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THE IMPACT OF BOOTH RECOMMENDATION SYSTEM ON EXHIBITION ATTENDEES' UNPLANNED VISIT BEHAVIOR: AN EXTRINSIC-INTRINSIC DICHOTOMY PERSPECTIVE

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Abstract

Our study on unplanned behaviour theory have examined the effect of booth recommendation system (BRS) on exhibition arise from either an extrinsic or intrinsic motivation. Previous studies, however, ignored the importance of the unplanned behavioural effectiveness through BRS that bonds extrinsic and intrinsic motivation together to deliver unexpected outcomes in exhibition. In this paper, we propose a model of the impact of BRS where perception of usefulness and threat to freedom of choice mediates the effect of both extrinsic and intrinsic motivation on unplanned booth visit behavior. We collected data from 101 visitors of exhibition and analyzed it using the Partial Least Square (PLS) method. Our findings, interestingly, show that only intrinsic motivations (escape, attraction) significantly influence both perceived usefulness of BRS and threat to freedom of choice, however extrinsic motivation (information) does not significantly influences. Perceived usefulness of BRS mediates directly the effect of escape and attraction on unplanned booth visit behavior. The results and implications are further discussed.

Keywords: unplanned visit behaviour, extrinsic motivation, intrinsic motivation, perceived usefulness, threat to freedom of choice, booth recommendation system, unplanned booth visit behavior

1 INTRODUCTION

As MICE (Meeting, Incentive travel, Convention, Exhibition) industry has been growing rapidly during the last decade, convention business from the MICE of exhibition becomes important due to its high profit rate (Moon et al., 2011). Particularly, one of MICE industry, exhibition is explained as market events of a specific time, which can bring a number of companies as well as visitors. The exhibition business is growing a multi-billion dollar industry returning not only economic benefits but also tourism together from the on-site (Moon et al., 2011). In terms of tourism study, there are currently studying on for the purposed tourism business: a well-planned tour for the tourist (Severt et al., 2007) and unplanned attraction site visit by travellers by a sudden decision (Hwang and Fesenmaier, 2011). Recent studies on convention business emphasize the importance of employing between motivations and satisfaction by a well-planned theory (Severt et al., 2007) and decision-making process to select places by unplanned behaviour theory (Hwang, 2011) and examine the role of IT in the decision making processes on on-line consumer's unplanned purchase behaviour (Hostler et al., 2011).

Generally, visitors for booth provided by exhibition try to attend purposely for gathering information for their business, analyzing market trends, and learning specific targeted items. Thus, visitors try to experience directly on new product and service and check out a large number of items or target items within a limited time; otherwise visitors would be disappointed from failing right items or interesting

items. For solving this kind of possible problem, showcase industry could adopt a device which can provide valuable information in ubiquitous environment to identify interesting and personalized items for visitors among the exhibitors (Moon et al., 2011). One of the most successful and popular devices is called collaborative filtering (CF), which it originally developed for recommendation service. In this study, we investigate on booth recommendation system (BRS) how it is used for visitors in exhibition showcase place. Theoretically, IT device and a theory of planned behaviour are well tested so far. Interestingly, although the previous literature provides some insight into the effect of a well-planned behaviour and unplanned behaviour on convention and tourism business, it is silent about how motivations (extrinsic, intrinsic two ways) are intertwined to generate the expected outcomes, i.e., satisfaction by either planned or unplanned behaviour. Moreover, most of the studies that encompass extrinsic motivation and intrinsic motivation for the unplanned behaviour and the mediated role of IT have not been empirically tested. Previous studies also have identified and articulated convention studies that are supposed to consist of site selection (Crouch and Louviere, 2005; Crouch and Ritchie, 1998; Grant and Weaver, 1996), attendee motivation aspect (Rittichainuwat et al, 2001; Severt et al., 2007), and meeting planner issue of decision-making processes (Baloglu and Love, 2001).

To fill the gap, we reviewed in this study the theory of ‘unplanned decision theory’ in other diverse disciplines (Beatty and Ferrell, 1998; Bellenger et al., 1978, Cobb and Hoyer, 1986; Rook, 1987; Weinberg and Gottwald, 1982) as a main theory, employed motivation theory (Severt et al., 2007), and measured mediating effect of perceived usefulness of BRS and threat to freedom of choice (Lee and Lee, 2009) onto unplanned booth visit behavior. A role of IT (i.e., Booth Recommendation System; BRS) and threat to freedom of choice in this paper refers to addresses the issues of managing the relationship between motivation and unplanned booth visit behavior to explain better expected outcome using mediated variables. We argue in this paper that unplanned booth visit behaviour requires perceived usefulness of BRS that facilitates unplanned decision makings including planned setting for achieving own purpose adopted by a study of Hostler et al. (2011) that is about use of recommendation agent in the context of online shopping site and investigate the effect of threat to freedom of choice as well. This argument shows unplanned booth visit behaviour through including both perceived usefulness and threat to freedom of choice is necessary.

2 THEORETICAL BACKGROUND

2.1 Unplanned Behaviour Theory

The substantial literature has been studying empirically into the relationship between planned purchases and actual consumption. Many of those studies report significant relationship between intentions to buy goods and subsequent purchase. This theory give us the understanding of the predictive powers and accuracy of intentions influenced by various factors (March and Woodside, 2005). Ajzen and Driver (1992) test that the theory of planned behaviour in leisure activities setting is useful in predicting influence upon intentions and actual behaviours from intentions. On the other hand, the concept of “unplanned” behaviour is another dimension of the issue regarding the relationship between intentions and actual behaviour that has been examined in marketing. The unplanned behaviour (i.e., purchases or impulse buying) has long been considered an important (Hostler et al., 2011). Impulse buying tendency is defined as “the degree to which an individual is likely to make unintended, immediate, and unreflective purchases” (Park and Lennon, 2006, p. 57). Impulse buying happens to the condition between actually concluded and previously planned purchases (Park and Lennon, 2006). Unplanned purchase behaviour tends to increase impulse buying with amount spent money (Coley and Burgess, 2003; Jeffrey and Hodge, 2007, Mai et al., 2003, Shoham and Brecic, 2003), by contrast, there seems to have been little research on impulse buying in e-commerce (Hostler et al., 2011).

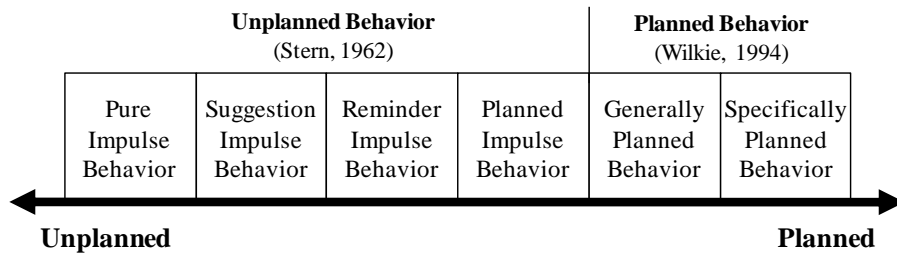


Figure 1. An Extended Classification of Consumer Behaviour (Adapted from Hwang, 2011)

These studies suggest in common that unplanned behaviour is not goal-directed but goal interpreted phenomenon to give more comfortable and better able to describe what they really want to do rather than that they plan to do (March and Woodside, 2005). We introduce the classification of consumer behaviour from planned behaviour of consumer behaviour theory to unplanned behaviour of impulse purchasing behaviour in Figure 1. Particularly, leisure-destination research provides that some conditions are more likely to increase unplanned behaviour such as consumption environment is unknown to buyer, consumption outcomes are positive, time and effort are constrained, multiple items are purchased (March and Woodside, 2005). Unplanned behaviour in tourism industry is explained as travellers are willing to choose some secondary destinations, attractive sites, restaurants using locally available information (Hwang, 2011). Therefore, travellers visit on attractive destinations that were not planned before a trip are likely to find new information suddenly and choose alternative options, disappointed from their expectations from the actual places, or when unexpected constrains happen (Hwang, 2011, See Figure 2). As a result, immediate and spontaneous behaviour is likely to occur in responding to on-site stimuli.

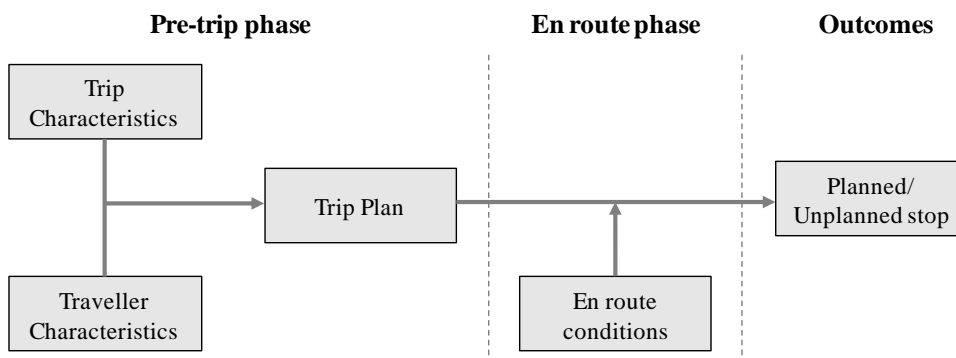


Figure 2. Travellers' Planned and Unplanned Attraction Visits (Adapted from Hwang, 2011)

Mayo and Jarvis (1981) raised an argument that service form of tourism consumption is an intangible, heterogeneous, and experiential product; as a result, reality can be ignored consequently, due to the susceptible to change during the period of active solicitation of information stimulated (March and Woodside, 2005). Consumers who purchase a product not planned for seem to be satisfied with the product as a means of justifying unplanned behaviour.

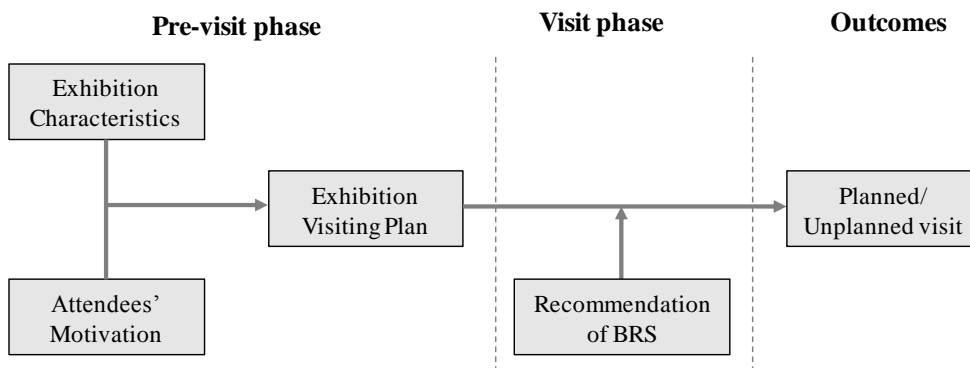


Figure 3. Exhibition Attendees' Visiting Behaviour

According to the studies, to be effective, unplanned behaviour in tourism (Hwang, 2011) or other related business such as convention, exhibition needs to be structured in ways of allowing unique value delivery via reaction to stimuli arising from instant information via BRS. Online recommendation services via devices are the common form of personalization and a persuasive communications tool for users try to achieve their goals (Lee and Lee, 2009). In the time of decision making, recommendation services assist individuals search for information regarding product or service item. In as sense, there is a perceived gap between expectation and disconfirmation that looks forward to consume or watching, sometimes, far exceeds the expectation, so called, face an unpredictable and positive situation using BRS. In doing so, this study focus on unplanned booth visit behaviour is helpful in particular by extrinsic and intrinsic motivations drivers to BRS in convention & exhibition help unplanned booth visit behavior. This concept of unplanned behaviour theory can be applied to convention or exhibition context where BRS is being used on managing the relationship between motivations and outcomes, not the planned behaviour in Figure 3.

2.2 Psychological Reactance

In consumer behavioural research, freedom to choose among alternatives such as in choice of product, political candidate, professions, and marriage partners (Clee and Wicklund, 1980). Given the freedoms, it become important to consider the loss of freedom by threaten from interpersonal influence. From the theoretical perspective, there are self-imposed threats to freedom or a consequent reassertion of freedom as reflected by a sudden desire for alternative options that are not considered before (Clee and Wichlund, 1980). Some rejected choices can be suddenly attractive. A social psychological theory notes that individual react to threaten or eliminate freedoms is called “reactance theory” (Clee and Wichlund, 1980). The degree of reactance is influenced by the intent to get freedom, the importance of freedom, the power of the threat to freedom, and subsequently possible threats (Lee and Lee, 2009).

Reactance is explained as “the motivational state of the person whose freedom is threatened”(Clee and Wichlund, 1980. p.389). This theory is quite related to the freedom of certain behaviours and freedom of attitudes which react against a try to control their behaviour or destroy their freedom of choice. Reactance can be aroused by attempts to the degree that the agent is persuading or forcing the sale of given commodity. The behaviour of reactance can be found easily two aspects, one is pop-up advertisements in websites which automatically try to get users involved, another is sales person get customer to a promotion event, or activity (Lee and Lee, 2009). According to the study of Nunes and Kambil (2001), it reveals that only 5.6% of the consumers are agreed to receive any personalized web service. We may reason that personalization service only increase a little bit a repeated visit through any recommendation service. In sum, the reactance behaviour can be able to explain why consumers are less interested in having positive feeling by personalization services. We tried to suggest why the negative perception for the personalization services is formed from BRS.

2.3 Motivation theories

Motivation theories can be classified into twofold. One is extrinsic motivation; another is intrinsic motivation (Davis et al., 1992). Extrinsic motivation is defined as “the performance of an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself, such as improved job performance, pay, or promotions,” By contrast, intrinsic motivation is defined as “the performance of an activity for no apparent reinforcement other than the process of performing the activity per se.” (Davis et al., 1992. P. 1112). Comparison of the two aspects, perceived usefulness is called one of extrinsic motivations, whereas enjoyment, feelings, and instinct are called one of intrinsic motivation (Yoon and Uysal, 2005).

3 RESEARCH MODEL AND HYPOTHESES

Based on the integrated theoretical background of unplanned behaviour, reactance theory, and motivation theory, we applied BRS for personalization service to the context of booth exhibition. The proposed research model is shown in Figure 4.

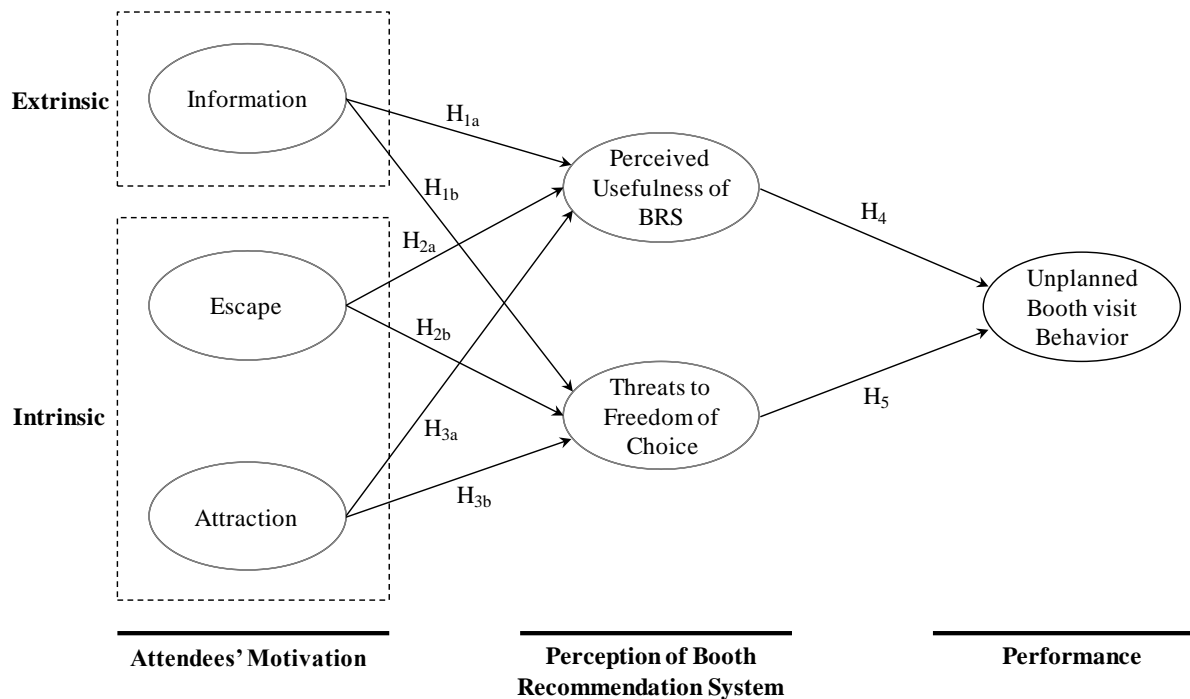


Figure 4. Research Model

3.1 Extrinsic motivation: Information

Pursuing information refers to pull motivations, which are connected to external, situational, or cognitive aspect (Yoon and Uysal, 2005). When travellers need new information while travelling, they search related information and require intensive information processing (Hwang and Fesenmaler, 2011), which try to identify useful information to achieve things what they want to gain such as new experiencing on a trip, chasing different lifestyle, trying new food, meeting new people, and visiting historical places etc. On the other hand, pursuing information can make a negative influence on freedom of choice. Information leads a reallocation of cognitive resources and stimulating responses or a reasonable behaviour (Petty and Cacioppo, 1986). If consumers to visit website to gain information, they believe that the website’s contents provides visitors who can make options for freedom of choice, which means they don’t feel likely to be threatened by massive information, which

can afford to have freedom to move in any of several choices. In doing so, pursuing information can get rid of threat to freedom of choice. Thus, we provide hypothesis as follow:

H_{1a}: Information makes an impact positively on perceived usefulness of BRS.

H_{1b}: Information makes an impact negatively on threat to freedom of choice.

3.2 Intrinsic motivations: Escape and Attraction

Motivations by intrinsic drivers are inspired by a destination's attractiveness, such as fun place, recreation facilities, cultural attractions, entertainment, natural scenery, shopping mall (Yoon and Uysal, 2005). Push motivation can be identified as a desire of escape, rest, relaxation, prestige, health and fitness, adventure, and social interaction, family togetherness, and excitement. One of intrinsic motivations is perceived enjoyment, relatively similar concept with escape and attract, which refers to the extent to which the activity of using the computer is perceived to be enjoyable (Davis et al., 1992, p. 1113). Pleasure-oriented system can provide self-fulfilling and connected to home and leisure activity. Heijden (2004) found that perceived enjoyment is positively related to perceived usefulness. The aspects of website's attraction such as visual attractiveness of the site have been indicated as a strong predictor of perceptions of the perceived quality of website (Law et al., 2010). Thus, in this study, we suggest that a positive relationship between attraction and perceived usefulness of BRS within exhibition context. A social psychological theory provide people's reaction to threatened or eliminated freedom is called "reactance theory" (Clee and Wicklund, 1980). Thus, intrinsic motivations such as escape and attract state of a person whose freedom is more likely threatened, which people who pursue more intrinsic motivations, they attempts to eliminate more threaten of freedom of choice.

H_{2a}: Escape makes an impact positively on perceived usefulness of BRS.

H_{2b}: Escape makes an impact positively on threat to freedom of choice.

H_{3a}: Attraction makes an impact positively on perceived usefulness of BRS.

H_{3b}: Attraction makes an impact positively on threat to freedom of choice.

3.3 Perceived usefulness of BRS

In marketing literature, consumers tendency to increase unplanned purchase, Bressolles et al (2007) found a strong relationship between website quality and unplanned purchases, Parboteeah et al (2009) have demonstrated that impulsive purchases is relevant to a product description and navigation aids. Thus, we can conjecture that perceived usefulness of BRS may influence unplanned booth visit behavior.

H₄: Perceived usefulness of BRS makes an impact positively on unplanned booth visit behavior.

3.4 Threat to freedom of Choice

Reactance theory told that individual will tend to move in the direction opposite from the influence effort. The negative effect would occur such like a "boomerang effect" (Clee and Wicklund, 1980). If there is no options or eliminated, a person are not likely to choose it. If individuals find recommendations to be restrictive or feel heavily pressured to accept them, they consider them as barriers to free choice or behaviour. In such cases, they experience a state of reactance, negatively evaluating the recommendation, refusing to accept it in an attempt to restore their freedom to choose and, even choosing the opposite of what was being recommended. Web users can also perceive web recommendations as restricting of their free will, even when the recommendations are relevant, accurate, and timely. When this occurs, they enter a motivational state where they form a negative attitude toward accepting the proposed recommendations. We therefore posited that the perception of threat to freedom generated by recommendations will be negatively related to the use the recommendation service (Lee and Lee, 2009). Thus, we hypothesize.

H₅: Threat to freedom of choice makes an impact negatively on unplanned booth visit behavior.

4 RESEARCH METHODOLOGY

4.1 Instrument development

In our study, a preliminary list of measurement items was originally developed using exhibition visit motivation and recommendation system adoption literature (Lee et al, 2004; Lee and Lee, 2009; Severt et al., 2007). The scales and their sources are shown in Table 1. The questionnaire employed the seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). These items were then screened by experts who were asked to clarify them and then comment on whether the items were likely to be appropriate for evaluating the unplanned booth visit behaviour of exhibition attendees.

Construct		Code	Scales	Reference
Extrinsic Motivation	Information	INF1	To acquire about the task related expert information	Severt et al. (2007)
		INF2	To find new product and information	
		INF3	To acquire new idea	
		INF4	To increase my knowledge	
		INF5	To meet expert	
Intrinsic motivation	Escape	ESC1	To relieve daily stress	Lee et al. (2004)
		ESC2	To relieve boredom	
		ESC3	To escape from routine life	
		ESC4	For a change of pace from everyday life	
		ESC5	Getting a change from a busy job	
	Attraction	ATT1	To enjoy a unique atmosphere	Lee et al. (2004)
		ATT2	To see new and different thing	
Perceived usefulness of BRS		USE1	Using BRS enables me to find booth more quickly.	Lee and Lee (2009)
		USE2	Using BRS enables me to find booth more easily.	
		USE3	Using BRS is helpful to visiting booth.	
Threats to freedom of choice		THR1	BRS will restrict my visiting the booth.	Lee and Lee (2009)
		THR2	BRS will bother me in visiting the booth.	
		THR3	BRS will interfere in my visiting the booth	
Unplanned booth visit behaviour		UNP1	I have visited an unplanned booth through the booth recommendation service.	Self - developed
		UNP2	I have spontaneously visited a booth through the booth recommendation service.	
		UNP3	I have visited a booth without thinking through the booth recommendation service.	
		UNP4	I have visited a booth on the spur of the moment due to the booth recommendation service.	

Table 1. Measurement Instruments

4.2 Data Collection

The major purpose of this study is to examine attendees' perception of BRS for exhibitions. BRS is developed for mobile communication technology, which it processing through a QR (Quick Response) code and wireless Internet standard for connecting the device. The BRS reads context information (QR code based booth information) to assist exhibition attendees, which provide information including schedule, topics, product, company, and presentation locations etc. The BRS has high accuracy due to the extremely short operating range in Figure 5.



Figure 5. Snapshot of BRS Usage

To this end, this study developed a system to test the BRS of the 2011 Seoul DMC Culture Open and promoted such test with an event “Recommendation event service QR Click, Foot Stamp Bang”. In this event, presents were granted to attendees who visited many of 25 booths, each of which had a specific QR code and those who scanned the code with their smart phone were considered as visitors. The genuine purpose of this event was to identify the locations of attendees who scanned QR codes on a real-time basis and analyze their QR code information, thereby recommending booths preferred by them on a real-time basis. From September 29 to October 1 (for two nights and three days), a large number of attendees participated in this exhibition, among whom 101 attendees utilized the recommendation system. A total of 101 responses were collected from the Internet survey and coded for analysis. The respondents were almost equally distributed between 55 males (54.5%) and 46 females (45.5%). The largest proportion of respondents (40, 39.6%) was aged 20 to 29, followed by those aged 30 to 39 (22, 21.8%) and those aged 40 to 49 (11, 10.9%). Most respondents were students (49, 48.5%) and office workers (21, 20.8%). The average monthly income per household was approximately three million Korean won (or approximately US\$2,750).

5 DATA ANALYSIS AND RESULTS

5.1 Analysis Method

To analyze our data, we adopted a confirmatory approach using PLS as our analysis method. PLS has been widely used in theory testing and confirmation. It is also an appropriate approach for examining whether relationships might or might not exist and thus is useful in suggesting propositions for later testing (Fornell and Larcker, 1981). Additionally, PLS relies on a smaller sample size for validating a model than do other structural equation modelling techniques (Chin, 1998). PLS-Graph version 3.0 was used to analyze the measurement and structural models.

Code	Factor analysis					AVE	CR	α
INF1	0.894					0.809	0.955	0.941
INF2	0.919							
INF3	0.917							
INF4	0.849							
INF5	0.847							
ESC1		0.805				0.789	0.949	0.933
ESC2		0.829						
ESC3		0.879						
ESC4		0.853						
ESC5		0.840						
ATT1			0.827			0.945	0.972	0.941
ATT2			0.824					
USE1				0.821		0.877	0.955	0.929
USE2				0.809				
USE3				0.766				

THR1					0.877		0.901	0.965	0.945
THR2					0.941				
THR3					0.909				
UNP1						0.908	0.840	0.954	0.936
UNP2						0.873			
UNP3						0.887			
UNP4						0.848			
Eigen value	8.501	3.425	1.927	1.067	1.927	2.977			
% explained	18.917	18.801	8.066	10.547	12.885	16.816			
Total Variance	18.917	37.718	45.784	56.331	69.216	86.032			

Table 2. Principle Component Analysis and Convergent Validity Testing

5.2 Measurement Model

To validate our measurement model, we undertook validity assessments of content, convergent and discriminant validity. The content validity of our survey was established from the existing literature, and our measures were constructed by adopting constructs validated by other researchers. And, exploratory factor analysis (EFA) using VARIMAX rotation was conducted in SPSS 18.0 to validate the survey instrument. All the items were loaded on distinct factors with Eigenvalues greater than 1.0, explaining 86.03% of the total variance. Next, confirmatory factor analysis (CFA) using PLS was done. Convergent validity was established by examining composite reliability (CR), Cronbach's α , and the average variance extracted (AVE) (Bhattacharjee and Sanford, 2006, p. 815). As shown in Table 2, CR and Cronbach's α for all the constructs exceeded 0.7. The AVE for each construct was greater than 0.5. Thus, the results established that the items demonstrated convergent validity. The discriminant validity of the measurement model was checked by comparing the squared root of AVE for each construct with the correlations between that construct and other constructs. If the square root of AVE was greater than the correlations between the construct and other construct, then it indicated discriminant. As shown in Table 3, the square root of AVE for each construct exceeded the correlations between that construct and the other construct. Hence, the discriminant validity of the instrument was established.

Construct	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)
(1) Information	4.368	1.584	0.899					
(2) Escape	4.481	1.478	0.249*	0.888				
(3) Attraction	4.975	1.439	0.264**	0.579**	0.972			
(4) Usefulness	5.000	1.443	0.106	0.285**	0.376**	0.936		
(5) Threats	3.554	1.637	0.176	0.400**	0.397**	0.129	0.949	
(6) Unplanned behavior	4.889	1.299	0.206*	0.266**	0.368**	0.750**	0.211**	0.917

* $p < 0.05$, ** $p < 0.01$

Note: Leading diagonal shows the squared root of average variance extracted (AVE) of each construct.

Table 3. Principle Component Analysis and Convergent Validity Testing

5.3 Hypothesis Testing

To evaluate the structural models' predictive power, we calculated the R^2 s for perceived usefulness of BRS, threats to freedom of choice, and unplanned booth visit behavior. Interpreted similarly to the multiple regression results, R^2 indicates the amount of variance explained by the exogenous variables (Barclay et al., 1995). Using a bootstrapping technique, the path estimates and t-statistics were calculated for the hypothesized relationships. The size of the bootstrapping sample that was used in the PLS analyses was 500. The results suggest that distinct antecedents influence the formation of satisfaction with and trust in online tourism shopping within each group. The results using PLS are shown in Figure 6.

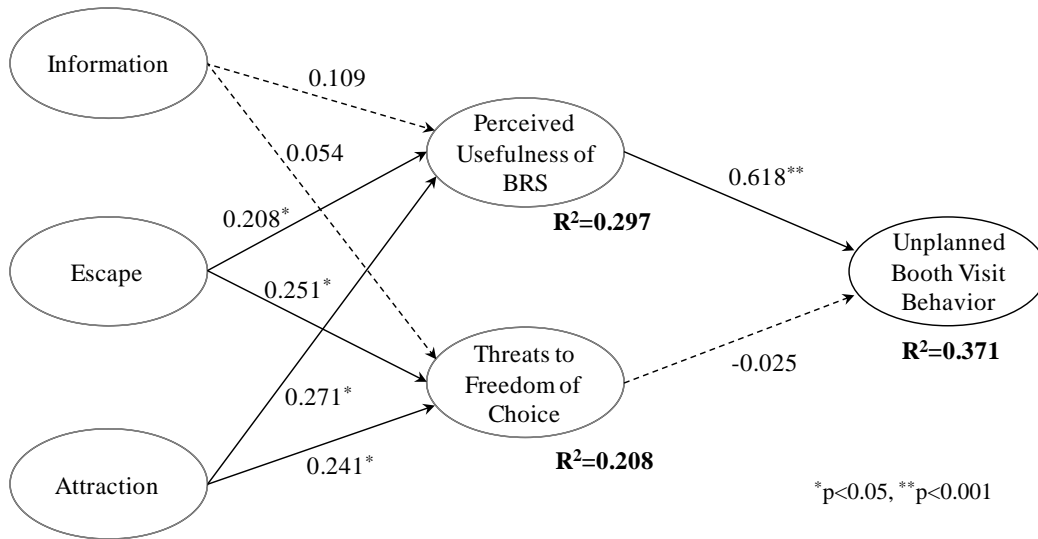


Figure 6. Path Estimates based on PLS Analysis

Figure 6 shows that PLS results. The research hypotheses raised in previous sections are proven, and the results are statistically significant. H_{1a} and H_{1b} show that information does not significantly influence the perceived usefulness ($\beta = 0.109$, t -value = 0.826, n.s), and threats ($\beta = 0.054$, t -value = 0.527, n.s). But, H_{2a} and H_{2b} show that escape significantly influence the perceived usefulness ($\beta = 0.208$, t -value = 1.974, $p < 0.05$), and threats ($\beta = 0.251$, t -value = 2.334, $p < 0.05$). And, H_{3a} and H_{3b} show that attraction significantly influence the perceived usefulness ($\beta = 0.271$, t -value = 2.328, $p < 0.05$), and threats ($\beta = 0.241$, t -value = 2.462, $p < 0.05$). H_4 shows that unplanned booth visit behaviour significantly affected by perceived usefulness ($\beta = 0.618$, t -value = 5.819, $p < 0.001$). But, H_5 shows that unplanned booth visit behaviour does not significantly affected by threats ($\beta = -0.025$, t -value = 0.259, n.s). In Table 4, we present the resulting standardized parameter estimates and verdicts for hypotheses H_{1a} to H_5 .

Hypotheses	Path	Estimates	t-value	Results
H_{1a}	Information \rightarrow Perceived usefulness	0.109	0.826	Not Supported
H_{1b}	Information \rightarrow Threats	0.054	0.527	Not Supported
H_{2a}	Escape \rightarrow Perceived usefulness	0.208	1.974	Supported
H_{2b}	Escape \rightarrow Threats	0.251	2.334	Supported
H_{3a}	Attraction \rightarrow Perceived usefulness	0.271	2.328	Supported
H_{3b}	Attraction \rightarrow Threats	0.241	2.462	Supported
H_4	Perceived usefulness \rightarrow Unplanned behavior	0.618	5.819	Supported
H_5	Threats \rightarrow Unplanned behavior	-0.025	0.259	Not Supported

Table 4. Standardized Structural Estimates and Hypotheses Test

6 DISCUSSION AND CONCLUSIONS

This study looked at how motivation of exhibition attendees influenced a positive factor (perceived usefulness of booth recommendation system) and a negative factor (threat to freedom of choice) of the BRS. Moreover, this study inquired into whether they were satisfied with unplanned booth visits induced by such factors. The analysis results are as follows. First, information was the only factor that did not influence attendees' BRS evaluation at all among information, escape, and attraction. On the other hand, escape and attraction had significant influence on their evaluation of the BRS. This means that while regarding the motives of escape and attraction, attendees have both positive and negative attitudes toward BRS, their motive of information is not correlated with the BRS. This suggests that the BRS may be conducive to unplanned attendees who visited the exhibition without sufficient

information, only for escape or attraction. On the other hand, the BRS is not useful and convenient to those who intend to obtain information (these are likely to have obtained information about the exhibition under a specific plan about their visit). Second, the BRS recommended booths suitable for its users' characteristics and therefore posed a threat to their free selection. However, despite threat to their freedom of choice caused by BRS recommendation, attendees considered that the BRS was useful. Third, because attendees felt the BRS was useful they were satisfied with unplanned booth visit behaviours resulting from recommendation information. The BRS's threat to freedom of choice was not significant; attendees perceived that the degree of BRS recommendation did not degrade attendees' unplanned booth visit behavior. The followings are this study's theoretical contributions. First, this study showed usefulness of the BRS by relating exhibition motivation used in the tourism area with information system evaluation factors. Second, this study is meaningful in that it applied the psychological reactance theory that individuals' freedom of choice is threatened by recommendation systems to an actual offline space, not online shopping malls. Third, this study is very important in that it explained attendees' unplanned behaviours occurring due to recommendation information from theoretical perspectives, and presented an integral model and empirically verified it. Currently, conventions and exhibitions offer diverse services to attendees and make great efforts to obtain information about different attendees in order to provide appropriate services to them. This study result showed that unplanned attendees with a light heart perceived such device for services was useful. On the other hand, it may be inconvenient and not so useful to those with sufficient advance information. This demonstrates the need to segment services provided by exhibitions, not providing uniform services, so that services may correspond to attendees' motives. Additionally, as shown by this study, the development of smart devices has led to reducing attendees' reluctance to recommendation services and therefore development of various relevant services is necessary. Using empirical data, this study analyzed the effects of the BRS on attendees' unplanned visits to booths based on the unplanned behaviour theory. As a result, it derived some suggestions useful for the establishment and design of future BRS. Future research that divides attendees into different groups with same motives and analyzes how they perceive BRS and their unplanned behaviours is necessary. Further, examination on how attendees perceive each function and how it influences them by segmenting BRS functions is considered necessary.

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