A Study on the Influencing Factors of Theme Park Accessibility on Revisit

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Abstract

The purpose of this study was to verify how the level of service perceived by theme park visitors affects satisfaction and revisit. Although the number of theme park visitors has been decreasing since the recent COVID-19 pandemic, it can be seen as a positive influence that the theme park can be a new opportunity to be reborn through a new attempt in which ICT technologies such as VR combined with the 4th industrial revolution technology is combined. Researcher tried to exploratory verification of what is the important factor in the service operation of the theme park. Researcher considered that accessibility perceived by visitors, diversity of services, and symbolic meaning of theme parks could be exogenous variables. And it tried to apply the perceived usefulness and perceived pleasure applied in the TAM study as mediating variables. It is expected that visitors will be satisfied and revisit through recognition of the place and service of this theme park. As a result of the study, it was confirmed that the locational accessibility of the customers visiting the theme park affects the diversity and symbolic meaning of the service. In addition, it was confirmed that the customer affected satisfaction and revisit by using perceived pleasure and perceived usefulness as mediating variables. Therefore, it was confirmed that the theme park operator should provide information such as location and parking, and geographical access services, and focus on perceived joyfulness. After the pandemic, theme parks are expected to focus on theme selection and enjoyment. Researcher considered this research to have theoretical and practical contributions. Lastly, researcher hope that the results of this study will be helpful to the theme park industry in the future.

Keywords: *Theme park, Amusement park, Accessibility, Joyfulness, Satisfaction, Re-Visit.*

1. Introduction

The purpose of this study was to verify how the level of service perceived by theme park visitors affects satisfaction and revisit. After the recent COVID-19 pandemic, theme park visitors are decreasing. However, it can be seen as a positive influence that the theme park can be a chance to be

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reborn through a new attempt in which ICT technologies such as VR combined with the 4th industrial revolution technology is combined. In the case of a domestic theme park, it is said that it will be created as a child- and family-friendly digital theme park that provides a consistent and integrated experience from entry to exit by applying advanced 4th industrial revolution technology while improving marine theme facilities. There are also local governments that have made plans to attract family visitors using robotic technology. The theme park is no longer a legacy of the analogue age, but is expected to be reborn as a play space full of future-oriented space technology, creating various fun activities using future technology.

Therefore, Researcher tried to do an exploratory study on what is the important factor in the service operation of the theme park. Researcher considered that accessibility perceived by visitors, diversity of services, and symbolic meaning of theme parks could be exogenous variables. And it tried to apply the perceived usefulness and perceived joyfulness (pleasure) applied in the TAM study as mediating variables. It is expected that visitors will be satisfied and revisit through recognition of the place and service of this theme park.

Researcher intends to summarize the research problems of this study as follows.

First, what are the factors of perception that influence theme park visitors' intention to revisit?

Second, we examine how spatial value, service value, and emotional value factors affect the perception that affects theme park visitors' intention to revisit.

Third, the factors that influence the intention of revisiting the theme park visitors are verified through which paths are connected with the mediator.

2. Literature review

2.1 Perceived Spatial, Service, Emotional Value & Hypothesis

Researcher regarded the customer's rational and emotional value perception as very important as an exogenous variable when customers visit the theme park. Therefore, rational value recognition can be seen as economic and spatial value or diversity of services, and emotional value is considered to have symbolism of theme parks. Among them, the researcher selected accessibility, service diversity, and symbolism as important variables. In addition, these exogenous variables were selected as valid factors in measuring pleasure and usefulness, which is the greatest purpose of leisure.

Therefore, researcher tried to propose a hypothesis as follows.

H1. Theme park visitors' Perceived Theme park Accessibility has a positive effect on Perceived Diversity of Service.

H2. Theme park visitors' Perceived Theme park Accessibility has a positive effect on Perceived Symbolic Meaning.

H3. Theme park visitors' Perceived Diversity of Service has a positive effect on Joyfulness.

H4. Theme park visitors' Perceived Theme park Accessibility has a positive effect on Joyfulness.

H5. Theme park visitors' Perceived Symbolic Meaning has a positive effect on Joyfulness.

2.2 Perceived Usefulness, Perceived Joyfulness & Hypothesis

The Technology Acceptance Model (TAM) was developed to explain and predict the usage behavior of information technology users. As its excellence as a model that can be easily measured and explained has been verified, it is being used in various fields as well as information technology. The technology acceptance model is based on Fishbein and Ajzen (1975)'s Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB). In particular, this technology acceptance model based on TRA is composed of perceived usefulness, perceived ease of use, attitude, and behavioral intention. Early technology acceptance models used belief variables that influence the perceived usefulness and ease of technology acceptance by users. These two belief variables influence the user's attitude toward technology acceptance, and the attitude affects the behavior intention, and ultimately, the behavior intention ultimately determines the technology use behavior.

This model came to the point where an extended technical model including several preceding factors was suggested. In particular, Venkatesh and Davis (2000) proposed an extended technology acceptance model (TAM2) by adding the effect of social influence as another preceding factor in addition to personal cognitive factors, unlike the early technology acceptance model. In this paper, we tried to apply perceived pleasure, which is widely used in TAM2, as a mediating variable.

Therefore, researcher tried to propose a hypothesis as follows.

H6. Theme park visitors' Perceived Diversity of Service has a positive effect on Perceived Usefulness.

H7. Theme park visitors' Perceived Theme park Accessibility has a positive effect on Perceived Usefulness.

H8. Theme park visitors' Perceived Symbolic Meaning has a positive effect on Perceived Usefulness.

H9. Theme park visitors' Perceived Joyfulness has a positive effect on Perceived Usefulness.

2.3 Satisfaction, Re-Visit & Hypothesis

Satisfaction is an emotional reaction you feel after using an object. Oliver (1980) explained that satisfaction is a state of emotion that compares expectations of before using a product or service with experience after using it. In this study, satisfaction is defined as the degree of satisfaction of the overall expectations that users feel after using the service of customers visiting the theme park, and the verified measurement items used in the study on measuring satisfaction such as Bhattacherjee (2001) are modified to suit the purpose of this study Then, it was configured as follows.

Re-Visit intentions have great significance in predicting user behavior and retaining users as the possibility that users will continue to visit the present theme park in the future.

It is said that consumer satisfaction is an important determinant for re-visit intention as it is formed after visiting theme parks and using services.

Therefore, researcher tried to propose a hypothesis as follows.

H10. Theme park visitors' Perceived Usefulness has a positive effect on Satisfaction.

H11. Theme park visitors' Perceived Joyfulness has a positive effect on Satisfaction.

H12. Theme park visitors' Perceived Joyfulness has a positive effect on Intention to Re-Visit decision.

H13. Theme park visitors' Perceived Usefulness has a positive effect on Intention to Re-Visit decision.

H14. Theme park visitors' Satisfaction has a positive effect on Intention to Re-Visit decision.

2.4 Research Model

Thus the resulting research model is figure 1 as follows.

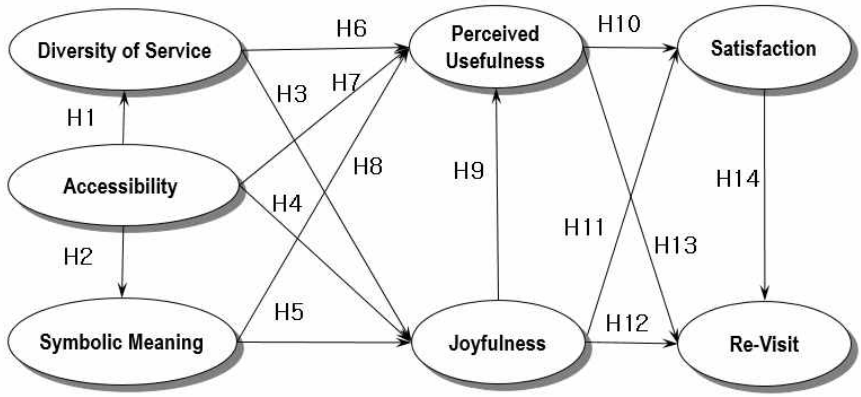

Figure 1 Research Model

3. Results

3.1 Data & demographic profile

The respondents to the survey consisted of people who have recently visited the theme park, and 245 samples were obtained by a random survey conducted by a professional survey agency with a national panel. Their average age was 40.2.

3.2 Structural equation model verification

First stage, researcher verified the structural equation model (SEM) of Diversity of Service, Accessibility, Symbolic Meaning, Perceived Usefulness, Joyfulness, and intention of Re-Visit etc. This approach recommended by Anderson and Gerbing was used as a guide to test the SEM.

Researcher examined the reliability and validity first. First, researcher adopted SEM software AMOS 18.0 to conduct a confirmatory factor analysis (CFA) and examine the validity. Table 1 lists the standardized factor loadings, the composite reliability (CR), and the average variance extracted (AVE) values. Mostly AVEs and CRs exceed 0.5 and 0.7, respectively, Except DV, SM factors.

The Chi-square(X^2) fit statistics show 431.390 with 168 of freedom, and Chi-square/df is 2.568 ($p < 0.001$, Suggested value <1.0, < 3.0). The root mean square residual (RMR) is 0.087, and the root mean square error of approximation (RMSEA) is 0.080. Typically, the RMR and the RMSEA index are lower than 0.10 for a good fit and lower than 0.09 indicates an excellent fit. The goodness-of-fit index (GFI) is 0.842, the normed fit index (NFI) is

0.881, the relative fit index (RFI) is 0.851, the incremental fit index (IFI) is 0.924, the Tucker-Lewis index (TLI) is 0.904, the comparative fit index(CFI) is 0.923, the parsimony normed fit Index (PNFI) is 0.705, and the parsimony-adjusted comparative fit index (PCFI) is 0.738.

As shown in Table 1, Almost all of the data fit indices surpass and close the suggested value for a good model. This indicates are a good fitness.

Table 1 Results of reliability and validity analysis

Variables of proposed model		Standardized item loading	T-Value	CR	AVE
Diversity of Service	DV ← Diversity 1	0.218	3.154	0.608	0.385
	DV ← Diversity 2	0.827	12.067		
	DV ← Diversity 3	0.828	- a)		
Accessibility	AC ← Accessibility1	0.726	13.736	0.887	0.726
	AC ← Accessibility2	0.914	-		
	AC ← Accessibility3	0.892	19.052		
Symbolic Meaning	SM ← Symbolic1	0.422	6.324	0.692	0.445
	SM ← Symbolic2	0.799	12.737		
	SM ← Symbolic3	0.829	-		
Perceived Usefulness	PU ← Usefulness1	0.824	15.306	0.833	0.625
	PU ← Usefulness2	0.86	-		
	PU ← Usefulness3	0.722	12.695		
Joyfulness	JY ← Joyfulness1	0.871	16.874	0.885	0.721
	JY ← Joyfulness2	0.858	-		
	JY ← Joyfulness3	0.796	14.784		
Satisfaction	SA ← satisfaction1	0.882	16.962	0.902	0.755
	SA ← satisfaction2	0.885	17.006		
	SA ← satisfaction3	0.847	-		
Re-Visit	RV ← Re-Visit1	0.72	13.954	0.885	0.722
	RV ← Re-Visit2	0.928	-		
	RV ← Re-Visit3	0.889	20.428		

Summary of model fit indices : X^2=431.390, df=168, p=0.000, X^2/df=2.568, RMR=0.087, GFI=0.842, NFI=0.881, RFI=0.851, IFI=0.924, TLI=0.904, CFI=0.923, PNFI=0.705, PCFI=0.738, RMSEA=0.08,*) P< 0.001, a) fixed to 1

Table 2 AVE and SMC(Squared Multiple Correlations)

Variables	1	2	3	4	5	6	7
1. DV	0.385 *						
2. AC	0.429	0.726 *					
3. SY	0.355	0.604	0.445 *				
4. PU	0.458	0.584	0.287	0.625 *			
5. JY	0.333	0.623	0.533	0.436	0.721 *		
6. SA	0.058	0.250	0.640	0.575	0.605	0.755 *	
7. RV	0.331	0.536	0.125	0.265	0.142	0.483	0.722 *

Next stage, researcher estimated the research structural model. Figure. 2 presents the results. Table 3 lists the actual values of fit indices for structural modeling.

The Chi-square(X^2) fit statistics show 451.107 with 175 of freedom, and Chi-square/df is 2.578 ($p < 0.001$, Suggested value >1.0, < 3.0). The following standards to assess modeling fit degrees are generally accepted. The root mean square residual (RMR) is 0.095, and the root mean square error of approximation (RMSEA) is 0.080. RMR and RMSEA index are a good fit. The goodness-of-fit index (GFI) is 0.839, the normed fit index (NFI) is 0.875, the relative fit index (RFI) is 0.851, the incremental fit index (IFI) is 0.920, the Tucker-Lewis index (TLI) is 0.903, the comparative fit index(CFI) is 0.919, the parsimony normed fit Index (PNFI) is 0.730, and the parsimony-adjusted comparative fit index (PCFI) is 0.766.

As shown in Table 3, Almost all of the data fit indices surpass and close the suggested value for a good model. This indicates are a good fitness.

The results of the structural model assessment are presented in Table 2 and Fig.2.

Supporting H1, Theme park visitors' AC (Accessibility) had a significant positive effect on DV (Diversity of Service) (Standardized Regression Weights: SRW= 0.670, t-value = 9.570, p <0.001). Also H2 is supported by the significant positive impact of visitors' AC (Accessibility) on SM (Symbolic Meaning) (SRW= 0.622, t-value = 9.012, p <0.001). But other hypotheses using path of DV & AC (Accessibility) on JY (Joyfulness) factor are not supported, H3, H4. Nevertheless, the H5 hypothesis was supported that SM (Symbolic Meaning) on JY factor (SRW= 0.640, t-value = 7.487, p <0.001).

Supporting H6, Theme park visitors' DV had a significant positive effect on PU (Perceived Usefulness) (SRW= 0.337, t-value = 4.058, p <0.001). Also H8 is supported by the significant positive impact of visitors' SM (Symbolic Meaning) on PU (SRW= 0.272, t-value = 2.419, p <0.05). And H9 is supported by the significant positive impact of visitors' JY (Joyfulness) on

PU (Perceived Usefulness) (SRW= 0.386, t-value = 3.451, p <0.001). But other hypotheses using path of AC (Accessibility) on PU (Perceived Usefulness) factor are not supported, H7.

Supporting H10, Theme park visitors' PU (Perceived Usefulness) had a significant positive effect on SA (Satisfaction) (SRW= 0.505, t-value = 4.258, p <0.001). But other hypotheses using path of JY (Joyfulness) on SA (Satisfaction) factor are not supported, H11.

Supporting H12, Theme park visitors' JY (Joyfulness) had a significant positive effect on RV (Re-Visit) (SRW= 0.253, t-value = 2.947, p <0.05). Also H13 is supported by the significant positive impact of visitors' PU (Perceived Usefulness) on RV (Re-Visit) (SRW= 0.523, t-value = 5.383, p <0.001). And H14 is supported by the significant positive impact of visitors' SA (Satisfaction) on RV (Re-Visit) (SRW= 0.134, t-value = 2.343, p <0.05).

Table 3 Results of Model estimated by AMOS

Path of proposed model		Standardized item loading	T-Value	Results
Diversity of Service ← Accessibility	H1	0.670 ***	9.570	Support
Symbolic Meaning ← Accessibility	H2	0.622 ***	9.012	Support
Joyfulness ← Diversity of Service	H3	0.133	1.703	Not Support
Joyfulness ← Accessibility	H4	0.154	1.668	Not Support
Joyfulness ← Symbolic Meaning	H5	0.640 ***	7.487	Support
Perceived Usefulness ← Diversity of Service	H6	0.337 ***	4.058	Support
Perceived Usefulness ← Accessibility	H7	-0.033	-0.365	Not Support
Perceived Usefulness ← Symbolic Meaning	H8	0.272 **	2.419	Support
Perceived Usefulness ← Joyfulness	H9	0.386 ***	3.451	Support
Satisfaction ← Perceived Usefulness	H10	0.505 ***	4.258	Support
Satisfaction ← Joyfulness	H11	-0.015	-0.132	Not Support
Re-Visit ← Joyfulness	H12	0.253 **	2.947	Support
Re-Visit ← Perceived Usefulness	H13	0.523 ***	5.383	Support
Re-Visit ← Satisfaction	H14	0.134 **	2.343	Support
Summary of model fit indices : X^2=451.107, df=175, p=0.000, X^2/df=2.578, RMR=0.095, GFI=0.839, NFI=0.875, RFI=0.851, IFI=0.920, TLI=0.903, CFI=0.919, PNFI=0.730, PCFI=0.766, RMSEA=0.080				
*) p< 0.1, **) p< 0.05, ***) p< 0.001				

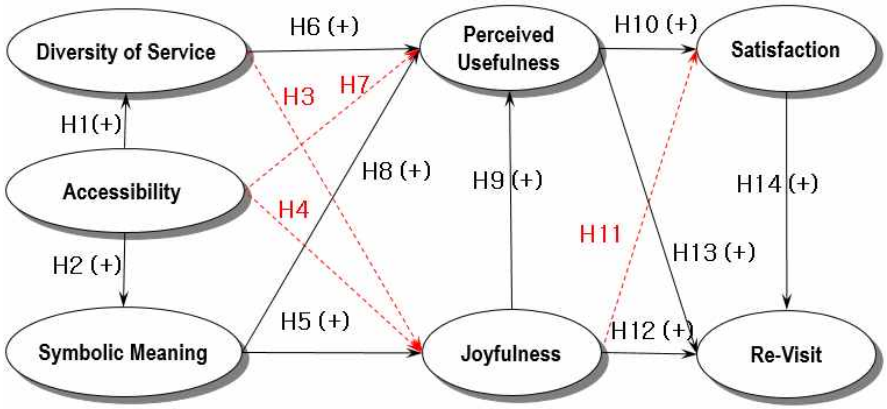

Figure 2 Results of Research Model

Researcher conducted the same model test by classifying groups according to gender, age group, and marital status in order to test whether the discrimination of each group of the research model was found. However, no differences were found for each group, and it was judged that additional samples should be recruited and reviewed in future studies. Tables 4 and 5 summarize the results for male and female gender among the results for group comparison.

Table 4 Results of Model estimated by AMOS (female respondents)

Path of proposed model		Standardized item loading	T-Value	Results
Diversity of Service ← Accessibility	H1	0.745 ***	8.112	Support
Symbolic Meaning ← Accessibility	H2	0.538 ***	5.465	Support
Joyfulness ← Diversity of Service	H3	-0.067	-0.561	Not Support
Joyfulness ← Accessibility	H4	0.352 **	2.699	Support
Joyfulness ← Symbolic Meaning	H5	0.626 ***	6.327	Support
Perceived Usefulness ← Diversity of Service	H6	0.182	1.312	Not Support
Perceived Usefulness ← Accessibility	H7	-0.045	-0.284	Not Support
Perceived Usefulness ← Symbolic Meaning	H8	0.257	1.687	Not Support
Perceived Usefulness ← Joyfulness	H9	0.443 **	2.679	Support
Satisfaction ← Perceived Usefulness	H10	0.796 ***	5.687	Support
Satisfaction ← Joyfulness	H11	-0.113	-0.919	Not Support
Re-Visit ← Joyfulness	H12	0.366 ***	3.378	Support
Re-Visit ← Perceived Usefulness	H13	0.335 **	2.198	Support
Re-Visit ← Satisfaction	H14	0.184	1.646	Not Support
Summary of model fit indices : X^2=349.090, df=175, p=0.000, X^2/df=1.995, RMR=0.084, GFI=0.792, NFI=0.830, RFI=0.796, IFI=0.907, TLI=0.887, CFI=0.905, PNFI=0.691, PCFI=0.755, RMSEA=0.090				
*) p< 0.1, **) p< 0.05, ***) p< 0.001				

Table 5 Results of Model estimated by AMOS (male respondents)

Path of proposed model		Standardized item loading	T-Value	Results
Diversity of Service ← Accessibility	H1	0.579 ***	5.683	Support
Symbolic Meaning ← Accessibility	H2	0.722 ***	7.959	Support
Joyfulness ← Diversity of Service	H3	0.275 **	2.747	Support
Joyfulness ← Accessibility	H4	-0.057	-0.383	Not Support
Joyfulness ← Symbolic Meaning	H5	0.752 ***	4.644	Support
Perceived Usefulness ← Diversity of Service	H6	0.591 ***	5.186	Support
Perceived Usefulness ← Accessibility	H7	-0.012	-0.102	Not Support
Perceived Usefulness ← Symbolic Meaning	H8	0.258	1.343	Not Support
Perceived Usefulness ← Joyfulness	H9	0.232	1.335	Not Support
Satisfaction ← Perceived Usefulness	H10	0.106	0.619	Not Support
Satisfaction ← Joyfulness	H11	0.253	1.445	Not Support
Re-Visit ← Joyfulness	H12	0.207	1.664	Not Support
Re-Visit ← Perceived Usefulness	H13	0.571 ***	4.576	Support
Re-Visit ← Satisfaction	H14	0.184 **	2.596	Support
Summary of model fit indices : X^2=401.224, df=175, p=0.000, X^2/df=2.293, RMR=0.135, GFI=0.753, NFI=0.797, RFI=0.756, IFI=0.874, TLI=0.846, CFI=0.872, PNFI=0.664, PCFI=0.727, RMSEA=0.104				
*) p< 0.1, **) p< 0.05, ***) p< 0.001				

4. Discussion

The purpose of this study was to verify how the level of service perceived by theme park visitors affects satisfaction and revisit. Although the number of theme park visitors has been decreasing since the recent COVID-19 pandemic, it can be seen as a positive influence that the theme park can be a new opportunity to be reborn through a new attempt in which ICT technologies such as VR combined with the 4th industrial revolution technology is combined.

Researcher tried to exploratory verification of what is the important factor in the service operation of the theme park. Researcher considered that accessibility perceived by visitors, diversity of services, and symbolic meaning of theme parks could be exogenous variables. And it tried to apply the perceived usefulness and perceived pleasure applied in the TAM study as mediating variables. It is expected that visitors will be satisfied and revisit through recognition of the place and service of this theme park. As a result of the study, it was confirmed that the locational accessibility of the customers visiting the theme park affects the diversity and symbolic meaning of the service. In addition, it was confirmed that the customer affected

satisfaction and revisit by using perceived pleasure and perceived usefulness as mediating variables.

Therefore, it was confirmed that the theme park operator should provide information such as location and parking, and geographical access services, and focus on perceived joyfulness. After the pandemic, theme parks are expected to focus on theme selection and enjoyment.

Researcher considered this research to have theoretical and practical contributions. Lastly, researcher hope that the results of this study will be helpful to the theme park industry in the future.

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