A Mediation Model of Tourists' Repurchase Intentions for Packaged Tour Services

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Abstract

Built on a structural equation model, this study examines the mutual relationships between tourists' perceived service quality, value, satisfaction and intentions to re-purchase packaged tour services from travel agents. A mediation model where tourist satisfaction is hypothesized as a key mediator of the relationships between perceived service quality and repurchase intentions, and between perceived value and repurchase intentions is developed and tested using a substantial dataset with a time span of nine consecutive years, available from a well-established regional consumer satisfaction survey. While previous literature suggests that quality perception imposes a direct effect on tourists' repurchase intentions, this study shows that such impact is *fully* mediated by tourist satisfaction. The mediating role of satisfaction is further supported by examining the direct/indirect effects of perceived value on tourists' repurchase intentions.

Keywords: Service Quality, Perceived Value, Satisfaction, Repurchase Intentions, Packaged Tour Services

Introduction

Service managers often tie consumer evaluations of service quality, service value and satisfaction to employee evaluations and compensation packages (Cronin *et al.* 2000). The implicit assumption is that improvement in perceptions of the quality, value and satisfaction in a service encounter would lead to favorable outcomes desired by service firms. When they refer to the literature to help evaluate the effectiveness of firm strategies or to set employee goals, however, service managers find conflicting information as to which of these variables, if any, is directly linked to consumer behavioral intentions and should thus be given a particular focus (Bolton 1998).

For example, Bou-Llusar *et al.* (2001) report that quality perception exerts a significant direct influence on customers' repurchase intentions. Though the results show that part of this influence is exerted through the satisfaction variable, the direct effect of perceived quality on repurchase intention is found to be greater than the indirect one through the satisfaction variable. By examining cruise passengers' behavioral intentions through three competing models (i.e., satisfaction model, value model and quality model), Petrick (2004) also suggests that quality is the best predictor of cruise passengers' intentions to repurchase. However, other researchers have proposed different arguments. For instance, Kashyap and Bojanic (2000) investigate the relationships between travelers' perceptions of value and quality and their influences on travelers' ratings of similar hotels and revisit intentions for both business and leisure travelers. Their findings suggest that perceived value plays a pivotal role in travelers' decisions in selecting a hotel, thus emphasizing the need for shifting efforts from managing quality alone to managing customer value. A similar role of service value is also supported by Lee *et al.* (2007) who conclude that perceived service value appears to be the best construct in determining festival attendees' behavioral intentions.

A third school of thought centers on consumers' satisfaction with a service encounter as the core mechanism affecting consumers' behavioral intentions. For instance, Ekinci (2004) suggests that service quality is an antecedent of customer satisfaction, which then mediates the relationship between service quality and behavioral intentions. Cronin and Taylor (1992) propose that managers should emphasize total customer satisfaction programs rather than focusing solely on service quality strategies because

"*consumer satisfaction has a stronger influence on repurchase intention than does service quality*". In a subsequent study which synthesizes and builds on the efforts to conceptualize the effects of quality, satisfaction, and value on consumers' behavioral intentions, Cronin *et al.* (2000) investigate simultaneously the direct/indirect effects of perceived value, quality and satisfaction on behavioral intentions, and find that perceived value is the best predictor, followed by quality and satisfaction, in understanding consumers' repurchase intentions.

The objective of this study is to clear the above ambiguity by investigating the relative influence of service quality, value and satisfaction in forming tourist repurchase intentions; thus to provide a sound basis for tourism managers to formulate operational and communication strategies. Realizing the potential reliability limits of previous research which draw conclusions based on cross sectional data at a specific point of time only, this study employs a substantial dataset of nine consecutive years, available from a well-established regional consumer satisfaction survey (Chan *et al.* 2003), to investigate the said relationships. Built on a structural equation model, this research examines mutual relationships between tourists' perceived service quality, value, satisfaction and repurchase intentions in the context of outbound tourism package services in Hong Kong. A mediation model is developed, in which tourist satisfaction is hypothesized as a mediator, intervening the relationships between perceived service quality and repurchase intentions, and between perceived value and repurchase intentions. Managerial implications and directions for future research are discussed at the end of the paper.

Antecedents of repurchase intentions: theoretical models and empirical evidence

The formation of customer repurchase intention is no doubt a complicated process. Some researchers view an individual's intention to repurchase as one facet of attitude (Zeithaml *et al.* 1996). Others prefer to view it as something distinct from attitude, e.g., as a particular form of volition that transforms the attitude into guided bodily responses (Bagozzi *et al.* 1989; Belk 1985; Soderlund *et al.* 2001). Social psychologists suggest that the impact of both attitudes and normative factors on behavior is mediated through behavioral intentions (Fishbein and Ajzen 1975). For this reason, business managers are particularly interested in understanding how an individual's intention to repurchase is formed theoretically, and what factors influence such a process empirically. A proliferation of theoretical

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models and empirical evidence in both the tourism and marketing literature have shown that perceived quality, value, and satisfaction are different antecedents of repurchase intentions (Anderson *et al.* 1994; Bolton and Drew 1991; Chan *et al.* 2003; Fornell 1992; Fornell *et al.* 1996; Mazursky and Geva 1989; Patterson and Spreng 1997; Selnes 1998; Taylor and Baker 1994; Zeithaml 1988). The extensive arguments and evidences on the bivariate relationship between these three variables and repurchase intentions are briefly reviewed in the following sections.

Customer Satisfaction

It is believed that customer satisfaction is closely related to attitude, which is likely to predict repurchase behavior (Anderson *et al.* 1994; Anderson and Mittal 2000; Fornell 1992; Reichheld 1996). For this reason, customer satisfaction has long been valued as a key outcome of good marketing practice (Malthouse *et al.* 2004). Empirically, studies in the marketing field have found a strong positive association between customer satisfaction and repurchase intentions in the context of both consumer goods and services (Selnes 1998; Taylor and Baker 1994; Bloemer and Kasper 1995), and business-to-business interactions (Hallowell 1996; Woodside *et al.* 1989; Patterson and Spreng 1997). In a series of important studies on the development of national/regional customer satisfaction indexes, e.g., American Customer Satisfaction Index (ACSI), Swedish Customer Satisfaction Barometer (SCSB), and Hong Kong Customer Satisfaction Index (HKCSI), satisfaction is found to be the most important construct leading directly to customer loyalty, which covers dimensions such as customer repurchase intentions, word-of-mouth, and price increase tolerance (Anderson *et al.* 1994; Chan *et al.* 2003; Fornell *et al.* 1996). Consequently, the following hypothesis is suggested.

 H1: *Tourist satisfaction is positively associated with repurchase intention*

Service Quality

Perceived service quality is a customer's cognitive response to a service offering (Anderson *et al.* 1994). There used to be debates on the causality between perceived service quality and consumer satisfaction (Bitner and Hubbert 1994; Cronin and Taylor 1992; Fornell 1992; Oliver and Swan 1989). One school of thought conceptualizes quality perception as a continuous attitude and is composed of the

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present level of satisfaction (Parasuraman *et al.* 1988; Oliver 1980), thus service quality is seen as a superordinate construct under which customer satisfaction is a part. On the contrary, Cronin and Taylor (1992), Woodside *et al.* (1989), Anderson and Sullivan (1993) advocate that it is satisfaction which is the superordinate construct and that quality is part of the process forming the satisfaction judgment. As noted by Ekinci and Riley (1998), the arguments centered around separation of quality from satisfaction are inexorably linked to the concept of satisfaction. To date, researches in services marketing have advanced to a general congruence on the conceptual difference between quality and satisfaction, i.e., satisfaction is an overall affective response that reflects a customer's emotional state of mind created by his/her exposure to a service experience, while perceived quality is an evaluation of the attributes of a service that are primarily controlled by a supplier (Baker and Crompton 2000; Cronin *et al.* 2000). Therefore, satisfaction is superordinate to quality and quality should be modeled as an antecedent of customer satisfaction (Anderson *et al.* 1994; Chan *et al.* 2003; Fornell *et al.* 1996; Olsen and Johnson 2004). In the field of tourism research, Ekinci (2004) also confirms that service quality is an antecedent of customer satisfaction, which further plays a mediator role between service quality and behavioral intentions.

Perceived service quality is found to have an influence on repurchase intentions in a number of studies such as Anderson and Sullivan (1993), Baker *et al.* (2002), Petrick (2004), Bolton and Drew (1991), Fornell (1992) and Oliver (1980). However, confusion remains regarding whether perceived quality is directly or indirectly linked to repurchase intentions via other intermediary variables such as customer satisfaction. For instance, Baker and Crompton (2000) investigate the relationship between quality and satisfaction in a festival context and found that higher perception of service quality not only enhanced customer satisfaction, but also encouraged increased re-visitation through the positive word-of-mouth effect. Using samples from six service industries, Cronin *et al.* (2000) empirically show that quality plays a direct role in predicting purchase intentions. Other studies, recognizing the influences of service quality on repurchase intention, emphasized that such influence is exerted through satisfaction, i.e., satisfaction is a mediator between service quality and repurchase intentions (Ekinci 2004). In the current study, both the direct influence and mediation impact of service quality on repurchase intentions will be examined.

In line with the above arguments, the following hypotheses are proposed.

H2: *Perceived quality relates to repurchase intention directly*

H3: *Perceived quality is related to repurchase intention indirectly via satisfaction*

Service Value

Perceived value measures a customer's overall assessment of the utility of a service product based on perceptions of what is received and what is given (Zeithaml 1988). A fundamental framework for the conceptualization of perceived value was first proposed by Dodds and Monroe (1985) and further developed by Zeithaml (1988). As suggested by Zeithaml (1988), customers may have different perspectives in assessing value. For example, low price means value to some customers but not necessarily to others. Value could also be any things other than price that a customer wants in a product/service. While different definitions of value all have merit, the majority of the literature focuses on the most basic version, i.e., "*value is what consumers get for what they give*" (Zeithaml 1988). In particular, perceived value for a service/product captures the quality received relative to the price incurred (Bolton and Drew 1991; Dodds *et al.* 1991; Holbrook 1994; Zeithaml 1988), and customers usually take both price and quality into account when they assess value (Chan *et al.* 2003; Fornell *et al.* 1996). Zeithaml (1988) further shows that perceived quality leads to perceived value, which then leads to purchase intentions. Therefore, perceived quality is viewed as an antecedent variable to perceived value in this study, i.e., the following hypothesis will be tested.

H4: *As perceived quality increase, perceived value will increase*

Some published studies also suggest that perceived value is one of the most salient determinants of purchase intention and repeat visitation (Bojanic 1996; Chang and Wildt 1994; Jayanti and Ghosh 1996). For example, examining perceived value in the hotel industry using the Means-End model proposed by Zeithaml (1988), Bojanic (1996) reports a significant positive association between perceived value and intentions to re-patronage. Baker (1990) confirms this link in her study examining the impacts of retail store physical environments on consumers' perceptions of quality, price and value. Dodds *et al.* (1991) further suggests that nonmonetary purchase risk is a key moderator in the quality/price relationship and

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consumers' willingness to buy. While a direct link between service value and repurchase intentions is found to be significant, others argued that part of the influence of service value (SV) on repurchase intentions (RPI) is exerted via satisfaction, i.e., satisfaction is a partial mediator in the SV-RPI link (Ekinci 2003). Alternatively, some researchers suggest that service value influences repurchase intentions only via satisfaction and the direct SV-PRI link is not significant (Moniler *et al.* 2007; Tam 2000). The current study will compare these two models to identify the exact mechanism through which service value influences repurchase intentions.

The following two hypotheses are proposed in accordance with the above arguments.

H5: *Perceived value relates to repurchase intention directly*

H6: *Perceived value is related to repurchase intention indirectly via satisfaction*

A Mediation Model of Tourist Repurchase Intentions

While numerous studies have attempted to model the relationships between satisfaction, perceived value, quality and repurchase intentions, conflicting results have been reported regarding their specific roles in predicting repurchase intentions (Kashyap and Bojanic 2000; Bou-Llusa *et al.* 2001; Cronin and Taylor 1994; Kashyap and Petrick 2004; Tam 2000). Fundamentally, these contradicting results lead to one key question—which variable is the most important one in forming customers' repurchase intentions? This is a question in which business managers are particularly interested, as they are desperate to utilize their organizations' resources efficiently to attract and/or retain customers, and is thus a question to be answered in the current study.

Based on the aforementioned literature review, two alternative models are proposed. Model 1 (Figure 1) is a partial mediation model and is developed based on the existing hypotheses that perceived quality, value and satisfaction all have a direct impact on repurchase intention (Baker and Crompton 2000; Jayanti and Ghosh 1996; Oh 1999; Petrick 2004; Spreng *et al.* 1996). The rationale of this modeling approach reflects the previous findings that customers assess a products' value through the quality perceived as well as the price incurred (Bolton and Drew 1991; Dodds *et al.* 1991; Holbrook 1994; Zeithaml 1988), and that perceived quality is an antecedent of consumer satisfaction (Anderson *et al.* 1994; Chan *et al.* 2003; Fornell *et al.* 1996; Olsen and Johnson 2004).

Though some relevant hypotheses considered in Model 1 are not brand-new hypotheses, a complete list of the hypotheses that examine the bivariate relationships between the identified variables and repurchase intentions is believed to be helpful for the current study for two reasons. (1) Fewer studies have examined these variables simultaneously in relation to their relative effects on subsequent variables (Cronin *et al.* 2000; Lee *et al.* 2007). The current study offers an opportunity to empirically investigate these relationships in a complex network. (2) The findings, if inconsistent with the existing literature, could provide further understanding of the interrelationships among the study variables; and be helpful in interpreting the hypothesis regarding customer satisfaction as a mediator.

Based on the literature reviewed, six path hypotheses regarding the relationships between service quality, service value customer satisfaction and repurchase intentions will be tested (Model 1).

[Insert Figure 1 here]

In accordance with the previous findings that perceived service quality influences repurchase intentions through satisfaction (Bou-Llusa *et al.* 2001; Cronin *et al.* 2000; Petrick 2004), and also with the arguments that total customer satisfaction should be the focus when attempting to attract/retain customers (Chan *et al.* 2003; Fornell *et al.* 1996), an alternative mediation model is developed. This second model represents a generative mechanism through which perceived quality and value influence repurchase intentions through satisfaction only. The following statement best describes the focal hypothesis of the current study as depicted in Model 2:

H7: *Tourist satisfaction <u>fully</u> mediates the relationships between perceived quality, value and repurchase intentions.*

[Insert Figure 2 here]

Model 2 is relatively constrained in that path (*a*) and path (*b*) are fixed to zero while they are set to

be freely estimated in Model 1. In this respect, Model 2 is said to be nested in Model 1 (Kline 1998). According to Baron and Kenny (1986), satisfaction may function as a mediator when: (i) variations in the levels of perceived quality and value significantly account for variations in satisfaction; *and* (ii) variations in satisfaction significantly account for variations in repurchase intentions; *and* (iii) the direct links between quality and repurchase intentions [i.e., path (*a*)], and that between value and repurchase intentions [i.e., path (*b*)] are no longer significant, when (i) and (ii) hold.

The Sample

In this study, we examine the relative importance of tourists' perceived service quality, value and satisfaction on their repurchase intentions of various tourism packages. To avoid evaluation bias derived from the specific destination on which a tourism package is targeted, a variety of tourism package products are considered in the study. This, however, may raise another issue in terms of comparability. Comparing tourists' evaluation of a travel package to one place versus another is analogous to comparing an apple with an orange. For example, tourists' experience of joining a tour to Paris is most likely very different from boarding on a venture trip to Cambodia. To make an apple and orange comparable, we thus will adopt a general measurement scheme to evaluate tourists' perception of service quality, service value and satisfaction, rather than focusing on the specific aspects of a tour experience, such as food, destination, accommodation, etc.

The Hong Kong Consumer Satisfaction Index (HKCSI), a well-established regional measure first launched by Chan *et al.* (2003) in 1998, offers an ideal case for the authors to test the hypotheses proposed in this study. A substantive dataset of nine consecutive years is readily available from the HKCSI survey. As a consumer-oriented economic performance indicator reflecting the quality of products (including services) sold in Hong Kong as evaluated by local consumers, the HKCSI survey covers about 70 commodities and has involved more than 10,000 successful consumer interviews each year since 1998. The survey procedures of the HKCSI are similar to those adopted in ACSI and SCSB studies (see Anderson *et al.* 1994; Anderson and Sullivan 1993; Fornell 1992; Fornell *et al.* 1996; Johnson *et al.* 1994). Specifically, a computer assisted telephone interview (CATI) system is employed to obtain a representative sample of consumers for each product. Potential respondents are first selected

from the household by the "nearest birthday" method, and then screened by asking the respondent whether he/she has joined packaged-tours sold by travel agents within a three-month period. A complete satisfaction survey is then conducted. In the survey, an 11-point scale from 0 for "worst" to 10 for "best" is applied to measure each measurement variable (MV) involved in the model with greater discerning power. The uses of the 11-point scale for each MV and of the multiple MVs for each latent variable (LV) are believed to help reduce the negative skewness commonly encountered with the distribution of ratings for satisfaction-related surveys and increase the measurement reliability and validity (Fornell 1992; Fornell *et al*. 1996). A detailed introduction to the development of the HKCSI as well as the measurement scales adopted can be found in Chan *et al*. (2003).

In the current study, the HKCSI survey of travel agency services (e.g., packaged tours) is employed. A sample survey questionnaire used for travel agency services is given in the Appendix. Each year from 1998 to 2006, around two hundred participants who have experienced packaged-tour services from local travel agents are interviewed in the HKCSI survey. A summary of the yearly sample size is included in Table 2 (see next section).

Operationalization of Constructs

Measuring latent constructs such as service quality, value and satisfaction has never been an easy job as noted in the literature (Bolton and Drew 1991; Parasuraman *et al.* 1985; Rust *et al.* 2002). For instance, the measurement of service quality in the past decades has evolved into several well-established measures of service quality; among these SERVQUAL (Parasuraman *et al.* 1988) has been the most extensively used as well as the frequently questioned measure (Cronin and Taylor 1992; Hartline and Ferrel 1996; Oh 1999; Yi 1990). The criticism of SERVQUAL concentrates on the relevance of the disconfirmation of expectations as the basis for measuring service quality and the applicability of SERVQUAL (Cronin and Taylor 1992). A critical review on the conceptual issues surrounding the measurement of service quality can be found in Ekinci and Riley (1998) Other than SERVQUAL, conceptualizations of service quality such as Importance-Performance Analysis (IPA) (Martilla and James 1977), SERVPERF, a measure of just Performance (Cronin and Taylor 1994; Yuksel and Rimmington 1998), and some combination scales that multiply SERVQUAL by Importance

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(Carman 1990; Fick and Ritchie 1991; McDougual and Levesque 1992) all received attention and were widely adopted to measure service quality in various contexts. Interestingly, a recent study (Hudson *et al.* 2004) shows that there was no statistical difference between these methodologies. Other researchers suggest that a simple performance-based measure of quality may just be an improved means of measurement (Baker and Compton 2000; Churchill and Surprenant 1982; Cronin and Taylor 1992; Hartline and Ferrell 1996; Oh 1999; Petrick 2004) which is based on the definition by Zeithaml (1988) stating that quality is a customers' judgment about a service's overall excellence or superiority.

In parallel to these arguments, perceived quality in the HKCSI study (Chan *et al.* 2003) is conceptualized by three performance-based items as summarized in Table 1, which shows the measures adopted in the HKCSI survey for perceived value and tourist satisfaction.

<Insert Table 1 here>

There is an additional remark on the measurement of perceived value worth addressing here, due to a recent relevant debate that appeared in *Journal of Travel Research*. Patrick and Beckman (2002) suggest measuring consumers' perceived value of a tourism product (e.g., golf vacation) through two dimensional schemes (proposed by Grewal *et al.* 1998), i.e., transaction value and acquisition value. Their findings show contradicting evidence to some earlier research that reports difficulties in discriminating transaction value from acquisition value. For example, Jayanti and Ghosh (1996) find that acquisition value is a redundant measure when accompanied with transaction value and the two measures are in fact difficult to disentangle. In a commentary article, Al-Sabbahy *et al.* (2004b) also question the validity of the scales and measurements used by Patrick and Beckman (2002) in capturing the different aspects of consumer perceived value. In an independent study, Al-Sabbahy *et al.* (2004a) rigorously investigated the two-dimensional value scale developed by Grewal *et al.* (1998) in the hospitality service industry, and found that the dimension of acquisition value was valid while transaction value showed poor validity. Based on their findings, Al-Sabbahy *et al.* (2004a) suggest that perceived value is in fact unidimensional, and that the acquisition value concept represents the essence of perceived value, i.e., what is received in relation to what is given.

The operationalization of perceived value in the HKCSI survey conforms to that of Al-Sabbahy *et al.* (2004a), i.e., perceived value is viewed as a unidimensional measure rather than a conglomerate of acquisition value and transaction value. Because consumers usually take both price and quality into account when they assess the value (Chan *et al.* 2003; Fornell *et al.* 1996), it is suggested that each may be measured in light of the other (Chan *et al.* 2003). Thus, perceived value in the HKCSI survey is measured through two indicators: (1) quality given price; and (2) price given quality. Similar operationalization of perceived value is also reported in NCSB (Fornell 1992) and ACSI (Fornell *et al.* 1996).

Analysis and Results

Model Estimation

The models depicted in Figures 1 and 2 represent a typical structural equation model (SEM), i.e., the structural relationships among the latent constructs as explained by a set of multiple regression models, and named structural models; and the relationship between each construct and its indicators which is reflected by a set of factor analysis equations, called measurement models. Among the different estimation approaches for a SEM, the maximum likelihood (ML)-based covariance structure analysis method is one of the most popular techniques. Alternative software such as LISREL, AMOS and EQS (Bollen 1989; Jöreskog 1970; Rigdon 1998) has been well-developed and widely applied in solving SEM problems. In the current study, an ML estimation method with the aid of AMOS is adopted to estimate the model.

Since customer surveys are inevitably subject to some non-responses, the issue of missing data is always a problem. To guarantee the positive definiteness of the sample covariance matrix and avoid serious problems such as negative variance, and under-identification (Arbuckle 1996; Finkbeiner 1979) in estimation, the missing data in this study was input by an expectation-maximization (EM) algorithm. This is a commonly applied method and can provide a complete data set with ML properties from incomplete data (Little and Rubin 1987; McLachlan and Krishnan 1997).

The estimation results of Model 1 using AMOS are given in Table 2. The goodness-of-fit of the proposed model can be evaluated using a few fit indices (Hu and Bentler 1998; Jöreskog 1970; Kline

1998). First, the chi-square ($\chi 2$) statistic, which reflects the discrepancy between model-implied covariance and observed sample covariance, ideally should be small and insignificant. However, the $\chi 2$ statistic is sensitive to sample size. When the sample size is large (which is often required in order that the index may be interpreted as a significant test), it is not uncommon to come across a large $\chi 2$ statistic even though the difference between observed and model-implied covariances are slight (Kline 1998). To reduce the sensitivity of the $\chi 2$ statistic to sample size, researchers suggest using $\chi 2/df$ as an alternative measure to examine the fit of the proposed model to sample data (Bentler and Bonett 1980; Jöreskog 1993; Kline 1998). Though there is no clear-cut guideline, a ratio of less than 3 for $\chi 2/df$ is suggested as a minimal acceptance value (Bentler and Bonett 1980; Jöreskog 1993; Kline 1998). As shown in Table 2, all $\chi 2/df$ indices are less than 3, implying that the hypothesized Model 1 fits all the nine sample data sets adequately.

Though $\chi 2/df$ could be the key measure that a researcher needs to assess the model's goodness-of-fit (Jöreskog 1970), many other good-ness-of-fit indices are also available from the AMOS package and are frequently adopted to provide further evidence in line with model fitting (Browne and Cudeck 1993; Kline 1998; Sörbom 2001). Among them, the most commonly used is *Goodness of Fit Index* (GFI) (Jöreskog and Sörbom 1996), which is analogous to a squared multiple correlation indicating the proportion of the observed covariance as explained by the model-implied covariance. The value of GFI ranges from 0 (poor fit) to 1 (perfect fit). Three other indices with similar rationales are *Comparative Fit Index* (CFI) (Bentler 1990), *Normed Fit Index* (NFI) (Bentler and Bonett 1980), and *Root Mean Square Residual* (RMSR) (Jöreskog and Sörbom 1996). Similar to GFI, both CFI and NFI have a theoretical value ranging from 0 to 1, and all these indices should be greater than 0.90 for the model to be considered acceptable. In addition to an acceptable GFI, NFI, CFI and RMSR, other researchers suggested *Root Mean Square Error of Approximation* (RMSEA) as a means to evaluate the goodness of fit a model (Hair *et al*. 1998; Hu and Bentler 1999). As a rule of thumb, a value of about 0.08 or less for the RMSEA would indicate a reasonable error of approximation. (Browne and Cudeck 1993).

As shown again in Table 2, GFI, CFI, and NFI are all greater than 0.90 (while many of them are in fact greater than 0.95), consistently across all the data sets investigated; and RMSEAs are less than 0.08, with only one marginal case in 1999 (RMSEA=0.09). These results provide sufficient evidence that

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Model 1fits the data adequately and thus could be tentatively accepted, pending further analysis to examine its reliability and validity.

[Insert Table 2 here]

Reliability and Validity of the Model

A valid result has to be based on a valid model. Before analyzing and discussing further the estimation results, the applicability of Model 1and Model 2 needs to be evaluated. As noted earlier, Model 2 is nested to Model 1 and Model 1 is a more relaxed model, thus we examine the model adequacy based on Model 1. Specifically, this is done by checking the reliability and validity of the model from the following three aspects.

First, each indicator that measures the corresponding latent constructs should be reliable. In the model, this is evidenced by the fact that the relevant standardized factor loadings for the three constructs are all positive and significant. The standardized factor loadings obtained from the nine data sets are shown in Table 3. With no exception, these factor loadings are all significant at the 0.01 level, which suggests they are reliable indicators in measuring the corresponding latent constructs (Anderson and Gerbing 1982).

[Insert Table 3 here]

Second, each latent construct should have convergent validity, i.e., the construct should explain more variances of its measurement indicators than does the error term (Fornell 1992; Fornell and Larcker 1981). The convergent validity of a construct can be gauged by its average variance extracted (AVE). It is suggested that a construct's average variance extracted (AVE) should be 0.5 or above (Dillon and Goldstein 1984). As shown in Table 4, the AVEs for perceived quality, value and satisfaction (as across the nine data sets) are consistently larger than 0.50, which demonstrates a satisfactory convergent validity of the research constructs examined in the study.

[Insert Table 4 here]

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Lastly, a reliable and valid model should be able to explain the dependent variable—*repurchase intentions*—adequately. This property can be examined by checking the multiple *R*-square ($R2$) of the unstandardized latent structural equations (Chan *et al.* 2003). For the current study, the $R2$ for repurchase intentions (see Table 3) varies from 0.24 (*2003 data*) to 0.47 (*1998 data*). In general, Model 1 explains repurchase intentions by its three antecedent variables adequately.

Estimation Results

Estimated path coefficients based on Model 1 are summarized in Table 5. As shown, both perceived quality and value are found to significantly influence tourist satisfaction, evidenced by the significant direct impacts between perceived quality and satisfaction, and that between perceived value and satisfaction. Such direct impacts are supported consistently by data across nine years. In other words, H1, H2 and H3 are supported in this study. On the contrary, the estimates of both path (*a*) and path (b) are found to be statistically *insignificant* (p<0.01), which implies that neither perceived value nor quality has a direct influence on tourists' repurchase intentions. Thus, H4 and H5 are not supported.

However, it may be too early to make any claim about the mediation role of satisfaction at the moment. As suggested by Baron and Kenny (1986), satisfaction may be said to function as a mediator when: (1) variations in levels of perceived quality and value significantly account for variations in satisfaction; *and* (2) variations in satisfaction significantly account for variations in repurchase intentions. The current results based on Model 1 fail to show a significant effect between tourist satisfaction and repurchase intentions. Thus, further analysis is needed before the hypothesis that "*tourist satisfaction fully mediates the relationships between perceived value, quality and repurchase intentions*" (i.e., H6) can be verified.

[Insert Table 5 here]

The insignificance of path (*a*) and path (*b*) as reported in Table 5 suggest that the two paths should be fixed to zero—which conforms to the hypothesized structure of a full mediation model depicted in Model 2. Thus, a second estimation is carried out based on Model 2, which postulates that satisfaction

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fully mediates the influences of perceived value and quality on tourists' repurchase intentions. The estimation results based on Model 2 are reported in Table 6. As evidenced by the fit indices, Model 2 is also an adequate model in fitting the data. The $\chi 2/df$ indices based on the nine data sets, are consistently less than 3. GFI, CFI and NFI are all greater than 0.90, and RMSEA is between 0.03 and 0.08 across the nine years. As a matter of fact, Model 2 does not differ from Model 1 in terms of data fit. This can be shown by examining the $\chi 2$ difference between the two models. For instance, the $\chi 2$ statistic based on a full model using 2006 data is 25.82 (see Table 2) with 22 degrees of freedom, while Model 2 utilizing the same data set generates a $\chi 2$ statistic of 30.04 (see Table 6) with 24 degrees of freedom. Therefore, a $\chi 2$difference=4.22 (=30.04−25.82) can be obtained, which is not significant given the degrees of freedom of 2 (i.e., =24−22). The insignificant $\chi 2$difference indicates that the two models fit the data equivalently well (Arbuckle and Wothke 1999).

[Insert Table 6 here]

As shown in Table 6, the paths between perceived value and tourist satisfaction, and those between perceived quality and satisfaction are positive and statistically significant ($p<0.01$). Thus, the notion is supported that both perceived value and quality have a direct impact on satisfaction. Besides, there is an indirect effect exerted from perceived quality on satisfaction through perceived value. The total effects of perceived quality on satisfaction can be counted by combining the standardized direct and indirect effects together. Taking the estimated path coefficients on 2006 data as an example, the standardized direct effect from perceived quality to satisfaction is 0.53 while the indirect one is 0.432 = 0.90 (QualityValue) × 0.48 (ValueSatisfaction). The total effect thus is: 0.53+0.432=0.962. The contribution of the indirect effect to the total effect between perceived quality and satisfaction is 0.432/0.962 = 44.91%. On average, the indirect effect through perceived value accounts for 42.38%[2] of the total effects between perceived quality and satisfaction.

Regarding the path between satisfaction and tourists' repurchase intentions, all of the nine data sets support a positive and statistically significant relationship ($p<0.01$) between the two variables, see Table 6. This, together with what has been found regarding the non-existence of path (*a*) and (*b*) in Model 1,

suggests that both perceived value and quality influence tourists' repurchase intentions through satisfaction. In other words, satisfaction is found to fully mediate the said relationships with repurchase intentions.

Discussions and Conclusions

Group travel is known to be a major force in the tourism industry (Sheldon 1986), and travel agencies have traditionally played a key role in offering packaged services to potential tourists over time (Klenosky and Gitelson 1998). Given the increasing competitiveness of the travel industry, it is imperative for practitioners to understand what factors influence the formation of tourists' intentions to repurchase tourism packages from a travel agency. Though there has been ample evidence in the literature that perceived value, quality and satisfaction all play a role in determining tourists' repurchase intentions, disagreement remains as which is the most salient interim factor that influences repurchase intentions. The current study, utilizing substantive historical data, provides a good opportunity to re-examine the said relationship in the tourism context. It contributes to the existing literature in the following three ways. (1) It confirms that a higher perception of service quality and value contributes to a higher level of tourist satisfaction, which in turn increases tourists' intentions for future re-patronage. (2) Though perceived service quality and value are well-known antecedents of repurchase intentions, direct links between these two variables and repurchase intentions are not supported in the current study. Instead, the indirect links via satisfaction are found to be significant, which is consistently supported by all of the nine years data investigated. Perception of service quality and value are tourists' cognitive measures of the service offering for a particular tourism package, while satisfaction evaluation is more emotion oriented (Anderson *et al.* 1994). Findings from this research indicate that tourists' emotions are a closer measure than the cognitive responses in forming tourists' future repurchase intentions. (3) Few previous studies have simultaneously examined visitors' judgments in one study to compare the relative effects of service quality, value and satisfaction on subsequent consequential variables (Lee *et al.* 2007), which could be one possible reason that inconsistent findings were reported previously in terms of whether the indirect links between service quality and value are mediated by satisfaction. Moreover, if it does, is satisfaction a full mediator or a partial one? The simultaneous examination of the bivariate

relationships as identified in the current study has advanced our understanding of the specific mediator role of tourist satisfaction in forming repurchase intentions.

A few important managerial implications are readily available from the current study. First, perceived service quality is the key to attract and retain tourists. Depicted in the verified full mediation model (Model 2), perceived quality is the only exogenous (independent) variable in the structural model. In particular, perceived quality explains on average (based on the nine data sets) 73% of variations in perceived value, which in turn influences the tourist satisfaction level. Altogether, perceived quality accounts for on average 84% of the variations in tourist satisfaction[3]. Therefore, in order to attract and retain tourists, travel agents should become intrinsically quality-driven and maintain a decent level of service quality. Nevertheless, a mindset of quality may not be sufficient in a highly competitive business environment. A quality-driven management mindset focuses intensively on a firm's internal processes. To become a competitive player in the market, however, a travel agent needs to be more customer-focused. For this purpose, the quality-improvement emphasis should be extended to customer satisfaction because satisfaction is a more immediate antecedent influencing tourists' intentions to repurchase. In other words, designing and delivering excellent service quality should not be the ultimate goal of a service firm. Rather, firms need to be able to make the quality improvement perceivable by customers. As a mediating variable, satisfaction bridges the transition from tourist's cognition of service excellence to an affective response of intentions to patronize, which in turn would most likely result in actual purchase behavior. Therefore, a high priority should be given by travel agents to enhance total tourist satisfaction.

Limitations and Future Studies

To some extent, findings from this study may be generalizable (largely due to the substantial nine-year data employed), but several limitations in this research should also be noted when applying the results. First, the gap between tourist repurchase intentions and their actual behaviors needs to be noted when formulating marketing strategies with regard to bringing in more business by improving total tourist satisfaction. Though a very strong relationship between satisfaction and repurchase intentions is found in this study, the impact of tourist satisfaction on actual repurchase behaviors needs to be

examined and quantified. In this regard, a subsequent study where tourist repurchase behavior is included will be a good supplement to the current study.

Second, the current study examines the formation of tourist repurchase intentions employing mainly psychological variables. The effects of situational variables such as types of vacations, tour products and tourists (Neilson 1996) are not included in the current study. It will be desirable to further extend the research by including more such situational variables.

Thirdly, previous studies, and the current one, have revealed the importance of service quality in determining customer satisfaction and retention, which in turn, is deemed to contribute to companies' profitability (Anderson *et al.* 1994; Anderson and Mittal 2000). However, it is not clear which dimension of service quality is more important in the service profit chain. For example, some researchers suggest reliability is more critical because service is intangible and its production and consumption is simultaneous, which potentially creates more inherent reliability problems (Grönroos 1990; Johnson and Nilsson 2003; Zeithaml *et al.* 1996). In contrast, other researchers argue that a service firm's ability to differentiate itself through customizing its service to individuals is more important than providing reliable, but undifferentiated service (Anderson *et al.* 1997; Fornell *et al.* 1996). Future studies to further examine the importance of different dimensions of service quality in affecting customers' repurchase intentions will be helpful to the industry, and thus are encouraged.

Endnotes:

[2] Not shown in the paper, but the average contribution of indirect effect to the total effects between quality and satisfaction can be readily derived from Table 5.

[3] To save space, individual data are not shown here but are available from the authors.

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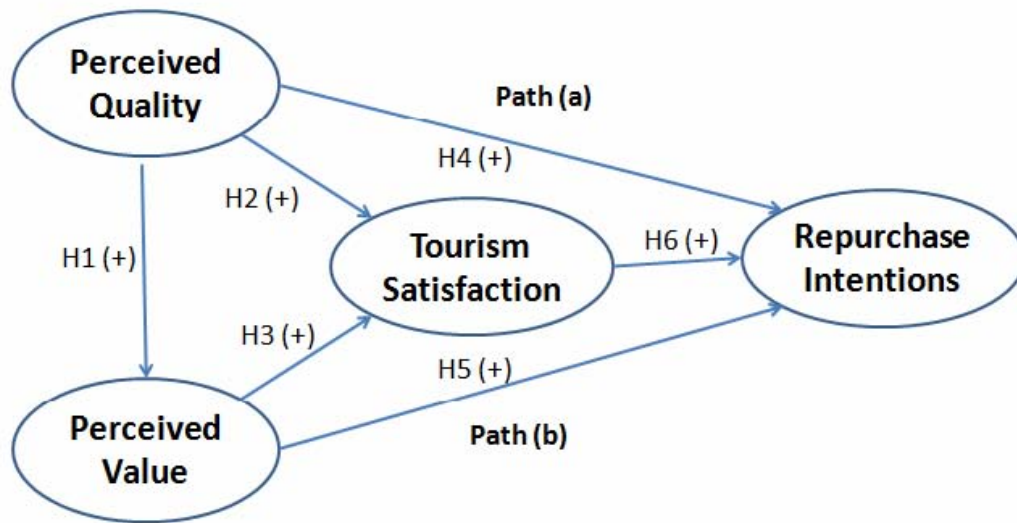**Figure 1.** **A partial mediation model (Model 1)**
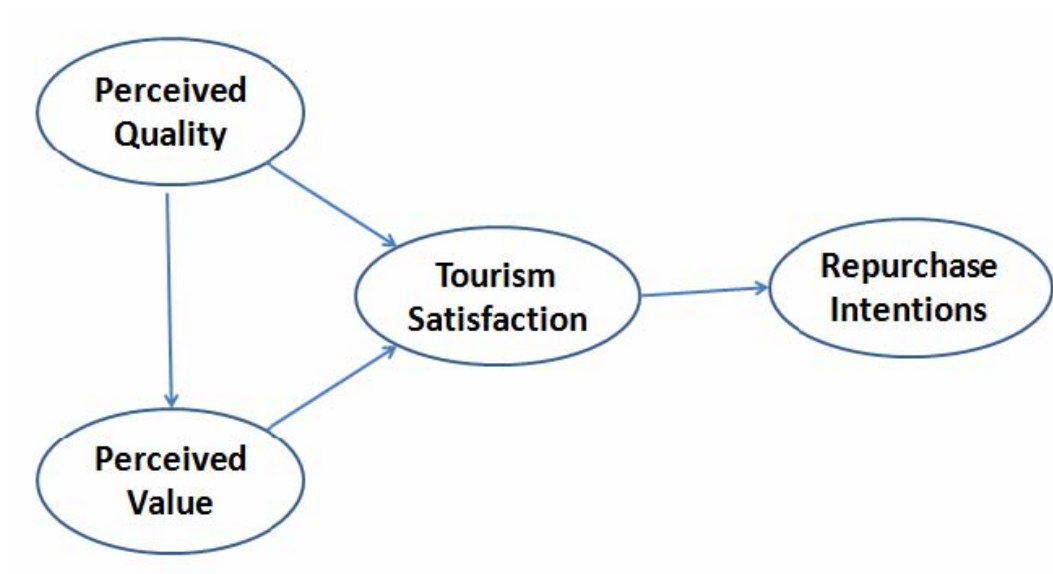
Figure 2.   A full mediation model (Model 2)

Table 1.　Measurements of Latent Constructs

Latent Constructs	Measurement Variables
Tourist Satisfaction	(TS1) *Overall satisfaction*, The adoption of this indicator indicates that tourist satisfaction is measured cumulatively, rather than as single transaction-based
	(TS2) *Confirmation of expectations*, which measures the degree to which performance exceeds or falls short of expectations.
	(TS3) *Comparison with ideal*, which measures the performance in relation to tourists' perceptually ideal tourism product/service.
Perceived Value	(PV1) *Quality given price*;
	(PV2) *Price given quality.*
Perceived Quality	(PQ1) *Customization* (or *fitness for use*), which reflects how a tour service product provided by travel agents can meet various needs of tourists and how it provides tourists with the desired service/product specifications;
	(PQ2) *Reliability*, which is defined as the ability of a travel agent to perform the promised service dependably and accurately
	(PQ3) *Overall performances\,* to capture the meaning of the construct in a broader way.

Table 2 Goodness-of-fit of Model 1 (*Partial Mediation Model***)**

Fit indices	Goodness-of-fit Measures								
	2006	2005	2004	2003	2002	2001	2000	1999	1998
χ^2	25.82	38.19	40.73**	53.77**	48.68**	49.77**	44.71**	57.06**	31.38
χ^2/df	1.17	1.74	1.85	2.44	2.21	2.26	2.03	2.59	1.43
GFI	0.97	0.96	0.96	0.95	0.97	0.95	0.95	0.93	0.96
CFI	0.99	0.98	0.98	0.97	0.98	0.97	0.98	0.96	0.99
NFI	0.98	0.97	0.98	0.96	0.98	0.96	0.97	0.94	0.98
RMSEA	0.03	0.06	0.06	0.08	0.06	0.07	0.07	0.09	0.04
Sample size (N)	200	192	207	199	323	205	185	183	188

Table 3 Standardized Path Coefficients of Latent Factors

	Factor Loadings								
	2006	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**	**1998**
Perceived Quality									
PQ1	0.83	0.87	0.88	0.89	0.86	0.66	0.86	0.85	0.85
PQ2	0.83	0.82	0.87	0.88	0.87	0.84	0.87	0.84	0.85
PQ3	0.87	0.90	0.86	0.70	0.83	0.84	0.87	0.75	0.77
Tourist Satisfaction									
TA1	0.96	0.93	0.95	0.90	0.93	0.88	0.91	0.86	0.91
TA2	0.81	0.80	0.81	0.80	0.35	0.76	0.85	0.63	0.82
TA3	0.86	0.80	0.89	0.81	0.84	0.86	0.90	0.84	0.86
Perceived Value									
PV1	0.76	0.84	0.81	0.79	0.84	0.79	0.83	0.66	0.80
PV2	0.94	0.88	0.99	0.87	0.93	0.90	0.91	0.88	0.99

Table 4 AVEs of Latent Constructs

Latent Construct	AVEs								
	2006	2005	2004	2003	2002	2001	2000	1999	1998
Perceived Quality	0.71	0.74	0.75	0.69	0.73	0.61	0.75	0.66	0.68
Satisfaction	0.77	0.71	0.78	0.70	0.56	0.70	0.79	0.61	0.75
Perceived Value	0.73	0.75	0.82	0.69	0.78	0.71	0.76	0.61	0.81
R_2	0.42	0.40	0.37	0.24	0.39	0.39	0.28	0.33	0.47

Table 5 Path estimates (*Partial Mediation Model*)

Path	Path Estimates[1] based on *Full* Model								
	2006	2005	2004	2003	2002	2001	2000	1999	1998
Quality → Value	0.79** (0.90)	0.93** (0.86)	0.87** (0.84)	0.78** (0.83)	0.87** (0.87)	0.77** (0.85)	0.84** (0.88)	0.75** (0.88)	0.80** (0.76)
Value → Satisfaction	0.51** (0.48)	0.34** (0.39)	0.51** (0.47)	0.40** (0.45)	0.58** (0.64)	0.54** (0.59)	0.34** (0.35)	0.52** (0.45)	0.39** (0.44)
Quality → Satisfaction	0.48** (0.52)	0.59** (0.62)	0.57** (0.51)	0.43** (0.53)	0.32** (0.36)	0.36** (0.43)	0.60** (0.65)	0.51** (0.52)	0.56** (0.59)
Quality → Repurchase Intentions (Path *a*)	1.27 (0.69)	-0.30 (-0.17)	-0.31 (-0.17)	0.09 (0.06)	0.67 (0.42)	-0.91 (-0.55)	0.70 (0.42)	0.01 (0.04)	0.14 (0.08)
Value → Repurchase Intentions (Path *b*)	1.10 (0.52)	-0.50 (-0.30)	-0.41 (-0.23)	-0.09 (-0.05)	-0.10 (-0.06)	-1.83 (-1.02)	0.11 (0.06)	-0.18 (-0.09)	-0.44 (-0.26)
Satisfaction → Repurchase Intentions	-1.07 (-0.54)	2.05 (1.09)	1.61** (0.98)	0.95 (0.49)	0.51 (0.29)	4.22 (2.13)	0.11 (0.06)	1.20 (0.65)	1.62 (0.85)

[1] Unstandardized (Standardized) path estimates.
* p<.05; **p<.01

Table 6 Path estimates and Goodness-of-fit Indices (*Full Mediation Model*)

Path	Path Estimates[2] based on *Mediation* Model								
	2006	2005	2004	2003	2002	2001	2000	1999	1998
Quality → Value	0.79** (0.90)	0.93** (0.86)	0.87** (0.84)	0.77** (0.83)	0.87** (0.87)	0.77** (0.85)	0.84** (0.88)	0.75** (0.88)	0.81** (0.76)
Value → Satisfaction	0.50** (0.48)	0.33** (0.38)	0.51** (0.47)	0.39** (0.45)	0.54** (0.60)	0.52** (0.58)	0.33** (0.35)	0.51** (0.45)	0.37** (0.42)
Quality →Satisfaction	0.49** (0.53	0.60** (0.63)	0.56** (0.51)	0.43** (0.53)	0.36** (0.40)	0.37** (0.44)	0.60** (0.66)	0.51** (0.53)	0.57** (0.61)
Satisfaction → Repurchase Intentions	1.29** (0.65)	1.20** (0.63)	0.99** (0.61)	0.96** (0.49)	1.11** (0.63)	1.23** (0.62)	0.97** (0.53)	1.06** (0.58)	1.30** (0.69)
Fit indices									
χ^2	30.04	39.29	43.90**	53.89**	55.58**	52.58**	45.86**	57.16**	36.04
χ^2/df	1.25	1.64	1.83	2.25	2.32	2.19	1.91	2.38	1.50
GFI	0.97	0.96	0.95	0.95	0.97	0.94	0.96	0.93	0.96
CFI	0.99	0.98	0.98	0.97	0.98	0.97	0.98	0.96	0.99
NFI	0.98	0.97	0.97	0.95	0.97	0.95	0.96	0.94	0.97
RMSEA	0.03	0.06	0.06	0.07	0.06	0.07	0.07	0.08	0.05
Sample size (N)	200	192	207	199	323	205	185	183	188

[2] Unstandardized (Standardized) path estimates.
  * p<.05; **p<.01

Appendix Satisfaction Survey Questionnaire on Packaged Tour Service

Tourist Satisfaction
Your overall satisfaction with the tour?
How well the service quality of the tour conforms to your prior expectations before joining the tour?
How close the service quality of the tour is to that of your ideal case?
Perceived Quality
Your overall evaluation of the quality of the tour?
The extent to which the tour arrangement (i.e., itinerary, accommodation, meals, etc.) fits your individual needs?
How does the tour arrangement (i.e., itinerary, accommodation, meals, etc.) is consistent with what is promised?
Perceived Value
Your rating of tour fee given service quality received?
Your rating of service quality of this tour given the fee you paid?
Repurchase Intention
How likely you may visit this travel agent again for the packaged tour?