEDEV)	P Values
MTE→ TS	0.668	0.665	0.113	5,882	0,000
STT→ TS	0.214	0.206	0.124	1,720	0.086
TS→ TL	0.754	0.743	0.084	8,930	0,000

The multiple regression test is intended to determine the influence of each variable. The t-test has a positive and significant effect if the calculated t-result is greater than the t-table (t-count > t-table). Before testing the hypothesis, it is known that the T-table value for a confidence level of 95% (α of 5%) using a two-sided significance level and degrees of freedom (df)= nk = 175 – 3= 68 is 1.973.

Based on Table 6, it can be proven that the MTE variable has a significant influence on TS because it produces t-count > t table, namely 5,882 > 1,973. Then, the STT variable on TS produces a calculated t-value of 1.720 < t table 1.973, so the STT variable does not significantly influence TS. Then, the TS variable on TL produces a calculated t-value of 8,930 > t table 1,973, so the TS variable significantly influences TL.

CONCLUSIONS

The first hypothesis proves that a Memorable Tourism Experience significantly affects Tourist Satisfaction. This shows that the Memorable Tourism Experience significantly impacts Tourist Satisfaction because the higher the value of the Memorable Tourism Experience, the higher the Tourist Satisfaction. This hypothesis is supported by previous research, which states that variables (Rahmawati, 2023). Memorable Tourism Experience has a significant effect on Tourist Satisfaction.

The second hypothesis shows that Smart Tourism Technology in this study has no significant effect on Tourist Satisfaction. This is proven by the calculated value of Smart Tourism Technology, which is lower than the predetermined T-table. The third hypothesis proves that Tourist Satisfaction greatly influences Tourist Loyalty. This is supported by previous research, which proves that Tourist Satisfaction has a positive and significant influence on Tourist Loyalty (Purwianti et al., E, 2021)

Based on the results of the research that has been carried out, several conclusions are obtained as follows:

1. A Memorable Tourism Experience is proven to influence Tourist Satisfaction significantly.
2. Smart Tourism Technology has yet to be proven to influence Tourist Satisfaction significantly.
3. Tourist Satisfaction has a significant influence on Tourist Loyalty.

For future research, it is recommended to add independent variables that influence customer satisfaction and expand the research sample to obtain more extensive data.

REFERENCES

[1]. Bigne, E., Fuentes-Medina, M. L., & Morini-Marrero, S. (2020). Memorable tourist experiences versus ordinary tourist experiences analysed through user-generated content. Journal of Hospitality and Tourism Management, 45, 309-318.

[2]. Chandralal, L., & Valenzuela, F. R. (2013). Exploring memorable tourism experiences: Antecedents and behavioural outcomes. *Journal of Economics, Business and Management*, *1*(2), 177-181.

[3]. Dorcic, J., Komsic, J., & Markovic, S. (2019). Mobile technologies and applications towards smart tourism–state of the art. Tourism Review, 74(1), 82-103.

[4]. Gargoum, S. A., & El-Basyouny, K. (2016). Exploring the association between speed and safety: A path analysis approach. *Accident Analysis & Prevention*, *93*, 32-40.

[5]. Hayes, A.F., 2013. Introduction to mediation, moderation, and conditional process analysis: A 5 regression-based approach Guilford Press.

[6]. Hew, J.J.; Leong, L.Y.; Tan, W.H.; Lee, V.H.; Ooi, K.B. Mobile social tourism shopping: A dual-stage analysis of a multi-mediation model. *Tour. Manag.* 2018, *66*, 121–139.

[7]. Kim, H., & So, K. K. F. (2022). Two decades of customer experience research in hospitality and tourism: A bibliometric analysis and thematic content analysis.International Journal of HospitalityManagement,100(January), 1–15

[8]. Lee, H.; Lee, J.; Chung, N.; Koo, C. (2018). Tourists' happiness: Are there smart tourism technology effects? Asia Pac. J. Tour. Res., 5, 486–501

[9]. Leninkumar, V. (2017). The relationship between customer satisfaction and customer trust on customer loyalty. International Journal of Academic Research in Business and Social Sciences, 7(4), 450-465.

[10]. Munar, A. M., & Jacobsen, J. K. S. (2014). Motivations for sharing tourism experiences through social media. *Tourism management*, *43*, 46-54.

[11]. No, E., & Kim, J. K. (2015). Comparing the attributes of online tourism information sources. Computers in human behavior, 50, 564-575.

[12]. Purwianti, L., & Patricia, E. (2021, April). Analisa Pengaruh Destination Image dan Motivation Terhadap Tourist Loyalty dengan Perceived Value dan Tourist Satisfaction sebagai Mediasi di Kota Batam. In *CoMBInES-Conference on Management, Business, Innovation, Education and Social Sciences* (Vol. 1, No. 1, pp. 2110-2122).

[13]. Sánchez, A. F., Muñoz, J. P., Caballero-Villalobos, J., Sánchez, R. A., Garzón, A., & de Pedro, E. A. S. (2021). Coagulation process in Manchega sheep milk from Spain: A path analysis approach. *Journal of Dairy Science*, *104*(7), 7544-7554.

[14]. Stone, M. J., Soulard, J., Migacz, S., and Wolf, E. (2018). Elements Of Memorable Food, Drink, And Culinary Tourism Experiences. Journal of Travel Research, 57(8), 1121–1132.

[15]. Wahab, I. N. (2017). Role of information technology in tourism industry: Impact and growth. International Journal of Innovative Research in Computer and Communication Engineering, 5(2), 260-263.
[16]. Weaver, D.B.; Moyle, B.D. 'Tourist stupidity' as a basic characteristic of "smart tourism": Challenges for destination planning and management. Tour. Recreat. Res. 2019, 44, 387–391.
[17]. Xiang, Z. (2018). From digitization to the age of acceleration: On information technology and tourism. *Tourism management perspectives*, *25*, 147-150.