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Information Dissemination of Brochures and Service Encounter of Staff at Visitor Information Centres

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Abstract

Visitor Information Centres play an important role in destination tourism marketing, mainly with brochures supply and staff consults service for the visitors. The aim of this study is to examine the effects of brochure information dissemination and staff service encounter on overall experience, and to assess the relative importance. This study used sample from visitor information centre at Taipei East Metro Mall to develop the model and to test hypotheses, and the model was validated with sample from visitor information centre at Taipei Main Station. Results of confirmatory factor analysis of measurement model identified the quality factors of staff service encounter include: reliability, assurance, responsiveness and empathy; factors determining quality of brochure information dissemination include comprehensibility, credibility, and usefulness. Results of path analysis of structural model revealed that both quality of staff service encounter and quality of brochure information dissemination have significant effects on overall experience evaluation, and the effect of the former is far greater than the latter. Findings of this study not only provide managerial implications but also can be used as the foundation for further research.

Keywords: Visitor information centre, service encounter, information dissemination.

1. Introduction

Information is the lifeblood of tourism industry. For this reason, the tourism and travel industries can be said to be information-intensive industries (see Sheldon [23]). As tourists are generally traveling in unfamiliar environments, they go to considerable lengths to obtain adequate information before making purchase decisions, to enhance their trip quality, or to optimize the allocation of scarce resources such as time and money (see Wong and McKercher [26]). The acquisition of information affect the progression and outcome of the trip, and such demand for information has led to the establishment of visitor information centres (VICs). While VICs serve multiple functions including promotion, enhancement, control/filtering, substitution, and community integration (see Pearce [22]), the core function is to provide travel information to market local tourism and to encourage tourists to stop and shop (see Ballantyne et al. [2] and Deery et al. [8]).

In recent years, information technology has changed search behaviour in the context of travel information and challenged the operation and orientation of VICs (see D'Ambra and Mistilis [7]). Online applications have reduced the overall demand for VICs, yet social networks have increased visits to VICs. Affected by ubiquitous information technology, VICs continue to play an important role in providing travel information (see Lyu and Hwang [18]). This is because tourists emphasize the quality of information and services, and they trust the role of VICs as brokers of travel knowledge and gatekeepers of information (see Wong and McKercher [26]). In response to the foregoing demands and see characteristics, VICs generally use various types of brochures and media as well as personnel services to satisfy tourists' needs.

The services of VICs not only affect tourist behaviours at the destination but also the outcomes of travel experiences. Before, during, and even after trips, tourists have a need for information (see D'Ambra and Mistilis [7]). When tourists seek information about their travel destination, VICs are important sources of external information. Therefore, tourists necessarily engage in interaction and exchange with VICs. The efficacy of VICs is determined by the interaction during "moments of truth" (see Normann [20]), while exchange takes place through brochure media and service staff service staff. Although the study by Mistilis and D'Ambra [19] accounted for the diverse transmission of information, existing literature rarely considers the effect of performance of both brochure information dissemination and staff service encounters on the overall experience of VICs simultaneously. This gap requires further supplementation both in terms of academic and practical aspects.

According to 2018 statistics from Tourism Bureau, 80% of inbound tourists to Taiwan were independent travelers which are characterized by the gradual development of itineraries after they arrive at a destination(see Sheldon [23]). VICs are the gateways to the locales, important factors that determine impressions for travel locations, the initial encounters for travellers arriving at destinations, and they play important roles as travel knowledge brokers and information gatekeepers. Taipei City Government established VICs at important traffic and travel junctures to serve the travellers. There were more than 20.9 million visits in 2014, providing 3.83 million consultations, and 3.35 million sets of promotional tourism brochures were distributed, but dropped to less than 2 million visits in 2016 and 2017. Due to limitations in personnel and budgeting over the years, there were developmental constraints. For instance, the main supervision and administration was only conducted by several temporary personnel; most of the service providers were interns or volunteering students; the promotional materials lacked sufficient design and depth. It is not only necessary to confirm and emphasize the importance of brochure information dissemination and staff service encounter to the operations of VICs, but it is also necessary to clarify the relative importance of both. In contrast with the importance of functionality and roles of VICs, related studies are still rare in recent years (see Lyu and Hwang [17]). Therefore, it is necessary to engage in in-depth exploration of related issues from academic and practical perspectives. The main purpose of this study is to focus on Taipei Visitor Information Centres, combining existing theories of information transmission and service encounter, in order to establish and confirm the relationship

model of brochure information dissemination, staff service encounter, and overall experience by empirically assessing the effect of these two factors on overall experience, and by comparing their relative importance. Research results can provide references for the operation and management of VICs, and can serve as the foundation for related studies.

2. Literature Review

The services of VICs primarily involve consultation with staff and the provision of brochures. Visitors are most concerned with service items of VICs such as friendliness, professional service staff consultation, and the provision of materials and maps related to local scenic spots and events (see Ballantyne et al. [2] and Deery et al. [8]). Mistilis and D'Ambra [18] researched the VIC in Sydney and noted that visitor experiences at VICs were deeply affected by information provided by service staff and promotional materials. This effect was confirmed by Hwang and Li [11] in a study on VICs in United States. Outstanding personnel and information provision at VICs have contributed considerably to the economic development of the travel destination. Therefore, the development of tourism at travel destinations should be aided by understanding and evaluating staff service encounters and brochure information dissemination of VICs as well as their effects on tourist experiences.

2.1. Service encounter of staff at VICs

Normann [20] pointed out that customer perception of a service formed at the "moment of truth", the service encounter, and that service providers' skills, operations, and instruments, and customer expectations and behaviours jointly create service provision. Service encounter includes a series of key moments in interaction between the customer and the service provider. Such encounter would affect service quality as perceived by the customer. Service quality is comprised of the technical quality of service output and the functional quality of the service process (see Gronroos [10]). Technical quality is relatively easy to evaluate objectively, while functional quality is determined by interaction during the service encounter process and tends to be subjective. Customer evaluation of quality of service received originates from service encounter. In the high-contact service of VICs, the encounter process certainly includes many clues to enable customer evaluation of service quality.

The real significance of these key moments is in grasping specific times and locations and in taking opportunities to present high-quality service to customers (see Gronroos[10]). In terms of encounter with the services of VICs, the effect of service staff's interpersonal communication skills and their service environment on encounter and interaction cannot be overlooked. The VIC staff's ability depends on more than just product knowledge. Successful information provision is a function of developing a true service attitude, critical elements including whether she/he has an underlying service ethic, and is able to overcome stereotypical imaging, has sufficient depth of knowledge to explain the rationale behind the subsequent recommendations(see Wong and McKercher [26]).

Jago and Derry [12] explored the VIC in Melbourne, Australia, which used volunteers to reduce operating costs and to elevate service quality. In terms of quality service, the items deemed most important by tourists are polite and knowledgeable service staff, accurate and reliable consulting services, rapid responses from empathy in service staff, similar to the idea of implicit service quality and dimensions of service quality as stressed by Parasuraman et al. [21]. For volunteers, it is believed that quality service includes friendliness and approachability, passion and enthusiasm, solicitous and kind, and willing to serve people. For full-time service staff, professionalism, accuracy, timeliness, and reliability are emphasized. In sum, the points are the dimensions of reliability, assurance, responsiveness, and empathy in service. There should be considerable correlation between the quality of VIC staff encounter service quality staff encounters as perceived by tourists and their overall experience. Thus, the following hypothesis was proposed:

H1. Tourist perceptions of staff encounter service quality at VICs positively affect their overall experience evaluation for the centers.

2.2. Information dissemination of brochures at VICs

Effective system transmission of information can stimulate visits from tourists (see Leiper [14]). Before the trip, while traveling, and at the destination, tourists would search for marking information, and VICs are important sources of information when tourists are at their destinations. Tourists like to obtain customized, real-time, and accurate information from VICs (see Ballantyne et al. [2]), and the main priorities of transmitted information are comprehensibility, credibility, and usefulness (see Mistilis and D'Ambra [19]). In order to resolve problems or formulate decisions, consumers must first search for information from internal and external sources. When consumers are faced with decisions to buy, they usually first engage in internal search from past experience and personal memory, then use external searches for supplemental information. The information provided by VICs is external, and is used to form important foundations on trips to confirm issues and make travel decisions.

The experiential study by Mistilis and D'Ambra [19] on Sydney VIC showed that the perceived quality of information can be divided into three dimensions: comprehensibility, credibility, and usefulness. Comprehensibility means that information is clear in meaning, easy to understand, and easy to access; credibility means that information is reliable, accurate, and trustworthy; usefulness means that information is beneficial, valuable, and helpful; and experience refers to the overall satisfaction of visitors toward information provided by VICs. These dimensions and the scale for the measurement of perceived quality of information were revised from the customer satisfaction model proposed by McKinney et al. [18]. McKinney et al. considered that overall satisfaction is determined by information quality and service quality provided by the system, similar to the way that experience of VICs is affected by brochure information dissemination quality and staff encounter service quality. There should be a significant relationship between tourist-perceived brochure information dissemination quality and overall experience evaluation, thus the following hypothesis is proposed:

H2. Tourist perceptions of brochure information dissemination quality at VICs positively affect their overall experience evaluation for the centres.

2.3. Indivisible brochure information dissemination and staff service encounter

In terms of the content and characteristics of VIC interaction with tourists, Wong and McKercher [26] conducted a qualitative study on Macau VICs, and found that the satisfaction for interaction is dependent on whether the service staff can overcome pre-existing stereotypes and conventional formulaic responses, have broad and deep travel knowledge, the appropriate service ethics and attitudes, and VIC conditions at the time of service encounter; these four factors then mutually affect each other. Preconceived stereotypes toward visitors, or so-called erroneous attribution or prejudices, tend to cause misjudgement of tourist needs, such as judging a book by its cover and other notions, in turn resulting in dissatisfaction in service. In Zeithaml et al. [28] service quality gap model, this is the listening gap, in which the inability to confirm customer needs causes the overall gap to widen, leading to failed service. The key to correcting this error is whether the service staff is capable and willing to quickly modify its response based on tourist requests. This is based on the service staff's depth and breadth in professional travel knowledge, as well as their service ethics and attitudes, which would affect the size and direction of other gaps in the model.

For VICs, the core technological output is information needed by tourists, while service delivery is related to when, where, and how to transmit information to tourists. Zeithaml et al. [27] pointed out that perceived quality would affect consumers' behavioral intentions. Fornell et al. [9] pointed out that perceived quality is the antecedent variable of overall satisfaction, including the performance of output and service. The field of service marketing generally holds that output and service quality are the antecedent variables of satisfaction; both simultaneously affect the outcome variable of customer satisfaction, which further positively affects loyalty (see Zeithaml et al. [28]).

VICs primarily provide services through promotional media and service staff (see Mistilis and D'Ambra [19]), thus experiences that affect VICs can be divided into two parts. The first is the perception of brochure information dissemination quality, while the second is the perception of staff encounter service quality. Experiences, however, are holistic, comprised of core services, auxiliary services, and transmission process (see Lovelock and Wirtz [16]). Performance includes technical and functional quality (see Gronroos [10] and Normann [20]). Although Wong and McKercher [26] stressed that the service staff plays the role of travel knowledge brokers and information gatekeepers, but when customers enter VICs, service staff consultations or brochure information dissemination both involve tourism marketing. Therefore, staffs encounter service quality and brochure information dissemination quality at VICs should both simultaneously affect overall experience evaluation of tourists.

3. Methodology

3.1. Construct measurement

The conceptual framework for this study is shown in Figure 1. The main purpose was to confirm the effect of the two antecedent variables of staff encounter service quality and brochure information dissemination quality on tourists' overall experience evaluation of VICs, and to compare the relative importance of these two factors. The operational definition of staff encounter service quality is the performance of staff service encounter as perceived by tourists at VICs. The determining factors include the four dimensions of reliability, assurance, responsiveness, and empathy (see Parasuraman et al. [21]). The operational definition of brochure information dissemination quality is the performance of brochure information dissemination as perceived by tourists at VICs. The determining factors include the three dimensions of comprehensibility, credibility, and usefulness (see Mistilis and D'Ambra [19]). Overall experience evaluation is defined as the overall evaluation of tourists visiting VICs, including overall perceptions of experiences, services, and impression (see Mistilis and D'Ambra [19]). The study hypothesized that staff encounter service quality positively affects overall experience evaluation; brochure information dissemination quality also positively affects overall experience evaluation.

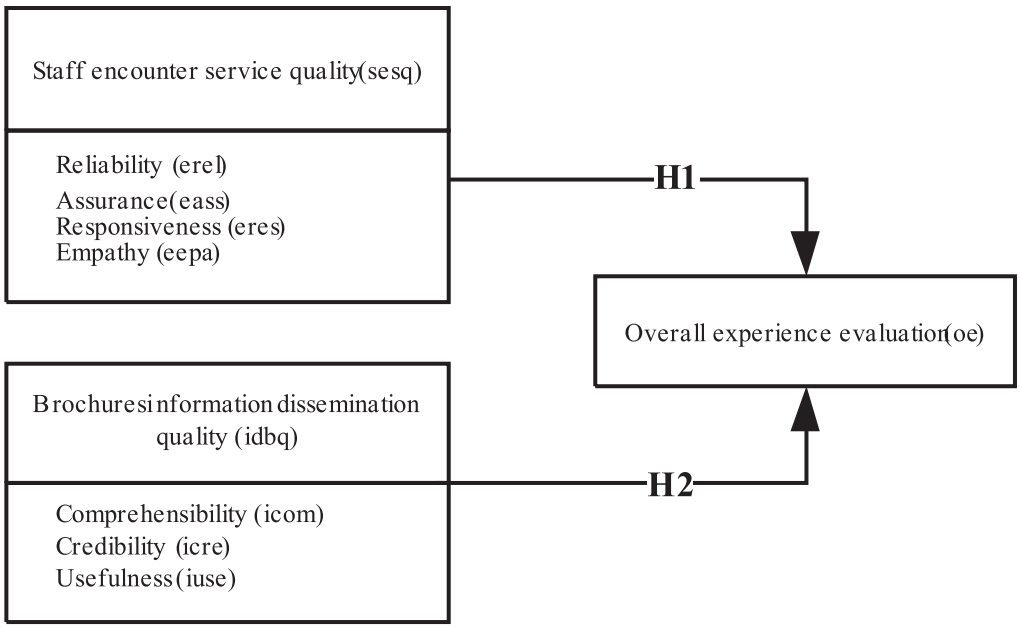

Figure 1: Research framework.

In terms of the measurement model, staff encounter service quality (sesq) and brochure information dissemination quality (idbq) were both designed based on the second-order reflective model, while overall experience evaluation (oe) was designed based on first-order reflective model. Staff encounter service quality (sesq) includes four

first-order reflective dimensions including reliability (erel), assurance (eass), responsiveness (eres), and empathy (eepa) as well as their reflective observed indicator questions. Brochure information dissemination quality (idbq) includes three first-order reflective dimensions including comprehensibility (icom), credibility (icre), and usefulness (iuse), as well as their reflective observed indicator questions. In the structural model, it was hypothesized that staff encounter service quality (sesq) and brochure information dissemination quality (idbq) would have a positive effect on overall experience evaluation (oe).

The scale was first used for pre-test analysis. After completing scale item evaluations, the East Metro Mall VIC sample was used to test the model by confirmatory factor analysis and structural model path analysis, to confirm the model and to test the hypotheses. Finally, in order to test the model's general applicability, the Taipei Main Station VIC sample was used to assess the model's generalizability. Confirmatory analysis and path analysis in this study was conducted using Amos 21.0, while descriptive statistics and item analysis was conducted using SPSS 21.0.

Questionnaire items included the demographic characteristics of the subject, as well as the staffs encounter service quality scale, the brochure information dissemination quality scale, and the overall experience evaluation. The staff encounter service quality scale was formulated in reference to Parasuraman et al.'s [21] SERVQUAL scale and Jago and Derry's [12] scale, and included the four dimensions of reliability (erel), assurance (eass), responsiveness (eres), empathy (eepa), with 3 questions in each dimension for a total of 12 questions (s1-s12). The brochure information dissemination quality scale was formulated in reference to the scale by Mistilis and D'Ambra [19], divided into the three dimensions of comprehensibility (icom), credibility (icre), and usefulness (iuse), with 3 questions in each dimension for a total of 9 questions (i1-i9). The overall experience evaluation questions referred to the studies of Mistilis and D'Ambra [19] and Zeithaml et al. [27], with 3 questions, which asked the subjects to rate their overall experience at the centre (t1), overall standard of services provided by the centre (t2), and the overall impressions of the centre (t3). In accordance with the study by Parasuraman et al. [21], all questions were measured on the Likert 7-point scale. To ensure content validity, items were reviewed by the director of Taipei Visitor Information Centre, VIC agent, and senior travel consulting service staff. Revisions were made on the basis of their feedbacks. Two scholars from university who worked closely with VICs also reviewed and edited the questionnaire.

3.2. Data collection

Considering that characteristics of visitors at VICs can be different, and taking into account feasibility and convenience of survey execution, the sampling sites were the VICs at East Metro Mall and Main Station in Taipei; visitors who can read Chinese were the subjects. The two VICs had won top two individual national awards from Tourism Bureau for supervision, auditing, evaluation, and service quality improvement. The East Metro Mall VIC is located in the shopping zone of East District in Taipei City; most

visitors are engaged in shopping and recreation, making this a representative and general VIC. Taipei Main Station VIC is another representative general VIC. It is located in the lobby of Taipei Train Station, the long- and short-distance public transportation hub in the Taipei metro area. Most visitors are transfer passengers. The number of visitors to this Taipei VIC is usually the highest of all VICs.

3.2.1. Analysis of pre-test surveys

Convenience sampling was used for pre-test surveys, focusing on the visitors of the two foregoing VICs. The research assistants, who were four fourth-year students majoring in tourism, took turns in carrying out the on-site questionnaire surveys; beforehand, they were given detailed instructions and training. Subjects were those who elected to stop at the VICs for longer than 10 minutes, and received two or more of the six VIC services (scenic spots, transportation and accommodations, festivals and events, packaged tours, brochures and maps, and staff consultation). Tourists who only stopped for a very short time to ask about travel destination, surrounding facilities and locations or just for brochures were excluded. The survey period was June 2013, including 4 weekdays and 4 weekends and holidays each; administered between 11:00 and 17:00 when there were more visitors.

The main purpose of the pre-test questionnaire was to evaluate applicability of the questions. A total of 100 questionnaires were randomly administered at both VICs, retrieving 70 and 66 valid questionnaires, respectively. Chi-square homogeneity testing of the genders, age groups, education levels, and residences of the subjects from both test sites found no significant difference in the composition of the two samples. Thus, the samples were combined for item analysis. Comparison of extreme groups was first conducted for item analysis. According to scholarly recommendations, subjects in the top and bottom 27% were placed in the high and low score groups (see Cureton [6]) to conduct t-test for the average scores in the high and low score groups for each question. Test results of the scales showed that there were significant differences in their questions ($p < 0.001$), which showed that the questions had considerable discrimination. In addition, the correlation between items and total score, as well as the correlation between modified items and total score all reached moderate to high correlation of over 0.30, and the two scales of staff encounter service quality and brochure information dissemination quality had overall reliability coefficients of 0.954 and 0.937, respectively; both exceeded the standard of 0.80. The deletion of individual questions did not lead to sudden spikes in reliability coefficients, demonstrating considerable internal consistency in the scales. In summary, after evaluation, all questions in the scale were retained and incorporated into the formal survey.

3.2.2. Formal survey

After referring to the responses from pre-test subjects and research assistants, the wording in the scale narrative was slightly modified and the layout was adjusted. The formal survey was simultaneously administered at both VICs in August-September 2013

using the method described in the pre-test; 350 visitors were randomly sampled at each site.

A total of 264 valid samples were acquired at the East Metro Mall VIC. The ratio of female subjects was higher (57%); the age ranges were mostly 20-29 years (45%) and 30-39 years (25%); most had college or university education levels (74%); most visitors were visiting for the first time (39%); and most were residents of the Taipei metro area (71%). 296 valid samples were acquired at the Taipei Main Station VIC, with the distribution characteristics similar to that of the East Metro Mall VIC sample. Male and female subjects each made up approximately half (49%, 51%); the age ranges were mostly 20-29 years (46%) and 30-39 years (25%); most had college or university education levels (79%); most visitors were visiting for the first time (37%); and most were residents of the Taipei metro area (75%).

4. Findings and Discussion

The study first used the East Metro Mall VIC sample for model establishment and validation in regard to the research framework and hypotheses. Then, the Taipei Main Station VIC sample was used for revalidation.

4.1. Model establishment and validation

4.1.1. Measurement model - confirmatory factor analysis

In the first step, confirmatory factor analysis was conducted for the second-order model of staff encounter service quality, finding that factor loading of indicator question s12 = 0.45 < 0.7, with relatively lower reliability, thus it was deleted and confirmatory factor analysis was re-conducted. As for the analytical results in the second instance, other than the chi-square value, which may have been significantly affected by sample number ($\chi^2 = 83.123$, $df = 40$, $p = 0.000$), the remaining important fit indicators were within the acceptable range ($\chi^2/df = 2.078 < 5$, GFI= 0.946 > 0.8, AGFI= 0.911 > 0.8, SRMR= 0.041 < 0.05, RMSEA= 0.064 < 0.08, TLI= 0.951 > 0.9, IFI= 0.965 > 0.9, CFI= 0.964 > 0.9), which showed good model fit. As shown in Table 1, composite reliability CR values were all greater than 0.7 except for the empathy (eepa) dimension =0.684, which was slightly low. Other than slightly lower standardized factor loading of s1=0.628 and s9=0.664 in the dimensions and indicators, the rest were greater than 0.7, and unstandardized factor loading were all significant. The average variance extracted (AVE) values of dimensions were all greater than 0.5, which showed that the dimensions had considerable convergent validity. As shown in Table 2, other than the square root of AVE of assurance (eass), 0.744, which was slightly lower than the correlation coefficient of assurance (eass) and responsiveness (eres) dimensions, 0.768, the remaining square roots of AVE of the other dimensions were all greater than the correlation coefficients with the other dimensions; this showed that the measurement constructs had considerable discriminant validity.

Table 1: Reliability and convergent validity of staff encounter service quality (sesq) measurement sub-model.

Indicator	Construct	Unstandardized factor loading	Standardized factor loading	CR Composite reliability	AVE Average variance extracted
erel ←	sesq	1.000	0.812	0.906	0.708
eass ←	sesq	1.495***	0.887		
eres ←	sesq	1.454***	0.866		
eepa ←	sesq	1.282***	0.797		
s1 ←	erel	1.000	0.628	0.763	0.519
s2 ←	erel	1.306***	0.749		
s3 ←	erel	1.424***	0.776		
s4 ←	eass	1.000	0.705	0.788	0.554
s5 ←	eass	0.975***	0.731		
s6 ←	eass	1.060***	0.795		
s7 ←	eres	1.000	0.809	0.820	0.605
s8 ←	eres	1.061***	0.848		
s9 ←	eres	0.707***	0.664		
s10 ←	eepa	1.000	0.735	0.684	0.520
s11 ←	eepa	0.843***	0.707		

$^{***}p < 0.001$

Table 2: Discriminant validity of staff encounter service quality (sesq) measurement sub-model.

Construct	eepa	eres	eass	erel
eepa	**0.721**			
eres	0.690	**0.778**		
eass	0.707	0.768	**0.744**	
erel	0.647	0.703	0.720	**0.720**

Note. The bold numbers on the diagonal are the square root of AVE; off diagonal numbers are the correlations among constructs.

Next, confirmatory factor analysis was conducted on the second order sub-model of brochure information dissemination quality. According to the results, other than the significant chi-square value ($\chi^2 = 52.498$, $df = 24$, $p = 0.001$), the remaining important fit indicators were within the acceptable range ($\chi^2/df = 2.187 < 5$, GFI= $0.959 > 0.8$, AGFI= $0.922 > 0.8$, SRMR= $0.040 < 0.05$, RMSEA= $0.067 < 0.08$, TLI= $0.977 > 0.9$,

Table 3: Reliability and convergent validity of brochures information dissemination quality (idbq) measurement sub-model.

Indicator	Construct	Unstandardized factor loading	Standardized factor loading	CR Composite reliability	AVE Average variance extracted
icom ←	idbq	1.000	0.865	0.847	0.649
icre ←	idbq	0.779***	0.731		
iuse ←	idbq	1.156***	0.816		
i1 ←	icom	1.000	0.887	0.891	0.734
i2 ←	icom	1.053***	0.932		
i3 ←	icom	0.983***	0.739		
i4 ←	icre	1.000	0.835	0.903	0.757
i5 ←	icre	1.075***	0.891		
i6 ←	icre	1.124***	0.884		
i7 ←	iuse	1.000	0.914	0.924	0.802
i8 ←	iuse	0.921***	0.880		
i9 ←	iuse	0.984***	0.892		

$^{***}p < 0.001$

Table 4: Discriminant validity of brochures information dissemination quality (idbq) measurement sub-model.

Construct	iuse	icre	icom
iuse	**0.896**		
icre	0.596	**0.870**	
icom	0.705	0.632	**0.857**

Note. The bold numbers on the diagonal are the square root of AVE; off diagonal numbers are the correlations among constructs.

IFI= 0.985 > 0.9, CFI= 0.985 > 0.9), which showed good model fit. As shown in Table 3, the constructs' composite reliability CR values were all greater than 0.7; standardized factor loading of constructs and indicators were all greater than 0.7, and unstandardized factor loading were all significant. The AVE values of constructs were all greater than 0.5, which showed that the constructs had considerable convergent validity. As shown in Table 4, the square roots of AVE of all constructs were all greater than the correlation coefficients with the other constructs; this showed that the constructs had considerable discriminant validity.

After validating the second-order model factor analysis of staffs encounter service

quality and brochure information dissemination quality, subsequent analysis was carried out in reference to the two-stage method recommended by Bollen [3]. In the first stage, all latent exogenous (staff encounter service quality, brochure information dissemination quality) and endogenous (overall experience evaluation) variables in the original analytical model were deemed latent exogenous variables, and all three were assumed to be correlated in restructuring the model for confirmatory factor analysis and to evaluate the correlations among latent variables. In the second stage, the original analytical model was used to conduct path analysis to explore the causal relationships among latent variables.

Results of first-stage confirmatory factor analysis showed that although the chi-square value was significant ($\chi^2 = 366.695$, $df = 220$, $p = 0.000$), other than SRMR=0.051, which was slightly higher than 0.05, the remaining important fit indicators were within the acceptable range ($\chi^2/df = 1.667 < 5$, GFI= $0.894 > 0.8$, AGFI= $0.867 > 0.8$, RMSEA= $0.050 < 0.08$, TLI= $0.953 > 0.9$, IFI= $0.959 > 0.9$, CFI= $0.959 > 0.9$), demonstrating acceptable model fit. The correlation coefficients among all three latent variables reached the level of significance, which showed considerable correlation among the three. The correlation coefficient of staff encounter service quality (sesq) and brochure information dissemination quality (idbq) was 0.51; the correlation coefficient of staff encounter service quality (sesq) and overall experience evaluation (oe) was 0.65; the correlation coefficient of brochure information dissemination quality (idbq); and the overall experience evaluation (oe) was 0.54. There was a moderate correlation between staff encounter service quality (sesq) and brochure information dissemination quality (idbq) but the correlation coefficient was below 0.85 and it was not greater than the correlation of the two to overall experience evaluation (oe). For exploration of path analysis for causal relationships in the next stage, the problem of collinearity was not significant (see Kline [13]).

In addition, as shown in Table 5, composite reliability CR values were all greater than 0.7 except for the empathy (eepa) construct =0.684 which was slightly low. Other than slightly lower standardized factor loading of s1=0.634 and s9=0.669 in the constructs and indicators, the rest were greater than 0.7, and unstandardized factor loading were all significant. The AVE values were all greater than 0.5 values of constructs were all greater than 0.5, which showed that the constructs had considerable convergent validity. As shown in 6, in terms of the first order construct of staff encounter service quality and brochure information dissemination quality, other than the square root of AVE of reliability (erel) in staff encounter service quality of 0.720, which was slightly lower than the correlation coefficient of reliability (erel) and assurance (eass) constructs, the remaining square roots of AVE of the other constructs were all greater than the correlation coefficients with the other constructs. Additionally, according to Table 7, in terms of the second constructs of staff encounter service quality and brochure information dissemination quality and the variables of overall experience evaluation, the square roots of AVE of all constructs were all greater than the correlation coefficients with the other constructs. This showed that the constructs had considerable discriminant validity.

(2) Structural model – path analysis

After completing Bollen's first stage confirmatory factor analysis for preliminary confirmation of the correlations among latent variables, the second stage in the original analytical model by path analysis was conducted to explore the causal relationships of latent variables. Because the original analytical model in the second stage path analysis

Table 5: Reliability and convergent validity of Bollen 1st stage measurement model.

Indicator	Construct	Unstandardized factor loading	Standardized factor loading	CR Composite reliability	AVE Average variance extracted
erel ←	sesq	1.000	0.843	0.907	0.710
eass ←	sesq	1.400***	0.857		
eres ←	sesq	1.362***	0.854		
eepa ←	sesq	1.261***	0.815		
icom ←	idbq	1.000	0.848	0.848	0.651
icre ←	idbq	0.812***	0.749		
iuse ←	idbq	1.182***	0.820		
s1 ←	erel	1.000	0.634	0.763	0.519
s2 ←	erel	1.292***	0.748		
s3 ←	erel	1.404***	0.772		
s4 ←	eass	1.000	0.716	0.789	0.556
s5 ←	eass	0.966***	0.736		
s6 ←	eass	1.028***	0.782		
s7 ←	eres	1.000	0.805	0.819	0.604
s8 ←	eres	1.064***	0.847		
s9 ←	eres	0.715***	0.669		
s10 ←	eepa	1.000	0.742	0.684	0.520
s11 ←	eepa	0.828***	0.700		
t1 ←	oe	1.000	0.769	0.807	0.583
t2 ←	oe	1.028***	0.802		
t3 ←	oe	0.926***	0.718		
i1 ←	icom	1.000	0.891	0.891	0.734
i2 ←	icom	1.044***	0.927		
i3 ←	icom	0.980***	0.740		
i4 ←	icre	1.000	0.836	0.903	0.757
i5 ←	icre	1.074***	0.891		
i6 ←	icre	1.121***	0.882		
i7 ←	iuse	1.000	0.915	0.924	0.802
i8 ←	iuse	0.919***	0.879		
i9 ←	iuse	0.984***	0.893		

***$p < 0.001$

was equivalent to the first stage confirmatory factor analytical model, model fit was the same as in the first stage. Table 8 and Figure 2 showed the causal correlations between latent variables, and that the unstandardized path coefficient of staff encounter service quality (sesq) and overall experience evaluation (oe) was significant ($p < 0.001$), thereby supporting hypothesis H1, while the standardized path coefficient was 0.509. The unstandardized path coefficient of brochure information dissemination quality (idbq) and overall experience evaluation (oe) was significant ($p < 0.001$), thus hypothesis H2 was also supported. The standardized path coefficient was 0.281, and the two could explain 48% of overall experience evaluation (oe). The effect of staff encounter service quality (sesq) on overall experience evaluation (oe), however, was evidently greater than that of brochure information dissemination quality (idbq).

Table 6: Discriminant validity of Bollen 1st stage measurement model (Part1).

Construct	iuse	icre	icom	eepa	eres	eass	erel
iuse	**0.896**						
icre	0.614	**0.870**					
icom	0.695	0.635	**0.857**				
eepa	0.343	0.313	0.354	**0.721**			
eres	0.359	0.328	0.371	0.696	**0.777**		
eass	0.360	0.329	0.372	0.699	0.732	**0.746**	
erel	0.354	0.324	0.366	0.687	0.720	0.723	**0.720**

Note. The bold numbers on the diagonal are the square root of AVE; off diagonal numbers are the correlation among constructs.

Table 7: Discriminant validity of Bollen 1st stage measurement model (Part2).

Construct	idbq	oe	sesq
idbq	**0.807**		
oe	0.542	**0.764**	
sesq	0.513	0.653	**0.843**

Note. The bold numbers on the diagonal are the square root of AVE; off diagonal numbers are the correlation among constructs.

4.2. Model extension evaluation

Based on the foregoing model constructed and validated by the East Metro Mall VIC sample, the study then used the Taipei Main Station VIC sample for the second

Table 8: Hypotheses test and path coefficient estimation (East Metro Mall VIC sample).

Indicator	Construct	Unstandardized path coefficient	Standardized path coefficient
oe	← sesq	0.722***	0.509
oe	← idbq	0.236***	0.281

$^{***}p < 0.001$

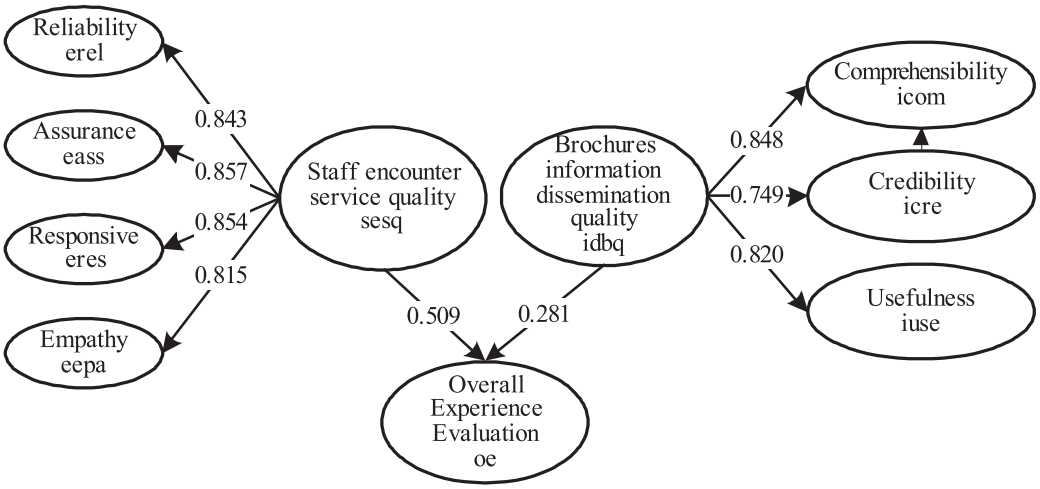

Figure 2: Path analysis of structural model (East Metro Mall VIC sample).

instance of model confirmation. Results showed that other than significant chi-square values ($\chi^2 = 452.481$, $df = 220$, $p = 0.000$), the remaining important fit indicators were within the acceptable range ($\chi^2/df = 2.057 < 5$, GFI= $0.887 > 0.8$, AGFI= $0.858 > 0.8$, SRMR= $0.043 < 0.05$, RMSEA= $0.060 < 0.08$, TLI= $0.956 > 0.9$, IFI= $0.962 > 0.9$, CFI= $0.961 > 0.9$), demonstrating good model fit. Further referring to Byrne (2010) [4] for group comparisons focusing on chi-square differences, it was found that although the two groups did not have fully equivalent factor loading values, path coefficients, latent variable variances, and covariance values, based on the views of Cheung and Rensvild [5] and Little [15], between them Δ CFI ($0.961 - 0.959 = 0.002$) was smaller than the recommended value of 0.01, and Δ TLI ($0.956 - 0.953 = 0.003$) was smaller than the recommended value of 0.05. In practice, it is possible to deem that there was no difference; in other words, the model has considerable generalizability.

According to Table 9 and Figure 3, for the Taipei Main Station VIC, in relationships between latent variables, unstandardized path coefficient of staff encounter service quality (sesq), and overall experience evaluation (oe) was significant ($p < 0.001$), thus supporting hypothesis H1, with a standardized path coefficient of 0.494. The unstandardized path coefficient of brochure information dissemination quality (idbq) to overall

experience evaluation (oe) was significant ($p < 0.001$), also supporting hypothesis H2, with a standardized path coefficient of 0.254. The two explained the 46% for overall experience evaluation, and the effect of staff encounter service quality (sesq) on overall experience evaluation (oe) was also greater than that of brochure information dissemination quality (idbq). The relationships among latent variables were similar to those in the East Metro Mall VIC.

Table 9: Hypotheses test and path coefficient estimation (East Metro Mall VIC sample).

Indicator	Construct	Unstandardized path coefficient	Standardized path coefficient
oe	← sesq	0.553***	0.494
oe	← idbq	0.253***	0.254

$^{***}p < 0.001$

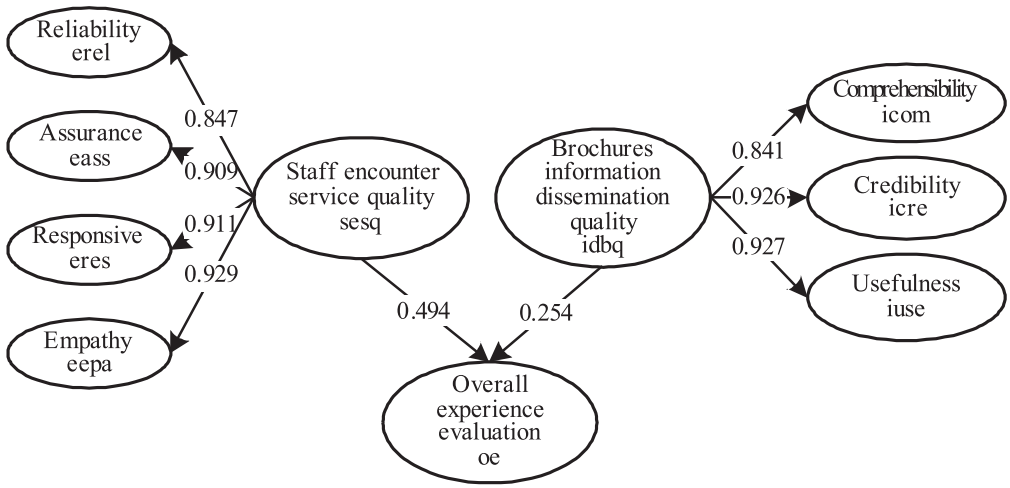

Figure 3: Path analysis of structural model (Taipei Main Station VIC sample).

5. Conclusions

Regarding the effect of staff service encounter and brochure information dissemination quality on overall experience evaluation at VICs, this study first used the sample from Taipei's East Metro Mall VIC to construct and confirm the model. In terms of the measurement model, results of confirmatory factor analysis showed that the staff service encounter and brochure information dissemination quality scales had considerable reliability and validity. Staff encounter service quality was primarily reflected in the four constructs of service reliability, assurance, responsiveness, and empathy, while

brochure information dissemination quality was primarily reflected in the three constructs of information comprehensibility, credibility, and usefulness. In terms of the structural model, path analysis showed that the model had considerable explanatory power, and that perceptions of staff service encounter and brochure information dissemination quality did indeed have a significant positive effect on overall experience evaluation, which corresponded to parts of Mistilis and D'Ambra's [19] conclusion. The study finally used the sample from the Taipei Main Station VIC to further verify the constructed model, confirming that the model has considerable generalizability. In summary, based on the analysis of both samples, hypotheses H1 and H2 were both confirmed. However, although perceptions of staff service encounter and brochure information dissemination quality can explain approximately 50% of overall experience evaluation, evidently the model includes antecedent variables that were not accounted for. This would be worth exploring further in future research.

In addition, the structural model path analysis results from both sampling surveys showed that staff encounter service quality had greater effect on overall experience evaluation than did brochure information dissemination quality. Evidently, tourist emphasis and feelings regarding personnel services were far greater than the provision of promotional information. Tourists preferred engagement with warm personnel, similar to the study on Australian VICs conducted by Ballantyne et al. [2]. Staff service encounter received relatively more emphasis, which suggested that tourists hoped to interact with solicitous, polite, and knowledgeable service staff, accurate and reliable consulting services, quick reactions, and empathetic service staff (see Jago and Derry [12]). Personal interaction continues to be an important element in the design of VICs, but that new technology may increase the quality of the provision of services and visitor satisfaction (see Araña et al. [1]). Therefore, the priority in operations and management of VICs is the pursuit of personnel service quality, but quality of promotional information should not be neglected. VIC authorities should pay attention to the research results. In addition, the scale and model constructed in this study can serve as the research foundation for service encounter and information transmission at VICs. Moreover, through reliable and valid measurement and monitoring of perceived quality, it be used to evaluate VICs as well as to be the basis of decision-making to improve quality. For instance, the study can be used to improve on performance evaluations, to formulate educational and training plans, and to improve the provision of promotional materials and information.

For the management ranks, as previously described, because staff encounter service quality is relatively more important, thus greater care should be taken in the recruitment and training of VIC service staff. As shown in the left half of Figure 2, for the East Metro Mall VIC, the four constructs of staff encounter service quality as ranked by importance were assurance, responsiveness (eres), reliability (erel), and empathy (eepa), thus professional ability and service attitudes received more attention. This may serve as a reference for VICs in improving their personnel services. On the other hand, the significant effect of brochure information dissemination quality on overall experience evaluation also cannot be overlooked. Therefore, VICs should properly handle design of promotional media and provision of travel information. As shown in the right half of

Figure 2, the three constructs of brochure information dissemination quality as ranked by importance were comprehensibility, usefulness, and credibility. There was greater emphasis on brochure information that was clear in meaning, easy to understand, and easy to read. This can also serve as a reference for VICs in improving the provision of promotional information.

Different VICs vary, however, in service provision and visitor demand characteristics, resulting in different levels of importance in constructs of staff encounter service quality and brochure information dissemination quality. This is generally caused by their disparate locations. As in Figure 3, for the Taipei Main Station VIC, the four constructs of staff encounter service quality as ranked by importance were empathy, responsiveness, assurance, and reliability, while the three constructs of brochure information dissemination quality as ranked by importance were usefulness, credibility, and comprehensibility, which differed from the East Metro Mall VIC. Thus, it is recommended that operating authorities should take different management strategies in different VICs. Regular scale evaluation and analysis can achieve performance comparison and supervisory effects of VICs.

Future studies should focus on other VICs for further confirmation of the generalizability of the scales and model. This is necessary in the context of government policies in promoting tourism development and improving travel service quality.

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