THE ANTECEDENTS AND CONSEQUENCES OF PRICE FAIRNESS IN TOURISM

A Dissertation

by

JIN YOUNG CHUNG

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2010

Major Subject: Recreation, Park, and Tourism Sciences

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ABSTRACT

The Antecedents and Consequences of Price Fairness

in Tourism. (December 2010)

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Pricing strategies (e.g. yield management) in the tourism industry, known as non-transparent pricing, have raised fairness issues, and more recently, new pricing schemes in the airline industry have been controversial issues in terms of price fairness. Nonetheless, few tourism researchers have studied price fairness from a consumer perspective. Thus, an understanding of the cognitive processes associated with perceived price fairness could have far-reaching implications for tourist behavior research.

The purpose of this study was to examine the antecedents and consequences of tourists' perceived price fairness of the ancillary revenue (i.e. extra fees of airlines). In particular, a conceptual model was based on Weiner's (1980) attribution theory, which was expected to complement shortcomings of the traditional dual entitlement principle (Kahneman, Knetsch, and Thaler, 1986). Following the study purpose, four objectives of the study were established: (1) to examine the dimensionality of price fairness in a price change context; (2) to examine the antecedents of price fairness; (3) to examine the consequences of price fairness; and (4) to compare differences in the price fairness

model between high and low price sensitivity groups. To achieve the study objectives, this study developed a conceptual model of price fairness with three antecedents (price comparison, cognitive attribution, and emotional response) and four consequences (behavioral loyalty, willingness to pay, complaining, and revenge), and determined the model that best predicted the hypothesized model using Structural Equation Modeling.

Data were collected from an online survey and the respondents (n=524) were leisure travel passengers in the United States who had taken domestic flights in the past 12 months. The initial model fit the data well from a global perspective, yet, some hypotheses were not supported. Results suggested that price comparison evaluation and cognitive attribution are antecedents to price fairness, but emotional response was found to be influenced by price fairness as opposed to what was hypothesized. It was also revealed that while price fairness directly influenced favorable behavioral intentions (e.g. behavioral loyalty and willingness to pay more), it also influenced unfavorable behavioral intentions (e.g. revenge and complaining behavior), mediated by negative emotional response. The revised model was alternatively proposed. In addition, significant differences in price fairness, emotional response, willingness to pay more, and revenge intention between high and low price sensitivity groups were found.

Results of this study provide potentially important direction for the development of a theoretical framework for the conceptualization of antecedents and consequences of price fairness in a tourism context. It is further expected that findings of this study from an attributional perspective provide managerial guidance for the utilization of marketing strategy when a company encounters inevitable price increases or extra fees.

DEDICATION

I dedicate this work to my wife, Young Ah, and our unborn child with love.

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There are many people I need to thank for their assistance with this study.

Of the many people who have been enormously helpful in writing this dissertation, I extend immense gratitude to Dr. James Petrick, my advisor. Thank you very much for your guidance, support, and professionalism. You are truly a great role model to me and have made my stay at Texas A&M University one without regrets. I am also deeply grateful to all my committee members. Thanks to Dr. Gerard Kyle for his encouragement and advice on my publications and dissertation work. Also, thanks to Dr. Alex McIntosh and Dr. Haipeng Chen for participating on my dissertation committee and for providing valuable insight in their areas of expertise. I really enjoyed their classes and learned a lot, which has given guidance for this dissertation.

In addition, I am indebted to the many professors, staff, colleagues and friends at the Department of Recreation, Park, and Tourism Sciences of Texas A&M University. It was really a great experience being with them. Many friendships and scholarly interactions occurred during my four years in Aggieland. I am also deeply grateful to my undergraduate advisor, Dr. Jin Young-Jae, who encouraged me to study further.

Sincere thanks to ASTA (American Society of Travel Agents) for funding the project. Without their financial assistance, this research would not have been completed on time. Also, I would like to thank the audience at my presentations at the TTRA Conference 2009 for sharing ideas and giving me valuable feedback.

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TABLE OF CONTENTS

Page

Page

Page

LIST OF FIGURES

Page

LIST OF TABLES

Page

1. INTRODUCTION

1.1 Background of the Study

Price is one of the most critical attributes in buying products or services (Stevens, 1992). Numerous researchers in marketing, management, and economics have thus studied price from managerial, behavioral, and/or quantitative perspectives. Despite being an important indicator influencing consumer decision-making and buying behavior, price fairness has just recently become one of the emerging agendas in pricing literature (Bolton, Warlop, & Alba, 2003). Few studies on price fairness have been found in the tourism literature as well, while many tourism and hospitality studies have paid attention to pricing strategy from a managerial perspective (e.g. yield management). Given the fact that tourism is one of the most price non-transparent industries (e.g. dynamic pricing of airlines, car rentals, and hotels) (Kimes & Wirtz, 2003a; Maxwell, 2008), it would seem that price fairness perception should be examined in relation to tourism (Perdue, 2002). The study of price fairness in tourism is also justified by previous findings that have revealed that people are more likely to perceive price unfairness toward services than products (Bolton, et al., 2003).

More recently, new pricing schemes in the airline industry have been controversial. The pricing scheme, called *ancillary fees* or *a la carte pricing*, refers to charges for services that passengers used to be given for free (Wilkening, 2009).

This dissertation follows the style of *Annals of Tourism Research.*

As indicated by the fact that all airlines' revenues from ancillary fees in 2008 were almost $10.25 billion, which was a 346 percent increase from 2006 in the United States, ancillary fees are one of the fastest growing industry norms. These extra charges were also initiated by some European low-cost carriers (Economist, 2006). Two reasons why airlines have been using ancillary fees are because of the steep drop in air travel demand and unpredictable fuel prices (Economist, 2008). In other words, due to the decreasing number of domestic passengers, airlines have had to use alternative pricing mechanism (i.e., checked bag fees and on-board service fees add-on), and subsequently, U.S. Airlines collected nearly $740 million in baggage fees alone in the third quarter of 2009. The total ancillary fee revenue also accounted for 6.9% of their total operating revenue for the major U.S. airlines in the quarter of 2009, which was only 4.1% a year earlier (US Bureau of Transportation Statistics, 2010). More recently, one airline announced new fees for even one carry-on bag (e.g. Sprint Airlines), which led to various reactions from the major airlines (definitely supportive or skeptical) (CNN, 2010; USA TODAY, 2010).

It is fairly understandable that price increases or extra fees would evoke consumers' negative psychological and/or behavioral reactions (e.g. switching behavior, negative word-of-mouth, and complaining behavior). However, in spite of this common wisdom, airlines have indeed struggled to charge extra fees as much as possible. Some industry experts have claimed that there have been no severe hostile responses to the extra fees charged (Sorensen, 2010). They also pointed out airfares or extra fees have not

been on the major lists of passengers' complaints, but passengers have been more concerned about flight delays, cancellations and baggage problems (Enforcement, 2010).

1.1.1 Justification for the Study

Justification for this study is twofold. First, despite its importance for consumer welfare, only a few price fairness studies have been conducted (e.g. Kimes and colleagues, 1998; 2003). As discussed earlier, pricing strategies (e.g. yield management) in the tourism industry, known as non-transparent pricing mechanisms, have raised fairness issues, and more recently, new pricing schemes in the airline industry have been controversial issues in terms of price fairness. Nonetheless, few tourism researchers have studied price fairness from a consumer perspective.

Second, a traditional principle of price fairness (i.e. dual entitlement) has been criticized in the literature for its limitations (Maxwell, 2008; Vaidyanathan & Aggarwal, 2003), and some alternative or supplementary theoretical bases (e.g. attribution theory) have been suggested (Xia, Monroe, & Cox, 2004). However, despite its potential theoretical importance, these alternatives have seldom been applied in pricing literature. Thus, an understanding of the cognitive processes associated with perceived price fairness has potentially far-reaching implications for tourist behavior research.

1.2 Purpose of the Study

The main purpose of this study is to examine the antecedents and consequences of consumers' perceived price fairness of ancillary fees from an attributional perspective.

That is, this research aims to determine the model that better predicts the cognitive attribution influencing tourists' price fairness and the effects of price fairness on behavioral intentions. This study will hopefully contribute to understanding how tourists perceive extra charges for tourism products, and help to establish appropriate marketing strategies related to consumers' perceptions of price (un) fairness. Although some researchers have attempted to develop conceptual frameworks for price fairness (Diller, 2008; Xia, et al., 2004) and have reported empirical results (Campbell, 1999a, 2007; Haws & Bearden, 2006; Kahneman, Knetsch, & Thaler, 1986b; Vaidyanathan & Aggarwal, 2003), the current study is different from prior research in some aspects;

- Examining price fairness from an attribution perspective,
- Investigating multidimensional price fairness,
- Investigating the dimensionality of causal attribution, and
- Empirically testing a conceptual model of antecedents and consequences of price fairness.

In sum, this study investigates how cognitive attribution influences price fairness via emotional response, which in turn is postulated to influence tourists' behavioral intentions.

1.2.1 Objectives of the Study

In line with the purpose of the study, this study has four main objectives:

(1) To examine the dimensionality of price fairness in a price change context,

(2) To examine the antecedents of price fairness,

- To determine which dimensions of attribution are best at predicting price fairness,
- To examine the role of emotional response in relation to price fairness,
- To examine the role of price comparison as a predictor of price fairness,

(3) To examine the consequences of price fairness,

- To determine which dimensions of price fairness are best at predicting behavioral intentions,

(4) To compare differences in the price fairness model between high and low price sensitivity groups.

1.3 Conceptual Framework

The conceptual framework (Figure 1) is based on Weiner's (1980) attribution theory (cognitive attribution - emotional response – behavioral intentions), which has seldom been applied in pricing literature regardless of its potential theoretical importance. Following an attributional perspective, cognitive attribution and emotional response are suggested as antecedents of price fairness, and favorable/unfavorable behavioral intentions as consequences of price fairness. In addition, price comparison evaluation is included as a significant predictor of price fairness on the basis of the literature review. Furthermore, the dimensionality of causal attribution and price fairness is tested.

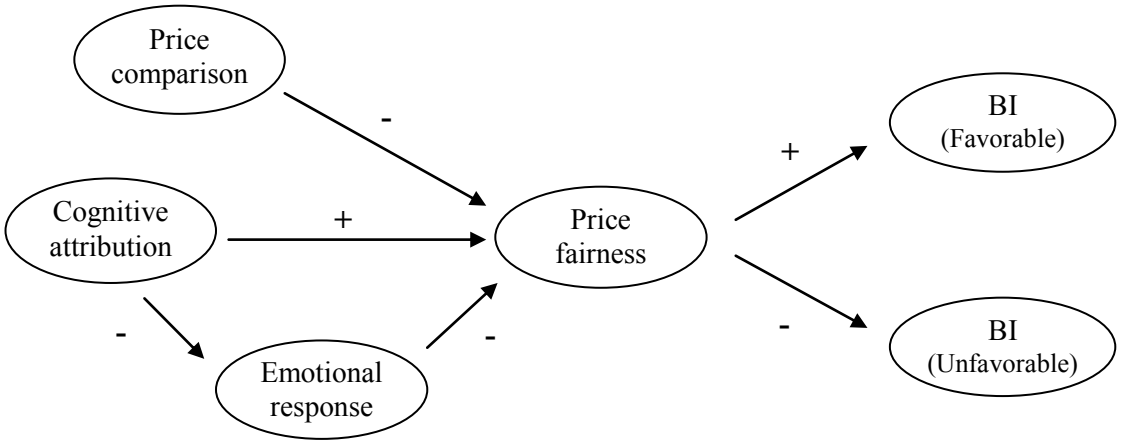


Figure 1. Conceptual Framework of Price Fairness

NOTE: Only in the interest of clarity, higher-order factors of attribution and price fairness are displayed, and behavioral intentions are also collapsed into favorable and unfavorable variables.

1.3.1 Hypotheses

H1: Distributive fairness and procedural fairness are explained by price fairness as a higher order factor.

H2: Locus of causality, controllability, and temporal stability are explained by cognitive attribution.

H2a: Locus of causality positively influences price fairness

H2b: Controllability positively influences price fairness

H2c: Temporal stability positively influences price fairness

H3: "C-E-PF" Model will have better model fit than "C-PF-E" Model.

* C-E-PF Model: Cognitive attribution → Emotional response (partial mediator) → Price Fairness

C-PF-E Model: Cognitive attribution → Price Fairness → Emotional response

H4: Price comparison negatively influences price fairness.

H5: Price fairness influences behavioral intentions.

H5a: Price fairness positively influences behavioral loyalty.

H5b: Price fairness positively influences willingness to pay more.

H5c: Price fairness negatively influences complaining behavior.

H5d: Price fairness negatively influences revenge behavior.

H6: There are differences in the price fairness model between high and low price sensitive group.

1.3.2 Conceptual Definitions

Airline Passenger: a customer aged 18 and older who has taken a domestic flights for leisure purposes in the past 12 months in the United States

(Cognitive) Attribution: a cognitive process that infers the cause(s) of an event or others' behavior, which in turn leads to behavioral intentions or consequences (Kelley, 1973; Weiner, 1980)

Behavioral Loyalty: the frequency of repeat or relative volume of same-brand purchase (Tellis, 1988)

Complaining Behavior: likelihood or actual behavior of negatively reporting the experiences to external agencies, the media, or a company's employees (Zeithaml, Berry, & Parasuraman, 1996)

Controllability: "*whether or not the cause is subject to personal influence*" (Weiner, 1980, p. 188), in other words, whether the actor had control over the cause or not (Bitner, 1990)

Locus of Causality: "*whether the cause is internal or external to the actor*" (Weiner, 1980, p. 188)

Price fairness: "*a consumer's assessment and associated emotions of whether the difference (or lack of difference) between a seller's price and the price of a comparative other party is reasonable, acceptable, or justifiable*" (Xia, et

al., 2004, p. 3). Note that in this study, price fairness is interchangeably used with perceived price fairness or price fairness perception

Revenge Behavior: a tendency toward aggressive behaviors toward a company for their wrongdoings (e.g., switching to the company's direct competitor, even when switching leads to monetary loss) (Xia, et al., 2004)

(Temporal) Stability: "*whether the cause is perceived as temporary or permanent*" (Weiner, 1980, p. 188), in other words, whether the event is likely to recur (Bitner, 1990)

Willingness to Pay More: likelihood or actual behavior of paying a price premium even when its prices go up (Zeithaml, et al., 1996)

1.3.3 Delimitations

This study has the following delimitations:

(1) The study will be delimited to passengers who have taken U.S. domestic leisure flights in the past 12 months.

(2) The study will not consider some situational factors (e.g. seasonality, travel distance, destinations of the airlines, and travel party size).

(3) The study will only focus on the most relevant variables to achieve the study objectives.

(4) Differences in airlines will not be explored.

1.4 Organization of the Study

Guided by the main research questions as to what leads to price fairness and what price fairness influences in a tourism context, this dissertation is composed of the following sections: introduction, literature review, conceptual model development, methodology, descriptive findings, hypothesis testing, and conclusions.

In the introduction section, the background of the study is explained. Then, the purpose of the study (i.e., to examine the antecedents and consequences of tourists' perceived price fairness from an attributional perspective) and four main objectives of the study are described. Subsequently, a brief conceptual framework is depicted along with six main hypotheses, conceptual definitions, and delimitations.

The literature review section has three main sub-sections: price fairness, antecedents of price fairness, and consequences of price fairness. This structure logically follows the objectives of this study. The first sub-section (price fairness) deals with the concept of price fairness and diverse conceptual approaches to price fairness. The first part reviews the literature on the dual entitlement principle, and the relationship between price fairness and price perception, while the second part reviews various conceptual approaches including distributive, procedural, and affective fairness. The second sub-section (antecedents of price fairness) reviews the concepts of price comparison and attribution. The last sub-section in the literature review (consequences of price fairness) deals with two types of behavioral intentions: favorable and unfavorable behavioral intentions.

In the conceptual model development section, a conceptual framework for this study is developed. Through three phases, this section describes the process of formulating hypotheses and a subsequent development of a conceptual model, by focusing on the most relevant variables and their relationships in the model. That is, Phase 1 (Conceptualization of price fairness), Phase 2 (Antecedents and Consequences of price fairness), and Phase 3 (Model comparison in terms of price sensitivity).

The methodology section explains the justification for the choice of appropriate research methods for this study, and describes the research design. Specifically, population, sample, data collection methods, and how the survey instrument was designed are described. Finally, data analysis procedures are explained.

The next section includes descriptive findings, in which sample characteristics and the results of preliminary data analysis (i.e. validity, reliability, and normality) are reported.

The hypothesis testing section presents findings of the study, largely focusing on testing the hypotheses developed in the previous section.

Finally, the conclusions section includes a summary of the study results and some theoretical and managerial implications of the study are discussed, followed by limitations and further research topics.

2. LITERATURE REVIEW

This section attempts to conduct a thorough literature review of the variables in this study. First, price fairness is conceptualized and reviewed in relation to price perception research, and how price fairness research has developed in tourism literature is investigated. Second, antecedents of price fairness (i.e., price comparison and cognitive attribution) are reviewed. Finally, consequences of price fairness (i.e., favorable and unfavorable behavioral intentions) are discussed.

2.1 Price Fairness

2.1.1 Concept of Price Fairness

Price fairness perception is defined as "*a consumer's assessment and associated emotions of whether the difference (or lack of difference) between a seller's price and the price of a comparative other party is reasonable, acceptable, or justifiable*" (Xia, et al., 2004, p. 3). In other words, it is a price evaluation based on the comparison of the actual price to the reference price including previously paid price, competitors' price, costs, and/or other consumers' price (Kahneman, Knetsch, & Thaler, 1986a; Kahneman, et al., 1986b; Thaler, 1985).

Buyers' perception of price fairness is related to the process of inferring the reason(s) of price increases or decreases. Monroe (2003) argued that two types of situational factors influence buyers' (un)fairness perception. That is, when a buyer believes that a seller increases a price without corresponding increases in costs, and

when a buyer pays more than others only because they are members of a different group (e.g. age or employment status).

Dual Entitlement

Based on the results of household surveys, Kahneman et al. (1986b) postulated that a dual entitlement (DE) principle exists; that is, a consumer is entitled to a reasonable price based on reference transaction, and a company is also entitled to a reasonable profit based on reference profit. According to this principle, a company is not allowed to increase profits if it violates the entitlement of a consumer, whereas, it is acceptable for a company to protect profits if the reference profits are threatened. Therefore, Kahneman et al. (1986a, 1986b) argued that while people tend to accept price increases when costs increase, they would not accept price increases if costs have not increased. Traditionally, dual entitlement has been used as a fundamental principle for explaining how people perceive price fairness (Campbell, 1999a; Chen, Ray, & Ng, 2010; Franciosi, Kugal, Michelitsch, Smith, & Dent, 1995; Kachelmeier, Limberg, & Schadewald, 1991; Kahneman, et al., 1986a, 1986b; Kalapurakal, Dickson, & Urbany, 1991).

Kahneman et al. (1986b) identified three determinants of fairness perceptions: reference transactions, outcomes to sellers and to buyers, and occasions for the action of sellers. Reference transaction is defined as "*a relevant precedent that is characterized by a reference price or wage, and by a positive reference profit to the firm*" (Kahneman, et al., 1986b, p. 729). In other words, a reference transaction represents how buyers believe

a transaction should be conducted (Kimes, 2003). An outcome, the second factor influencing buyers' fairness judgments, is evaluated as a gain or a loss in comparison to the reference transaction (Kahneman & Tversky, 1979). That is, if the outcome is psychologically encoded as a loss, it leads to perceptions of unfairness regardless of whether or not the result is monetary loss. Particularly, it has been found that framing effects influence this subjective judgment (Kimes & Wirtz, 2003b; Tversky & Kahneman, 1974, 1981). Further, Kahneman et al. (1986b) argued that occasions for the action of sellers are categorized into three cases: profit reductions, profit increases, and increases in market power. For instance, a seller's behavior for protecting profits at risk of losses below the reference level or behavior for maintaining prices when its cost decreases is mostly acceptable to buyers. On the other hand, the unethical behavior of increasing prices in response to a shortage of products in a market is not likely acceptable.

Despite wide-spread usage of the DE principle in pricing literature, Vaidyanathan and Aggarwal (2003) argued that the principle has limitations. They pointed out that DE claims that cost-justified price increases should be perceived as fair, but this is not necessarily the case in real life (Vaidyanathan & Aggarwal, 2003). Incorporating focus group interviews, Maxwell (2008) also demonstrated that customers no longer agree that increased costs of suppliers is uncontrollable, but, instead, they believe that costs control is a producer's responsibility in the current economic environment. Vaidyanathan and Aggarwal (2003) therefore introduced attribution theory to compensate for the shortcomings of the DE principle, and argued that an attributional approach is useful for

understanding the dynamics of price fairness perception. Campbell (1999a) also proposed inferred motives as an alternative factor influencing price (un)fairness by pointing out that the DE principle does not fully represent all factors related to price fairness in spite of its parsimonious explanation.

Price Fairness and Price Perception

The stream of price perception research is grounded in subjective and psychological dimensions of price, which is distinguished from pricing literature emphasizing sellers' profit maximization (e.g., pricing strategy and price modeling) (Monroe, 1973; Winer, 1988; Xia, et al., 2004). While the former is based on a consumer behavior perspective, the latter is based on managerial and/or quantitative perspectives. Over the past four decades, a growing body of literature has researched consumers' responses to price, and has expanded to address a variety of important issues (Monroe & Lee, 1999).

Monroe and Lee (1999) thoroughly reviewed the behavioral pricing literature, and stated that "*during the 1970s, two major streams of the behavioral pricing research developed: (1) the price – perceived quality relationship and (2) extensions of the psychophysics foundations to understanding how buyers perceive price*" (p.211). While the first stream is oriented on the price-quality relationship, the second stream involves understanding reference prices, namely, consumers' price comparison and the resultant psychological reactions (Winer, 1988). After the 1970s, many researchers broadened the scope of inquiry to cover some important issues including perceived value and purchase

behavior, and subsequently, the two streams were attempted to be synthesized during the late 1980s (e.g. Rao & Monroe, 1989; Zeithaml, 1988).

Zeithaml (1988) defined perceived price as "*what is given up or sacrificed to obtain a product*" (p.10), and argued that price perception is influenced by three components of price: objective price, perceived nonmonetary price, and sacrifice. While some individuals may know or remember the actual price of a product or service purchased (objective price), others may only encode that the product was expensive or not (perceived price) (Petrick, 2002; Zeithaml, 1988). With conceptualizations of perceived price, quality, and value, Zeithaml (1988) proposed a means-end model illustrating the relationships among the concepts and postulated that there are linear relationships among them. However, price fairness has been paid little attention in the literature.

On the other hand, Monroe (2003) argued that price fairness is a subjective price perceptions and a judgment of whether a price is acceptable or not. Because of the nature of subjectivity, he argued that buyers perceive even the same amount of monetary sacrifice differently, depending on their perceptions. Traditionally, it has been assumed that a consumer with rationality is objectively able to process price information: encoding, remembering, and retrieving without error. However, it has been empirically found that a buyer subjectively perceives a price for a product or service, considering a variety of situations and conditions (Monroe, 2003). Monroe (2003) therefore classified price fairness as one of the conditions of subjective price perceptions in addition to other conditions including: begrudging expenditures and brand equity effects. An examination

of price fairness in this study is therefore conceived as a way to elaborate on the concept of price perception because fairness is believed to be one of the dimensions of price perception.

Relevant Research in Tourism

Since Stevens (1992) investigated price perceptions of travelers from a consumer perspective, price perception has generally been studied in terms of Zeithaml's (1988) "perceived price – perceived quality – perceived value framework" (e.g. Petrick, 2004). The framework was the synthesis of two price research streams: the price-quality relationship and psychological understanding of how buyers perceive price (Monroe & Lee, 1999). Guided by Zeithaml (1988), Petrick (2002) developed scales for measuring price perception in terms of monetary and behavioral price dimensions. He argued that behavioral and monetary price perceptions are two significant dimensions of perceived value along with emotional response, perceived quality, and reputation (Petrick, 2002). Petrick (2002) defined behavioral price as the non-monetary price of obtaining a service product (e.g. time costs, search costs, and effort), which is conceptually similar to the concept of transaction costs in economics. On the other hand, monetary price indicates the price encoded by a buyer; for instance, reasonably priced, fairly priced, worth the money, economical, a good buy, and a good bargain.

In comparison to the behavioral price research derived from the price – quality relationship, price fairness research has been rarely conducted in tourism literature. Although a few hospitality studies have recently began to pay attention to price fairness

in some contexts (e.g. Choi & Mattila, 2004; Oh, 2003; Wirtz & Kimes, 2007), the concept of price fairness has been relatively neglected compared to other price-related topics including pricing strategy and yield management in the tourism literature. Recently, some researchers have emphasized the importance of studying price fairness because pricing practices in the tourism industry (e.g. yield management and dynamic pricing) can raise fairness issues (Chiang, Chen, & Xu, 2007; Kimes & Wirtz, 2003a; Krugman, 2000; Maxwell, 2008; Perdue, 2002). From a managerial perspective, it is also important to understand price fairness because a customer's reaction to price information may have a direct impact on the performance of revenue management (Chiang, et al., 2007).

Since Kimes and Chase (1998) proposed a yield management matrix with four combinations of duration and price management for service industries (Figure 2), Kimes and her colleagues have researched the concept of price fairness in a variety of tourism contexts. They argued that this framework would help each industry determine their optimal revenue management strategy. For instance, hotels, airlines, and cruise lines in quadrant 2 employ variable pricing practices and generally have control over duration of use. On the other hand, restaurants and golf courses show an almost fixed pricing structure and have little control over duration of use (Kimes, 2003; Kimes & Chase, 1998).

Duration	Price: Fixed	Price: Variable
Predictable	*Quadrant 1* Stadiums and arenas Convention centers Hotels' function space	*Quadrant 2* Hotel rooms Airline seats Rental cars Cruise lines
Unpredictable	*Quadrant 3* Restaurants Golf courses	*Quadrant4* Continuing care Hospitals

Figure 2. Yield Management Matrix

Source: Kimes and Chase (1998)

In line with the yield management matrix, Kimes and her colleagues have studied how tourists or consumers react to pricing practices in an individual context. Kimes and Wirtz (2003b) examined the perceived price fairness of six revenue management practices in the golf industry, and found that while golfers feel some practices (e.g., time-of-day pricing, two-for-one coupon program, tee time interval pricing, and reservation/no-show fee) as fair, they perceive varying price levels and time-of-booking pricing as unfair.

In addition, Kimes and Wirtz (2003a) argued that consumers' perceptions of price fairness are affected not only by the price paid, but also by rate fences. Rate fences have been defined as "*rules that a company uses to determine who gets what price*" (Kimes & Wirtz, 2003a, p. 128). There are a variety of physical or non-physical rate

fences: seat location in a theater, seat class of a flight, size of a hotel room, senior citizen discounts, and time of booking. A rate fence needs to be clear and logical to be perceived as fair. Kimes and Wirtz (2003a) showed that while three rate fences (i.e., two-for-one coupons, differential time-of-day pricing, and differential lunch/dinner pricing) are perceived as fair, two rules (i.e., differential weekday/weekend pricing and differential table location pricing) are moderately perceived as unfair in a restaurant setting.

Choi and Mattila (2004) also examined the relationship between customers' perceived fairness and variable pricing for a hotel. They found that variable pricing rarely reduces perceptions of price fairness, but information about a room pricing structure has a moderating effect on guests' fairness perception (Choi & Mattila, 2004). Oh (2003) also applied a price fairness concept in the perceived price, quality, and value framework, and revealed that price fairness influences perceived price and perceived quality, which in turn affect perceived value in a hotel context. That is, when a hotel guest feels disadvantaged inequality regarding a room rate, he or she perceives the room rate as expensive and also negatively rates the service quality offered by the hotel.

2.1.2 Diverse Conceptual Approaches to Price Fairness

Fairness is usually defined as an evaluation of whether an outcome and/or the process to reach an outcome is reasonable, acceptable, or just (Bolton, et al., 2003; Xia, et al., 2004). Nonetheless, there has been little consensus on the dimensionality of price fairness in the behavioral pricing literature. While some researchers have measured a

price fairness unidimensionality (Bechwati, Sisodia, & Sheth, 2009; Campbell, 2007; Kimes & Wirtz, 2003a; Martin-Consuegra, Molina, & Esteban, 2007), some have operationalized price fairness with multiple-dimensions (Diller, 2008; Xia, et al., 2004). The latter follows the traditional justice and fairness literature, and argues that the concept of price fairness generally encompasses two dimensions: distributive price fairness representing price outcome per se and procedural price fairness emphasizing the price setting process (Herrmann, Xia, Monroe, & Huber, 2007; Martin, Ponder, & Lueg, 2009). These notions of fairness are derived from social justice theories. While distributive justice is related to an outcome's distribution and allocations (Walster, Walster, & Berschied, 1978), procedural justice pertains to the processes used to determine the outcome's distribution and allocations (Aryee, Budhwar, & Chen, 2002; Gilovich, Keltner, & Nisbett, 2006). In addition to the two dimensions, an affective dimension has been proposed as another factor of the price fairness concept, yet with little empirical evidence thus far (Maxwell, 2008; Xia, et al., 2004).

Distributive Fairness

Theoretically, the concept of distributive justice is rooted in equity theory (Adams, 1965), and the concept of procedural justice is grounded in Thibaut and Walker's theory of procedure (Lind & Tyler, 1988). Distributive fairness is associated with evaluations of distributive outcomes (Rutte & Messick, 1995), and includes three principles: equity, equality, and need (Adams, 1965; Deutsch, 1975; Seiders & Berry, 1998). While equality refers to equal distribution or opportunity regardless of one's

efforts or contribution, equity primarily depends on the amount of one's inputs. On the other hand, need-based distribution proposes that outcomes should be distributed based on what one needs (Deutsch, 1975).

Recently, Nyaupane, Graefe, and Burns (2007, 2009) proposed a three-dimensional model of equity in a user fee context, and empirically tested a structural model of equity and user fee acceptance. They hypothesized that the equity construct is composed of three dimensions including democratic equity, compensatory equity, and equity belief. They argued that democratic equity represents equal opportunity for concession fees to all visitors regardless of their socio-demographic profiles, while compensatory equity is appropriate in situations where reduced fees are offered to disadvantaged groups such as low-income, elderly, disabled, and/or minorities (Nyaupane, Graefe, & Burns, 2007).

They also argued that while democratic equity is theoretically aligned with equality in distribution, compensatory equity is related to a needs-based justice and that equity belief is related to individuals' perceptions and beliefs about impacts of fees. Consequently, the confirmatory factor analysis showed that these three concepts were reliable and valid dimensions of equity. However, subsequent testing of a structural model revealed that, of three factors of the equity concept, only equity belief significantly influenced user fee acceptance (Nyaupane, Graefe, & Burns, 2009).

Procedural Fairness

In contrast to distributive fairness, procedural fairness is related to the process and methods to reach outcomes (Leventhal, 1980; Lind & Tyler, 1988). Specifically, the notion of distributive justice is related to whether individual inputs match their outputs (Walster, et al., 1978). However, the presence of formal procedures for judgments per se has been found to have a significant impact on forming procedural justice (Aryee, et al., 2002).

Greenberg (1990) argued that there are three steps in the procedural justice research history. That is, in the literature prior to 1980, the concept of procedural justice was introduced (e.g. Thibaut & Walker, 1975), while, during the 1980s, the concept was elaborated and evaluated (e.g. Leventhal, 1980; Lind & Tyler, 1988). He argued that from the 1990s, procedural justice was consolidated with other variables (Greenberg, 1990b). More recently, diverse antecedents and consequences of procedural justice (e.g. voice, leadership, citizenship behavior, satisfaction, employee theft) have been examined (Konovsky, 2000).

Martin et al. (2009) pointed out that despite the fact that a number of fairness and justice studies have researched both distributive and procedural fairness, a majority of pricing studies have dealt with price fairness only from a global standpoint without identifying two dimensions. They argued that there are few pricing studies that have employed a procedural price fairness aspect, and few attempts have been made to investigate how the processes to reach an outcome is related to price perception and its consequences (Martin, et al., 2009).

Herrmann et al. (2007) also argued that price fairness is formed by both distributive and procedural dimensions, and further, that both dimensions are positively inter-correlated. For instance, perceived fairness of a given price positively influences the perception of price setting procedures in purchasing products or service (Herrmann, et al., 2007). That is, if consumers feel the initial price of a product (e.g. car) is acceptable and fair, they would be more likely to regard a procedure of setting the final price (e.g., negotiating with a dealer) as fair.

Affective Fairness

Recently, some studies have pointed out that research on price fairness has focused only on cognitive assessment, and further argued that emotions are significantly related to price fairness (Campbell, 2007; Xia, et al., 2004). For example, Finkel (2001) argued that emotion is an element of perceived unfairness. He stated that "*instances of unfairness have a clarity and concreteness to them; they typically come with heat and passion, anger, and outrage; and they insistently press for action and redress*" (Finkel, 2001, p. 57). Xia et al. (2004) also proposed an affective dimension of price fairness, and suggested that the affective fairness is distinguished from negative emotions which are evoked by unfairness perception.

Further, Xia et al. (2004) suggested that research on affective fairness pay attention to the situational differences in feeling. That is, if people feel advantaged inequality, they are likely to have uneasiness or guilt, whereas, if they perceived disadvantaged inequality, they may have strong feelings of disappoint, anger, or outrage

(Austin, McGinn, & Susmilch, 1980; Maxwell, 2008). Advantaged or advantageous inequality refers to getting more than the other party to the exchange gets or pay less than others, whereas, disadvantaged inequality means getting less than other people get or pay more than others (Oliver & Swan, 1989a). However, although they gave insights into understanding a multidimensional price fairness concept, Xia et al. (2004) did not clearly indicate how cognitive and affective dimensions interplay (e.g., how cognitive assessment and emotions concurrently interact with each other, or how emotions precede cognitions).

Additionally, Maxwell (2008) stated that emotional response to price would be different depending on two types of price fairness: "*preference for what is considered acceptable outcomes and procedures based on the legitimate expectations of descriptive norms*" and "*judgment that outcomes and procedures are just based on the standards of prescriptive norms*" (p.11). She named the former *personal fairness* and the latter *social fairness*, and stressed the distinction between two concepts. For instance, while personal fairness is related to 'acceptable' or 'satisfactory' fairness, social fairness is associated with 'just' fairness. Lower prices may evoke personal fairness, but not necessarily social fairness. Accordingly, emotional reaction to personal fairness could be mild distress or at most dissatisfactory, yet individuals feel more severe distress in socially unfair situations which induce more committed behavioral intentions (Maxwell, 2008).

2.1.3 Variables Related to Price Fairness

In one of the most cited papers in the price fairness literature, Xia et al. (2004) conducted a literature review on price fairness over the last two decades, and subsequently developed a conceptual framework of perceived price fairness (See more in Xia et al.2004's appendix: summary of research). Their comprehensive model of price fairness, though not empirically tested, proposes that variables including price comparison, previous experiences, buyers' beliefs, and attributions of responsibility are predictors of perceived price fairness (Bechwati, et al., 2009). Trust, social norms, transaction similarity, and distribution of cost and profit have also been suggested as playing moderating roles in the relationship between price comparison and price fairness (Xia, et al., 2004). Likewise, a number of researchers have demonstrated that comparisons to price outcomes (e.g. internal or/and external reference price) influence consumers' fairness perception, emotional responses, cognitive judgments, and even actions toward sellers (Kahneman, et al., 1986a, 1986b; Thaler, 1985). Xia et al. (2004) further postulated that two dimensional price fairness perception (cognitive and affective) leads to behavioral actions through mediators of perceived value, negative emotions, and relative power.

In addition, satisfaction has been frequently researched in relation to price fairness, and subsequently researchers have had mixed results. Some researchers have argued that perceptions of price fairness are significantly associated with customer satisfaction (Herrmann, et al., 2007; Martin-Consuegra, et al., 2007; Oliver & Swan, 1989b). On the other hand, some researchers have revealed that price fairness and

satisfaction are distinct from each other (e.g. Ordóñez, Connolly, & Coughlan, 2000). Similarly, Xia et al. (2004) also pointed out that price fairness and satisfaction have been often used interchangeably, and suggested that price fairness is different from satisfaction.

2.2 Antecedents of Price Fairness

2.2.1 Price Comparison

It has been argued that price fairness is induced by a consumer's price comparison (Monroe, 2003; Xia, et al., 2004). That is, a consumer perceives fairness or unfairness by comparing the price to a reference price such as past price, another competitor's price, or inferred costs of the price (Bolton, et al., 2003). Traditionally, the concept of reference price has been researched as an important determinant of a consumer's acceptable price ranges and subsequent buying behavior (Gabor & Granger, 1969; Monroe, 2003).

Kim and Crompton (2002) conducted review of the theories of reference price. They maintained that reference price has been operationalized by either a single criterion or multiple criteria (Kim & Crompton, 2002): while the definitions of reference price based on a single-criterion include "*last price paid*" (Gabor, 1977) , "*the average price*" (Monroe, 1973), and "*anticipated or expected price*" (Jacobson & Obermiller, 1989). One of the reference price definitions based on multiple criteria is a combination of fair price, price most recently charged, price last paid, and price normally paid (Jacoby & Olson, 1977).

Winer (1988) also argued that eight operationalizations of reference price have been proposed in the literature although some of them conflict each other: 1) fair or just price, 2) price frequently charged, 3) last price paid, 4) reservation price, 5) lower threshold, 6) price of the brand usually bought, 7) average of price charged for similar goods, and 8) expected future price.

Theories Related to Reference Price

Monroe (1973) proposed three theoretical bases for the concept of reference price: Weber's Law, adaptation-level theory, and assimilation-contrast effects (social judgment theory), and later, added prospect theory (Monroe, 2003). Winer (1988) further argued that at least four psychological theories are related to the concept of reference price: the Weber-Fechner law of psychophysics, adaption-level theory, assimilation-contrast theory, and prospect theory. Yet, he pointed out that some of the theoretical foundations for reference price conflict each other (Winer, 1988).

Adaption-Level Theory: This theory mainly argues that individuals' judgment is influenced by their existing internal adaptation level (Helson, 1964). In other words, the adaptation level is determined by preceding stimuli, and the response to new stimuli is made by comparing the stimuli level to previous stimuli levels (called adaptation level). Thus, to put this theoretical base in a price context, a buyer makes a judgment of the acceptability of a given price by comparing the price to another price (Kalyanaram & Winer, 1995; Monroe, 1973). The comparative price is the buyer's reference price, which serves as an anchor for judgments of other prices.

In line with this theoretical foundation, Monroe (1973) argued that three types of stimuli or cues influence a buyer's price perception: focal, contextual, and organic cues. Focal cues are stimuli to which individuals directly respond (e.g. price), contextual cues refer to situational factors including availability of monetary resources or market environment, and organic cues indicate an individual's psychological processes (e.g. the ability of processing the price information). Adaptation-level theory provides an important implication that consumers may not perceive two different prices as being distinguishable (Monroe, 2003). This results from the relativeness of consumers' price perceptions. "*That is, judgments about prices are comparative and buyers apparently have some internal knowledge about the prices for different discernible quality levels for each product category…buyers compare a specific price to another price, or a reference price*" (Monroe, 2003, p. 133).

Assimilation-Contrast Theory (Social Judgment Theory): Similar to adaption-level theory, the principle of assimilation-contrast theory is based on the relativeness of reference scale (Sherif & Hovland, 1961). According to this theory, individuals compare new stimuli to a reference scale stimuli, and the reference stimuli changes due to the new stimuli as anchors. In particular, depending on how the change of the reference stimuli is perceived after the introduction of new stimuli, it leads to assimilation or contrast effects (Monroe, 2003). In other words, as shown in Figure 3, if a new price is perceived to be within a latitude of acceptance (called range of acceptable prices in a pricing context), the price is assimilated into the range and becomes acceptable (a).

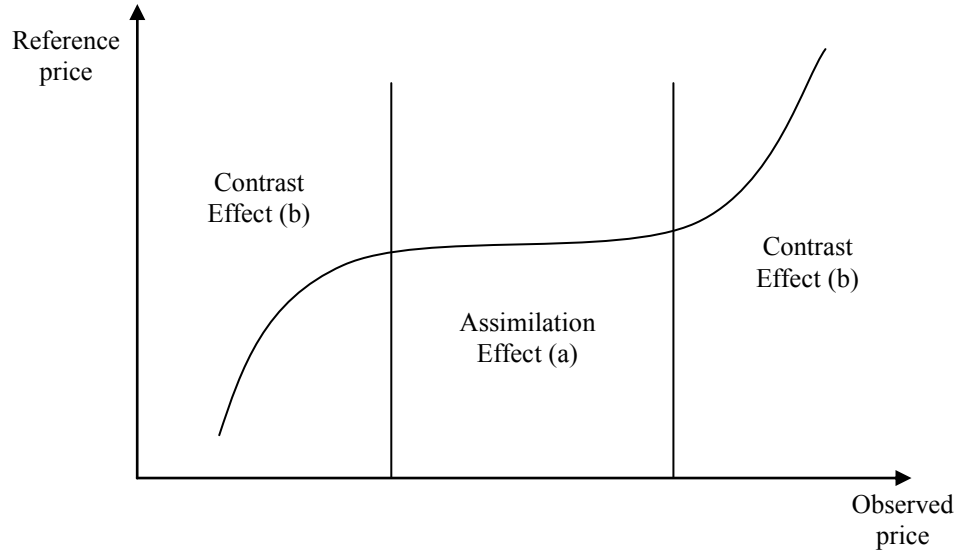


Figure 3. Assimilation-Contrast Theory

Adapted: Sherif and Hovland (1961, p.49) and Winer (1988, p.41)

Conversely, a new price that is outside the range is not acceptable to a consumer and also becomes noticeable (b) (Kalyanaram & Winer, 1995; Winer, 1988). Therefore, this theory argues that if new prices are still within the latitude of price acceptance, new stimuli would not provoke unfavorable attitudes or behaviors (e.g., brand switching, unfairness perception, complaining behavior).

Prospect Theory: As with the theories reviewed earlier, prospect theory argues that the evaluation of an outcome is influenced by a reference point (Kahneman & Tversky, 1979). This is a seminal theory that has largely influenced behavioral sciences over the years as an alternative to classical economic utility theory.

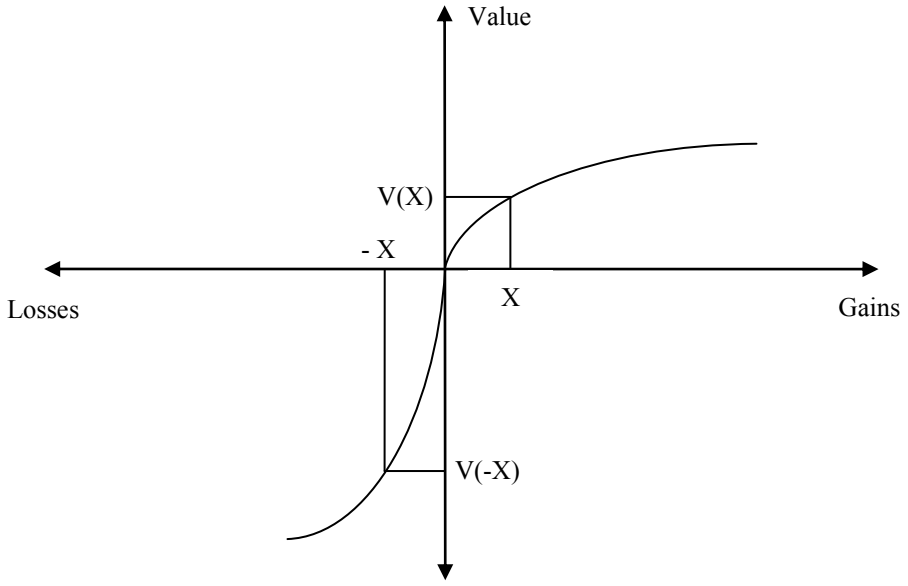


Figure 4. Prospect Theory

Adapted: Kahneman and Tversky (1979)

Figure 4, depicting prospect theory, shows three characteristics: 1) the reference point determines whether outcomes belong to gains or losses; 2) the value function v(x) is concave for gains and convex for losses; and 3) individuals tend to be more averse to losses than to gains as the loss curve is steeper (Kahneman & Tversky, 1979; Winer, 1988).

Weber-Fechner Law: Weber's law relates "proportional changes in a stimulus to a response" (Winer, 1988, p. 38), and can be formulated as follows:

$$\Delta S/S = K$$

where S is the stimulus and K is the response. It could be also applied in a pricing context as:

$$\Delta P/P = K$$

where ΔP is the acceptable price change, P is the reference price, and K is the constant of proportionality – essentially Weber's law (Monroe, 1973). In addition, Fechner adapted Weber's law to deal with subjective sensations and formulated a logarithmic relationship between price and quantity purchased. Although this theory has been frequently cited as the basis for perceived price differences (Monroe, 1973; Webb, 1961), the validity of the theory in a pricing context has been criticized due to the contradictive empirical results (Kamen & Toman, 1971; Stapel, 1972).

2.2.2 Attribution

The foundation for the body of research on attribution theory is that inferences for a cause(s) of an event lead to behavioral intentions or consequences (Kelley, 1973; Weiner, 1980). In literature, two major attribution paradigms regarding attribution theory have developed: Weiner's (1980) model and Kelley's (1973) model. Martinko and Thomson (1998) argued that Weiner's model has been frequently adapted for self-attribution, whereas Kelley's model (known as Kelley's cube) has been relatively used to explain social-attribution in social psychology literature. That is, while one can use attribution theory to explain how individuals' attributions affect their own behavior, the others can use this to understand the attributions for the behavior or outcomes of others. However, this distinction was not what the researchers originally intended, and moreover, it is suggested that the two models can be synthesized and be interchangeably applied in various contexts (Martinko & Thomson, 1998).

Also, it has been argued that while Weiner's model largely focuses on the motivation and possible cause for an event, Kelley's cube pays more attention to information process used for attribution (i.e., consensus, consistency, and distinctiveness). Given that this study aims to examine consumers' inference of the cause(s) for price changes and its effect on fairness judgments and behavioral intentions, it was determined that Weiner's model is more appropriate to this study.

Multi-dimensions of Attribution

Weiner (1980) argued that observed actions are attributed on the basis of three dimensions: locus of causality, controllability, and temporal stability. Locus of causality pertains to whether the cause of an action is internal or external to the actor. Vaidyanathan and Aggarwal (2003) stated that "*the locus is determined based on who is responsible for a given action*" (p.454). Controllability refers to what extent the cause is subject to personal influence. Specifically, if an action was unavoidable, it is more likely to be perceived as uncontrollable. Controllability is therefore determined by examining "*if the actor could have done otherwise*" (Vaidyanathan & Aggarwal, 2003, p. 454). Finally, stability is related to whether the cause is perceived as a temporary or permanent phenomenon. It is important to note that consumers infer the cause(s) of an action or an event on the basis of any or all of these attributional dimensions.

Based on the dimensionality of attribution, Russell (1982) developed a measure for assessing causal perceptions. The scale, named Causal Dimension Scale (CDS I), is composed of nine items for measuring causality, stability, and controllability dimensions

described by Weiner (1980), and all the items were found to be reliable and valid (Russell, 1982). All items are bipolar scales with two extremes, and items for locus of causality include: *is the cause something that reflects an aspect of yourself ↔ situation*; *is the cause something that is outside of you ↔ inside of you*; and *is the cause something about you ↔ others*. Items for stability include: *is the cause something that is permanent ↔ temporary*; *is the cause something that is variable over time ↔ stable over time*; and *is the cause something that is changeable ↔ unchanging*. Items for controllability include: is *the cause controllable by you or other people ↔ uncontrollable by you or other people*; *is the cause something intended by you or other people ↔ unintended by you or other people*; and *is the cause something for which no one is responsible ↔ someone is responsible*.

Attributional Approach to Price Fairness

It has been argued that perceptions of justice/fairness are fundamentally based on attribution of cause and responsibility (Cohen, 1982). By pointing out that "understanding a person's perceptions of justice may require an understanding of his or her attributions of cause and responsibility" (p.152), Cohen (1982) introduced an attributional perspective for understanding perceived fairness. McCarville, Reiling, and White (1996) also suggested that attribution theory is considerably applicable for understanding individuals' unfairness perceptions about entrance fees for a public recreation service. They examined recreational service users' fairness perceptions of user fees, and found that the introduction of new fees evokes victimized feelings to those who

have not paid fees before. Although they adapted transaction and acquisition utility instead of the attribution theory, McCarville et al. (1996) argued that Weiner's (1980) attribution theory best fits the setting where fees are not expected at all or justifications for new fees are not made explicit. This is because the users tend to find reasons for the new fees, and if they are not given any justification, it would lead to negative emotional responses and unfavorable behaviors (McCarville, Reiling, & White, 1996).

Nonetheless, not many price fairness studies have applied attribution theories into their conceptual models (Diller, 2008). Furthermore, as reviewed earlier, an attributional approach has seldom been applied into price fairness literature despite that this theoretical base is expected to compensate for the shortcomings of the traditional principle (i.e., Dual Entitlement) (Campbell, 1999a, 2007; Vaidyanathan & Aggarwal, 2003). Vaidyanathan and Aggarwal (2003) examined two dimensions of attributions: locus of causality and controllability. Following the notion of Weiner's attribution theory, they manipulated locus of causality as an internal vs. external cause of price increases, and controllability as price increases within vs. beyond a volitional control of a company. Consequently, the results of three experiments showed that even cost-justified price increases would be dependent on contextual factors (Vaidyanathan & Aggarwal, 2003). However, they excluded a third dimension of causal attribution, temporal stability, because of methodological limitations. They argued that it was not practical to manipulate all three dimensions using an experimental design (Vaidyanathan & Aggarwal, 2003).

Campbell (1999a) used the concept of inferred motives to examine causal attributions in a price fairness context. Based on the literature on fairness and attribution theory, consumers' inferences about the firm's motive for the price change and inferred relative profit were identified as factors influencing perceptions of price fairness (Campbell, 1999a). In an experimental design, inferred motives were categorized into justifiable (positive) and unjustifiable (negative) motives of the seller. That is, in scenarios describing a retailer's behavior of increasing prices, while positive motive was manipulated by a statement of the seller's intention of using profits positively (e.g. giving a donation), negative motives were manipulated by absence of the information about the charitable plan.

Recently, Campbell (2007) replicated his previous experiment with the same variable, inferred motive, but in this study, instead of manipulating the variable, he measured inferred motives using two questions of participants' perceptions of the motive for the price change with a 7-point Likert scale (1 = "bad", and 7 = "good") and of participants' agreement with the statement "the intent in this situation was to take advantage of the customers) with a 7-point Likert scale (1 = "agree", and 7 = "disagree").

More recently, Bechwati et al. (2009) extended Campbell's (1999a) findings by criticizing that "*Campbell does not discuss how consumers decide on the valence of a motive, i.e., how they come to the conclusion that a particular motive is good or bad*" (p.763). Additionally, Bechwati et al. (2009) argued that their model is distinguishable from previous models of price fairness. That is, they attempted to include all possible antecedents of price unfairness, yet Bolton et al. (2003) focused on only a price

comparison context. Xia et al. (2004) also delimited their conceptual model within a price comparison situation.

Accordingly, drawing from previous research, Bechwati et al. (2009) argued that there are three broad predictors of price unfairness: consumers' perceptions of excessive profits by the company, consumers' perceptions of immorality on the part of the company, and consumers' inability to understand the pricing strategies or policies used by the company. Consequently, their qualitative content analysis revealed that there are some under-researched decision processes (signals or heuristics) that consumers use to conclude price unfairness (Bechwati, et al., 2009, p. 766).

In addition to a few attempts to discover empirical findings, some researchers have conceptually stressed an attributional approach to price fairness research. Xia et al. (2004) stated that attribution theory needs to be considered as one of the theoretical foundations in the price fairness literature and Maxwell (2008) emphasized the importance of attribution theory as one of the theoretical perspectives of price fairness. Diller (2008) also pointed out that attribution theory is rarely examined.

Alternative Conceptualization

McAuley, Duncan, and Russell (1992) pointed out controllability in Weiner's attribution model has raised serious concerns regarding reliability and high correlation with controllability. They suggested that controllability should be divided into personal and external control, and thus revised the CDS I. Accordingly, the CDS II with four dimensions was examined using a confirmatory factor analysis, and confirmed to

represent a good model fit (McAuley, Duncan, & Russell, 1992). The revised version (CDS II) has a total of 12 items for three dimensions of attribution. Holding other items constant, only three items for controllability were replaced to six items for external and personal control. Items for external control include: *is the cause something over which others have control ↔ over which others have no control*; *is the cause something under the power of other people ↔ not under the power of other people*; and *is the cause something other people can regulate ↔ other people cannot regulate*. Items for personal control include: *is the cause something manageable by you ↔ not manageable by you*; *is the cause something you can regulate ↔ you cannot regulate*; and *is the cause something over which you have power ↔ over which you have no power*.

Betancourt and Blair (1992) proposed that intentionality would be one of the dimensions of attributions in addition to the three properties of Weiner's (1980) theory (i.e., locus of cause, stability, and controllability). They distinguished intentionality from controllability by stating that "controllability is conceived as the presence of absence of the ability to cause an event, whereas intentionality is conceived as the presence or absence of the motivation to bring about specific consequences" (Betancourt & Blair, 1992, pp. 344-345). As a result of testing the proposed structural equations model, they found that the attribution process was determined by two dimensions (i.e., intentionality and controllability), which significantly evoke anger and empathic emotions.

Additionally, some researchers proposed the dimensionality of cognitive attribution (Peterson, et al., 1982). The Attributional Style Questionnaire (ASQ) measures individual differences in the use of the attributional dimensions: internal vs.

external; stable vs. unstable; and global vs. specific. However, Peterson et al. (1982) found discriminant validity of each dimension needs to be addressed although the reliability and content validity are satisfactory.

On the other hand, Kelley (1973) argued that attributions are a function of three informational factors: consensus, consistency, and distinctiveness. Consensus pertains to uniqueness of the behavior, and is concerned with whether or not the same behavior is conducted by others in the same situation. Consistency indicates the degree of repetition of the behavior. If the behavior is frequently exhibited in similar situations, consistency would be high. Distinctiveness is a comparison of the individual's behavior in other situations. That is if the person behaves the same way in other situations, distinctiveness would be low (Kelley, 1973). In addition to Kelley's three factors, global/specific characteristics of attributions were also proposed (Abramson, Seligman, & Teasdale, 1978). Globality is related to the judgment of whether the event will occur in all similar situations, or if it will only be observed during specific circumstances (Kent & Martinko, 1995). However, Weiner (1985) criticized that this dimension may only be an abstract concept, and was not empirically found in his study. Kent and Martinko (1995) also noted that the globality dimension has not been applied in usual contexts.

2.3 Consequences of Price Fairness

2.3.1 Favorable Behavioral Intentions

Zeithaml, Berry, and Parasuraman (1996) classified behavioral intentions as either favorable or unfavorable. According to the behavioral consequences of the service

quality model, assessment of service quality determines a customer's behavioral intentions. That is, if customers are satisfied with service quality, they are more likely to remain with the service provider via favorable intentions, whereas, if they perceive that service quality is poor, they tend to leave the service provider because of unfavorable behavioral intentions. While favorable behavioral intentions include "*say positive things, recommend company, remain loyal to company, spend more with company, and pay price premium*", unfavorable behavioral intentions induces "*say negative things, switch to another company, complain to external agencies, and do less business with company*" (Zeithaml, et al., 1996, p. 36).

By pointing out that previous research has failed to reflect a wider range of behavioral intentions, Zeithaml et al. (1996) empirically tested the dimensionality of behavioral intentions using four a priori categories with 13 items: word-of-mouth, purchase intentions, price sensitivity, and complaining behavior. Studies in four different contexts have shown that five dimensions of behavioral intentions were consistently identified: loyalty to company (loyalty), propensity to switch (switch), willingness to pay more (pay more), external responses to a problem (external response), and internal responses to a problem (internal response) (Zeithaml, et al., 1996). In particular, the pay more dimension includes the items of likelihood of paying a price premium and behavioral loyalty even if a company increases its prices, and dimensions of external and internal responses to a problem is related to complaining behavior when service problems occur.

Based on their factor analysis identifying five dimensions of behavioral intentions, Zeithaml et al. (1996) argued that the empirical results largely support dichotomy in behavioral intentions including favorable and unfavorable categories. Specifically, while the first and third factors (i.e., loyalty and pay more, respectively) have items associated with favorable behavioral intentions, the second and fourth factors (i.e., switch and external response, respectively) encompass unfavorable behavioral intentions items. The last factor (internal response) containing only one item, "*complaining to XYZ's employees if you experience a problem with XYZ's service*", was excluded due to the ambivalence of the interpretation, which means that "*the equivocal interpretation of this factor and its being represented by just one item undermine its meaningfulness on conceptual and psychometric grounds. As such, (they) deleted this single-item measure from all subsequent analyses*" (Zeithaml, et al., 1996, p. 38).

Baker and Crompton (2000) adapted behavioral intentions from two dimensions of Zeithaml et al. (1996)'s study: loyalty and willingness-to-pay more. Loyalty indicates committed behavior, which is generally biased toward a selected resource and service (Backman & Shinew, 1994), and willingness-to-pay more has two items: *continue to attend (a) festival if the admission price was increased* and *pay a higher price than other festivals in the area charge*. Using a perceptions-only measure instead of a perceptions-minus-expectations measure, Baker and Crompton (2000) found that both perceived quality and satisfaction with a festival respondents had attended have a significant direct effect on their behavioral intentions.

Tian-Cole, Crompton, and Willson (2002) also applied a model of service quality, satisfaction, and behavioral intentions into a wildlife refuge context. Likewise, the direct effect of service quality and overall visitor satisfaction on future behavioral intentions was found. However, different from previous research, Tian-Cole et al. (2002) revealed that behavioral intention is uni-dimensional. The result of principal component factor analysis on seven items derived from Zeithaml, Berry, and Parasuraman (1996) showed that three items resulted in low factor loadings and one item impaired the reliability of the variable. Consequently, excluding those four items, Tian-Cole et al. (2002) measured behavioral intentions with three items: *say positive things about the refuge to other people*, *visit the refuge again in the future*, and *encourage friends and relatives to go to this refuge*. Accordingly, in their study, behavioral intentions encompass the notions of recommendation, behavioral loyalty, and word-of-mouth.

More recently, derived from Zeithaml et al. (1996)'s conceptualization, Lee, Petrick, and Crompton (2007) adapted both loyalty and willingness to pay more dimensions to measure festival visitors' behavioral intentions, but contrary to previous findings of Baker and Crompton (2000), they found that the pay more dimension showed poor internal consistency. Consequently, the dimension was excluded when measuring behavioral intentions of festival visitors (Lee, Petrick, & Crompton, 2007).

In a pricing context, Grewal, Monroe, and Krishnan (1998) proposed two variables associated with behavioral intentions: willingness to buy and search intentions. Willingness to buy is defined as to what extent a consumer intends to buy a product or service, and search intention is defined as a consumer's willingness to search for

additional price information (e.g. lower price) (Dodds, Monroe, & Grewal, 1991; Grewal, Monroe, & Krishnan, 1998). In particular, while willingness to buy is positively influenced by perceived value, search intention is negatively influenced by perceived value, that is if a buyer perceives that a price of product or service is a good value, he or she tends to stop searching for a lower price and purchase the product or service (Urbany, Bearden, & Weilbaker, 1988; Zeithaml, 1988).

2.3.2 Unfavorable Behavioral Intentions

Folkes, Koletsky, and Graham (1987) revealed that product failure (e.g., delayed flights) significantly influences desire to complain and intention to repurchase product. That is, when a product or service failure is caused by a controllable reason(s), a buyer would be less willing to use a product or service and would be more likely to complain about a problem. Folkes et al. (1987) stated that "consumers may perceive complaining as a way of castigating a firm but also as a way of encouraging problem-solving efforts" (p.535).

Zeithaml et al. (1996) also argued that complaining behavior encompasses external and internal responses. While external responses indicate complaining dissatisfaction to other customers and friends or to third-party agencies such as the Better Business Bureau, internal responses refer to complaining dissatisfaction to the company's employees. This conceptualization is influenced by a consumer-complaining behavior (CCB) model including a three-dimensional typology: voice responses (such as seeking redress from the seller), private responses (negative word-of-mouth), and third-

party responses (taking legal action) (Singh, 1988). It has also been argued that complaining behavior occurs together with exit behavior (leaving a relationship with a company or product) and switch behavior (Solnick & Hemenway, 1992; Xia, et al., 2004; Zeithaml, et al., 1996). Xia et al. (2004) argued that consumers complain, spread negative word-of-mouth, and switch to other competitors in order to protect themselves financially and/or psychologically. Thus, they called this self-protection behavior.

However, frequently, behavior of complaining or switching to competitors may not be sufficient to mitigate consumers' dissatisfaction or perceived inequity (Xia, et al., 2004). Especially, when a consumer feels a distinct emotion (e.g., anger and outrage) rather than general feelings (e.g., positive or negative sentiment), he or she is more likely to seek revenge for a company's wrongdoing (Bougie, Pieters, & Zeelenberg, 2003). This revenge behavior includes spreading negative word-of-mouth, taking legal actions, and reporting to the media and regulatory agencies (Xia, et al., 2004). Negative word-of-mouth for revenge is different from what it is for self-protection in terms of a purpose; while people with dissatisfaction tend to spread negative words to comfort themselves psychologically, they purposely give their social network negative word-of-mouth to damage the company when they are in severe emotions of anger and fury (Xia, et al., 2004).

2.4 Synopsis of the Section

This section reviewed the literature regarding antecedents and consequences of price fairness. The concept of price fairness was reviewed in relation to price perception

and the dual entitlement principle, and relevant studies in the tourism literature were also examined. As antecedents of price fairness, price comparison (i.e., reference price) and cognitive attribution were reviewed, respectively. Finally, consequences of price fairness (i.e., favorable and unfavorable behavioral intentions) were discussed.

Based on the literature review, the following section develops a conceptual model of price fairness. The conceptual model will depict the relationships among variables reviewed, and the relationships will be hypothesized based on the theoretical foundations and previous empirical research findings in the literature.

3. CONCEPTUAL MODEL DEVELOPMENT

This section develops a conceptual model of price fairness in line with the literature review in the preceding section. It also describes the process of formulating hypotheses and the subsequent development of the conceptual model in three phases: Phase 1 (Conceptualization of price fairness), Phase 2 (Antecedents and Consequences of price fairness), and Phase 3 (Model comparison in terms of price sensitivity).

3.1 Phase 1: Conceptualization of Price Fairness

As reviewed earlier, there is mixed support for the dimensionality of price fairness in the literature. Traditionally, some researchers have measured price fairness with one dimension (Bechwati, et al., 2009; Campbell, 2007; Kahneman, et al., 1986a, 1986b; Kimes & Wirtz, 2003a; Martin-Consuegra, et al., 2007). Drawing from previous research, Martin-Consuegra et al. (2007) stressed a cognitive aspect of price fairness, arguing that the judgments involve a comparison of the price to a standard, reference, or norm. Campbell (2007) also conceived price fairness as a global attitude towards price, with a definition of "a consumer's subjective sense of a price as right, just, or legitimate versus wrong, unjust, or illegitimate" (p.261). More recently, Bechwati et al. (2009) qualitatively attempted to identify the antecedents of price unfairness using content analysis, but had no empirical evidence about the dimensionality of price fairness.

Yet, some researchers have defined price fairness as multi-dimensional (Diller, 2008; Herrmann, et al., 2007; Martin, et al., 2009; Xia, et al., 2004). Although there are

some exceptions (Diller, 2008; Xia, et al., 2004), the two dimensions of distributive and procedural fairness are frequently used as a theoretical base. Diller (2008) proposed one integrated model of price fairness encompassing multiple components: distributive fairness, consistent behavior, personal respect and regard for the partner, price honesty, price reliability, the right of influence and co-determination, and fair dealing. Xia et al. (2004) also pointed out that the affective element has been ignored in the literature which has been dominated by cognition-based price fairness. They therefore proposed an affective dimension of price fairness, and argued that emotion-based fairness may occur concurrently with unfair cognitions.

Herrmann et al (2007) adapted distributive and procedural price fairness following relevant theoretical foundations, and more recently, Martin, Ponder, and Lueg (2009) proposed two-dimensional concept of price fairness including distributive and procedural price fairness. Despite recent research which has proposed the multi-dimensionality of price fairness, there are only a few empirical studies which have measured it with two dimensions. Therefore, in this study, two dimensions of price fairness will be examined following the discourse on distributive and procedural fairness (Adams, 1965; Leventhal, 1980; Lind & Tyler, 1988). It aims to investigate the dimensionality of price fairness and confirm which model (e.g., one dimension vs. two or multiple dimensions) better fit the data. Accordingly, the following hypothesis is proposed:

H1: Distributive fairness and procedural fairness are explained by price fairness as a higher order factor.

3.2 Phase 2: Antecedents and Consequences of Price Fairness

As reviewed earlier, it could be argued that the dual entitlement principle has limitations in being applied to a price change context. Accordingly, some researchers have attempted to expand on or complement the principle of dual entitlement by proposing an attributional perspective (Campbell, 1999a; Vaidyanathan & Aggarwal, 2003). In this study, Weiner's (1980) attribution model will be fundamentally utilized to develop a conceptual model.

3.2.1 Weiner's Attribution Model

Weiner (1980) proposed an attribution model called CEAM (Cognitive attribution – Emotion – Action Model). This model explains that an individual's cognitive attribution influences his or her behavior through emotional response (Weiner, 1980). More specifically, when people encounter certain kinds of events, they infer the cause(s) of the event, and then, depending on how the causes are attributed, they have different kinds of emotional responses which lead to how they act toward the events. For instance, when people are asked to lend their class notes, a judgment of help might be made in line with cognitive attribution. If the causes of need are perceived as internal and controllable factors (e.g. the borrower's lack of effort), people are likely to perceive negative affects and give rise to avoidance behavior. On the other hand, if the causes of need are believed to be external and uncontrollable factors (e.g. ability or instructor problems), then individuals are more likely to provide assistance and give positive affect. Although the initial context in which this model fits was individual's helping

behavior, this attribution-based model has been applied to diverse disciplines and contexts.

With reference to the relationship between causal attribution and price fairness, Vaidyanathan and Aggarwal (2003) found that even if price increases are cost-justified, individuals could perceive unfairness depending on how they understand the causes of the price changes. For example, when the locus of causality is internal to the company, price increases can be perceived as less fair. Likewise, when price increases are believed to be under the control of the company, the increases can be perceived as less fair (Vaidyanathan & Aggarwal, 2003).

Accordingly, when consumers believe that sellers increase prices because of internal reasons (e.g. having to make a large tax payment as a result of an accounting oversight) and also that the sellers deliberately increase prices (e.g. In case of increases in a currency exchange rate, the sellers did not have to change prices because of a legal contract to buy at the old rate), they are more likely to feel the price is unfair than when the change is perceived to be caused by external reasons (e.g. a market-wide shortage of raw materials) and in uncontrollable situations (e.g. the sellers had to increase prices because the costs should have went up correspondingly with the currency rate change). More importantly, price increases are seen most fair when the causes of the price change is external to the company and is simultaneously beyond the company's volitional control (Vaidyanathan & Aggarwal, 2003).

Although it was not drawn from Weiner's (1980) attributional dimensions, Campbell (1999a) also argued that individuals' inferences cause them to perceive price

fairness or unfairness. His experimental study showed that when participants inferred that the seller had a negative motive for a price increase, the increase was perceived as less fair than when they inferred that the seller had a positive motive (e.g. giving the profits away to donations).

Thus, the following hypothesized model (Figure 5) and hypotheses based on Weiner's conceptualization are proposed:

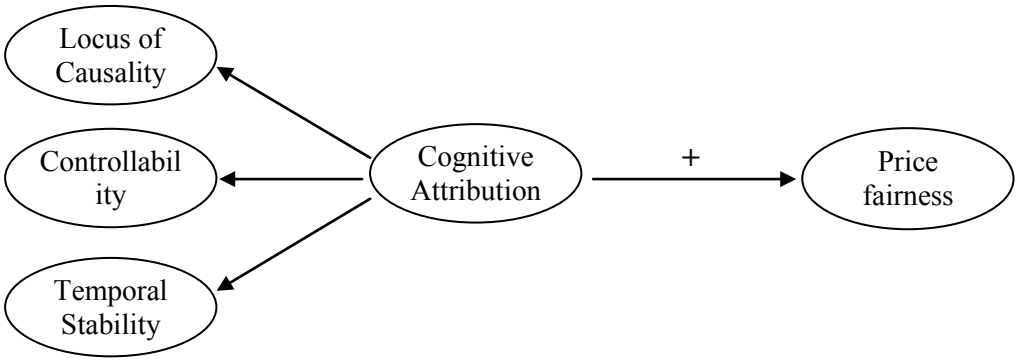


Figure 5. Hypothesized Model of Attribution and Price Fairness

H2: Locus of causality, controllability, and temporal stability are explained by cognitive attribution.

H2a: Locus of causality positively influences price fairness

H2b: Controllability positively influences price fairness

H2c: Temporal stability positively influences price fairness

In addition, depending on the perceptions of the three dimensions (locus of causality, controllability, and temporal stability), positive or negative emotions are

generated (Weiner, 1985), which, in turn, are proposed to be associated with behavioral intentions (Vaidyanathan & Aggarwal, 2003). However, there are mixed findings about the fairness perception in relation to cognitive attribution and emotional response. While some researchers have proposed that price (un)fairness results in negative emotions (Oliver & Swan, 1989b; Xia, et al., 2004), some have argued that emotional response influences price (un)fairness (Campbell, 2007). There is also a debate on the role of cognitive thinking versus affect in moral judgments (e.g. fairness) (Haidt, 2001). Accordingly, two main competing models are proposed in this study, and a hypothesis as to which model will best fit the data will be tested.

Model 1 and Model 2

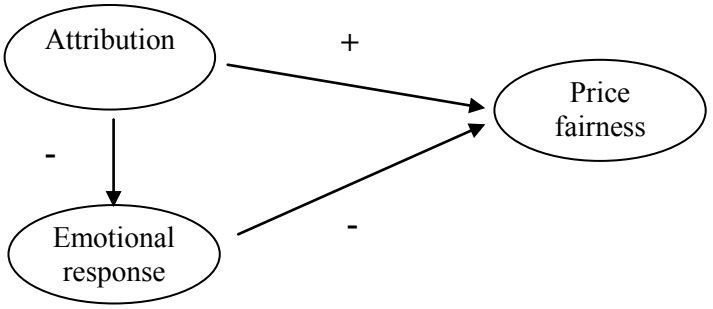
Model 1 (Cognitive Attribution-Emotional Response-Price Fairness): Campbell (2007) employed the dual process of affective and cognitive (inferred motive) modes in order to identify significant antecedents of perceived price (un)fairness. She examined the moderating role of information sources on the relationship between price change and perceived price fairness. She argued that whether price change information is given by human or non-human sources differently influences price fairness perceptions (Campbell, 2007). For instance, nonhuman sources of pricing information (e.g. price tag) do not elicit positive or negative emotions, whereas human sources (e.g. owners or employees of the store) do.

In addition to a moderator of information source, Campbell (2007) examined the mediating role of affect in the relationship between price change and fairness perception.

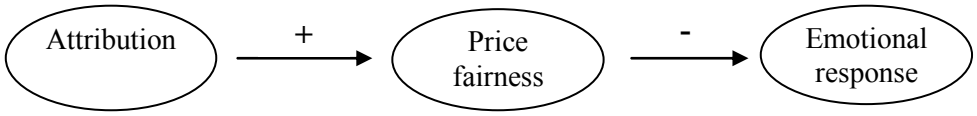
Affect refers to feelings or emotions toward a price situation, and particularly, it indicates stimulus-induced affect (Campbell, 2007). Drawn from a body of literature on the role of affect in judgment and choice, it was hypothesized that emotions influence price fairness perception, and it was subsequently demonstrated that emotional response (affect) is one of the critical antecedents of price (un)fairness perceptions along with cognitive attribution (i.e. inferred motive).

Accordingly, Model 1 (C-E-PF) was proposed (Figure 6). Campbell (2007) suggested that "*both reasoning and emotions are important antecedents of fairness and that their relative influence depends on specific conditions*" (p.270). Although Campbell (2007) argued that cognitive reasoning and emotions interact each other and did not provide any empirical evidence about the relationship, she proposed the direct effect of cognitive attribution on emotional response based on Weiner's attribution model. The direct path from attribution to emotions has also been empirically tested by some researchers (e.g. Folkes, Koletsky, & Graham, 1987; Reisenzein, 1986).

Model 2 (Cognitive Attribution-Price Fairness-Emotional Response): On the other hand, Xia et al. (2004) suggested that price (un)fairness leads to negative emotional response. They stated that discrete emotions, which are correlated with dissatisfaction (Folkes, et al., 1987; Storm & Storm, 1987), vary in intensity and type depending on the type of fairness. For instance, while an advantage inequality is related to feelings of uneasiness or guilt, a disadvantaged inequality may lead to disappointment, anger, or outrage (Austin, et al., 1980). Drawn from the proposition given by Xia et al. (2004), Model 2 (C-PF-E) was thus proposed (Figure 6).



Model 1 (C-E-PF)



Model 2 (C-PF-E)

Figure 6. Hypothesized Models

The main difference in the two competing models is the location of emotions in relation to cognitive attribution and fairness perception. Thus, the comparison of the two models could be helpful in articulating the relationships between cognitive attribution, emotions, and price fairness. In this study, it is postulated that Campbell's (2007) findings will be supported. Thus, the following hypothesis is proposed:

H3: "C-E-PF" Model will have better model fit than "C-PF-E" Model.

* C-E-PF Model: Cognitive attribution → Emotional response (partial mediator) → Price Fairness
C-PF-E Model: Cognitive attribution → Price Fairness → Emotional response

3.2.2 Price Comparison and Price Fairness

Research suggests that individuals make moral judgment (i.e., perceived fairness) by making comparisons (Adams, 1965). Accordingly, the relationship between price

comparison and perceived fairness has been researched over the years. Following Jacoby and Olson's (1977) model, Kim and Crompton (2002) argued that consumers' encoding of actual prices influence the evaluation of the given price, and also found that economic factors (i.e., importance of an admission price, perceived quality, perceived value, income, and the level of current price) significantly influenced the perception of the price in addition to the price comparison to the reference price.

McCarville et al. (1996) also demonstrated that reference price, anchored by past experiences, influences perceived price fairness. That is, individuals tend to expect a certain price on the basis of past payment experience, and they are more likely to accept a given price if it is consistent with previous prices. On the other hand, people are not willing to tolerate a price if it violates the existing pricing structure (e.g. charging first-time fees for public leisure services, which were used to provide for free). McCarville et al. (1996) explained that "such violations diminish transaction utility suggesting unfair treatment to many users" (p.64). Additionally, price fairness can be differently perceived by comparing the value received to the degree of the investment, called acquisition utility. While acquisition utility is related to the received value as compared with the amount of investment, transaction utility indicates the relative merits of an agreement (Thaler, 1985). Subsequently, the hypotheses about the relationship between price comparisons and fairness perception were supported, which means that people feeling a large difference between reference price and a given price tended to perceive unfairness (McCarville, et al., 1996).

Accordingly, it is argued that a price comparison paradigm largely influences the introduction of the price fairness concept in pricing literature. Xia et al. (2004) also clarified price fairness by proposing that "*all price evaluations, including fairness assessments, are comparative*" (p.1). The following hypothesis is therefore proposed:

H4: Price comparison negatively influences price fairness.

3.2.3 Behavioral Intentions

Folkes, Koletsky, and Graham (1987) found that there are significant relationships between causal inferences and consumer reaction, which are mediated by emotional responses to product failure (e.g., delayed flights). That is, the reason(s) a passenger attributes a flight delay to (e.g. due to bad weather or due to poor management) determines the passenger's willingness to purchase the flight again. A field study at an airport showed that passengers' causal inferences influence their propensity to complain about the delays and their desire to use the same airlines in the future, and more importantly, that anger has a mediating role in the relationship between attributions and behavioral intentions (Folkes, et al., 1987). More specifically, two dimensions of perceived reasons (i.e., controllability and stability) were measured, and it was found that perceived control over the problem and perceived stability increase passengers' anger at the airlines, which in turn affects their future behavioral intentions.

It has also been empirically shown that perceptions of price fairness influence behavioral intentions (Campbell, 1999a). In line with attribution theory, Campbell

(1999a) argued that inferred motives and relative profits lead to perceived unfairness of a price increase, which in turn, affects future buying intentions. Inferred motives indicate the consumer's inference of the company's motive for increasing prices. The experiment manipulated inferred motive as positive vs. negative, and showed that when a subject inferred that the company had a negative motive for a price increase, he or she was more likely to feel unfairness about the price increase (Campbell, 1999a). In sum, the study showed that a buyer's causal inference (positive vs. negative motive) leads to the perceived fairness of the price increase, and also that perceived (un)fairness has a mediating role in the relationship between causal inferences and behavioral intentions.

Using non-experimental data, Martin-Consuegra, Molina, and Esteban (2007) also tested the relationship between perceived price fairness and loyalty in an airline industry setting, and revealed that price fairness significantly influences loyalty. That is, the more fair passengers felt airfares were, the more likely they would be loyal and committed to the airlines. More recently, Martin, Ponder, and Lueg (2009) conducted an experiment in a retail context, and concluded that justifiable reasons for price increases increase price fairness and also not only distributive, but also procedural price fairness influences post-price increased loyalty. Post-price increasing loyalty refer to patronage behavior even in the presence of price increases (Martin, et al., 2009). Thus, it could be concluded that if a justifiable reason is given, a price increase at a moderate level will be acceptable.

Additionally, in a leisure and public recreation context, perceived price fairness has been considered as an important antecedent of willingness to pay (WTP) (Ajzen,

Rosenthal, & Brown, 2000; Mitchell & Carson, 1989; Schröder & Mieg, 2008). McCarville et al. (1996) argued that perceptions of unfairness of user fees evoke considerable hostility and displacement for public recreation services. Ajzen et al. (2000) also empirically tested the relationship between fairness and WTP using an experimental design. Subsequently, it was found that the perceived fairness of the requested payments to public goods or services is positively related to WTP. More recently, Schröder and Mieg (2008) argued that perceived fairness significantly predicts WTP. That is, when individuals are asked what amount of money they would be willing to pay for a public good, their response may depend on their perception of justice or fairness (i.e. should I pay for it, or should someone else pay for it more than what I ought to pay?) (Chung, Kyle, Petrick, & Absher, 2010).

With reference to the relationship between price fairness and unfavorable behavioral intentions, Xia et al. (2004) proposed that perceived price (un)fairness can lead to actions including: no action, self-protection, and revenge. When buyers feel perceived inequality of prices, they cannot act, or act to protect themselves financially and/or psychologically. Moreover, they could seek revenge by trying to get back at the company(s) (Bougie, et al., 2003). Therefore, Xia et al. (2004), in their conceptual model, claimed that depending on to what extent one feels unfairness and the degree of the negative emotions, two types of unfavorable behavioral intentions could be observed as consequences of price (un)fairness. Based on the literature review, the following model (Figure 7) and hypotheses are proposed:

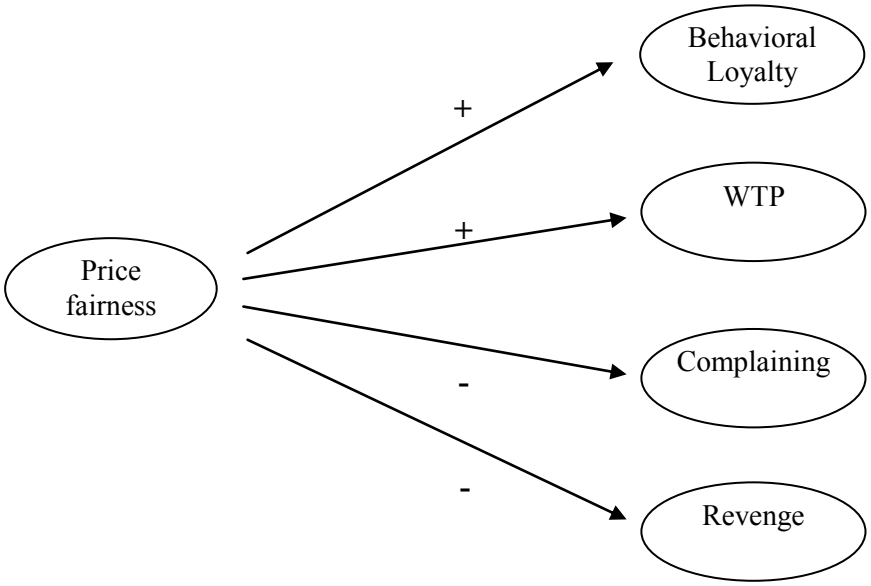


Figure 7. Hypothesized Model of Price Fairness and Behavioral Intentions

H5: Price fairness influences behavioral intentions.

H5a: Price fairness positively influences behavioral loyalty.

H5b: Price fairness positively influences willingness to pay more.

H5c: Price fairness negatively influences complaining behavior.

H5d: Price fairness negatively influences revenge behavior.

3.3 Phase3: Model Comparison in Terms of Price Sensitivity

Respondents will be divided into two groups in terms of their degree of price sensitivity. Price sensitivity represents how individuals respond to various prices (Goldsmith & Newell, 1997; Lichtenstein, Bloch, & Black, 1988; Petrick, 2005). This concept is different from price elasticity indicating to what extent the quantity of demand changes by the change in price (Goldsmith & Newell, 1997). The 'High sensitive group'

will be individuals who rely more on price when purchasing airline tickets, and are therefore believed to be less tolerant of unexpected price changes in flights than the 'Low sensitive group'. It is expected that the different degree of the two groups' price sensitivity will lead to variant emotional responses and behavioral intentions across the two groups as a result of a moderating effect. Additionally, in this study, it is expected that passengers of low-cost carriers are more likely to represent the high price sensitive group than the low price sensitive group. The examination of low-cost carriers users' price perceptions and behaviors in comparison to passengers of full-service carriers is suggested for a future research topic (Martin-Consuegra, et al., 2007).

H6: There are differences in the price fairness model between high and low price sensitive group.

3.4 Hypothesized Model and Hypotheses

According to the literature review and study objectives, the hypothesized model is proposed (Figure 8). The fundamental theoretical base is Weiner (1980)'s attribution theory. Specifically, price fairness including two factors (distributive and procedural fairness) is applied to the attribution model (cognitive attribution – emotional responses – behavioral intentions) in a behavioral price context.

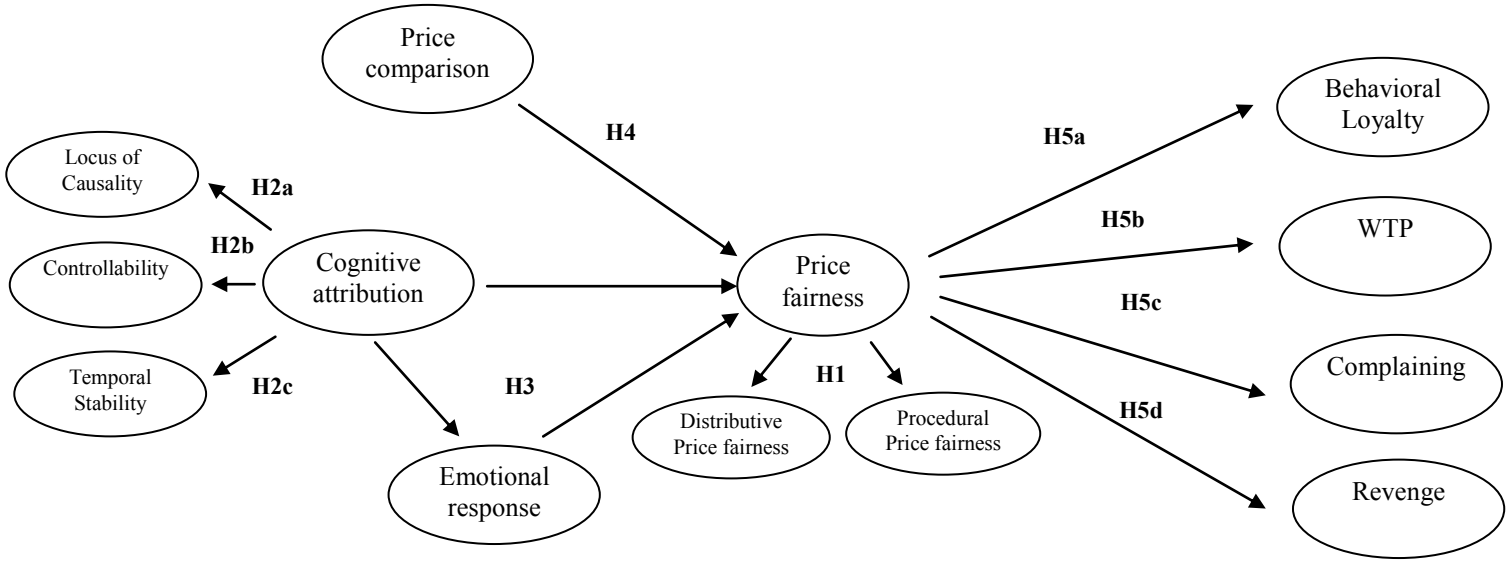


Figure 8. The Hypothesized Model

NOTE: H6tests a mean comparison between two groups (i.e., high vs. low price sensitivity). Therefore, it is not illustrated here.

The following objectives guided the current study: (1) To examine the dimensionality of price fairness in a price change context; (2) To examine the antecedents of price fairness (more specifically, to determine which dimensions of attribution are best at predicting price fairness, to examine the role of emotional response in relation to price fairness, and to examine the role of price comparison as a predictor of price fairness); (3) To examine the consequences of price fairness (more specifically, to determine which dimensions of price fairness are best at predicting behavioral intentions); and (4) To compare differences in the price fairness model between high and low price sensitivity groups. According to the literature review and the objectives of study, the following hypotheses were developed to examine these objectives:

H1: Distributive fairness and procedural fairness are explained by price fairness as a higher order factor.

H2: Locus of causality, controllability, and temporal stability are explained by cognitive attribution.

H2a: Locus of causality positively influences price fairness

H2b: Controllability positively influences price fairness

H2c: Temporal stability positively influences price fairness

H3: "C-E-PF" Model will have better model fit than "C-PF-E" Model.

* C-E-PF Model: Cognitive attribution → Emotional response (partial mediator) → Price Fairness

C-PF-E Model: Cognitive attribution → Price Fairness → Emotional response

H4: Price comparison negatively influences price fairness

H5: Price fairness influences behavioral intentions.

H5a: Price fairness positively influences behavioral loyalty.

H5b: Price fairness positively influences willingness to pay more.

H5c: Price fairness negatively influences complaining behavior.

H5d: Price fairness negatively influences revenge behavior.

H6: There are differences in the price fairness model between high and low price sensitive group.

4. METHODOLOGY

This section explains the justification for the choice of appropriate research methods, and describes the research design for this study. Specifically, population, sample and data collection methods are discussed, and also how the survey instrument was designed is described. Finally, data analysis procedures are introduced.

4.1 Choice of Research Methods

This study adopted a quantitative methodology in line with the positivist and scientific realism paradigm (Hunt, 2002). More specifically, a self-administered questionnaire survey was used to measure latent variables and test hypotheses, and this method was chosen in order to address the limitations of previous studies (e.g. difficulty in manipulating attribution variables) and to seek generalizability.

Monroe (2003) introduced four types of research methods for pricing research: surveys, experimentation, statistical methods and models, and panels. These methods have been independently used to best fit a variety of research purposes and contexts. Surveys are a frequently used method of estimating price sensitivity and purchase intentions, are relatively easy to conduct, and are one of the least costly research methods (Monroe, 2003).

Monroe (2003) further pointed out that surveys have some drawbacks. This includes unreliable responses when the respondents are not interested in purchasing the product or have never experienced the service being asked in the survey. Accordingly, in

order to tackle the concerns, critical incident technique (CIT) has been attempted in service literature (Bejou & Palmer, 1998; Bitner, Booms, & Tetreault, 1990; Edvardsson, 1992). CIT is a technique to capture factual stories or episodes respondents have experienced. Surveys based on CIT are able to deal with a specific incident(s) by asking what incident had an effect on the respondent's response or perception. Recently, some tourism researchers have utilized surveys based on CIT (Chung & Hoffman, 1998; Petrick, Tonner, & Quinn, 2006; Wang, Hsieh, & Huan, 2000).

Experiments have also been used in price research due to the advantage of controllability (i.e., measuring price perception resulting from the manipulation of factors). However, lack of realism and external validity can be a critical issue, particularly in laboratory experimentation (Monroe, 2003). Alternative forms of experimentation, field experiments, also yield some issues including: lack of control over other factors that may affect the variables, and the time and expense.

Additionally, statistical methods and models have been used to analyze historical price-sales volume data to estimate price elasticity, and this econometric approach has helped researchers project price changes in the future. Finally, consumer panels have frequently been utilized to observe purchasing patterns and/or price awareness in marketing research (Monroe, 2003). This method has the advantage of gaining data quickly, and allows researchers to establish an adequate price-related database despite the issue of representativeness of the general population.

Likewise, with reference to price fairness, researchers have used a variety of methods depending on the study purposes and the nature of research contexts:

conceptual models (e.g. Xia, et al., 2004), laboratory experiments (e.g. Bolton, et al., 2003; Campbell, 1999a), field experiments (e.g. Choi & Mattila, 2004), surveys (e.g. Oh, 2003), and qualitative approaches (e.g. Bechwati, et al., 2009).

In addition to pricing and, and more specifically, price fairness research, Weiner (2000) recommended three types of research methodologies for consumer behavior research based on attribution theory: surveys using real personal incidents, scenario-based or role-playing methodologies, and laboratory experiments. He argued that each methodology has its unique strengths and weaknesses, and should be used in the right contexts, depending on the nature of study and the research question(s).

Consequently, considering the advantages of each method and the nature of the study context, the current study conducted a survey.

4.2 Research Design

This study was designed in line with the comprehensive research design scheme proposed by Sekaran (2003). This diagram (Figure 9) integrates issues "*regarding the purpose for the study (exploratory, descriptive, hypothesis testing), its location (i.e., the study setting), the type it should conform to (type of investigation), the extent to which it is manipulated and controlled by the researcher (extent of researcher interference), its temporal aspects (time horizon), and the level at which the data will be analyzed (unit of analysis)*" (Sekaran, 2003, p. 118). In addition, sampling design, data collection methods, measurement, and data analysis procedures are included in the research design. Following this scheme, the current study aims to conduct hypothesis testing of

correlations among variables. The remainder of the research design (i.e., population, sampling, data collection method, measurement, and data analysis procedures) are subsequently discussed.

4.2.1 Population and Sample

This study was conducted in a tourism context (e.g. an airline trip) in order to examine the antecedents and consequences of tourists' perceptions of price fairness. The travel and tourism industry is one of the most price non-transparent industries (Kimes & Wirtz, 2003a; Maxwell, 2008), and over the years, travelers have complained about the obscure pricing strategy called "yield management" (e.g. flexible airfares and hotel fees) (Sharkey, 2002), and some tourism researchers have raised issues regarding price fairness (Oh, 2003; Perdue, 2002). Particularly, new pricing schemes including ancillary fees revenue have recently been a controversial issue in the air transport market in the U.S (CNN, 2010). The population of this study therefore is leisure tourists who have taken domestic flights in the U.S.

Sample Size

The appropriate sample size for this study was determined to be 500 after overall examination of multiple guidelines in literature. First, it has been argued that sample sizes that exceed 200 cases are large enough to conduct SEM analysis although this is not absolute, but dependent on the complexity of a model (Kline, 2005).

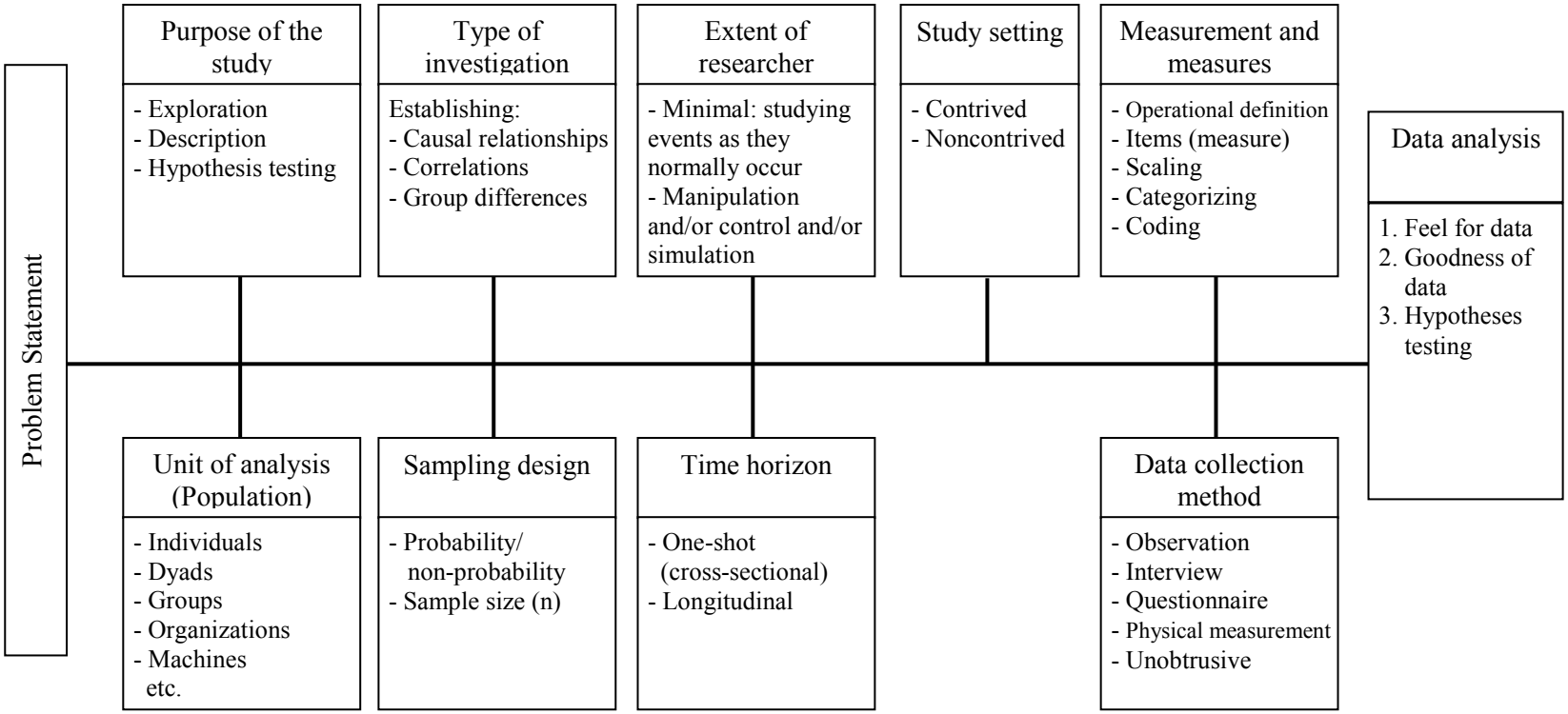


Figure 9. The Research Design

Adapted: Sekaran (2003, p.118)

Also some researchers have proposed a rule of thumb, indicating that a sample well over 200 is adequate for analyzing data with small to medium SEM (Kline, 1998; Loehlin, 1992; Ullman, 2001). Other than the aforementioned rough guidelines, more sophisticated methods can be applied to calculate an appropriate sample size, particularly, for complex models.

There is a lack of consensus on absolute standards about the relation between sample size and model complexity (Hair, Black, Babin, Anderson, & Tatham, 2006). Kline (2005) proposed a 10:1 ratio recommendation, indicating the ratio of the number of cases to the number of free parameters. That is, a path model with 10 free parameters should have a minimum sample size of 100 cases. On the other hand, other researchers have suggested 5 cases per estimated parameter (Bentler & Chou, 1987) or 15 cases per measure variable (Stevens, 1996). Using this rule of thumb, since the proposed model in this study has 98 parameters to be estimated, the suggested sample size would be 490 (98 * 5).

Hair et al. (2006) argued that five factors influence the determination of minimum sample size for SEM: multivariate distribution of the data, estimation technique, model complexity, amount of missing data, and amount of average error variance among the reflective indicators. That is, one has to have larger sample size than usually recommended, especially when data are non-normal and/or more than 10 percent missing data is expected. Also, a 150 to 400 sample size has been recommended to obtain valid results when using maximum likelihood estimation (Hair, et al., 2006). Hair et al. (2006) maintained that larger samples generally lead to more stable results, yet

they suggested that sample size should be determined based on a set of factors such as the model complexity and measurement model characteristics (Hair, et al., 2006, p. 742):

- *SEM models containing five or fewer constructs, each with more than three times (observed variables), and with high item communalities (.6 or higher), can be adequately estimated with samples as small as 100 - 150.*
- *If any communalities are modest (.45 - .55), or the model contains constructs with fewer than three times, then the required sample size is more on the order of 200.*
- *If the communalities are lower or the model includes multiple underidentified (fewer than 3 items) constructs, then minimum sample sizes of 300 or more are needed to be able to recover population parameters.*
- *When the number of factors is larger than six, some of which use fewer than three measured items as indicators, and multiple low communalities are present, sample size requirements may exceed 500.*

In addition, power analysis could be used to determine the appropriate sample size (Clark-Carter, 2004). Power indicates the likelihood of avoiding a Type II error, and at least 0.8 of power has been recommended (Cohen, 1988). The power analysis requires not only the significance level (alpha level), but also the sample size, effect size, and the number of independent variables in the model. Therefore, minimum sample size can be obtained if the rest of information is set. Kline (2005) stated that "*a power analysis in SEM can be conducted at the level of individual paths or for the whole model*" (p.156). In this study, suppose that pre-test shows the R^2, effect size, is 0.05 with three predictor

variables (price comparison, cognitive attribution, and emotional response) and a priori significant level (α) and statistical power (β) are set to 0.05 to 0.90, respectively, an effect size table shows that minimum sample size necessary for this study would be 250 with 90% statistical power (Clark-Carter, 2004).

Consequently, a sample size for this study was determined to be 500 on the basis of overall examination of aforementioned guidelines, budget and time constraints, characteristics of a proposed model, and study objectives (i.e., developing two structural models for two groups respectively).

4.2.2 Data Collection

The target population for the current study was pleasure tourists who had taken domestic flights in the U.S. However, because the author is not aware of the existence of a passenger list in the U.S, a panel list provided by an online survey institution was used as an alternative sampling frame. Panels indicate "*individuals who are pre-recruited to participate on a more or less predictable basis in surveys over a period of time*" (Dennis, 2001, p. 34). Specifically, a survey instrument is e-mailed to panelists who voluntarily registered to participate in online surveys. Although several researchers have expressed concerns about the potential for sampling bias (Dillman, Smyth, & Christian, 2009), recent empirical studies have revealed only minor differences between the results of online panel surveys and conventional survey methods (e.g. telephone and face-to-face).

In addition, online panels have some advantages including: speed, costs, large sampling size, and selective samples by socio-demographic attributes. Technical mechanisms in this method can also prevent respondents from giving missing values. The economic benefits and convenience therefore make this method increasingly common for marketing research (Deutskens, Jong, Ruyter, & Wetzels, 2006; Dillman, et al., 2009; Duffy, Smith, Terhanian, & Bremer, 2005). Accordingly, data were collected using an online panel survey in this study.

On the other hand, Dillman et al. (2009) pointed out the possibility of coverage error, self-selection and sampling error, and non-response error problems. For example, since online panelists are only individuals who have online access, people who have never used the Internet are not included even though they obviously account for some portion of tourists in the U.S. Nonetheless, due to both economic and time benefits, an online panel survey has been increasingly used in order to get more generalized results (Hung, 2008; Li, 2006).

This study made efforts to address coverage error issues, that is, to fill the gaps between online panels and the general population. Therefore, an online survey institution which can appropriately handle this issue was chosen (Dee Boyd, personal communication, April, 8, 2010). The invitations to the survey were sent to mirror the U.S. Census population parameters of age, gender, and household income (MarketTools, 2010; Zoomerang, 2009). That is, arguably, the outbound invitations were weighed towards the U.S. Census population in terms of age, gender, and household income. In addition to these three profiles, only respondents who are qualified for this study (i.e.

had experiences on domestic leisure flights in the past 12 months) were invited to participate in the survey. Those who were not qualified were screened out via a screening question at the beginning of the online survey.

The survey was conducted from April 15 to April 22, 2010. Once the online survey was deployed, computer program in the online survey organization led to 20,700 e-mail invitations sent out in order to obtain the appropriate sample size (n=500 and more). Boyd (2010) stated "*our computer has an algorithm written that calculates how many panelist will be mailed to hit a targeted number of completes. The algorithm is based upon completes, incidence rate, survey length and other factors. The initial deployment was sent to National Representative Panelist*" (Personal communication, April 21, 2010).

To address the concerns about the quality of the online panel, Zoomerang.com, an online survey provider for this study, operates some management process: "*We verify respondent information with a patent-pending process that utilizes the same automatic, real-time validation technologies that help prevent credit card fraud and identity theft. We ensure that no respondent can enter a survey twice – no matter which survey panel he or she has joined. And we use digital fingerprinting to eliminate and blacklist fraudulent respondents to prevent them from taking future surveys*" (Zoomerang, 2009, p. 3). Specific description of the technologies and algorithm regarding quality assurance is beyond the scope of this study.

4.2.3 Measurements

The hypothesized model had eleven latent variables – price comparison, locus of causality, controllability, temporal stability, emotional response, distributive price fairness, procedural price fairness, behavioral loyalty, willingness to pay more (WTP), complaining, and revenge behavior. The measurement items for each variable were adapted from previous research (Table 1), and were somewhat modified to best fit the study context. The survey instrument was composed of the information sheet and three main sections. The first section included a screening question and respondents' general leisure flight behaviors (e.g. purchasing an airline ticket, frequency of taking flights). The second section measure all variables (i.e. price comparison, locus of causality, controllability, temporal stability, emotional response, distributive price fairness, procedural price fairness, behavioral loyalty, willingness to pay (WTP), complaining, and revenge behavior), in sequence. The last section asks socio-demographic profiles including gender, age, household income, education, ethnicity, and ZIP code.

Variables

Information Sheet: In line with the consent checklist and information sheet samples guided by Texas A&M University's Institutional Review Board (IRB), the first page of the survey included consent requirements. In this section, statements that explained the purpose of the study, any likely risks or discomforts to respondents, survey procedures including estimated completion time, and voluntary participation were included along with IRB and researchers' contact information.

Screening and General Behavior of Flight Trip: To rule out ineligible units, only individuals who had taken domestic flights in the past 12 months were selected with the following screening question: "*Have you taken any U.S. domestic flights in the past 12 months (since March 2009) for leisure travel?*". If a respondent answered "no", the response was screened out, and consequently, did not count. In addition to the screening question, the airlines that a respondent used on the most recent trip was asked: "*which of the following airlines did you use when traveling on your most recent trip for leisure purposes?*". A respondent was instructed to choose one of the major U.S domestic airlines from a given list.

Additionally, price sensitivity was measured with the Lichtenstein, Bloch, and Black (1988) scale. This is a three-item scale, and each of the items are placed on a five-point Likert scale from 1 "*strongly* disagree" to 5 "strongly agree" (Lichtenstein, et al., 1988). As discussed in the literature review section, this operationalized concept was used to categorize the collected data into two groups: high vs. low price sensitive groups using the median to divide the two groups. Frequency of taking domestic flights per year was also asked to examine the respondents' familiarity with airlines pricing scheme.

Price Comparison: Price comparison was measured with items which have been used in previous studies (Bolton, et al., 2003; Xia, et al., 2004). Four items related to extra fees were given in this part. For example, each question asked whether the actual price was more or less than respondents' reference price.

Cognitive Attribution: The items for cognitive attribution were adapted from the attribution theory literature. In particular, cognitive attribution items were derived from

the Causal Dimension Scale (CDS I and II), which has been developed to measure how individuals infer causes of an event (McAuley, et al., 1992; Russell, 1982), and the Attributional Style Questionnaire (ASQ) (Peterson, et al., 1982). Results of a pilot test indicated that some errors in wording may exist. Therefore, some items were re-worded and some were replaced with other items for the main survey. Also, a pilot test used only seven items, but the main survey used a total of nine items derived from CDS I and II. For example, instead of one item for causality in the pilot survey (*to what extent do you think there are actions the company could take but has not to keep the price unchanged?*), two items were added to measure causality (*the cause of price changes is something that reflects an aspect of the company/the situation* and *the cause of price change is something about the company/the situation*). Items for stability were also re-worded (*the cause of price change is something permanent/temporary*) and added (*the cause of price change is something unchangeable/changeable*).

Emotional Response: Emotional response was measured with multiple items which have been frequently used in related contexts (Folkes, et al., 1987).

Price Fairness: Distributive and procedural price justice was measured with valid and reliable scales which have been used in marketing and tourism literatures (Martin, et al., 2009; Petrick, 2002; Wirtz & Kimes, 2007), with minor wording changes to fit the current study's context.

Behavioral Intentions: Behavioral intentions were measured with items frequently used in tourism and marketing literature (Campbell, 1999a; Grewal, et al., 1998; Herrmann, et al., 2007; Lee, et al., 2007).

Table 1. Measurement Scales in Previous Research

Concept	Research	Measurement scales
Price comparison	Bolton, et al. (2003) Xia, et al. (2004)	• The fees I paid were (less/more) than what I paid for my previous flights. • The fees I paid were (less/more) than other passengers on the flight. • The fees I paid were (less/more) than the fees of other competitive airlines toward the same destination. • The fees I paid were (less/more) than what I thought it would be appropriate prices.
Cognitive attribution	Russell (1982) * Causal Dimension Scale (CDS I): bipolar scale	Is the cause(s) something: • that reflects an aspect of yourself ↔ that reflects an aspect of the situation • inside of you ↔ outside of you • something about you ↔ something about others • permanent ↔ temporary • stable over time ↔ variable over time • unchangeable ↔ changeable • controllable by you or other people ↔ uncontrollable by you or other people • intended by you or other people ↔ unintended by you or other people • no one is responsible ↔ someone is responsible

Table 1. Continued

Concept	Research	Measurement scales
Cognitive attribution	McAuley, Duncan, & Russell (1992) *Causal Dimension Scale (CDS II): bipolar scale	Is the cause(s) something: • that reflects an aspect of yourself ↔ that reflects an aspect of the situation • inside of you ↔ outside of you • something about you ↔ something about others • permanent ↔ temporary • stable over time ↔ variable over time • unchangeable ↔ changeable • over which others have control ↔ over which others have no control • under the power of other people ↔ not under the power of other people • other people can regulate ↔ other people cannot regulate • manageable by you ↔ not manageable by you • you can regulate ↔ you cannot regulate • over which you have power ↔ over which you have no power
	Peterson et al. (1982) *Attributional Style Questionnaire (ASQ): bipolar scale	• Is the cause of ( ) due to something about you or to something about other people or circumstance? (totally due to other people ↔ totally due to me) • In the future, will this cause again be present? (will never again be present ↔ will always be present) • Is the cause something that just influences ( ) or does it also influence other situations? (influences just this situation ↔ influences all situations) • How important would this situation be if it happened to you? (not at all important ↔ extremely important)

Table 1. Continued

Concept	Research	Measurement scales
Cognitive attribution	McAuley, Duncan, & Russell (1992) *Causal Dimension Scale (CDS II): bipolar scale	Is the cause(s) something: • that reflects an aspect of yourself ↔ that reflects an aspect of the situation • inside of you ↔ outside of you • something about you ↔ something about others • permanent ↔ temporary • stable over time ↔ variable over time • unchangeable ↔ changeable • over which others have control ↔ over which others have no control • under the power of other people ↔ not under the power of other people • other people can regulate ↔ other people cannot regulate • manageable by you ↔ not manageable by you • you can regulate ↔ you cannot regulate • over which you have power ↔ over which you have no power
	Peterson et al. (1982) *Attributional Style Questionnaire (ASQ): bipolar scale	• Is the cause of ( ) due to something about you or to something about other people or circumstance? (totally due to other people ↔ totally due to me) • In the future, will this cause again be present? (will never again be present ↔ will always be present) • Is the cause something that just influences ( ) or does it also influence other situations? (influences just this situation ↔ influences all situations) • How important would this situation be if it happened to you? (not at all important ↔ extremely important)

Table 1. Continued

Concept	Research	Measurement scales
Emotional response to the price	Folkes et al., (1987)	• How important was it to you that you pay the fair price? • How angry were you at the company for the price changes? • How disappointed were you that the company changed the price? • How much distress did you feel that the company changed the price?
Distributive Price fairness	Martin et al. (2009)	• The new price is fair. • The new price is reasonable. • The new price is acceptable.
	Wirtz and Kimes (2007)	• The price changes were clearly understandable • All consumers were treated equally by the company's pricing policy • I think the price changes were based on cost • The price changes were independent of customer's needs • The price changes were acceptable • The price changes were fair
Procedural Price fairness	Martin et al. (2009)	• The ( )'s pricing processes and procedures are fair. • The ( )'s pricing processes and procedures are reasonable. • The ( )'s pricing processes and procedures are acceptable.
	Wirtz and Kimes (2007)	• The pricing decision processes and procedures were fair • The pricing decision processes and procedures were reasonable • The pricing decision processes and procedures were acceptable

Table 1. Continued

Concept	Research	Measurement scales
Behavioral loyalty	Zeithaml et al. (1996)	• Say positive things about ( ) to other people. • Recommend ( ) to someone who seeks your advice. • Encourage friends and relatives to do business with ( ). • Consider ( ) your first choice to buy ( ) services. • Do more business with ( ) in the next few years.
Willingness to Pay More	Zeithaml et al. (1996)	• Continue to do business with ( ) if its prices increase somewhat. • Pay a higher price than competitors charge for the benefits you currently receive from ( ).
Complaining	Zeithaml et al. (1996) Xia et al. (2004)	• Complain to other customers if you experience a problem with ( )'s service. • Complain to external agencies, such as the Better Business Bureau, if you experience a problem with ( )'s service. • Complain to ( )'s employees if you experience a problem with ( )'s service.
Revenge	Zeithaml et al. (1996)	• Switch to a competitor if you experience a problem with ( )'s service. • Do less business with ( ) in the next few years. • Take some of your business to a competitor that offers better prices.
	Xia et al. (2004)	• Report what you experienced to the media. • Report what you experienced to the legal and regulatory agencies.

Table 1. Continued

Concept	Research	Measurement scales
Price sensitivity	Lichtenstein, Bloch, and Black (1988)	• I usually buy ( ) when they are on sale. • I buy the lowest priced ( ) that will suit my needs. • When it comes to buying ( ) for me, I rely heavily on price.

4.2.4 Pilot Survey

Prior to the main survey, a pretest (pilot survey) was conducted. The purpose of the pretest was to evaluate the survey instrument and appropriate sample selection procedures (Groves, 2004). In addition, data collected during the pretest was expected to provide quantitative information to check the validity and reliability of the scales used. Due to cost and time limitations, a pilot survey was conducted based on convenient sampling. The survey subjects were undergraduate students (n=107), and the pilot survey was conducted from December 10 to 15, 2009. After the survey instrument was updated from the pilot survey (e.g., modified items for causal attribution, rephrased wording to fit the context of flights trip), the revised survey instrument was employed.

4.3 Data Analysis Procedures

Data in this research were analyzed in line with the data analysis process proposed by Sekaran (2003). Figure 10 shows the flow diagram of this data analysis process. First, after data are collected with a survey, data are edited and coded appropriately. Since this study conducted an online survey, conventional coding and entering of data were not necessary, and moreover, recent computer program support the function of transforming numerical data collected by an online survey to a specific type of data for analysis (e.g. CSV file to SPSS file). However, open-ended questions of questionnaires needed to be manually edited, and also, data needed to be carefully reviewed for missing data or invalid responses in order to get data ready for analysis.

Next, central tendency and dispersion needed to be checked in order to acquire a feel for data (i.e., description of the data) and to give the researcher "*a good idea of how the respondents have reacted to the items in the questionnaire and how good the items and measures are*" (Sekaran, 2003, p. 306). For example, frequency distributions for the demographic variables, mean, standard deviation, range, and variance on the other variables in the model can be easily obtained and used to examine how well concepts were measured. Particularly, whether variables were normally distributed or not was used to examine the assumption for multivariate statistics (e.g. multiple regression analysis and structural equation modeling) (Byrne, 2009; Hair, et al., 2006), and to examine the data's validity and reliability.

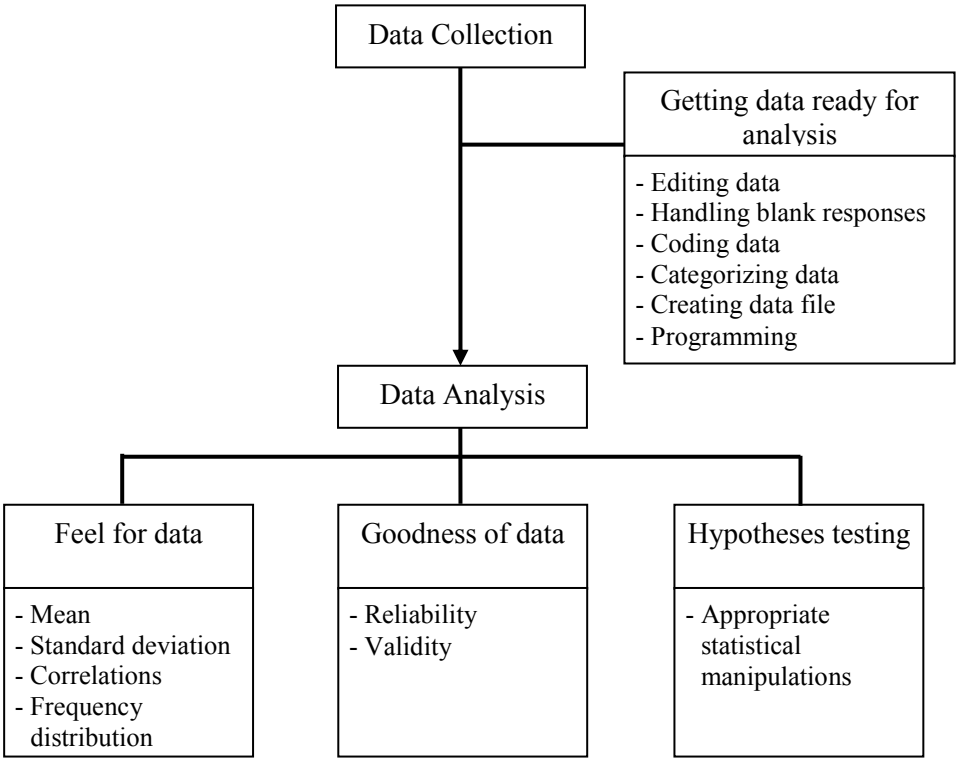


Figure 10. The Flow of Data Analysis Process

Adapted: Sekaran (2003, p.301)

4.3.1 Validity and Reliability

Following the initial assessment, validity and reliability needed to be analyzed to evaluate the goodness of data (i.e., quality of the data) in detail (Sekaran, 2003). While the reliability of a measure refers to its consistency, the validity of a measure is associated with how accurately a concept is measured (Seale, 2004; Sekaran, 2003). In this study, for reliability analysis, internal consistency (reliability) was checked with Cronbach's alpha, which is the most frequently used test of inter-item consistency (Nunnally, 1978; Sekaran, 2003).

In addition, composite reliability was calculated (Hair, et al., 2006; Netemeyer, Bearden, & Sharma, 2003). While Cronbach's alpha tends to be used in preliminary analyses, composite reliability is frequently used to assess whether a dataset adequately fits the proposed model. Composite reliability is similar to coefficient alpha (Cronbach's alpha), and particularly has been recommended for structural equation modeling (Fornell & Larcker, 1981).

Following the reliability analysis, validity was examined. Although some types of validity are conceptually similar and can be used interchangeably, there is some disagreement as to the classification of and types of validity across the literature (Netemeyer, et al., 2003). Sekaran (2003) classified three types of validity as follows (p. 206-207):

1. Content validity (Factorial validity): *a function of how well the dimensions and elements of a concept have been delineated*

- Face validity: *indicates that the items that are intended to measure a concept, do on the face of it look like they measure the concept*

2. Criterion-related validity: *established when the measure differentiates individuals on a criterion it is expected to predict*
   - Concurrent validity: *established when the scale discriminates individuals who are known to be different*
   - Predictive validity: *indicates the ability of the measuring instrument to differentiate among individuals with reference to a future criterion*
3. Construct validity: *testifies to how well the results obtained from the use of the measure fit the theories around which the test is designed*
   - Convergent validity: *established when the score obtained with two different instruments measuring the same concept are highly correlated*
   - Discriminant validity: *established when, based on theory, two variables are predicted to be uncorrelated, and the scores obtained by measuring them are indeed empirically found to be so*

Similarly, Netemeyer, Bearden, and Sharma (2003) stated that "*construct validity is an assessment of the degree to which a measure actually measures the latent construct it is intended to measure*" (p.8), and suggested three types of validity with several sub-types as follows (p.71-87):

1. Translation validity
    - Content validity: *the degree to which elements of a measurement instrument are relevant to and representative of the targeted construct for a particular assessment purpose. Assurances of content validity are based upon a priori theoretical, item generation, and judging efforts*
    - Face validity: *an evaluation that the items in a scale adequately measure the construct. Face validity can be judged after a measure has been developed, often prior to application in another study, by potential measurement users*
2. Criterion-related validity: *the degree to which a measure covaries with previously validated or "gold-standard" measures of the same constructs (Haynes, Nelson, & Blaine, 1999)*
    - Predictive validity: *the ability of a measure to effectively predict some subsequent and temporally ordered criterion*
    - Concurrent validity: *for which evidence is provided by sizable correlations between the construct measure under development and a criterion measure collected simultaneously or "concurrently"*
    - Convergent validity: *the extent to which independent measures of the same construct converge, or are highly correlated*
    - Discriminant validity: *the extent to which measures diverge from other operationalizations from which the construct is conceptually distinct*
    - Known-group validity: *the extent to which a measure differs as predicted between groups who should score low and high on a trait*

3. Nomological validity: *the extent to which the measure fits "lawfully" into a network of relationships or a "Nomological network": that is, the extent to which a measure operates within a set of theoretical constructs and their respective measures*

Sekaran (2003) proposed several ways of testing validity: a panel of judges for content validity, correlational analysis for concurrent/predictive validity or convergent/discriminant validity, factor analysis for construct validity, and multitrait-multimethod matrix of correlations for convergent and discriminant validity. Netemeyer, Bearden, and Sharma (2003) also introduced some methods of establishing or investigating validity (e.g. judges with expertise and pilot tests for content validity, multitrait-multimethod (MTMM) matrix for convergent and discriminant validity).

Accordingly, in this study, a panel of judges and a pilot survey were used to establish content and face validity. Confirmatory factor analysis was used to confirm the appropriateness of items in each latent variable (i.e., factorial validity). Additionally, correlation coefficients among all latent variables in the proposed model were used to assess the validity of measures (i.e. discriminant and convergent validity) along with AVE (average variance extracted estimate).

There were no absolute criteria for judging whether the data had reasonable levels of reliability and validity, yet, this study used rules of thumb frequently used in literature (Table 2).

Table 2. Criteria of Reliability and Validity

Indices	Criteria
Cronbach's alpha	≥ .70 (Pallant, 2005) ≥ .60 (Robinson, Shaver, & Wrightsman, 1991) * in exploratory research
Composite (or construct) reliability	≥ .70 (Hair, Anderson, Tatham, & Black, 1998) ≥ .60 (Bagozzi & Yi, 1988)
Factor loading	≥ .50 (Hair, et al., 1998) .50 ~ .90 (Bagozzi & Yi, 1988)
AVE (for convergent validity)	≥ .50 (Fornell & Larcker, 1981) ≥ .50 (Bagozzi & Yi, 1988) ≥ .45 (Netemeyer, et al., 2003) * newly developed scales
AVE for two factors (for discriminant validity)	> the square of the correlation between the two factors (Hair, et al., 2006; Hatcher, 1994)

4.3.2 Hypothesis Testing

Finally, in order to examine the study objectives (1) to (4), the hypothesized model was tested (Table 3). This work is rooted in the theoretical background leading to the hypothesized model and hypotheses. The model had three independent variables including price comparison, cognitive attribution, and emotional response and four dependent variables with corresponding manifest variables. Price fairness, including distributive and procedural justice were included as mediating variables between the independent and the dependent variables. Thus, Structural Equation Modeling (SEM), which is based on a confirmatory factor analysis (CFA) and path model, is believed to be a proper statistical technique to test the proposed hypothesized model (Byrne, 2009; Kline, 2005; Reisinger & Mavondo, 2006; Reisinger & Turner, 1999).

In particular, a two-step approach to SEM was used (Anderson & Gerbing, 1988). The two-step approach indicates the sequential testing of a measurement model (i.e., confirmatory factor analysis where one examines the measurement properties of the scales: factor loadings, item deletion, etc.) and a subsequent structural model (i.e., the regression or path model) (G. Kyle, personal communication, October 29, 2008). In the first step, a confirmatory factor analysis (CFA) was conducted to determine if manifest variables reliably reflected the latent variables in the hypothesized model. The CFA can determine the dimensionality of price fairness and casual attribution (study objective (1) and (2), respectively). Before doing CFA, exploratory factor analysis (EFA) was conducted to examine the nature of the dimensionality of price fairness in line with the study objective (1). In the following step, the goodness of structural model fit was assessed using multiple fit indices.

Table 3. Hypothesis Testing

Objective of study	Hypothesis	Data analysis
(1) To examine the dimensionality of price fairness in a price change context	**H1:** Distributive fairness and procedural fairness are explained by price fairness as a higher order factor.	EFA, CFA
(2) To examine the antecedents of price fairness - To determine which dimensions of attribution are best at predicting price fairness - To examine the role of emotional response in relation to price fairness - To examine the role of price comparison as a predictor of price fairness	**H2**: Locus of causality, controllability, and temporal stability are explained by cognitive attribution. **H2a**: Locus of causality positively influences price fairness **H2b**: Controllability positively influences price fairness **H2c**: Temporal stability positively influences price fairness **H3**: "C-E-PF" Model will have better model fit than "C-PF-E" Model. * C-E-PF Model: Cognitive attribution → Emotional response (partial mediator) → Price Fairness C-PF-E Model: Cognitive attribution → Price Fairness → Emotional response **H4**: Price comparison negatively influences price fairness	EFA Structural Equation Modeling (CFA) Structural Equation Modeling (Path analysis)
(3) To examine the consequences of price fairness - To determine which dimensions of price fairness are best at predicting behavioral intentions	**H5:** Price fairness influences behavioral intentions. **H5a:** Price fairness positively influences behavioral loyalty. **H5b:** Price fairness positively influences willingness to pay more. **H5c:** Price fairness negatively influences complaining behavior. **H5d:** Price fairness negatively influences revenge behavior.	Structural Equation Modeling (Path analysis)
(4) To compare differences in the price fairness model between high and low price sensitivity groups	**H6**: There are differences in the price fairness model between high and low price sensitive group.	Multiple-group invariance test

4.3.3 Sequential Steps in SEM

In this study, data analysis using SEM followed sequential steps to achieve the study objectives. Diamantopoulos and Siguaw (2000) suggested the following eight steps in SEM analysis (Figure 11). Although they proposed this process in LISREL (Linear Structural Relations) modeling, this study adapted the flow of SEM modeling because the procedures are so similar.

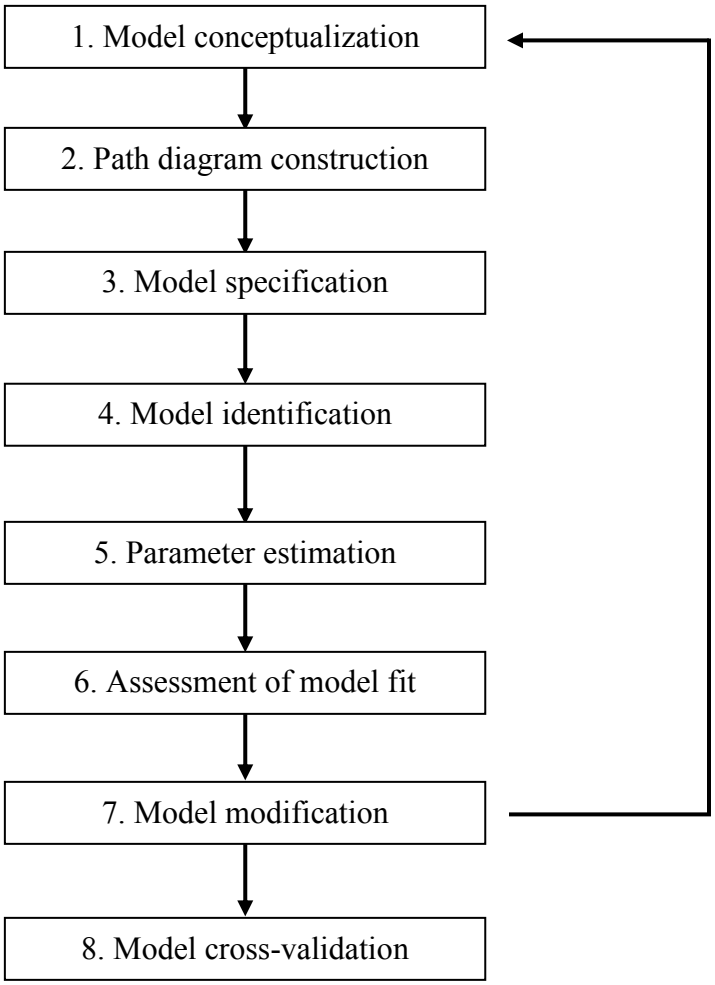


Figure 11. SEM Sequential Steps

Adapted: Diamantopoulos and Siguaw (2000, p.7)

Model conceptualization includes developing theory-based hypotheses, which serve as the guide for linking the latent variables to each other and to their corresponding manifest variables (Diamantopoulos & Siguaw, 2000). The literature review is utilized to guide this step. The second step, path diagram construction, indicates visualization of the developed model from the previous step. The AMOS program provides users with competitive features regarding visualizing their models (Byrne, 2009). Model specification refers to the description of the hypotheses in the form of a series of equations, which allow researchers to define the model's parameters to be estimated (Diamantopoulos & Siguaw, 2000; Kline, 2005).

The next step, model identification, is related to the parameters defined in the preceding step. This step determines whether the model is statistically identified. It is associated with whether a unique set of parameters are consistent with the collected data. Byrne (2009) stated that "*this question bears directly on the transposition of the variance-covariance matrix of observed variables (the data) into the structural parameters of the model under study. If a unique solution for the values of the structural parameters can be found, the model is considered to be identified. As a consequence, the parameters are considered to be estimable and the model therefore testable. If, on the other hand, a model cannot be identified, it indicates that the parameters are subject to arbitrariness, thereby implying that different parameter values define the same model*." (p.33). A proposed structural model may be just-identified, over-identified, or under-identified depending on the number of estimated parameters and the number of variances and covariances of the observed variables (Reisinger & Mavondo, 2006). Please refer to

Kline's (2005, p.105-110) discussion about the principle of identification for more comprehensive understanding.

Byrne (2009) argued that "*the just-identified model is not scientifically interesting because it has no degrees of freedom and therefore can never be rejected. An over-identified model is one in which the number of estimable parameters is less than the number of data points (i.e., variances and covariances of the observed variables). This situation results in positive degrees of freedom that allow for rejection of the model, thereby rendering it of scientific use.*" (p.34). Therefore, while an over-identified model is appropriate for SEM analysis, an under-identified and just-identified model are not because of insufficient information for estimating parameters and lack of scientific attractiveness, respectively.

Parameters are estimated in the fifth step. Parameter estimation is calculated from the comparison between an implied covariance matrix and the observed covariance matrix drawn from the collected data (Diamantopoulos & Siguaw, 2000). The choice of appropriate parameter estimation techniques relies on the nature of the collected data (i.e., the variable scale and the distributional property of the variables) (Reisinger & Mavondo, 2006). Parameter estimation techniques include instrumental variables (IV), two-stage least squares (TSLS), unweighted-least squares (ULS), maximum likelihood (ML), ordinary (unweighted) least squares (OLS), generalized least squares (GLS), weighted least squares (WLS), and diagonally weighted least squares (DWLS). Among them, ML (maximum likelihood) estimation is the most commonly used method (Reisinger & Mavondo, 2006). ML literally means that "*the estimates are the ones that*

maximize the likelihood (the continuous generalization) that the data (the observed covariances) were drawn from this population. That is, ML estimators are those that maximize the likelihood of a sample that is actually observed." (Kline, 2005, p. 112).

The equivalence between two covariance matrixes can be assessed by the variety of model fit indices. Therefore, this step of the model fit assessment allows a researcher to evaluate the quality of measurement and the goodness of the proposed model. Although there are many different fit indices in literature, there is no consensus on the required model fit indices when reporting the results of SEM (Garson, 2010a; Maruyama, 1998; Reisinger & Mavondo, 2006).

Kline (2005) suggested that a research using SEM should report at least the following set of fit indices: the model chi-square (χ^2), the Steiger-Lind root mean square error of approximation (RMSEA) with its 90% confidence interval, the Bentler comparative fit index (CFI), and the standardized root mean square residual (SRMR).

Similarly, Byrne (2009) recommended GFI (Goodness-of-fix index), CFI, and RMSEA. Hair et al (2006) also stated that χ^2, CFI, and RMSEA are often regarded as sufficient information to evaluate a model. NNFI (the Bentler-Bonett non-normed fit index), also called TLI (Tucker-Lewis index) indicates the index which is relatively independent of sample size (Marsh, Balla, & McDonald, 1988).

Although there is a wide disagreement on which fit indices to examine, Reisinger and Mavondo (2006) recommended use of multiple indices from different categories, which are absolute fit measures, model comparison and relative fit measures, model parsimony and parsimonious fit measures, and noncentrality-based indices (Maruyama,

1998; Tanaka, 1993). More specifically, they suggested that the chi-square index should be used along with other model fit indices such as GFI, AGFI, CFI, and RMSEA. However, recently, GFI and AFGI have been suggested to no longer to be preferred (Garson, 2010a; Ryan, 2008). Therefore, in line with the above recommendations, this study used the following fit indices to assess the goodness of the model: χ^2 (Hair, et al., 2006; Kline, 1998; Reisinger & Mavondo, 2006), RMSEA (Bearden & Etzel, 1982; Brown & Cudeck, 1993; Byrne, 2009; Hu & Bentler, 1999; MacCallum & Austin, 2000), CFI (Byrne, 2009; Hair, et al., 2006; Kline, 1998), and NNFI (Kline, 1998).

The following criteria of model fit indices (Table 4) were used in this study.

Table 4. Criteria of Model Fit Indices

Model fit indices	Criteria
chi-square (χ^2)	p>0.05
RMSEA (Root Mean Square Error of Approximation)	>.1 = poor <.08 = reasonable <.05 = good
CFI (Comparative Fit Index)	>.95 = good >.90 = acceptable
NNFI (Non-Normed Fit Index) or TLI	>.95 = good >.90 = acceptable

Although the chi-square index is frequently used, it is well known that this index is highly sensitive to sample size (Li, 2006; Reisinger & Mavondo, 2006). Thus, significant p-values can be expected in case of large sample size even though the p-

values indicate poor model fit (Hair, et al., 2006). Other goodness of fit indices have different acceptable levels: RMSEA (<.05 = good, <.08 = adequate), NNFI and CFI (>.95 = good) (Brown & Cudeck, 1993; Hu & Bentler, 1999). In recent years, there has been concern that the recommended (acceptable) criteria are too low and higher criteria (i.e. .95 for CFI and NNFI) have been suggested (G. Kyle, personal communication, October 1, 2008). Thus, this study used more conservative criteria for judging whether the proposed model best fit the data.

After assessing model fit, the model can be modified in line with model modifications suggested by the SEM program. However, it should be noted that model modification should always be based on theory and substantive reason.

4.3.4 Multiple-group Invariance Test

Finally, in order to examine the study objective (4), a multiple-group invariance test was conducted to examine between-group differences in the hypothesized model. This test occurred in a model cross-validation step because the purpose of this test was to see whether the proposed model could be applied in diverse settings (Bollen, 1989; Byrne, 2009). Specifically, the test examines equivalence across groups in terms of the hypothesized factor structure, pattern of factor loadings, factor variances/covariances, and structural path coefficients, respectively. Differences between groups with regard to these parameters are identified by using a χ^2 difference test for nested models (Byrne, 1998).

In sum, data analysis in this study followed the sequential steps in SEM, and Table 3 shows the four study objectives, six hypotheses, seven sub-hypotheses, and corresponding data analysis methods.

With reference to statistics programs, SPSS (Statistical Package for the Social Sciences) 16.0 and AMOS (Analysis of moment structures) 16.0 were used. AMOS is known for its unique strength in preventing errors in model specification (Kline, 2005). That is, a program user can specify the model by drawing it on the screen through a graphical user interface (GUI). Another strength of AMOS is an extensive bootstrapping feature allowing a researcher to handle non-normal data sets (Arbuckle, 2007). However, it is well known that several SEM programs (e.g. Mplus, LISREL, SAS/STAT CALIS and AMOS) produce virtually the same statistics including factor loadings, model fit indices, and path coefficients (Albright & Park, 2009).

5. DESCRIPTIVE FINDINGS

This section includes descriptive findings, sample characteristics and the results of preliminary data analysis (i.e. validity, reliability, and normality).

5.1 Sample Characteristics

5.1.1 Descriptive Analysis

Characteristics of Survey Responses

The online survey yielded a total of 1,358 responses, that is, a response rate of 6.6 percent out of the 20,700 email invitations sent out. This response rate is lower than previous studies using a similar data collection method (e.g. Hung, 2008; Li, 2006). With the use of the same online survey organization and panel, Li (2006) obtained a response rate of 31.8 percent (a total of 727 out of 2,283 invitations), and Hung (2008) successfully received 800 responses out of 5,300 invitations (a response rate of 18.7%). However, it can be argued that some differences between the current study and previous studies resulted in the lower response rate. That is, Li (2006) and Hung (2008) sent e-mail invitations only to predetermined panelists who qualified for their study purposes, respectively, whereas, this study sent invitations to a general panel who represent the general population in terms of gender, age, and household income level (Dee Boyd, personal communication, April, 21, 2010).

Without purposely selecting panelists in terms of predetermined profiles, over 20,000 invitations were sent out in this study, and consequently, this method yielded a

relatively low response rate despite reaching the targeted sample size (n=500). Furthermore, Li (2006) used monetary incentives (three $500 and fifteen $100 drawing prizes), while this study used a point incentives scheme (50 virtual award points that are accumulated and can be exchanged for a prize when reaching some amount of points).

Among the 1,358 responses, those who were not qualified for this study (i.e. having not taken any domestic flights in the past 12months for leisure travel) were screened out and those who failed to complete the survey were also excluded for data analysis. Subsequently, 524 valid responses were used to conduct data analysis in this study, which is over the targeted sample size (n=500).

Since response rates in e-mail surveys have gradually declined over time (Sheehan, 2001), many researchers have struggled to find a way to maintain response rates. However, high response rates do not guarantee a samples' representativeness and further examination of sample data is necessary (e.g. generalizability of the collected data, sample size, and credibility of the data). Likewise, lower response rates are not necessarily problematic unless: 1) sample size is too small to get statistical power; or 2) samples are biased so that they cannot represent the target population (Dillman, et al., 2009; Tomaszczyk, 2008). Therefore, a low response rate per se can be non-problematic, and acceptable if the target sample size is reached and it is believed to represent the target population.

Another possible issue regarding sample quality is the existence of respondents who have not experienced any price changes. That is, they recalled that they paid the same amount of extra fees as what they paid for previous flights, what other passengers

on the flight paid, and what other competitive airlines would charge. In order to address this issue, a group of respondents who answered “the same” to all questions of price comparison section in the survey (i.e. fee1 to fee4 and fare1 to fare4) was compared to the remaining group of respondents. As shown in Table 5, there were mixed findings about the differences in fairness perceptions, emotional responses to price changes, and behavioral intentions between the no price changes group (n=47) and the remaining group (n=477).

Table 5. t-Test between Price Change Groups

Whether there are price changes or not		N	Mean	S.D	t –value	p
cau1	1	47	3.4043	1.36190	1.253	.215
	0	477	3.1363	1.72971		
cau2	1	47	3.3617	1.34205	.723	.473
	0	477	3.2096	1.68598		
cau3	1	47	3.5106	1.41225	1.251	.216
	0	477	3.2348	1.72092		
tem1	1	47	3.8085	1.07619	3.478	.001
	0	477	3.2055	1.60871		
tem2	1	47	4.3404	.98415	-4.279	<.001
	0	477	5.0231	1.51931		
tem3	1	47	3.9574	.88361	-6.316	<.001
	0	477	4.8973	1.62437		
con1	1	47	3.4468	1.24775	2.553	.013
	0	477	2.9455	1.60918		
con2	1	47	3.5532	1.29897	2.902	.005
	0	477	2.9581	1.71447		
con3	1	47	3.6383	1.29255	4.279	<.001
	0	477	2.7778	1.52875		

Table 5. Continued

Whether there are price changes or not		N	Mean	S.D	t –value	p
emo1	1	47	2.8298	1.14814	-1.682	.093
	0	477	3.1405	1.21405		
emo2	1	47	2.9787	1.09325	-3.128	.003
	0	477	3.5052	1.17505		
emo3	1	47	2.7660	1.16494	-1.607	.109
	0	477	3.0650	1.22216		
dpf1	1	47	3.1064	.78668	3.027	.004
	0	477	2.7296	1.05332		
ppf1	1	47	2.8085	.87572	2.307	.021
	0	477	2.4507	1.02704		
dpf2	1	47	3.0851	.88046	1.377	.174
	0	477	2.8952	1.10076		
dpf3	1	47	2.8511	.93201	3.178	.002
	0	477	2.3941	1.02275		
ppf2	1	47	2.8511	.93201	2.520	.012
	0	477	2.4591	1.02536		
dpf4	1	47	2.7021	.97613	1.891	.059
	0	477	2.4046	1.03399		
ppf3	1	47	2.7447	.96612	2.058	.040
	0	477	2.4151	1.05501		
dpf5	1	47	3.2979	.93052	2.584	.010
	0	477	2.8616	1.11979		
loy1	1	47	3.2128	.68955	1.007	.318
	0	477	3.1006	1.04637		
loy2	1	47	3.2128	.72039	.317	.753
	0	477	3.1761	1.06433		
loy3	1	47	3.1489	.62480	.508	.613
	0	477	3.0964	1.06862		
loy4	1	47	3.1277	.71070	-.381	.704
	0	477	3.1719	1.13750		

Table 5. Continued

Whether there are price changes or not		N	Mean	S.D	t –value	p
loy5	1	47	3.1489	.75119	.589	.558
	0	477	3.0776	1.12658		
wtp1	1	47	3.0000	.62554	1.014	.314
	0	477	2.8952	1.06191		
wtp2	1	47	2.7872	.68955	4.150	<.001
	0	477	2.3208	1.09614		
com1	1	47	2.7660	.98274	-1.081	.280
	0	477	2.9560	1.16503		
com2	1	47	2.4681	.95214	1.064	.288
	0	477	2.2872	1.12613		
com3	1	47	2.4894	.95262	.726	.470
	0	477	2.3816	1.13811		
rev1	1	47	2.8511	.75119	-2.070	.042
	0	477	3.1006	1.09733		
rev2	1	47	2.9787	.98884	-1.480	.144
	0	477	3.2055	1.12633		
rev3	1	47	3.2766	.90174	-3.277	.001
	0	477	3.8008	1.05925		
rev4	1	47	2.4043	.99257	1.756	.080
	0	477	2.1132	1.09226		
rev5	1	47	2.3191	.91143	1.678	.094
	0	477	2.0482	1.06894		

While the significant differences between the two groups were mainly found in terms of two dimensions of cognitive attribution (e.g. controllability and temporal stability) and some items regarding distributive and procedural price fairness, there were no consistently significant differences in the remaining variables (i.e., locus of causality,

emotional responses, and behavioral intentions) between the two groups. Although the reason why there were mixed results are unknown in this study, there was no compelling evidence for excluding the group of respondents who had no experience on price changes might not be justified in this study. Therefore, the group (n=47) was included in the data set, and a total of 524 responses was used to conduct the data analysis in this study.

Demographic Profiles

As shown in Table 6, the sample was slightly dominated by female respondents (58.0%), which was consistent with the results of previous studies using the same online survey methodology (Hung, 2008; Li, 2006).

Table 6. Demographic Profiles of Respondents (n=524)

Characteristics	N	%
Gender (n=524)[1]		
Male	220	42.0
Female	304	58.0
Age (Mean = 47.8, S.D. = 15.6)[1]		
Household income (n=524)[1]		
Less than $24,999	37	7.1
$25,000 to $34,999	47	9.0
$35,000 to $49,999	55	10.5
$50,000 to $74,999	94	17.9
$75,000 to $99,999	93	17.7
$100,000 and more	154	29.4
Prefer not to say	44	8.4

[1)] The questions were forced to answer (i.e., mandatory questions).

Table 6. Continued

Characteristics	N	%
Education (n=522)		
High school or less	59	11.3
Some college or graduate school	298	57.1
Post graduate school	165	31.6
Ethnicity (n=523)		
Black or African American	20	3.8
Asian American	34	6.5
White	434	83.0
American Indian/Native American	3	0.6
Hispanic/Latino	17	3.3
Other	8	1.5
Prefer not to say	7	1.3

The average age of the respondents was 47.8. Over one third of the respondents (36%) were 55 and older, while only 26 percent of the respondents were age 18-34. Additionally, almost one third of respondents (29.4%) fell into the annual household income category of $100,000 and more, while, only 7.1 percent earned less than $25,000 annually. The median household income was $50,000 to $74,999.

It was also found that while a majority of respondents (57.1%) currently have some college or had a college degree, only 11.3 percent completed high school or less. In terms of ethnicity, the vast majority of respondents (83.0%) were Caucasian, which is also consistent with previous studies (Hung, 2008; Li, 2006).

5.1.2 Quality of the Sample

As discussed earlier, an online survey can inevitably result in several types of errors (e.g. coverage error, self-selection and sampling error, and non-response error). Therefore, although this study made best efforts to address the problems, it should be noted that all errors could not be adequately tackled. Table 7 shows the comparison of demographic profiles of the respondents and the online panel registered in the online survey organization. The online survey company (Zoomerang) claims that their online panel can be weighted toward the U.S. Census data in terms of gender, household income, and age (Zoomerang, 2009). That is, arguably, selective online panelists registered to Zoomerang could represent the U.S. general population in terms of selective attributes (e.g. age, gender, ethnicity, and household income) (Mary Rose, personal communication, March, 16, 2010).

Since the respondents in this study were selected through a screening question regarding domestic flights experience, it may be meaningless that the demographic profiles of the respondents are compared to those of Zoomerang online panel. However, the descriptive comparison of Table 7 shows that the respondents have a higher level of household income than the general online panel, whereas, at a glance, there are no significant differences in gender and age between two groups.

Table 7. Comparison of Respondents and Online panel

Profiles	The respondents (n=524)	Zoomerang online panel[1]
	%	%
Gender		
Male	42	49
Female	58	51
Age		
18 – 24	5	12
25 – 34	21	19
35 – 44	18	21
45 – 54	20	19
55 +	36	29
Household income		
Less than $34,999	18	42
$35,000 to $49,999	12	15
$50,000 to $74,999	20	19
$75,000 to $99,999	19	10
$100,000 and more	31	14

[1)] Based on 2001 U.S. Census (Zoomerang, 2009)

Non-response Error

Non-response error is another issue to consider in a sampling. Non-response is typically categorized into "unit non-response" and "item non-response" (Groves, 2004). While unit non-response indicates the failure of a response to a survey per se, item non-response refers to the partial failure of a response to an individual question(s). Because this study employed an online survey which allowed researchers to technically force a respondent to answer all given questions, item non-response was not observed in this study. However, due to the relatively low response rate, unit non-response error should be addressed (Groves, 2004). One of the most popular ways to examine non-response

bias is to randomly select a reasonable number of non-respondents and collect their data (e.g., via telephone interview) (Petrick, 1999; Weisberg, 2005). However, in this study, contact to non-respondents was impossible because no contact information was provided under the online survey company's policy.

Alternatively, non-response bias can be indirectly checked. One of the possible methods is called "time trend extrapolation test" or "continuum-of-resistance model" (Oppenheim, 1966). More recently, this has been used to check non-response bias for mail surveys (Crompton & Tian-Cole, 2001; Datta, Guthrie, & Wright, 2005; Petrick, 1999) and online surveys (Hung, 2008; Li, 2006). The tenet of this method is to compare early responses and very late responses, assuming that the very late responses would not have responded if participation in a survey had not been encouraged in the form of repeated contacts and/or reminders.

The current study therefore adopted an indirect non-response bias check. The 55 responses received after the last reminders (April 21, 2010) were regarded as the very late responses, and accordingly, the late responses (n=55) and the remaining responses (n=469) were compared in terms of some demographic variables and behavioral intentions (Table 8).

Table 8. Comparison of Early and Late Respondents

Variables	t –value $_{(522)}$	sig.
Behavioral loyalty	-1.441	.152
Willingness to pay more	-.724	.483
Complaining	3.783	<.001

Table 8. Continued

Variables	t –value $_{(522)}$	sig.
Revenge	4.342	<.001
Age	-1.015	.127
Income	-1.039	.263

Independent-samples t-test showed no significant differences ($p<.05$) in behavioral loyalty, willingness to pay more, age and income. A significant difference between the two groups was found in terms of complaining and revenge behavior. However, the relatively small sample size (n=55) of one group might violate one of the assumptions underlying the independent-samples t-test (i.e., the two populations from which the samples are selected must be normal) (Gravetter & Wallnau, 2003; Pallant, 2005), and thus whether actual significant differences between the two groups exist is unknown.

Nonetheless, since there were statistically significant differences in complaining and revenge behavioral intentions between the two groups existed, it might be argued that there was a possibility of non-response bias in this study. Researchers have argued that non-response error tends to result in bias if non-responses are associated with survey variables (Groves & Couper, 1998; Weisberg, 2005). For example, in a conversion study (i.e. of those who have been exposed to a tourism destination's marketing, how many individuals actually visited the destination), conversion rates in the survey may be exaggerated due to non-response bias. That is, it has been found that actual destination visitors tend to respond to surveys more favorably than people who do not visit. Yet, no

relationship was found between non-responses and unfavorable behavioral intentions (i.e., complaining and revenge in this study).

5.2 Preliminary Data Analysis

5.2.1 Reliability

As discussed in the earlier section, internal consistency (reliability) was checked with Cronbach's alpha, one of the most frequently used tests of inter-item consistency reliability (Netemeyer, et al., 2003; Sekaran, 2003). Table 9 demonstrates that most latent variables show acceptable levels of reliability (i.e. at least .70) (Nunnally, 1978; Pallant, 2005). However, temporal stability, believed to be one of the dimensions of cognitive attribution, showed a relatively poor level of reliability (α=.459).

Table 9. Scale Reliability, Mean, and Standard Deviation

Scale items	α[6]	Mean	S.D
Price comparison (Extra Fees)[1]	.779		
fee1: The fees I paid were (less/more) than what I paid for my previous flights.		3.46	.92
fee2: The fees I paid were (less/more) than other passengers on the flight.		2.89	.68
fee3: The fees I paid were (less/more) than the fees of other competitive airlines toward the same destination.		2.79	.95
fee4: The fees I paid were (less/more) than what I thought it would be appropriate prices.		3.47	.93
Locus of Causality (CAU)[2]	.898		
cau1: The cause(s) of price changes is something inside/outside the airlines.		3.16	1.70
cau2: The cause(s) of price changes is something about the airlines/other situations.		3.22	1.65
cau3: The cause(s) of price changes is something that reflects an aspect of the airlines/the situation.		3.25	1.69
Temporal Stability (TEM)[2]	.459		
tem1: The cause(s) of price changes is something permanent/temporary.		3.25	1.57
tem2: The cause(s) of price changes is something stable over time/variable over time.		4.96	1.49
tem3: The cause(s) of price changes is something unchangeable/changeable.		4.81	1.59
Controllability (CON)[2]	.863		
con1: The cause(s) of price changes is something controllable/uncontrollable by the airlines.		2.99	1.58
con2: The cause(s) of price changes is something intended/unintended by the airlines.		3.01	1.68
con3: The cause(s) of price changes is something for which someone/no one is responsible.		2.85	1.52

Table 9. Continued

Scale items	α[6]	Mean	S.D
Emotional response (EMO)[3]	.921		
emo1: How angry were you at the company for the airfare changes or extra fees?		3.11	1.21
emo2: How disappointed were you that the company changed the airfare or charged extra fees?		3.45	1.17
emo3: How much distress did you feel because the company changed the airfare or charged extra fees?		3.03	1.21
Distributive Price Fairness (DPF)[4]	.802		
dpf1: The price changes were clearly understandable.		2.76	1.03
dpf2: I think the price changes were based on cost.		2.91	1.08
dpf3: The price changes were fair.		2.43	1.02
dpf4: The price changes were acceptable.		2.43	1.03
dpf5: All passengers were treated equally by the airline's pricing policy.		2.90	1.11
Procedural Price Fairness (PPF)[4]	.912		
ppf1: The airline's pricing decision processes and procedures were fair.		2.48	1.01
ppf2: The airline's pricing decision processes and procedures were reasonable.		2.49	1.02
ppf3: The airline's pricing decision processes and procedures were acceptable.		2.44	1.05
Behavioral Loyalty (LOY)[5]	.935		
loy1: I will say (said) positive things about the airline to other people.		3.11	1.01
loy2: I will recommend (recommended) the airline to someone who seeks my advice.		3.17	1.03
loy3: I will encourage (encouraged) friends and relatives to use the airline.		3.10	1.03
loy4: I will consider the airline my first choice to take future leisure flights.		3.16	1.10
loy5: I will use the airline more in the next few years.		3.08	1.09

Table 9. Continued

Scale items	α[6]	Mean	S.D
Willingness to Pay More (WTP)[5]	.749		
wtp1: I am willing to continue to use the airline if its prices increase somewhat.		2.90	1.03
wtp2: I am willing to pay a higher price than competitors charge for the benefits I will receive from the airline.		2.36	1.07
Complaining (COM)[5]	.821		
com1: I will complain (complained) to other customers about the airfares and/or extra fees from my most recent trip.		2.93	1.15
com2: I will complain (complained) the airfares and/or extra fees from my most recent trip to external agencies, such as the Better Business Bureau.		2.30	1.11
com3: I will complain (complained) about the airfares and/or extra fees from my most recent trip to the airlines' employees.		2.39	1.12
Revenge (REV)[5]	.760		
rev1: I will switch to other competitors because of the price changes on the most recent trip with the airline.		3.07	1.07
rev2: I will use the airlines less in the next few years.		3.18	1.11
rev3: I will use other competitors that offer better prices.		3.75	1.05
rev4: I will report (reported) the airfares and/or extra fees from my most recent trip to the media.		2.13	1.08
rev5: I will report (reported) the airfares and/or extra fees from my most recent trip to legal and regulatory agencies (e.g., Federal Aviation Administration).		2.07	1.05

1) On a Likert scale ranging from 1 (extremely less) to 5 (extremely more)
2) On a bipolar rating scale from 1 to 7
3) On a Likert scale ranging from 1 (not at all) to 5 (extremely)
4) On a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree)
5) On a Likert scale ranging from 1 (very unlikely) to 5 (very likely)
6) Cronbach's alpha

The Cronbach's alpha is commonly underestimated when there are fewer items in the scale (Garson, 2010a; Graham, 2006; Pallant, 2005). Pallant (2005) thus suggested that the mean inter-item correlation for the items is more appropriate in the case of short scales having less than 10 items. The acceptable range for the inter-item correlation is 0.2 to 0.4 (Briggs & Cheek, 1986).

Accordingly, after analyzing inter-item correlation matrix, it was found that the deletion of one item (tem1: *The cause(s) of price changes is something permanent/temporary*) improves the internal consistency ($\alpha = .560$) showing the inter-item correlation is within an acceptable range (0.39). However, subsequent confirmatory factor analysis (CFA) yielded a low level of composite reliability. As discussed earlier, composite reliability, also called Raykov's reliability rho, is preferred to Cronbach's alpha for SEM (Raykov, 1998). Therefore, a close look at this variable was recommended in data analysis, and this issue is discussed in the following section.

5.2.2 Validity

This study used a correlation coefficients matrix to assess the construct validity (i.e. convergent and discriminant validity) at a preliminary stage, and also used another method during CFA stage. As shown in Table 10, validity was confirmed, but some variables (e.g. DPF and PPF, CAU and CON) showed relatively higher inter-items correlations (.867 and .749, respectively). This may be a signal indicating the violation of discriminant validity. Thus, this issue will be carefully addressed in the following data analysis section.

Table 10. Correlation Matrix of Latent Variables

	1	2	3	4	5	6	7	8	9	10	11
1. FEE (Extra fees)	-										
2. CAU (Causality)	-.090*	-									
3. TEM (Temporal stability)	.053	.165**	-								
4. CON (Controllability)	-.063	.749**	.156**	-							
5. EMO (Emotional response)	.331**	-.299**	.028	-.319**	-						
6. DPF (Distributive price fairness)	-.192**	.493**	.029	.535**	-.508**	-					
7. PPF (Procedural price fairness)	-.215**	.514**	.015	.569**	-.544**	.867**	-				
8. LOY (Loyalty)	-.321**	.382**	.099*	.327**	-.380**	.504**	.495**	-			
9.WTP (Willing to pay)	-.227**	.382**	.081	.389**	-.284**	.497**	.510**	.686**	-		
10. COM (Complaining)	.199**	-.054	.027	-.029	.441**	-.174**	-.175**	-.284**	-.093*	-	
11. REV (Revenge)	.305**	-.100*	.065	-.103*	.502**	-.233**	-.236**	-.375**	-.283**	.605**	-

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

5.2.3 Normality

As discussed earlier, SEM using maximum likelihood (ML) estimation assumes multivariate normality and continuously measured variables (Byrne, 2010). This assumption is drawn from normal theory methods (Kline, 2005). In this study, items were measured with Likert-type scales (e.g. 1 (strongly disagree) to 5 (strongly agree) were regarded as continuously measured.

Univariate normality was tested using the Kolmogorov-Smirnov test (Hair, et al., 2006). Both the Kolmogorov-Smirnov and Shapiro-Wilk tests showed significant results (i.e., sig. value of less than .05) indicating violation of the assumption of normality. However, these tests are quite sensitive to sample size, and thus, tests of significance are less useful in small or large samples (Hair, et al., 2006; Pallant, 2005). Thus, normal Q-Q plots were examined to compensate for the shortcoming of the statistical tests, and reasonably straight lines along the plots were observed. This demonstrated that univariate normality was likely met in this study (Pallant, 2005).

Additionally, two measures (i.e., skewness and kurtosis) were used to test whether or not data were normally distributed (Hair, et al., 2006). Skewness indicates the degree of symmetry. That is, a positive skewness means that a distribution is shifted to the left, and a negative skewness to the right. While skewness presents the balance of the distribution, kurtosis refers to the height of the distribution. Since the value of kurtosis for a normal distribution is 3 (cf. some statistic programs subtract 3 from the kurtosis to center it on zero), a high (or positive in some programs) kurtosis indicates that the distribution is more peaked than normal distribution, and a low (or negative in some

programs) kurtosis means that the distribution is flatter than normal distribution (Acock, 2006). While kurtosis using the value of 3 is called Pearson Kurtosis and used in Stata program, kurtosis using the value of 0 is called Fisher Kurtosis and used in SPSS and SAS program.

When interpreting skewness and kurtosis indexes, the absolute standardized values of the indexes are more useful than the ratio of the unstandardized index over its standard error because the latter is statistically sensitive to the size of samples. That is, even slight departures from normality may be statistically significant in a z-test of normality (Kline, 2005). Although there is no consensus regarding objective standards for judging normality in terms of skewness and kurtosis, the rule of thumb suggests that if skewness does not exceed 0.8 in absolute value in either direction, the distribution is normal (Lewis-Beck, 1995). It is also proposed that if kurtosis is within +/- 1 in absolute value, the distribution is adequately normal and if within +/- 2 or 3, it is also acceptable (based on the kurtosis value of 0). Table 11 shows that all values of skewness and kurtosis across variables met the criteria.

Table 11. Univariate normality

Observed variables	N	Mean	S.D	Skewness	Kurtosis
fee1	524	3.46	.92	-.326	.443
fee2	524	2.89	.68	-.486	2.735
fee3	524	2.79	.95	-.194	.005
fee4	524	3.47	.93	-.231	.243
cau1	524	3.16	1.70	.312	-.803
cau2	524	3.22	1.65	.220	-.858
cau3	524	3.25	1.69	.295	-.826

Table 11. Continued

Observed variables	N	Mean	S.D	Skewness	Kurtosis
tem1	524	3.25	1.57	.160	-.694
tem2	524	4.96	1.49	-.462	-.306
tem3	524	4.81	1.59	-.481	-.326
con1	524	2.99	1.58	.437	-.519
con2	524	3.01	1.68	.491	-.603
con3	524	2.85	1.52	.549	-.270
emo1	524	3.11	1.21	-.048	-.929
emo2	524	3.45	1.17	-.327	-.838
emo3	524	3.03	1.21	.067	-.942
dpf1	524	2.76	1.03	.073	-.635
dpf2	524	2.91	1.08	-.124	-.765
dpf3	524	2.43	1.02	.343	-.410
dpf4	524	2.43	1.03	.374	-.404
dpf5	524	2.90	1.11	-.140	-.701
ppf1	524	2.48	1.01	.275	-.532
ppf2	524	2.49	1.02	.252	-.606
ppf3	524	2.44	1.05	.385	-.361
loy1	524	3.11	1.01	-.169	-.290
loy2	524	3.17	1.03	-.220	-.237
loy3	524	3.10	1.03	-.183	-.281
loy4	524	3.16	1.10	-.174	-.418
loy5	524	3.08	1.09	-.106	-.370
wtp1	524	2.90	1.03	-.134	-.408
wtp2	524	2.36	1.07	.457	-.453
com1	524	2.93	1.15	-.092	-.776
com2	524	2.30	1.11	.477	-.495
com3	524	2.39	1.12	.375	-.676

Table 11. Continued

Observed variables	N	Mean	S.D	Skewness	Kurtosis
rev1	524	3.07	1.07	-.175	-.432
rev2	524	3.18	1.11	-.138	-.520
rev3	524	3.75	1.05	-.718	.160
rev4	524	2.13	1.08	.539	-.606
rev5	524	2.07	1.05	.594	-.448

Therefore, it can be argued that all variables in this study are independently normally distributed on the basis of graphical analyses of normal probability plots and kurtosis and skewness.

However, although univariate normality is a necessary condition for multivariate normality, the existence of univariate normality does not guarantee multivariate normality (Byrne, 2009; DeCarlo, 1997; Johnson, 1998; West, Finch, & Curran, 1995). Multivariate normality means (Kline, 2005, pp. 48-49);

(1) all the univariate distributions are normal

(2) the joint distribution of any pair of the variables is bivariate normal, and

(3) all bivariate scatterplots are linear and homoscedastic.

Tests of multivariate normality are not straightforward and are often impractical (Hair, et al., 2006; Kline, 2005). Some researchers therefore test univariate normality and tend to assume that if all variables are normally distributed, multivariate normality exists (Garson, 2010b). This is a "*quick and dirty method, but this approach does not assure correct conclusions*" (Garson, 2010b, p. 1). Micerri (1989) pointed out that the majority of empirical research in the literature has failed to examine multivariate

normality or even univariate normality. Furthermore, only a few published studies using SEM methodology have explicitly tested normality assumptions (Breckler, 1990; Micceri, 1989).

On the other hand, Garson (2010b) proposed several statistical methods to test multivariate normality: measurement of distances between variables in Multiple Analysis Of Variance (MANOVA), Mardia's statistic, examination of a bivariate scatterplot, and residual tests (e.g., Q-Q plots). Accordingly, the current study tested multivariate normality with some of the proposed methods. First, in line with the assumptions of the MANOVA technique, multivariate normality was tested with use of Mahalanobis distances. Mahalanobis distance indicates the distance of a particular observation from the centroid of the remaining observations, where the centroid is the point created by the means of all variables (Tabachnick & Fidell, 2007). In SPSS, the data's Mahalanobis distance value (148.621) was compared to the chi-square critical value (81.40, $df = 46$, $\alpha = .001$), and since the distance value is fairly larger than the critical value, it can be argued that some multivariate outliers exist in the data set (Pallant, 2005).

Secondly, with the use of a SPSS macro (downloaded from http://www.columbia.edu/~ld208) guided by DeCarlo (1997), Mardia's statistic was tested (Mardia, 1970). The Mardia's test for dependent variables (i.e., behavioral loyalty, willingness to pay more, complaining, and revenge behavior) showed significant results (coefficient of multivariate kurtosis = 341.3919, $p<.0001$), that is, the existence of multivariate non-normality.

West et al. (1995) argued that nonnormality in SEM may yield an inflation of χ^2 value, underestimation of fit indices (e.g. TLI, CFI), and underestimation of standard errors. Byrne (2009) also demonstrated that ML estimation using non-normal data leads to larger chi-square values, lower CFIs, higher RMSEA, and lower standard errors than Robust ML estimation using Satorra-Bentler adjusted chi-square value. That is, "*the uncorrected ML approach tended to overestimate the degree to which the estimates were statistically significant"* (Byrne, 2009, p. 127).

Therefore, researchers have proposed several ways to overcome non-normal data in SEM: employing non-ML (Maximum Likelihood) estimation such as asymptotic distribution fee (ADF) estimation (Browne, 1984; Reisinger & Mavondo, 2006), using the Bollen-Stine bootstrap (Byrne, 2009; Garson, 2010a; West, et al., 1995), and correcting the test statistic (e.g. Satorra-Bentler adjusted chi-square) (Byrne, 2009; Garson, 2010a). However, ADF estimation requires extremely large sample sizes (i.e., 1,000 to 5,000 cases) (West, et al., 1995), and corrected chi-square is not provided in AMOS (Garson, 2010a).

This study therefore employed the bootstrap procedure to deal with data that are multivariate non-normal, which is arguably the most often utilized method for overcoming non-normal data in SEM. Bootstrapping is a statistical resampling method by which the original sample is considered to represent the population (Byrne, 2009; Kline, 2005). This computer-intensive procedure uses "*multiple subsamples of the same size as the parent sample are then drawn randomly, with replacement, from this population and provide the data for empirical investigation of the variability of*

parameter estimates and indices of fit" (Byrne, 2009, pp. 330-331). Thus, bootstrapping allows a researcher to measure parameter estimates with a greater degree of accuracy, particularly, for moderately large samples indicating multivariate non-normality (Byrne, 2009; Garson, 2010a; West, et al., 1995).

In addition to the assumption of normality and continuously measured variables, ML estimation assumes that there are no missing values, observations are independent of one another, and the model is correctly specified (Kline, 2005). This study has no missing values due to the unique validation function forcing responses for questions. That is, a survey respondent could only complete the online survey if he or she gave all responses to the mandatory questions. Also, the observations were all independent and the proposed model was correctly specified as discussed earlier.

In summary, since multivariate non-normality was indicated, this study determined to use bootstrap ML estimation for data analysis. However, model fit indices and parameter estimates needed to be carefully examined as this may not be robust and best method, and subsequently, the results may be not accurate and trustworthy (i.e. underestimating parameter statistics) (Byrne, 2009; Yung & Bentler, 1996).

6. HYPOTHESIS TESTING

This section presents the data analyses and findings of the study, particularly focusing on testing the hypotheses provided in the previous section.

6.1 Testing of the Dimensionality of Price Fairness

As discussed earlier, despite recent studies which have argued that the concept of price fairness needs to be examined with two dimensions (e.g. Martin, et al., 2009), there is little empirical evidence supporting the multidimensionality of the construct. Thus, in this study, the first hypothesis (*Distributive fairness and procedural fairness are explained by price fairness as a higher order factor*) was formulated, and Exploratory Factor Analysis (EFA) was conducted to test the hypothesis. Specifically, common factor analysis based on oblique rotation methods was used.

While (principle) component analysis is requested when most of the original information (i.e., variance) needs to be summarized in a minimum number of factors, common factor analysis is appropriate when underlying factors that reflect the shared variance need to be identified (Hair, et al., 2006; Pallant, 2005). Hair et al. (2006) also stated that oblique rotation methods are "*best suited to the goal of obtaining several theoretically meaningful factors or constructs because, realistically, few constructs in the real world are uncorrelated*" (p.127). The value (.911) of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and the significant value ($\chi^2 = 3123.368$, $p <$

.001) of Barlett's Test of Sphericity indicated that factor analysis was appropriate (Pallant, 2005).

Consequently, the EFA showed that there was only one dimension in the concept of price fairness (Table 12). A scree test also demonstrated that only one factor followed the rule of thumb, "Eigenvalue-greater-than-1" (Netemeyer, et al., 2003).

Table 12. Exploratory Factor Analysis of Price Fairness

	Factor	Communality
ppf3	.891	.793
ppf2	.887	.787
ppf1	.876	.767
dpf3	.874	.764
dpf4	.865	.749
dpf1	.669	.447
dpf2	.548	.300
dpf5	.436	.190
Variance extracted	63.94%	
Eigenvalues	5.115	

KMO: .911
Bartlett test: $\chi^2 = 3123.368$, $p < .001$

However, one of the distributive price fairness items (dpf5) showed lower factor loadings (.436) than an acceptable standard (Hair, et al., 2006). Further analysis of reliability also showed that the sequential deletion of the items (dpf5: *All passengers were treated equally by the airline's pricing policy*, and dpf2: *I think the price changes were based on cost*) improved the reliability statistics (Cronbach's Alpha = .911 → .936).

Subsequent Confirmatory Factor Analysis (CFA) also showed results consistent with the EFA. The original model (i.e., two dimensions of distributive and procedural price fairness) indicated poor model fit (χ^2 (df) = 180.852 (19), p<.001; RMSEA = .128; CFI = .948; NNFI = .923). On the other hand, one dimension of price fairness (Figure 12) showed good model fit, excluding dpf2 and dpf5.

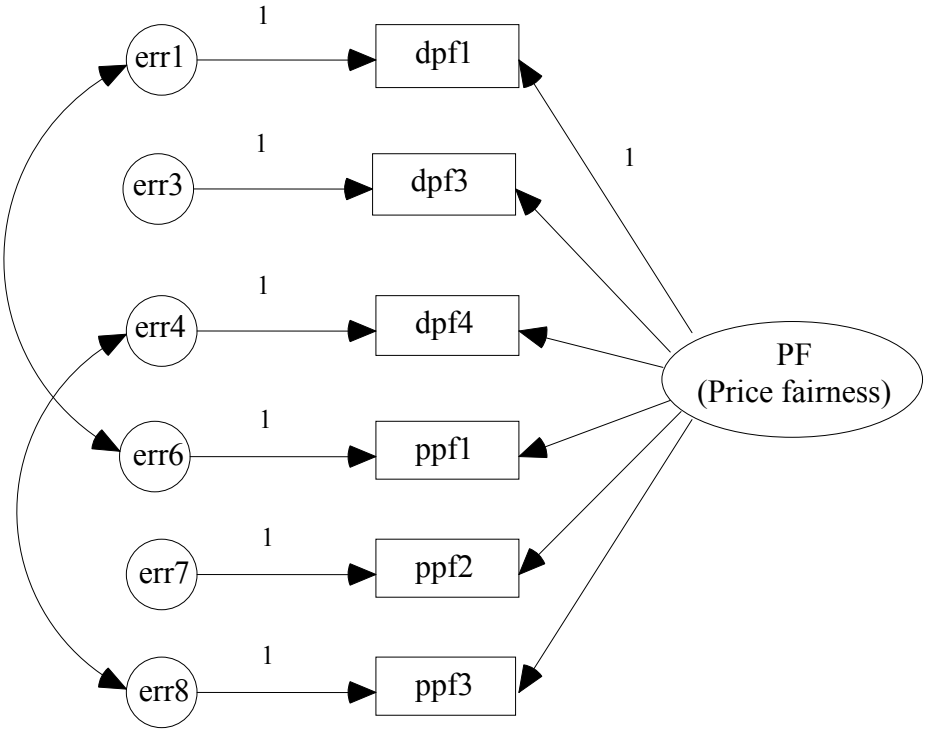


Figure 12. Model PF (Price fairness)

Table 13 shows that the goodness of model fit for the Model PF was good. More specifically, according to modification indices, a unidimensional model of price fairness was proposed with having error terms (i.e. err1 ↔ err6 and err 4 ↔ err8) with the observed measures allowed to be correlated with each other. Modification indices (MI)

are used to "*assess the statistical significance of an unspecified model relationship and represent the approximate reduction in* χ^2 *that would be obtained by estimating the unspecified parameter of interest. MIs greater than 3.84 are considered statistically significant (p<.05), thus freeing a parameter with an MI of 3.84 or greater would significantly improve model fit*" (Netemeyer, et al., 2003, p. 155).

Table 13. Summary of Model Fit Indices (Model PF)

Indices	Results
χ^2 (df)	30.285 (7), p<.001
RMSEA	.080
CFI	.992
NNFI (TLI)	.982

Additionally, CFA model parameters were estimated, and reliability was analyzed (Table 14). The results of composite reliability and AVE revealed adequacy of internal consistency and convergent validity. All six factor loadings were also found to be within the recommended range of acceptability in the literature (≥ .5), and they were all statistically significant (p<.001).

Table 14. Model PF Estimates

	Composite reliability	AVE[1]	Factor loadings	t-value
Price fairness	.85	.71		
dpf1[2]			.62	-
dpf3			.89	16.09*
dpf4			.86	15.77*
ppf1			.85	17.95*
ppf2			.91	16.30*
ppf3			.87	15.89*

1) AVE (Average Variance Extracted Estimate)
2) Reference variable
* p<.001

In summary, H1 (*Distributive fairness and procedural fairness are explained by price fairness as a higher order factor*) was not supported. Alternatively, in line with the results of the EFA and CFA, a modified factor model of price fairness with one dimension was proposed, and the model with six items fit the data well as indicated by the model fit indices.

6.2 Testing of the Dimensionality of Attribution

The second hypothesis (*Locus of causality, controllability, and temporal stability are explained by cognitive attribution*) was formulated based on Weiner's (1980) conceptualization, and was tested using CFA. However, since a preliminary data analysis showed poor reliability of temporal stability, a close examination of the dimension was requested. The variable of temporal stability also yielded a low reliability

index in the pilot study, and some items were reworded and one item was added in order to hopefully improve internal consistency.

In addition to the Cronbach's alpha, CFA was conducted to assess composite reliability. The composite reliability of temporal stability with three items turned out to be still very poor (.02), and furthermore, although one item (tem1) was deleted as suggested by the results of Cronbach's alpha, it further impaired composite reliability (.02 → .005). Therefore, it was concluded that the measure of temporal stability could raise a serious reliability issue, and it was determined not to include the concept of temporal stability as an independent (latent) variable.

Although there are no rigorous theoretical reasons for deleting temporal stability in this study, a reduction of dimensions regarding cognitive attribution could be acceptable because of two reasons: 1) there are mixed conceptualizations and empirical findings about the dimensionality of cognitive attribution (e.g., one dimension, two dimensions and three dimensions); and 2) this study is a relatively exploratory research applying attribution theory in a price fairness setting.

Accordingly, alternative models were proposed. The first modified model (Model ATT-1, Figure 13) has two dimensions: locus of causality and controllability. Different from the initial model, this model is a two first-order model instead of a second-order model due to underidentification issues (Byrne, 2009). That is, a second-order factor model with two first-order factors is under identified (i.e. the number of data points (3) are less than the number of unknown parameters (4).

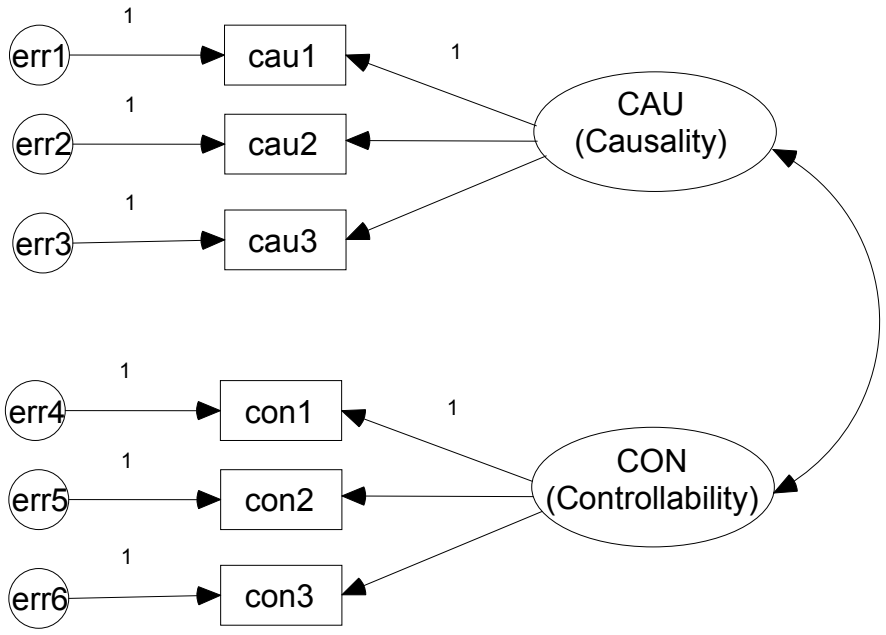


Figure 13. Model ATT-1 (Attribution)

Table 15 displays the model fit indices of the Model ATT-1. Based on the criterion suggested in the earlier section, this model represented a good fit to the data.

Table 15. Summary of Model Fit Indices (Model ATT-1)

Indices	Results
χ^2 (df)	31.018 (8), p<.001
RMSEA	.074
CFI	.990
NNFI (TLI)	.981

In addition to the two first-order model, another modified CFA model (Model ATT-2) was also considered, that is, a first-factor model with all six items related to causality and controllability. A relatively strong correlation between locus of causality

and controllability (.749) was found, which means that the two dimensions are somewhat measuring the same concept, and accordingly could be collapsed into one dimension. As discussed earlier, the items regarding temporal stability (tem1, tem2, and tem3) were not included due to the poor degree of reliability. Furthermore, the inclusion of the items impaired the model fit indices (χ^2 (df) = 278.862(27), p<.001; CFI = .881; NNFI = .841; RMSEA = .134), and standardized factor loadings of the items (com3, tem 2, and tem3) were also not significant: -.019 (p=.674), .044 (p=.335), and -.059 (p=.196), respectively.

The Model ATT-2 initially resulted in the following model fit indices: (χ^2 (df) = 188.996(9), p<.001; CFI = .919; NNFI = .865; RMSEA = .165). A review of the modification indices in CFA suggested that one of the items regarding controllability (con3) should be excluded due to insignificant factor loadings. Furthermore, the modification indices indicated that some error terms (i.e., err4 ↔ er5 and err 1↔ err3) should be correlated. Figure 14 thus shows the final version of the second modification model.

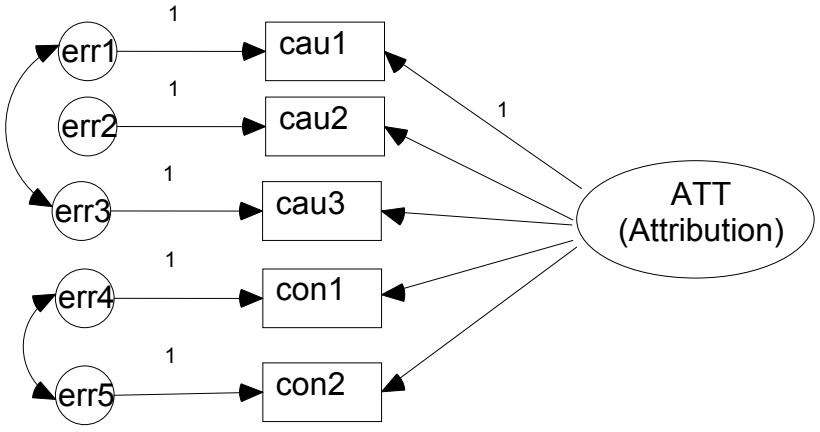


Figure 14. Model ATT-2 (Attribution)

As shown in Table 16, the Model ATT-2 represented a good fit to the data. Accordingly, in terms of model fit indices, both revised models (Model ATT-1 and Model ATT-2) are well within the recommended range of acceptability.

Table 16. Summary of Model Fit Indices (Model ATT-2)

Indices	Results
χ^2 (df)	13.526(3), p=.004
RMSEA	.082
CFI	.994
NNFI (TLI)	.982

However, the first model (ATT-1) may raise a discriminant validity issue. As pointed out earlier, one of the concerns about the cognitive attribution model was discriminant validity, that is, there is a possibility of strong correlations between locus of causality and controllability. The preliminary analysis in SPSS showed relatively high level of correlation (.749), and the CFA in AMOS revealed high correlation between the two factors (.844). As discussed earlier, some researchers have recommended that discriminant validity can be assessed by comparing the average variance extracted (AVE) for the pairs of factors of interest and the squared correlation between the factors. That is, if AVEs for both factors are greater than the squared correlation, it indicates the existence of discriminant validity. Accordingly, both AVEs (.75 and .68) were compared to squared correlation (.71), and it was found that there was a lack of discriminant validity.

Furthermore, based on the CFA results, EFA was conducted to explore the dimensionality of cognitive attribution. EFA using oblique rotation methods also demonstrated that cognitive attribution had only one dimension collapsing causality and controllability (KMO = .878; Bartlett's test = 2225.668 at $p<.001$). As discussed in the literature review section, some researchers have proposed one dimension of cognitive attribution (e.g. positive vs. negative inferred motive) and found some empirical evidences supporting this (Campbell, 2007). Thus, the model ATT-2 (i.e. one dimension of cognitive attribution) was chosen for data analysis in this study.

In summary, the H2 (*Locus of causality, controllability, and temporal stability are explained by cognitive attribution*) was not supported, and inevitably the sub-hypotheses (*H2a: Locus of causality positively influences price fairness, H2b: Controllability positively influences price fairness, and H2c: Temporal stability positively influences price fairness*) could not be tested. Alternatively, in line with the result of the CFA, a modified factor model of cognitive attribution with one dimension was proposed, and the model having five items indicated good model fit.

6.3 Testing the Antecedents and Consequences of Price Fairness

In the preceding sections, CFA for the constructs of price fairness and cognitive attribution was conducted to test H1 and H2. To test the following hypotheses regarding the antecedents and consequences of price fairness (i.e. cognitive attribution, emotional response, price comparison, and behavioral intentions), a measurement model encompassing all latent variables needed to be tested, and then the subsequent structural

model analyzed. As discussed in the data analysis procedures section, this two-step approach to SEM was used to examine the full proposed model in this study (Anderson & Gerbing, 1988). Accordingly, CFA of a measurement model including modified models of price fairness and cognitive attribution was conducted.

6.3.1 Measurement Model

The Figure 15 depicts the initially hypothesized measurement model for all latent variables and observed variables. Note that measurement errors and observed variables under the latent variables of cognitive attribution and price fairness were respecified in line with the results of the preceding CFA.

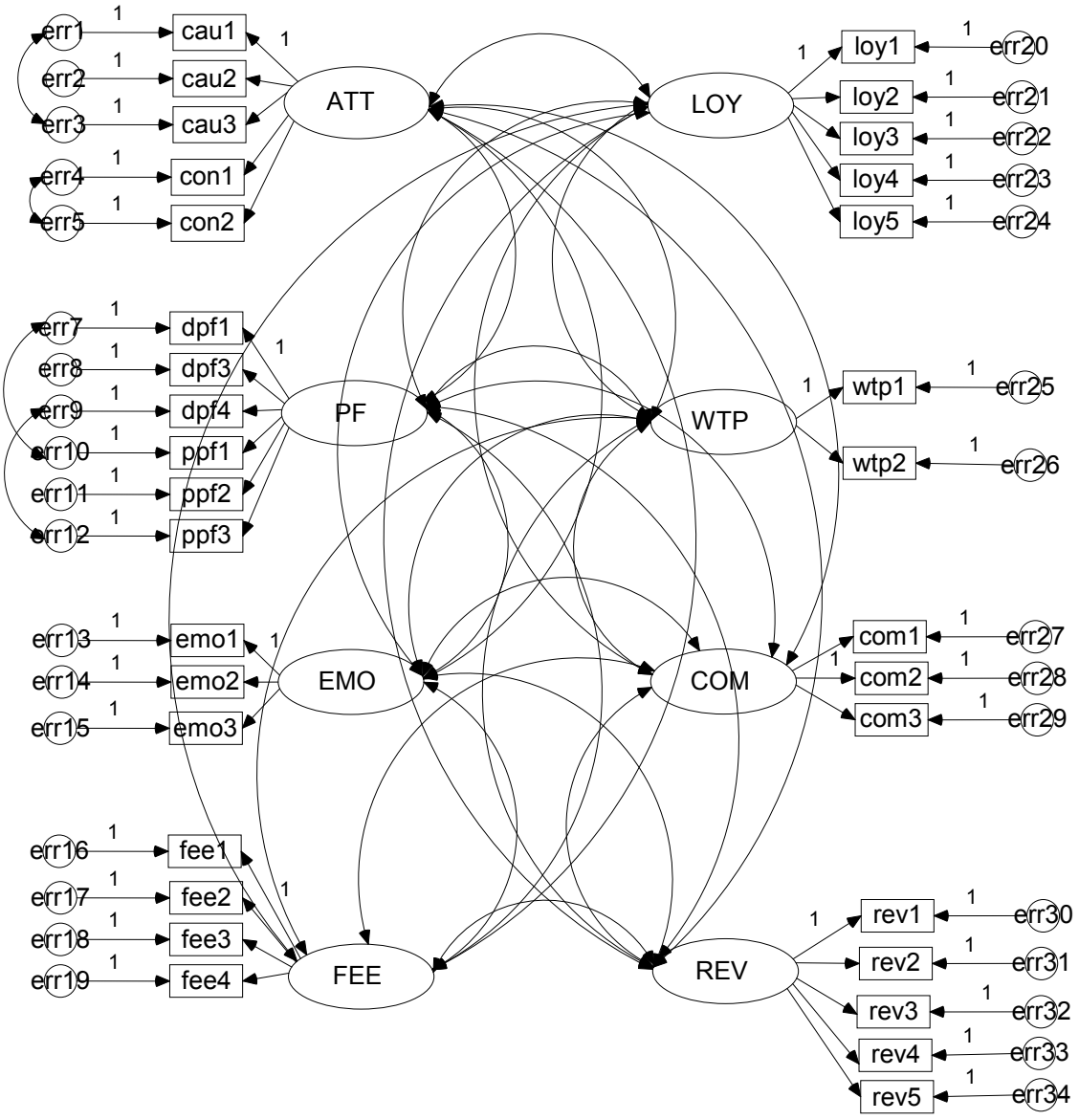


Figure 15. Initial Measurement Model of All Latent Variables

Eight latent variables and 32 observed variables were included in the measurement model: ATT (Cognitive attribution), PF (Price fairness), EMO (Emotional response): FEE (Price comparison), LOY (Behavioral loyalty), WTP (Willingness to pay more), COM (Complaining behavior), and REV (Revenge behavior). However, it was

found that the goodness of model fit was not fully acceptable: χ^2 (df) = 1759.881(463), p<.001; RMSEA = .073; TLI(NNFI) = .888; CFI = .902. This suggests that the model should be respecified according to the modification indices provided by AMOS (Byrne, 2009; Kline, 2005). The modification indices suggested that a respecification of some covariances would improve the chi-square statistics and other model fit indices (See the Appendix G). Yet, Kline (2005) suggested that this modification should be based on theoretically foundations, and recommended that a researcher avoid data-driven modification.

However, before modification indices were examined, some standardized factor loadings for REV and COM variables were found not to be appropriate (i.e. below .50), and a modification indices proposed some possible correlations between measurement errors of observed variables with COM and REV. Furthermore, correlation between REV and COM was relatively high (.758), which was not significantly detected in the preliminary data analysis. These indications led to a further examination of the relationships between REV and COM variables and the corresponding observed variables before modifying covariances between measurement errors.

As discussed in the measurements section, the concepts of COM and REV were adopted from previous research. That is, the two latent variables of COM (complaining) and REV (revenge) were conceptualized based on Xia's (2004) discussion and Zeithaml et al.'s (1996) findings. The measurement scales were drawn from Zeithaml et al.'s (1996) questionnaire and Xia's (2004) conceptual model, respectively, and were collapsed to measure each variable. Thus, considering the nature of the variables, EFA

was conducted to explore the dimensionality of each variable and to investigate the appropriateness of the items. As a result, EFA using Principal axis factoring method with an oblique rotation showed that COM significantly included five items (rev5, rev4, com2, com3, and com1), and REV include three items (rev3, rev2, and rev1). Cronbach's alpha indicated acceptable levels of reliability for the two latent variables (COM = .863 and REV = .781, respectively). However, an item of com1 indicated a lower level of factor loading (.43) than a criterion (≥ .50). Thus, the exclusion of com1 and movement of two items (rev4 and rev5) from REV to COM were recommended.

The examination of the scales also gave justification for relocating the two items. The rev 4 and rev 5 items were related to reporting behavior of the unfair experiences to external agencies or the media: rev 4 (*I will report (reported) the airfares and/or extra fees from my most recent trip to the media*) and rev 5 (*I will report (reported) the airfares and/or extra fees from my most recent trip to legal and regulatory agencies (e.g., Federal Aviation Administration)*). Although Xia et al. (2004) argued that the reports to the media or legal agencies belong to revenge behavior with an objective of damaging sellers, it could be argued that this reporting behavior is perceived as more closely related to complaining behavior than deliberate revenge behavior.

Consequently, the removing of the item (com1) and relocating of the two items (rev 4 and rev5) significantly improved a model fit: χ^2 (df) = 1234.964(432), $p<.001$; RMSEA = .060; TLI(NNFI) = .928; CFI = .938, although not yet at a good level. Thus, after the two items were relocated, modification indices were carefully examined in line with the caveats of a model modification process (Byrne, 2009), and it was found that

some covariances between errors need to be treated as free parameters (i.e. allowing those error terms to be correlated each other). The modification needs to be done in sequence "*because the estimation of MIs in AMOS is based on a univariate approach*" (Byrne, 2009, p. 112). Following the modification indices, measurement errors (i.e. err33 ↔ err34) were thus allowed to be correlated. It has been argued that these measurement errors covariances may result from systematic measurement error in item responses, which derive from characteristics specific either to the items or to the respondents (e. g., two or more questions, although worded differently, essentially ask the same question in a questionnaire) (Aish & Jöreskog, 1990).

The subsequent modification indices and model fit indices indicated that another estimation needed to be correlated with each other to contribute to improving model fit. Thus, the following correlations (i.e., err20 ↔ err21 and err23 ↔ err24) yielded the respecified measurement model (Figure 16), and good model fit indices of the modified measurement model were obtained (Table 17). All the re-specification procedures followed the evidence of misspecification associated with the pairing of corresponding error terms, which was indicated in the MI (Modification Indices).

Table 17. Summary of Model Fit Indices (Modified Measurement Model)

Indices	Results
χ^2 (df)	976.217(429), p<.001
RMSEA	.049
CFI	.957
NNFI (TLI)	.951

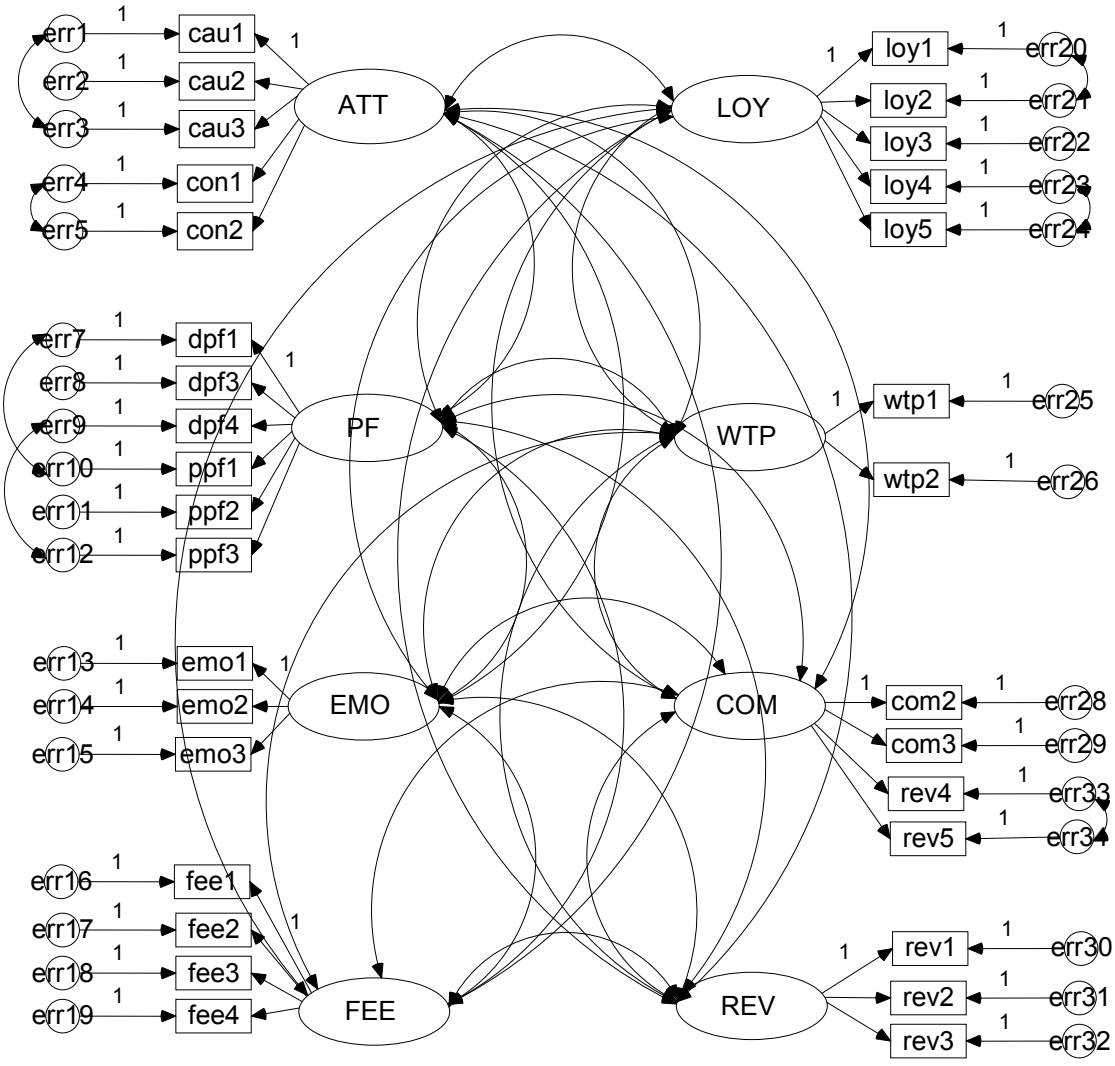


Figure 16. Modified Measurement Model of All Latent Variables

6.3.2 Assessing Reliability and Validity

As discussed in the earlier section, reliability and validity were analyzed in the measurement model. Composite reliability and the factor loadings were shown in Table 18.

Table 18. Reliability and Factor Loadings of Measurement Model

	Composite reliability	Std. Factor loadings	Standard error	t-value
Attribution (ATT)	.45			
cau1		.877	-	-
cau2		.890	.038	26.34***
cau3		.860	.042	23.16***
con1		.766	.039	20.96***
con2		.724	.043	19.28***
Price fairness (PF)	.85			
dpf1		.630	-	-
dpf3		.888	.085	16.45***
dpf4		.864	.085	16.12***
ppf1		.856	.073	18.22***
ppf2		.902	.085	16.61***
ppf3		.874	.086	16.25***
Emotion (EMO)	.90			
emo1		.894	-	-
emo2		.895	.033	29.35***
emo3		.887	.035	28.88***
Price comparison (FEE)	.76			
fee1		.746	-	-
fee2		.548	.049	11.08***
fee3		.717	.071	14.03***
fee4		.732	.070	14.21***

Table 18. Continued

	Composite reliability	Std. Factor loadings	Standard error	t-value
Behavioral loyalty (LOY)	.87			
loy1		.851	-	-
loy2		.938	.030	37.27***
loy3		.936	.038	29.28***
loy4		.818	.045	23.33***
loy5		.741	.047	19.99***
Willingness to pay (WTP)	.74			
wtp1		.885	-	-
wtp2		.678	.049	16.16***
Complaining (COM)	.74			
com2		.905	-	-
com3		.810	.043	21.05***
rev4		.701	.043	17.56***
rev5		.716	.042	18.09***
Revenge (REV)	.65			
rev1		.854	-	-
rev2		.698	.055	15.53***
rev3		.657	.052	14.61***

*** p<.001

Composite reliability indicated that all factors had acceptable reliability levels (.60 or above) except the variable of cognitive attribution (.45). However, although the composite reliability of the variable was marginally low, the Cronbach's alpha for this construct was found to be .917. The item-total correlations and inter-item correlations also ranged within .75 and .83. Thus, it was argued that this variable moderately showed

internal consistency. Although a composite reliability tends to be a little bit lower than Cronbach's alpha (Hair, et al., 2006), the reason for the difference between the two indicators was not known.

Table 19. Validity of Measurement Model

	1	2	3	4	5	6	7	8
1. ATT (Attribution)	**0.68**[1]	0.33[3]	0.11	0.01	0.16	0.19	0.00	0.06
2. PF (Price Fairness)	0.58[2]	**0.71**	0.36	0.07	0.27	0.36	0.01	0.14
3. EMO (Emotional response)	-0.34	-0.60	**0.80**	0.15	0.16	0.14	0.17	0.29
4. FEE (Price comparison)	-0.11	-0.26	0.38	**0.48**	0.13	0.08	0.03	0.18
5. LOY (Behavioral loyalty)	0.40	0.52	-0.40	-0.36	**0.74**	0.65	0.07	0.21
6. WTP (Willing to pay)	0.44	0.60	-0.37	-0.29	0.81	**0.62**	0.01	0.32
7. COM (Complaining)	0.02	-0.10	0.41	0.17	-0.27	-0.12	**0.62**	0.21
8. REV (Revenge)	-0.24	-0.37	0.54	0.43	0.46	-0.57	0.46	**0.55**

1) The diagonal entries represent the average variance extracted (AVE) by the latent variable.
2) The correlations between latent variables are shown in the lower triangle.
3) The upper triangle entries represent the variance shared (squared correlation) between the latent variables.

In addition to reliability, convergent and discriminant validity was assessed. Table 19 shows that all AVEs were above 0.45, indicating that this model meets the requirement in terms of convergent validity. Also, in order to assess discriminant validity, the correlations between variables needs to be compared to the squared correlations between the two variables (Hatcher, 1994). All AVEs in this model were greater than the corresponding squared correlations except the variable of WTP

(willingness to pay more). AVE of WTP (.62) is slightly less than the squared correlation between WTP (willingness to pay more) and LOY (Behavioral loyalty) (.65). The high correlation between WTP and LOY (.81) is understandable as the constructs are similar, though the literature consistently has suggested they are unique constructs (Baker & Crompton, 2000; Lee, et al., 2007; Zeithaml, et al., 1996). Other than this marginal violation, discriminant validity was satisfactory in this model.

6.3.3 Structural Model

With the final acceptable measurement model completed, a structural model was next examined. Since the nature of H3 (*"C-E-PF" Model will have better model fit than "C-PF-E" Model*) was to compare two models, two structural models were specified. As described earlier, while "C-E-PF" Model (Figure 17, Model 1) indicates that emotional response has a mediating role in the relationship between cognitive attribution and price fairness concepts, "C-PF-E" Model (Figure 18, Model 2) postulates that cognitive attribution influences price fairness, which in turn affects emotional response, holding the other variables in the models (i.e. price comparison and behavioral intentions) constant.

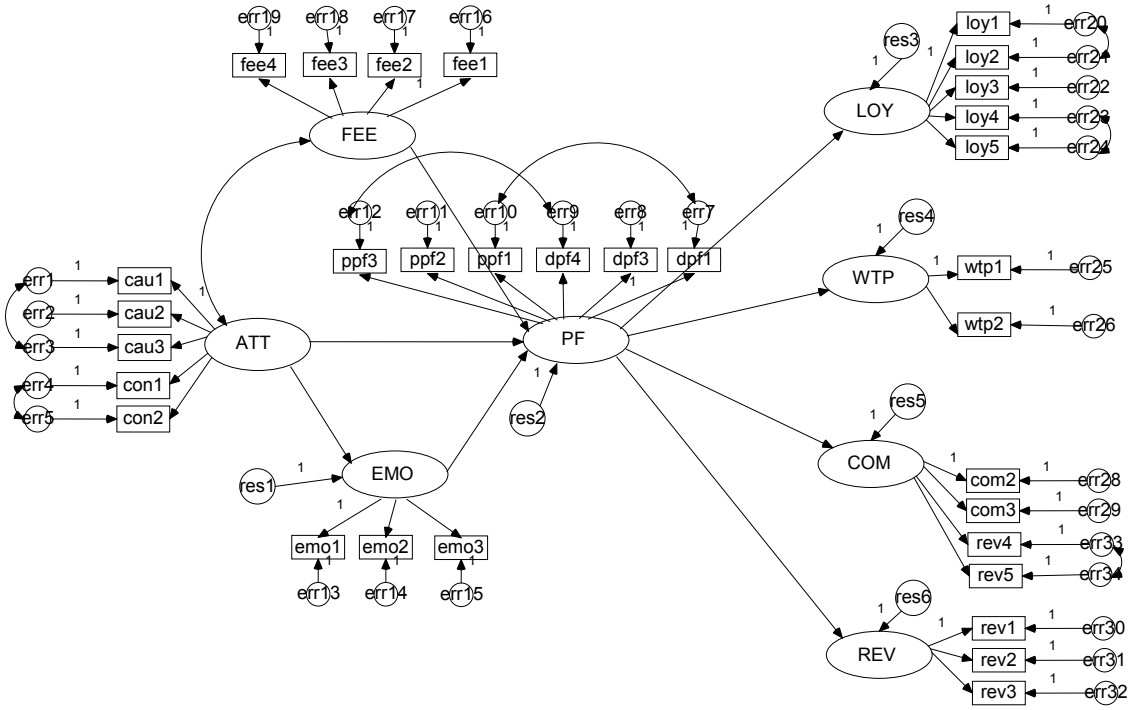


Figure 17. Structural Model 1 (C-E-PF Model)

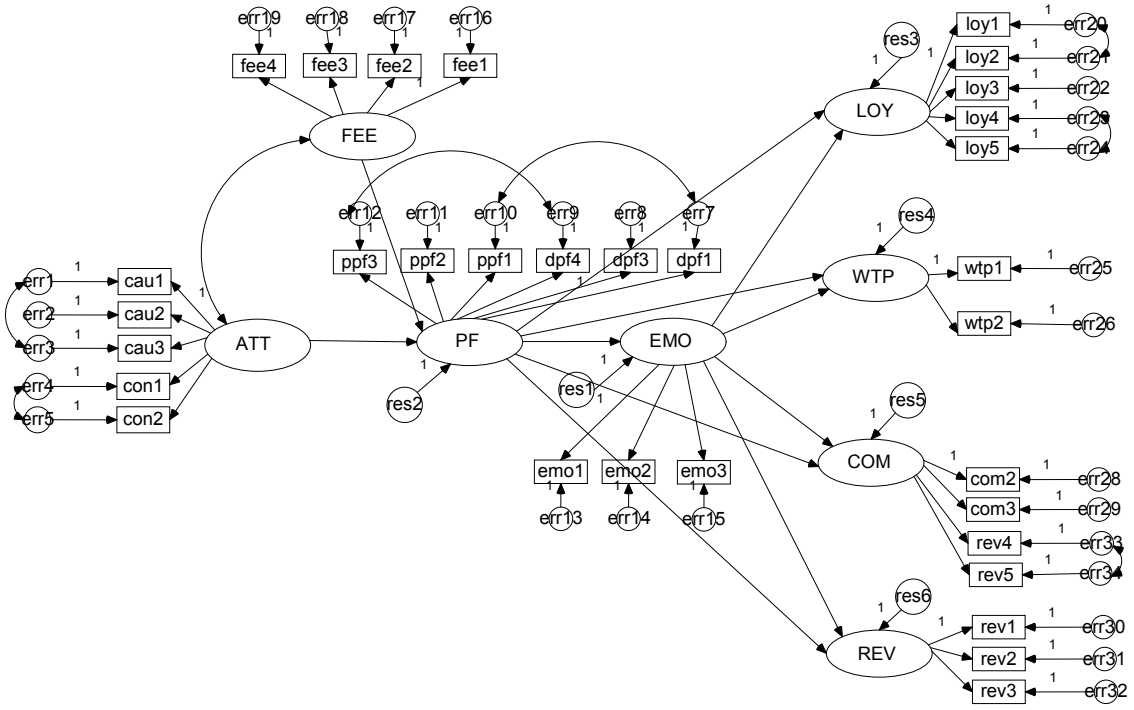


Figure 18. Structural Model 2 (C-PF-E Model)

A review of model fit indices demonstrated that although the two models were within the recommended range of acceptability in terms of RMSEA, CFI, and NNFI, Model 2 represented a better fit to the data (Table 20). Since "C-PF-E" model presented better model fit indices, H3 was not supported. This means that cognitive attribution influences price fairness, which in turn leads to emotional responses, rather than both cognitive attribution and emotional responses influence price fairness.

Additionally, Model 1 showed that the effect of price comparison (FEE) on price fairness (PF) is statistically insignificant. This is not consistent with empirical findings from previous studies, and further is not supportive to a theoretical base the current study relies on.

Table 20. Summary of Model Fit Indices

Indices	Results	
	Model 1	Model 2
χ^2 (df)	1602.436(448), p<.001	1424.917(445), p<.001
RMSEA	.070	.065
CFI	.910	.924
NNFI (TLI)	.901	.915

Accordingly, it was determined to use Model 2 for further examination of the structural model and for testing the following hypotheses. However, the model fit indices provided by the initial model (Table 20) and a review of the MIs indicated that the model fit could be improved better. Therefore, the modification and respecification were made until the model represented an excellent model fit to the data.

Table 21 shows the sequential process of modification of Model 2. The process followed the modification indices (MI). The value of the MI indicates that, "*if this parameter were to be freely estimated in a subsequent model, the overall χ^2 value drop by at least this amount…….a value of (parameter change) represents the approximate value that the newly estimated parameter would assume*" (Byrne, 2009, pp. 177-178). It is also important to determine which parameter will be made to be freely estimated based on size of the parameter change statistic, rather than a value of MI, if there are mixed indications (Kaplan, 1989).

Table 21. Modification of Structural Model 2 (C-PF-E Model)

Parameters[1)]	MI (parameter change)[2)]	χ^2 (df)[3)]	$\Delta\chi^2$	CFI	NNFI	RMSEA
(Base model)		1424.917(445)	-	.924	.915	.065
EMO≠WTP						
PF≠REV	-	1445.781(448)	-	.922	.914	.065
PF≠COM						
LOY→WTP	118.031(.458)	1223.625(447)	222.156	.940	.933	.058
WTP→REV	50.013(-.310)	1154.318(446)	69.307	.945	.939	.055
FEE→EMO	28.680(.353)	1120.947(445)	33.371	.947	.941	.054

1) A regression path between variables, which was included (→) for the estimation or deleted (≠) from the model
2) Overall χ^2 value which would drop by at least this value (value of parameter change statistic)
3) $p<.001$

Three paths showing relationships between a pair of latent variables in the initial model were excluded: from EMO (emotional response) to WTP (willingness to pay

more); from PF (price fairness) to REV (revenge behavior); from PF (price fairness) to COM (complaining behavior). The paths showed statistically insignificant (p>.05) regression coefficients: β = -.005 (p=.931); β = -.099 (p=.084); and β = -.089 (p=.059), respectively. Although the paths were specified based on the theoretical reasoning, the deletion of the paths was still justifiable because the variables were indirectly connected to the corresponding variables through mediators. That is, emotional response (EMO) influenced willingness to pay more (WTP) through behavioral loyalty (LOY), price fairness (PF) influenced revenge behavior (REV) and complaining (COM) through emotional response (EMO). These are evidence indicating full mediating relationships between each pair of variables.

Byrne (2009) pointed out that the respecification and modification of a structural model should be carefully made, that is, "*it is very important to know when to stop fitting a model*" (p.192). She thus proposed three principles including: 1) a knowledge of the substantive theory, 2) assessment of statistical criteria (e.g. model fit indices), and 3) model parsimony. Further, she emphasized that a researcher should try to avoid data-driven analysis (i.e., attempt to putting as many as parameters in a model in order to get the best-fitting model statistically), which is frequently meaningless from a theoretical perspective, and also makes it hard to replicate the model in the future.

In the end, revised model 2 (Figure 19) was specified to represent a good fit to the data: CFI = .95; NNFI = .94; RMSEA = .05. Note that the chi-square (χ^2 = 1120.947, *df* = 445) was not considered a critical indicator of a model fit as it tends to be very sensitive to the large sample (Hair, et al., 2006; Kline, 2005).

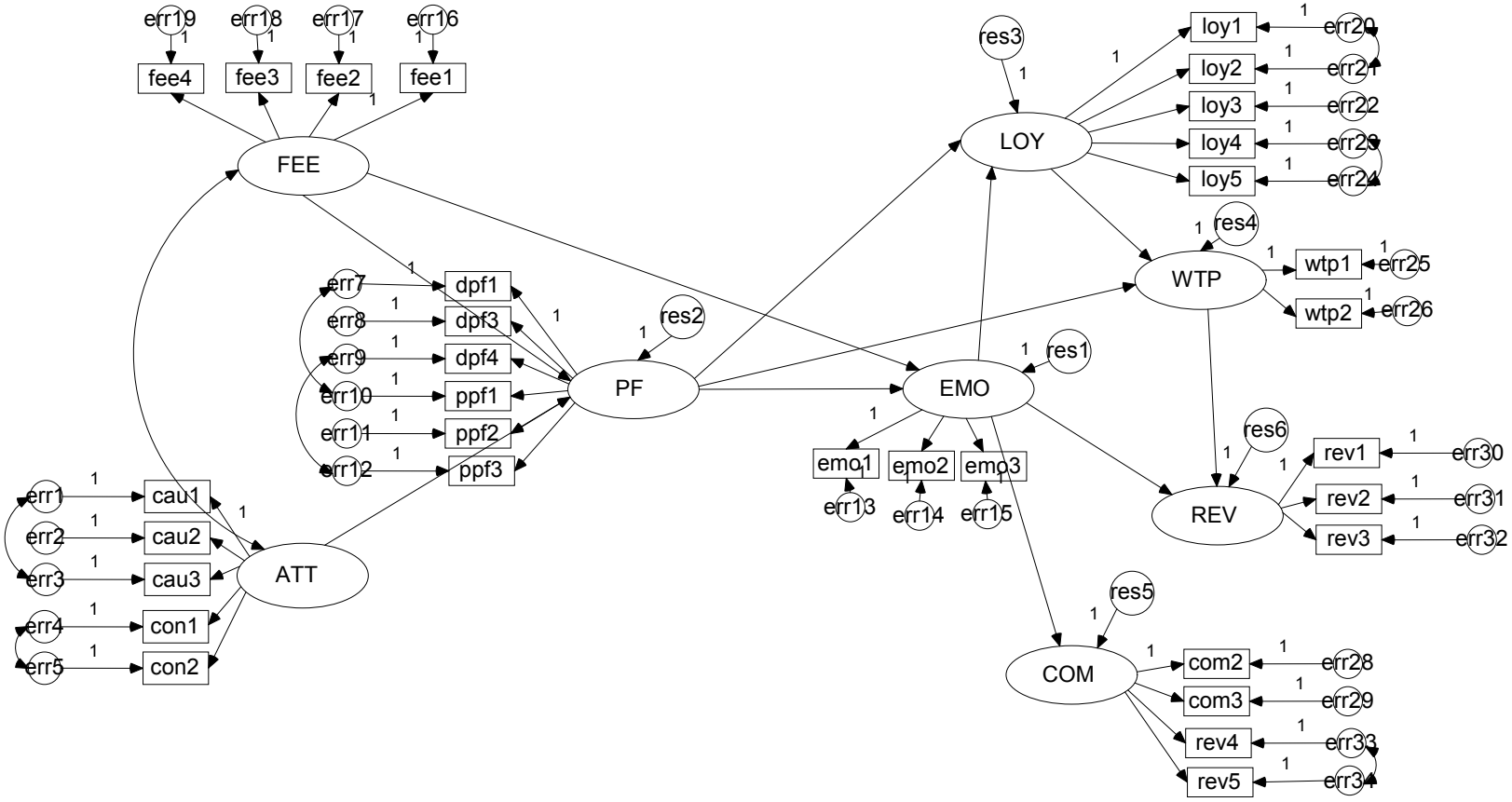


Figure 19. Revised Structural Model (Respecified from Model 2)

The path coefficients in the model were all statistically significant (Table 22 and Figure 20).

Table 22. Structural Paths of Structural Model 2

	Std. Path coefficient	Standard error	t-value	R^2 (Squared Multiple Correlations)
FEE→PF	-.204	.042	-4.631***	.381
ATT→PF	.560	.023	10.922***	
PF→EMO	-.520	.082	-10.403***	.407
FEE→EMO	.256	.070	5.690***	
EMO→LOY	-.156	.042	-3.015**	.290
PF→LOY	.431	.076	7.526***	
PF→WTP	.225	.060	5.495***	.653
LOY→WTP	.667	.047	15.422***	
EMO→COM	.408	.043	8.889***	.166
EMO→REV	.402	.040	8.293***	.449
WTP→REV	-.398	.047	-7.869***	

*** p<.001, ** p<.01

Specifically, price comparison (FEE) negatively influenced price fairness (PF) (β = -.204, p<.001), and price fairness (PF) positively influenced behavioral loyalty (LOY) and willingness to pay more (WTP) (β = .431, p<.001; β = .225, p<.001, respectively). These results support hypotheses 4, 5a and 5b. Thus, H4 (*Price comparison negatively influences price fairness*), H5a (*Price fairness positively influences behavioral loyalty*),

and H5b (*Price fairness positively influences willingness to pay more*) were all supported.

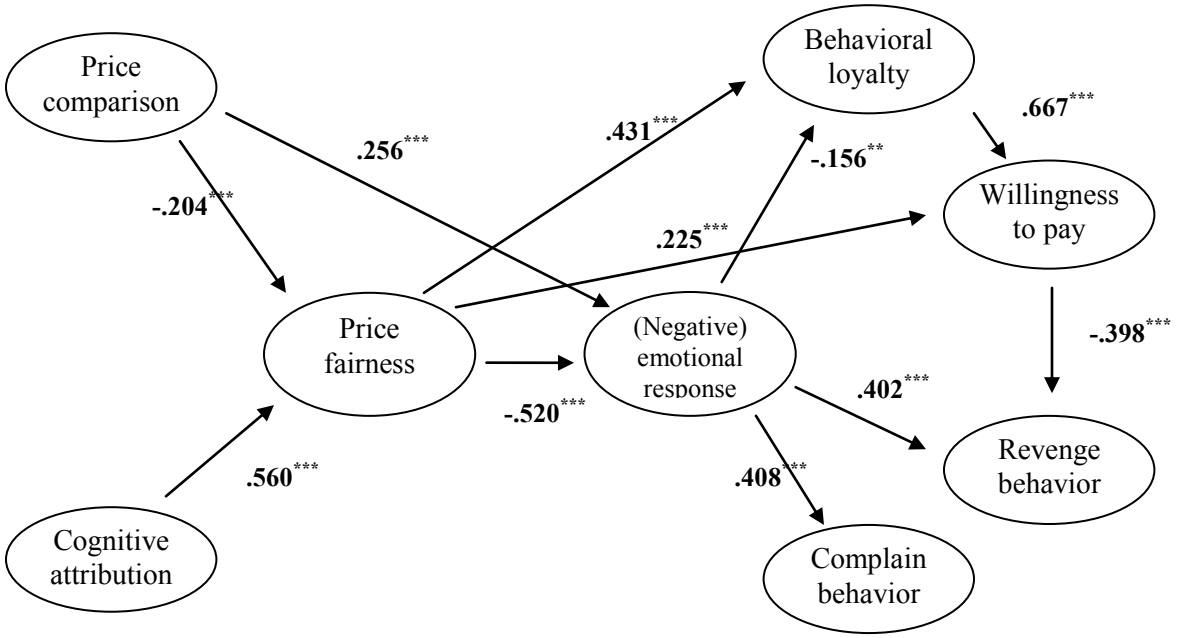


Figure 20. Relationships among Latent Variables (Revised Structural Model)

*** p<.001, ** p<.01
NOTE: In the interest of clarity, only significant regression paths between latent variables are displayed.

On the other hand, there was no direct evidence supporting H5c (*Price fairness negatively influences complaining behavior*) and H5d (*Price fairness negatively influences revenge behavior*) because the direct paths between price fairness and complaining/revenge behavior were deleted due to being statistical insignificant. Alternatively, an examination of the relationships via a mediator (emotional response) demonstrated that there was negative relationship between price fairness and the two dependent variables. That is, price fairness (PF) negatively influences emotional response (β = -.520, p<.001), which in turn positively influences revenge behavior

(REV) (β = .402, p<.001) and complaining behavior (COM) (β = .408, p<.001), respectively. While the hypotheses cannot be accepted, it is acknowledged that the variables are related, but not directly. Thus, H5c and H5d were not supported.

6.4 Multiple-group Invariance Test

Finally, a multiple-group invariance test was conducted to examine between-group differences in the revised model (H6: *There are differences in the price fairness model between high and low price sensitive group*).

As discussed in the data analysis procedures section, a multiple-group invariance test is regarded as a way of model cross-validation because it aims to confirm whether the model can be applied in diverse settings (Bollen, 1989; Byrne, 2009). Byrne (2009) argued that a cross-validation strategy can be conducted when "*the final model derived from the post hoc analyses is tested on a second (or more) independent sample(s) from the same population*" or "*randomly split the data into two (or more) parts, thereby making it possible to cross-validate the findings*" (p.258). That is, while one group serves as the calibration sample, the other group functions as the validation sample which is used for testing a hypothesized model drawn from the calibration sample. A multiple-group (or a multiple-sample) invariance test examines equivalence across groups in terms of a factor structure, a pattern of factor loadings, factor variances/covariances, and/or structural path coefficients (Byrne, 1998).

The current study spilt the pooled data into two separate groups in terms of price sensitivity. In other words, the sample in the previous section was split into two groups

based on each sample's degree of price sensitivity, and the two groups were compared following the invariance test procedure. This procedure, although not consistent with the original intention of invariance test, was expected to investigate the moderating effect of price sensitivity on the proposed model.

According to a test procedure guided by previous research (Bollen, 1989; Byrne, 1998), baseline models of pooled sample and each group (i.e., high and low price sensitivity groups) were specified and examined using model fit indices. The model fit indices showed the baseline models for the pooled sample, high price sensitivity, and low price sensitivity group fit the data well (i.e. χ^2 (df) = 1120.947(445), 829.203(445), 914.352(445), all p<.001; RMSEA = .054, .059, .062; TLI(NNFI) = .941, .932, .921; CFI = .947, .939, .929, respectively).

However, the path linking negative emotional response (EMO) to behavioral loyalty (LOY) for the high price sensitivity group was found to be statistically nonsignificant (β=-.115, p=.120). Accordingly, the deletion of the path was suggested, and the subsequent model fit indices for the pooled sample, high and low price sensitivity groups (χ^2 (df) = 1129.963(446), 831.602(446), 924.598(446), all p<.001; RMSEA = .054, .059, .062; TLI(NNFI) = .941, .932, .919; CFI = .947, .939, .927, respectively) still represented reasonably good fit to the data. It thus demonstrated that the revised baseline model should be appropriate to the invariance testing.

In line with the study objectives and the subsequent hypothesis testing (H6), differences in the structural path coefficients rather than other parameters (i.e., factor variances/covariances, factor structure, and error covariances) across the groups was

primarily examined in this study. All chi-square, degrees of freedom, and some model fit indices for every model at each step were recorded, and any statistically significant distinction between the preceding and more restrictive model with regard to the parameters was detected using a χ^2 difference test (Byrne, 1998; Kline, 2005).

For example, as shown Table 23, the difference between the χ^2 value of the unconstrained and equally (factor loading) constrained model was 28.23 with 24 degrees of freedom (i.e. 1786.23 – 1757.99 and 917 – 893, respectively). This χ^2 difference value is statistically not significant at a probability of less than .05, that is, the model fit indices will not be impaired even if all factor loadings are made equivalent across groups. It could therefore be argued that factor loadings were invariant across the two groups.

Table 23. Model Comparison: Model Fit Indices

Model	Model fit indices					
	χ^2(df)	$\Delta\chi^2$	Δdf	RMSEA	NNFI	CFI
Unconstrained	1757.99(893)	-	-	.043	.925	.933
Factor loadings	1786.23(917)	28.23	24.00	.043	.927	.932
Structural paths	1790.68(927)	4.45	10.00	.042	.928	.933

*** p<.001

Further, a comparison of the more restrictive model (i.e. making all structural paths equivalent across the two groups) to a preceding model showed that the equivalent constrains would not impair model fit (i.e., $\Delta\chi^2 = 4.45$, $\Delta df = 10$). Also, the difference between CFI values (i.e., CFI difference test) met the recommended cutoff criterion

of .01 (ΔCFI = .001) (Byrne, 2009). Therefore, it could be concluded that all factor loadings and structural paths were invariant across the two groups.

Table 24 shows the regression coefficients from the two groups. Note that all unstandardized coefficients between the two groups are identical because of equality constraints (Kline, 1998). Squared multiple correlations (R^2) were .363 (Price fairness), .414 (Emotional response), .286 (Behavioral loyalty), .649 (Willingness to pay more), .401 (Revenge), and .187 (Complaining behavior) for the high price sensitivity group, and were .378 (Price fairness), .370 (Emotional response), .257 (Behavioral loyalty), .649 (Willingness to pay more), .445 (Revenge), and .157 (Complaining behavior) for the low price sensitivity group.

Table 24. Structural Paths of Groups

	High price sensitivity group			Low price sensitivity group		
Parameters	coefficient	SE[1)]	β[2)]	coefficient	SE[1)]	β[2)]
FEE→PF	-.183***	.041	-.178	-.183***	.041	-.214
ATT→PF	.246***	.023	.552	.246***	.023	.565
PF→LOY	.688***	.068	.534	.688***	.068	.507
PF→EMO	-.834***	.081	-.540	-.834***	.081	-.490
PF→WTP	.289***	.059	.204	.289***	.059	.197
LOY→WTP	.745***	.048	.678	.745***	.048	.688
FEE→EMO	.379***	.069	.239	.379***	.069	.260
EMO→COM	.396***	.044	.433	.396***	.044	.397
EMO→REV	.324***	.039	.376	.324***	.039	.414
WTP→REV	-.374***	.046	-.398	-.374***	.046	-.413

1) Standard error
2) Standardized path coefficients
*** p<.001, ** p<.01, * p<.05

As indicated by the results of the multiple-group invariance test, there were no significant differences between the two groups in terms of measurement items and regression coefficients. However, a further examination of factor means revealed that some statistically significant differences in latent variable means existed (i.e., price fairness, emotional response, willingness to pay, and revenge). Table 25 shows a comparison of latent variable means between the two groups (high vs. low price sensitivity groups).

Table 25. Mean Comparison of Variables across Groups

Latent variables	Estimate	SE[1)]	C.R[2)]	Sig.
Cognitive attribution (ATT)	-0.23	0.14	-1.69	0.09
Price fairness (PF)	-0.22	0.06	-3.64	<.001
Emotional response (EMO)	0.44	0.10	4.48	<.001
Price comparison (FEE)	0.12	0.07	1.80	0.07
Behavioral loyalty (LOY)	-0.09	0.08	-1.18	0.24
Willing to pay (WTP)	-0.31	0.09	-3.56	<.001
Complaining (COM)	0.07	0.09	0.70	0.49
Revenge (REV)	0.38	0.09	4.29	<.001

1) Standard error
2) Critical ratio (z-value)

These results indicated that the high sensitivity group tended to feel less price fairness than the low sensitivity group in the price increase context. Also, it was more likely that individuals who were sensitive to price changes had more negative emotional responses to price changes than those who were not sensitive. Furthermore, the high sensitivity group people had lower willingness to pay more and showed more serious

revenge behavior in price change contexts, holding other variables constant. Yet, there was little difference between the two groups in terms of cognitive attribution, price comparison, loyalty and complaining behavior.

In summary, although the moderating effect of price sensitivity on the relationships among factors was not found in the model, significant mean differences in some variables were revealed. Accordingly, the H6 (*There are differences in the price fairness model between high and low price sensitive group*) was supported.

6.5 Summary of the Hypothesis Testing

Based on the hypotheses tests conducted in this section, it was found that while H1, H2, and H3 were not supported, H4 and H6 were supported. In addition, H5 were partially supported (Table 26). H1 and H2 were not supported because the price fairness and attribution were unidimensional concepts. However, H2a and H2b would be virtually supported, although it was not empirically tested because of the collapse of the two concepts into one construct. C-PF-E Model was also found to be better than C-E-PF Model as opposed to H3. On the other hand, it was found that price comparison has a significant negative impact on price fairness (H4), and price fairness positively influences behavioral loyalty and willingness to pay more (H5a and H5b, respectively). There were also differences in the price fairness model between high and low price sensitivity groups in terms of price fairness, emotional response, willingness to pay more, and revenge behavior (H6). For H5c and H5d, the negative relationships between the

variables were found, yet it was not a direct relationship, rather mediated by negative emotional responses. Thus, the hypotheses (H5c and H5d) were not supported.

Table 26. Summary of Hypothesis Tests

Hypotheses	Results
H1: Distributive fairness and procedural fairness are explained by price fairness as a higher order factor.	Not supported (Price fairness is a unidimensional concept)
H2: Locus of causality, controllability, and temporal stability are explained by cognitive attribution. **H2a**: Locus of causality positively influences price fairness **H2b**: Controllability positively influences price fairness **H2c**: Temporal stability positively influences price fairness	Not supported (Cognitive attribution is a unidimensional concept collapsing causality and controllability) * H2a and H2b are found to be supported.
H3: "C-E-PF" Model will have better model fit than "C-PF-E" Model.	Not supported ("C-PF-E" Model represents a better fit to the data than "C-E-PF" Model)
H4: Price comparison negatively influences price fairness	Supported
H5: Price fairness influences behavioral intentions. **H5a:** Price fairness positively influences behavioral loyalty. **H5b:** Price fairness positively influences willingness to pay more. **H5c:** Price fairness negatively influences complaining behavior. **H5d:** Price fairness negatively influences revenge behavior.	Partially Supported H5a & H5b: Supported H5c & H5d: Not supported *Price fairness negatively influences complaining and revenge behavior, but not directly.
H6: There are differences in the price fairness model between high and low price sensitive group.	Supported

7. CONCLUSIONS

In this section, the study findings are summarized and some significant results are further discussed. Following discussions of the findings, theoretical and managerial implications of this study are provided, and limitations and further research agendas are finally suggested.

7.1 Discussions of the Findings

This study sought to gain an understanding of the relationships between antecedents and consequences of tourist's perceived price fairness. Particularly, it was expected that this study would complement the shortcomings of previous studies in price fairness literature by examining the antecedents and consequences of price fairness from an attributional perspective, investigating the concept of price fairness in terms of multidimensionality, and empirically testing the relationships among variables related to price fairness. According to the study purpose, four specific objectives of the study were developed: (1) to examine the dimensionality of price fairness in a price change context; (2) to examine the antecedents of price fairness; (3) to examine the consequences of price fairness; and (4) to compare differences in the price fairness model between high and low price sensitivity groups. To achieve the study objectives, this study developed a conceptual model drawn from a literature review, and determined the model that best predicted the conceptual framework using multivariate data analysis (i.e. Structural Equation Modeling). Overall, the proposed model fits the data well from a global

perspective, yet, some hypotheses were not supported and the subsequent revised model was proposed.

7.1.1. Summary of the Findings

Based on the empirical findings from the previous section, the initially proposed conceptual framework was revised (Figure 21).

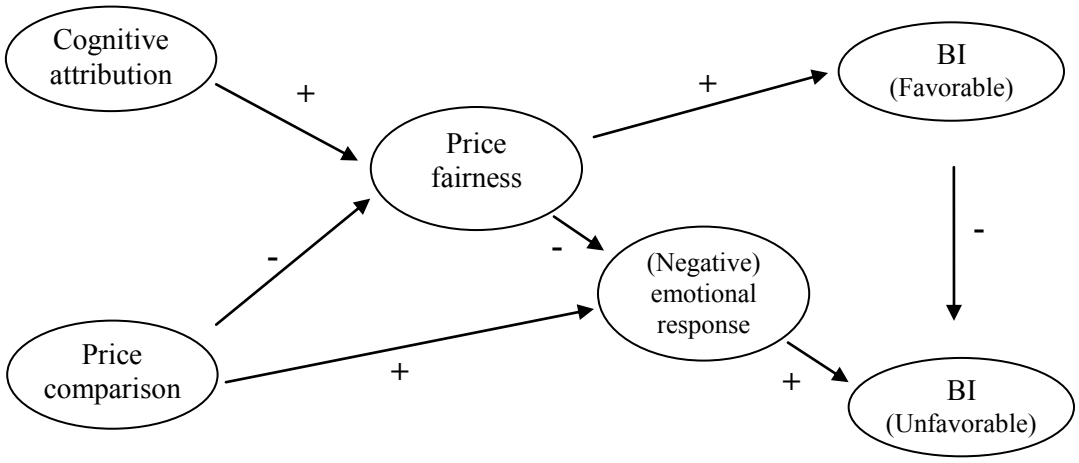


Figure 21. The Revised Conceptual Framework

NOTE: Only in the interest clarity, behavioral intentions are collapsed into favorable and unfavorable variables. All paths are statistically significant at $p<.001$.

First, it was found that two antecedents had an influence on price fairness as hypothesized by the conceptual model. H2a and H2b pertained to the positive relationship between cognitive attribution and price fairness, and H4 argued that price comparison negatively influences price fairness. The hypothesis testing demonstrated that while price comparison negatively influenced price fairness, cognitive attribution positively influenced price fairness. That is, if individuals evaluated the price (e.g. extra

fees) they paid to be much higher than expected, they perceived the price to be unfair. Therefore, H4 was supported.

On the other hand, if people inferred that price changes were caused by something uncontrollable and situational factors, they are more likely to judge the price increase fair than unfair. In other words, fairness or unfairness judgments rely on buyers' subjective perceptions based on cognitive reasoning. H2a and H2b were thus supported.

Second, the consequences of price fairness were identified and found to be positively and negatively related to price fairness. That is, while price fairness positively influenced favorable behavioral intentions (i.e., behavioral loyalty and willingness to pay more), price fairness negatively influenced unfavorable behavioral intentions (i.e., complaining and revenge behavior). Thus, H5 was supported.

To examine study objective (4), a multiple-group invariance test was conducted. The test showed that there were no significant differences in factor structures, factor loadings, and structural paths between high and low price sensitivity groups. In other words, there was no moderating effect of price sensitivity on the variables related to price fairness. However, it was revealed that the degrees of price fairness, negative emotional response, willingness to pay more, and revenge behavior in a price change context were invariant depending on an individual's price sensitivity. Accordingly, it could be argued that people who are more sensitivity to price information tend to perceive less price fairness and more negative emotional responses to price increases than those who are less sensitivity to price in buying behavior. Furthermore, the high sensitivity group was more likely to have lower willingness to pay more and to have

more revenge behavior in a price change context, having other variables constant. This result is consistent with previous studies. Petrick (2005) found that individuals with a high degree of price sensitivity (i.e. consumers who heavily rely on price in purchasing products or services) perceive more fairness for prices than those who are less price sensitive. H6 was therefore supported.

Accordingly, although the initially proposed model fit the data well from a global perspective, some hypotheses (H1, H2, and H3) were not supported. Hypotheses 1 and 2 pertain to the dimensionality of price fairness and attribution to achieve the study objective (1) and (2), and hypothesis 3 is associated with the role of emotions in relation to price fairness perception. Those findings not supporting the hypotheses drawn from the literature review are further discussed in the following section.

7.1.2. Dimensionality of Price Fairness and Attribution

The data analysis revealed that price fairness is unidimensional, and accordingly, H1 was not supported. This is not consistent with some previous research (e.g. Herrmann, et al., 2007; Martin, et al., 2009). Although there is little consensus on the dimensionality of price fairness (e.g. Bechwati, et al., 2009; Campbell, 2007; Herrmann, et al., 2007), this study operationalized price fairness into two dimensions (i.e. distributive and procedural fairness) in line with theories associated with justice or fairness (Adams, 1965; Lind & Tyler, 1988; Thibaut & Walker, 1975). Bolton et al. (2003) also argued that fairness in pricing literature is defined as an evaluation of whether an outcome and/or the process to reach an outcome is reasonable, acceptable, or

just. In addition, recent research has attempted to identify the two dimensions of price fairness using empirical data (Herrmann, et al., 2007; Martin, et al., 2009). Especially, Martin et al. (2009) empirically confirmed that price fairness encompasses two dimensions using multivariate statistics.

Nonetheless, the findings of this study support a unidimensional price fairness concept, and based on the findings, it could be argued that price fairness is rather perceived from a global perspective, not from an aggregated perspective combining individual approaches (i.e. distributive and procedural) as opposed to the traditional theory of justice or fairness. In other words, price fairness perception is defined as a consumer's global assessment of whether price change is reasonable, acceptable, or justifiable (Xia, et al., 2004).

Cognitive attribution was also found to be a unidimensional concept encompassing locus of causality and controllability. Accordingly, H2 was not supported. The findings indicated that the conceptualization drawn from Weiner's model is not appropriate in this study. Instead, one dimension of attribution that collapsed causality and controllability was used in this study. The use of partial dimensions of attribution has been occasionally found in the literature. For instance, Vaidyanathan and Aggarwal (2003) only used two dimensions (i.e., causality and controllability) and argued that temporal stability needed to be excluded because the dimension has been studied in a different context and methodologically is not plausible. On the other hand, Bitner (1990) adopted only causality and stability to examine the effect of attribution on service satisfaction. Folkes et al. (1987) also operationalized two dimensions of controllability

and stability when examining the relationship between attribution, repurchase and complaining behavior. They all adopted measures from Russell's (1982) Causal Dimension Scale (CDS), but only used parts of the scale. Although they did not clearly provide reasoning for using two out of three dimensions in their research, it seems plausible to exclude some dimensions which may not be relevant to study contexts.

Indeed, the issues regarding dimensionality of attribution have frequently raised concerns in the literature (McAuley, et al., 1992). For instance, the low internal consistency of the controllability and its possibility to correlate highly with the locus of causality have been reported (McAuley & Gross, 1983; Russell, McAuley, & Tarico, 1987). However, it is also important to note that lack of evidence for orthogonal dimensionality at the empirical level does not necessarily indicate that three dimensions of attribution should disappear at the conceptual level (Anderson, 1983).

Tsiros, Mittal, and Ross (2004) also suggested that both locus of causality and controllability be incorporated as a construct of *responsibility*. They stated that "*clearly, locus of causality, that is, who caused the failure, is an important part of responsibility, but so too is controllability, the degree of control the causal party had on the circumstances*" (p.477-478), and argued that two dimensions measure the same concept (Tsiros, Mittal, & Ross, 2004). Some evidences of implausibility of two separate attribution dimensions (i.e. causality and controllability) were also revealed in previous research (Folkes, 1984). For instance, Folkes (1984) found that the two dimensions are highly correlated each other (r = .94).

Additionally, some previous research has found that the temporal stability dimension of attribution does not play a predicting role in behavioral variables. For instance, in a hypothetical quasi-experiment of hotel guests, Smith and Bolton (1998) revealed that stability attributions have no significant influence on satisfaction and repatronage intentions. That is, whether or not people believe that service failure is likely to happen again is irrelevant to their satisfaction with the service and revisit intentions (Smith & Bolton, 1998).

From a statistical perspective, the inclusion of the items (tem1, tem2, and tem3) also impaired the model fit indices, and furthermore, the standardized factor loadings of the items (com3, tem 2, and tem3) were not significant: -.019 (p=.674), .044 (p=.335), and -.059 (p=.196), respectively. The pilot study also showed problems with the reliability of temporal stability dimensions. Therefore, this misfit could be caused by measurement error, not only by conceptualization error. Indeed, some respondents in the pilot study raised issues regarding wording in some items of cognitive attribution.

Subsequently, based on the statistical findings, the two concepts of price fairness and cognitive attribution were collapsed into one dimension, which did not support hypotheses H1 and H2. However, this finding could conversely contribute to a better explanation of the proposed model in terms of parsimony. In the initial hypothesized model, two higher-order models (price fairness and cognitive attribution) were proposed from a theoretical base. Yet, from a measurement perspective, a higher-order model may yield difficulty in interpretation because it is too abstract (Hair, et al., 2006). Therefore,

Hair et al. (2006, p.818) suggested that some questions should be answered to determine whether a higher-order factor model will be proposed or not:

(1) *Is there a theoretical reason to expect that conceptual layers of a construct exist?*

(2) *Are all the first-order factors expected to influence other nomologically related constructs in the same way?*

(3) *Are the higher-order factors going to be used to predict other constructs of the same general level of abstraction?*

(4) *Are the minimum conditions for identification and good measurement practice present in both the first-order and higher-order layers of the measurement theory?*

Furthermore, the following questions to be addressed after empirically testing higher-order models are necessary (Hair et al. 2006, p.819):

(1) *Does the higher-order factor model exhibit adequate fit?*

(2) *Do the higher-order factors predict other conceptually related constructs adequately and as expected?*

(3) *When comparing to a lower-order factor model, does the higher-order model exhibit equal or better predictive validity?*

Hair et al. (2006) argued that only if the answers to all questions above are yes, a higher-order factor model is recommended. The proposed higher-order factor model of cognitive attribution in this study seems not to meet some of the aforementioned

requirements. For instance, a first-order factor model exhibited better model fit than a second-order factor model.

7.1.3. Role of Emotions in Price Fairness Perception

One of the noticeable findings was the location of emotional response. In the initial model, it was proposed that emotional responses mediate cognitive attribution to price fairness; that is, after one infers the motive of outcomes (e.g. price changes), he or she shows emotional responses to the outcomes based on cognitive appraisal. It was also suggested that these two constructs simultaneously (directly) or in sequence (indirectly) influence price fairness perceptions.

However, hypothesis testing did not support H3 and rather supported the revised relationship (i.e. emotional response follows price fairness). In other words, emotional responses to price changes are influenced by price fairness perceptions. Therefore, although the initial model hypothesized that emotions would lead to fairness perception, the hypothesis testing result was not consistent with previous studies (Campbell, 2007). While the initial conceptual model was drawn from some previous empirical research (e.g. Campbell, 2007), there are other various theories of emotions and subsequent mixed findings exist in literature (e.g. Bagozzi, Gopinath, & Nyer, 1999; Roseman, 1991; Shiv & Fedorikhin, 1999).

Following cognitive appraisal theory of emotion (e.g. Roseman & Smith, 2001), emotion is conceived a mental state of readiness that arises from cognitive appraisals of events. Also, emotion is more likely to be accompanied by physical expressions such as

gestures, posture, or facial expression (Bagozzi, et al., 1999). As such, numerous researchers have found that emotions arise when an individual makes evaluations for something desired, and accordingly, the role of appraisal is central to the formation of emotions (Roseman & Smith, 2001). Roseman and Smith (2001) distinguished the appraisal theory from other theories of the causes of emotions, which have argued that events per se, physiological processes, facial expressions, or motivational processes elicit emotions without an evaluative process. Accordingly, following an appraisal approach, different people have different emotional reactions to the same event or happening, and can even show no emotional reactions at all if their emotional state largely relies on individual appraisal of the event (Bagozzi, et al., 1999).

The appraisal theory accounts for most emotion types, and in particular, it leads to discrete emotional responses depending on appraisal dimensions such as: motive consistent/inconsistent, appetitive/aversive, agency, probability, and power (Roseman, 1991). For example, positive emotion arises from two dimensions: when attaining a positive goal (appetitive) or avoiding a punishment (aversive). According to appraisal approaches in emotions, Tiedens and Linton (2001) also focused on the probability dimension of appraisal. They employed certainty-uncertainty discrete dimensions in response to the increasing necessity of examining more diverse approaches toward emotions. It has been argued that while emotions such as anger, disgust, and happiness result from certainty, emotions such as hope, surprise, fear, and worry are caused by uncertainty (Roseman, 1991). As a consequence, with regard to emotional certainty congruence, they show that certainty-associated emotions lead more to heuristic

processing than uncertainty-associated emotions, which result in systematic processing (Tiedens & Linton, 2001).

A further review of the literature explained that two kinds of emotional responses may exist. One is called general feelings, and the other is specific (particular or discrete) feelings (Roseman & Smith, 2001). Weiner (1980) also separated the types of emotional responses into general and discrete. In line with the categories of general and specific emotions, it seems that this study operationalized emotional response as specific feelings (i.e., negative emotional response: disappointed, angry, and distress) rather than as general emotional responses to price changes. Accordingly, it is likely more appropriate to name it negative emotional response.

The relationships between price fairness, emotional responses, and behavioral intentions can be therefore rephrased as price unfairness leads to negative emotional responses, which in turn, influence unfavorable behavioral intentions such as revenge and complaining behavior. On the other hand, if an individual perceived price changes to be fair, he or she will have favorable behavioral intentions including loyalty and willingness to pay more without feeling any negative emotional response.

Several previous studies have found that unfairness or injustice tends to evoke negative emotions (e.g. fury, anger, and distress) (Schoefer & Ennew, 2005; Weiss, Suckow, & Cropanzano, 1999). Xia et al. (2004) also proposed a conceptual model of price fairness, in which price fairness perception results in negative emotional response, which in turn leads to behavioral intentions. More recently, Rio-Lanza, Vazquez-Casielles, and Diaz-Martin (2009) revealed that perceived justice has a negative

relationship with negative emotions, that is, if one perceives injustice about the service provided, he or she feels more negative emotions with the service. Despite that they only confirmed the significant relationship between procedural justice and negative emotions (yet, insignificant relationships with distributive and interactional justice), their results support the significant relationship between justice and negative emotional response found in the current study (Rio-Lanza, Vazquez-Casielles, & Diaz-Martin, 2009).

Empirical support for the effect of fairness perception on negative emotional reactions was also found in the justice literature (Gray-Little & Teddlie, 1978; Hegtvedt, 1990; Homans, 1974; Sprecher, 1986, 1992). For example, Homans (1974) argued that while individuals who feel that they received what was expected are likely to feel satisfied, those who perceive to be unfairly treated are more likely to feel anger.

In this study, from a statistical perspective, the mediating role of (negative) emotional response in relation to price fairness and unfavorable behavioral intentions were also confirmed using Baron and Kenny's mediation analysis (Baron & Kenny, 1986). The path linking price fairness (PF) to revenge (REV) ($\beta = -.376$, $p<.001$) turned out to be not significant after mediated by negative emotional response (EMO) ($\beta = -.073$, $p=.206$). On the other hand, when negative emotional response (EMO) fully mediated the relationship between price fairness (PF) and revenge (REV), the paths (PF → EMO → REV) were all significant ($\beta = -.601$, $p<.001$; $\beta = .551$, $p<.001$, respectively). Thus, the full mediating role of EMO in relation to PF and REV was confirmed. Also, while a direct relationship between price fairness (PF) and complaining (COM) was not significant ($\beta = -.089$, $p=.059$), a relationship between PF and COM, fully mediated by

EMO, was significant: PF → EMO (β = -.592, $p<.001$); EMO → COM (β = .395, $p<.001$), respectively.

In summary, following theoretical arguments and empirical evidence, the relationship between price fairness and emotional response was therefore modified and the initial conceptual framework was subsequently revised (Figure 21).

However, in addition to the initial and revised models, a third model could be considered for further research; that is, cognitive attribution and emotional responses concurrently interact with each other and influence price fairness as antecedents. In line with dual process theory (e.g. Shiv & Fedorikhin, 1999), emotion and mood have been studied in consumer decision making in relation to cognitive information processing. The role of affect in judgment and decision making has recently been emphasized in response to traditional cognitive-based approaches in the consumer behavior literature. The examination of the interplay between affect and cognition in decision making processes originated in emotion-related theories in Psychology, and has demonstrated that the relative influence of the two modes on judgments is dependent on processing resources (Berkowitz, 1993; LeDoux, 1996; Shiv & Fedorikhin, 1999).

In an experiment regarding selection of chocolate cakes (more positive affect but less favorable cognitions) or fruit salads (less favorable affect but more favorable cognitions), Shiv and Fedorikhin (1999) revealed that the accessibility of processing resources largely determines whether an affective or cognitive domain dominates the decision making process. They found that when processing resources are available, cognition has a greater impact on an individual's evaluation and choice, yet when

processing resources are constrained, affective reactions are more likely to influence evaluations than cognitive reactions.

Hsee and Rottenstreich (2004) applied the dual process of affect and cognition to their empirical research on tendency of valuation (What is "tendency of valuation"?). They used the term of 'valuation by calculation' mainly based on cognitive processing and 'valuation by feeling' drawn by affective processing. As a result of several experiments, they found that while 'valuation by calculation' yields scope-sensitivity, 'valuation by feeling' results in scope-insensitivity (Hsee & Rottenstreich, 2004).

7.2 Theoretical and Practical Implications

7.2.1 Theoretical Implications

It was postulated that the current study is distinct from previous research on price perception and fairness in some aspects: examining price fairness from an attributional perspective, investigating the dimensionality of price fairness and causal attribution, and empirically testing a conceptual model of price fairness.

Accordingly, one of the major theoretical implications that this study provides was to build a price fairness model in line with attribution theory and to empirically confirm whether the model fit the data well. By demonstrating that there are significant relationships between the variables related to price fairness, this study gave insights to assist in understanding how cognitive attribution and price comparison influence price fairness, and how price fairness influences emotions and tourists' favorable and

unfavorable behavioral intentions (Figure 22).

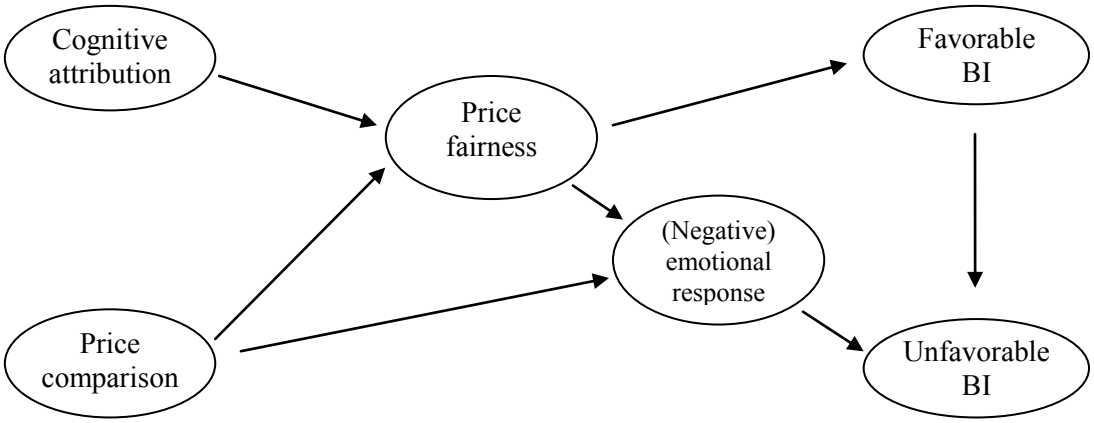


Figure 22. The Price Fairness Model

While price comparison was found to negatively influence price fairness, it was found to positively influence (negative) emotional response. That is, passengers perceived airlines extra fees to be unacceptable and unjustifiable and were more likely to be angry and feel distress when they thought the fees were higher than appropriate prices. However, the positive relationship between cognitive attribution and price fairness demonstrated that individuals tended to perceive the fees to be acceptable when they attributed the cause(s) of extra fees to external factors that were beyond control of the firm.

Price fairness had a significant influence on behavioral intentions. More specifically, people who felt that the fees were fair were more likely to spread positive word-of-mouth and recommend the airline to their social networks. In addition, they were willing to continue to use the airline if its prices increase somewhat. Conversely, if

individuals perceived the extra fees as unfair, it was most likely that they would complain the fees to the airlines or even external agencies and switch to other competitors. More importantly, unfairness perceptions of extra fees can evoke negative emotional responses (i.e., angry, disappointed, distress), which can lead to revenge and/or complain behavior.

As discussed earlier, although some hypotheses regarding dimensionality and emotional responses were not supported, the price fairness model in this study represented a good fit to the data. A majority of the initial conceptual framework remains in the revised model, with the addition of the direct effect of price comparison on emotional response. Also, a positive relationship between behavioral loyalty and willingness to pay more and a negative relationship between willingness to pay more and revenge behavior were added to the revised model of price fairness.

Further, empirical results of this study confirmed some propositions proposed by previous conceptual papers. For instance, Xia et al. (2004) offered some propositions in relation to price fairness: price comparison has an effect on price unfairness judgments; price inequality (unfairness) is associated with negative emotions; when buyers perceive a price as less fair, they are likely to respond to the situation by actions that seek compensation; and when buyers perceive a price as less fair, they are more likely to cope with the negative emotion by seeking revenge. The findings of this study confirmed the negative effect of price comparison on price fairness, which leads to negative emotional responses. It was further found that individuals with perceived price unfairness are more

likely to have negative emotions, and seek monetary compensation and revenge to deal with the negative emotion.

It was further revealed that the data explained a majority of the variance in the dependent variables (i.e., behavioral loyalty, willingness to pay more, revenge, and complaining behavior). Thus, results of this study give direction for the development of an extended framework of price fairness with the addition of other relevant variables (e.g. trust, social norms, transaction similarity, and etc.).

Additionally, results of this study provided empirical evidence supporting that price fairness is perceived from a global perspective. As discussed earlier, there has been little consensus on the dimensionality of price fairness. Also, mixed empirical findings have been reported in the literature. Based on the findings of the current study, it could be argued that one dimension of price fairness is more appropriate than multiple dimensions of the concept for further research on price fairness. Nonetheless, attempts to develop better measurement scales for distributive and procedural fairness are recommended. Because this study adapted measurements from previous research without developing its own scales, alternative scales may lead to different and potentially better results.

More importantly, it is expected that this study initiated price fairness research into the tourism literature. As reviewed earlier, tourists' price perceptions have been usually studied in terms of a perceived price - perceived quality - perceived value framework (e.g. Petrick, 2004). Indeed, the framework has been successfully applied in the literature to understand how price perceptions influence satisfaction and behavioral

intentions. The study of price fairness is believed to be a way to elaborate the concept of perceived price because fairness has consistently been found to be related to perceived price. A few researchers have examined price fairness in the tourism literature (Choi & Mattila, 2004; Oh, 2003; Wirtz & Kimes, 2007), but most have focused on hotel pricing and much is still unknown.

An examination of price fairness is particularly important in a tourism context since a variety of pricing practices (e.g. yield management, dynamic pricing, and ancillary revenues) have increasingly raised fairness issues (Perdue, 2002) and the fairness judgment in a pricing context can be a driver of emotions and/or satisfaction, which can also influence future behavioral intentions (Oliver & Swan, 1989a, 1989b). Thus, this research is believed to build upon the theoretical discourse in the tourism pricing literature.

Further, results of this study reiterated the role of explanations or justifications in moral judgments. As showed in the revised model, cognitive attribution was found to positively influence price fairness, that is, if individuals inferred that extra fees are inevitably charged due to uncontrollable reasons, they were more likely to perceive the price as fair. Thus, it could be argued that if justifications for increasing prices or charging extra fees (e.g., oil price surge, shortage of goods) are given, the price changes are more likely to be accepted. This is consistent with previous research that has demonstrated that reasons or justifications for an act could cause the outcome to be perceived as more fair than when justification is not offered (Bies & Shapiro, 1988; Greenberg, 1990a). Campbell (1999a, 1999b), for instance, in her scenarios-based

experiment, subjects who were given no reason for a sudden increase in bottled water prices tended to feel more unfairness than those who were given justifications for price increases (Campbell, 1999b). Vaidyanathan and Aggarwal (2003) also revealed that people are likely to perceive price increases as fair when they think the cause of the increases is beyond the seller's control (e.g. costs go up) and located external to the seller (e.g. market prices go up). Accordingly, they concluded that consumers will react to price increases based on the given information and reasons, and argued that "(consumers) will not automatically judge a cost-justified price increase to be fair" which is different from what the dual entitlement principle predicts.

7.2.2 Practical Implications

Results of the current study offer insight into various implications for airline management in terms of marketing communications and customer relationships. For example, results of this study suggest that airline management needs to understand their passengers' price fairness perceptions and the antecedents of the perceived price fairness in order to better predict passengers' subsequent behavioral intentions.

Results suggest that passengers' cognitive attribution is a significant predictor of their price fairness of extra fees. That is, depending how passengers understand the reasons for price increases or new prices, they may or may not feel the extra fees as fair. This result suggests that airline management needs to consider remedies as to how they can persuade passengers. For example, giving the right justification (e.g. this price

change is uncontrollable) to customers in a timely manner can be considered as one tool for successful marketing communications.

Recently, many airlines in America and Europe began charging extra fees for services that used to be free. They have also introduced new fees schemes for other reasons. For instance, some airlines have insisted that charges for carry-on bags would ultimately benefit customers because passengers might want to bring fewer bags to avoid the fees, which could speed up the check-in in the end (CNN, 2010). Some airlines have also stated that fewer bags and services due to the extra fees help cutting handling costs, which are ultimately used to cut airfares (Economist, 2006). However, it appears that although those justifications could be very persuasive to some segments, they would not be to others (e.g., business travelers may be supportive for that, while leisure travelers with some carry-on bags and checked-in bags would likely not be). Accordingly, a marketing strategy that focuses on customer benefits does not seem successful. The extra fees initiatives have recently led to passengers' negative reactions and resistances, and have become a controversial issue in the airline industry (CNN, 2010; Wilkening, 2009).

It could be argued that the unfairness perception of passengers is caused by the Airlines' inappropriate marketing communications, not by the extra fees scheme per se. Thus, a marketing strategy in line with the price fairness model of this study could be considered (e.g. having passengers attribute the extra charges to some external uncontrollable reasons such as falling traffic and surges in fuel costs).

In addition to the predicting role of cognitive attribution for price fairness, the results of the current study suggest that airline management needs to understand how

passengers form their cognitive attributions and perceptions of price fairness in an extra fees context. Different from previous studies arguing that cognitive attribution and price fairness are multidimensional, this study found that passengers are more likely to perceive the concepts to be unidimensional. That is, cognitive attribution is a unidimensional concept encompassing locus of causality and controllability, and price fairness is also found to be a global assessment of whether extra fees are reasonable, or justifiable. This finding means that a complicated explanation for the causes of the fees reflecting all three dimensions such as locus of causality, controllability, and temporal stability (as the traditional attribution theory has suggested) may not be efficient. Instead, the results of this study suggest that airline management needs to give justification of extra fees by focusing only on who is responsible for the fees. For example, a message like "We have done our best efforts to protect against price increases, but, inevitably, we have to start charging checked-bag fees because of the oil price increase" could be considered. This concise message may sound more clear and comprehensible, and could be an efficient way to deliver marketing communications.

This strategy is also applicable in a price reduction situation. A company is usually concerned that lowering prices will result in lower quality perceptions to consumers, and it may be true because of the positive relationship between price and quality. However, if plausible reasons for reducing price are given, it is likely more understandable that consumers would not attribute the lower price to lower quality (e.g. using low quality of resources or poor service) (Vlaev, Chater, Lewis, & Davies, 2009).

Instead, consumers may think that the company has given up parts of their profits, or adopted innovative technologies and management systems to reduce costs.

However, it is important to note that passengers may be suspicious that airline management intentionally takes advantages of this psychological mechanism based on attribution theory. For instance, a company might abuse marketing communications by disguising its motives for increasing prices due to "uncontrollable reasons". In the summer of 2000, oil companies blamed the cost increases imposed by OPEC countries, and increased the oil prices for individuals. However, the price increase was indeed found to be beyond what could be reasonably acceptable (Vaidyanathan & Aggarwal, 2003). Therefore, it is believed that airline management needs to consider how they can place more trust on their communications. The factors that influence price fairness along with the positive inferred motive (e.g. reputation and trust) certainly need to be considered for marketing strategies for pricing policies and should also be investigated in future research.

The results of the current study also suggest that price sensitivity influences the degrees of price fairness perceptions and negative emotions. Although no moderating role of price sensitivity in the price fairness model was found in this study, a further examination of mean differences in variables showed that high price sensitivity passengers were more likely to feel price unfairness and negative emotions than low sensitivity people in the extra fees situation. It was also found that the higher their price sensitivity is, the lower they have willingness to pay and the more they exhibit serious revenge behavior toward the extra fees. This result suggests that airline management

needs to do differentiated marketing communications to heterogeneous passengers. It appears that more research is required to classify the segmentation in terms of price sensitivity. Nonetheless, it is believed that airline management needs to consider the underlying dimensions related to price sensitivity when applying the price fairness model of this study in practice.

Finally, this study showed that price fairness significantly influences passengers' future behavioral intentions. In particular, it was found that in the case of price unfairness perception, negative emotional response had a mediating role in complaining and revenge behavior. That is, if passengers inferred that extra fees were inevitably charged due to the uncontrollable reason, they tended to be tolerant of the fees, while, if individuals felt unfairness of extra fees for some reasons, they were more likely to exhibit complaining or revenge behavior with anger, disappointment, and distress. This finding suggests that emotional response is critical in the price fairness model. In other words, it is important to cope with consumers who already feel price unfairness because the unfairness judgments tend to evoke negative emotions which consequently lead to unfavorable behavioral intentions (e.g. negative word-of-mouth or switching behavior).

As found in this study, negative emotional responses play a critical role in tourists' behavioral intentions along with cognitive processes. That is, if passengers believe that they are unfairly treated in terms of prices, they are more likely to report it to external agencies and the media, or spread word-of-mouth throughout the Internet. The importance of dealing with customers' negative emotional responses has also been

emphasized in the service industry literature (e.g. Dubé & Menon, 1998; Smith & Bolton, 2002).

For airline management, several ways of handling angry passengers because of the unexpected extra fees need to be suggested in order to protect against potential subsequent negative behaviors. This proactive consumer relationship management is required rather than reactive consumer relationship management because it can anticipate concerns before they are serious problems. More specifically, front-line employees need to be empowered to handle angry customers immediately and fairly because passengers or prospective passengers are most likely to show the front-line staff (e.g. customer service and check-out desk) their negative reactions. Thus, as suggested by the results of the current study, giving justifiable explanations to passenger in a timely manner could be effective, and guiding alternative ways to resolve these concerns could be an efficient way of dealing with angry customers. For example, a loyalty program or credit card membership (e.g. frequently flyer membership) could be introduced to the customers in order to have the extra fees waived. US airways actually promotes this strategy, that is, their loyalty members can have checked baggage for free, while normal passengers pay for their checked baggage. Thus, passengers who complain about the extra fees could be encouraged to register the airline frequently flyer membership to get the benefits they deserve.

However, a more serious problem is that an (internally) angry customer with unexpected extra fees could easily leave the company and exhibit switching behavior without showing their anger in front of employees. This situation is worse than dealing

with angry passengers on site because there is likely no chance to make excuses for their concerns. That is, the airline is not even aware of the existence of problems of passengers who have bad experiences. Therefore, training to front-line employees is suggested in order to improve their capability of detecting passengers who might not show their anger in front of the company, but could willingly exhibit negative reactions to the company since this study showed that negative emotions of passengers predict negative behavioral intentions including revenge and complaining. Specific techniques related to the training could be studied for further research.

In addition, this study showed that angry passengers are more likely to report their negative experiences to external agencies and media as well as the airlines. Thus, it is suggested that airline management needs to consistently monitor external agencies and media (e.g. websites). Management can set up a department for this function, and professional staff can be hired to monitor any negative feedback and complaints online including online consumer forums, tourism-related blogs and bulletin boards. These practices should be a part of customer relationship management, and the resultant activities can be utilized to improve marketing strategy in regards to pricing schemes in the future.

7.3 Recommendations for Future Research

7.3.1 Limitations of Present Study

From a methodological perspective, several issues can be raised. First, due to the nature of the survey method, memory loss or even distortion could be a problem. That is,

since this study asked respondents about their last trip in the past 12months, it is most likely understandable that they would not clearly remember how much they paid for extra fees and how they perceived the given prices. Furthermore, their experiences could be distorted or influenced by the media because recently the press has reported the news about ancillary fees and raised issues regarding the (un)ethical behavior of airlines (e.g. CNN, 2010; Economist, 2008; Wilkening, 2009).

In addition, although it was justified in the previous section, data collection through online panel is not flawless. One of the frequently cited issues is that online panels are a voluntarily registered group of people instead of randomly selected individuals (Dillman, et al., 2009). Therefore, it is almost impossible to calculate the probability of being selected from a statistical perspective. Non-response bias check also showed that there is a possibility of non-response bias in this study since the statistically significant differences in some variables between the earlier and late response groups. In spite of the possible issues, this study recruited online panelists because of several benefits. For instance, sample could be drawn from more general population than an intercept on-site survey at an airport.

In terms of reliability and validity, some issues could give rise to limitations. For instance, a composite reliability for attribution (ATT) in the revised version showed relatively lower (.45) than acceptable level (.60), but the Cronbach's alpha for this construct was found to be .917, which is extremely high. The reason of the difference between two indicators of reliability still remains unknown. Also, high correlation between willingness to pay more (WTP) and behavioral loyalty (LOY) (.81) may violate

discriminant validity from a statistical perspective, but the two concepts were used as distinct variables in this study following the literature that consistently has suggested that they are unique constructs (Baker & Crompton, 2000; Lee, et al., 2007; Zeithaml, et al., 1996).

Price comparison and price fairness perception were measured with a 5-point Likert scale in order to examine the linear relationships between variables. However, the concept of price comparison and resulting unfairness perception can be dichotomous, i.e., advantage and disadvantage inequality. Advantaged inequality refers to getting more than the other party to the exchange gets or pay less than others, whereas, disadvantaged inequality means getting less than other people get or pay more than others (Oliver & Swan, 1989a). Xia et al. (2004) further suggested that each unfairness perception is associated with different type of emotions. That is, while advantaged inequality is more likely to evoke uneasiness or guilt, perceived disadvantaged inequality tends to result in disappoint, anger, or outrage (Austin, et al., 1980; Maxwell, 2008). Thus, the relevant variables in this study could be operationalized as dichotomy variables representing two types of inequality, and the effects of the two unfairness judgments on other variables could be examined.

Finally, a structural equation modeling demonstrates only correlation between variables, and correlation itself does not imply causal relation. Although "SEM procedures deal with causal models" (Tian-Cole, Crompton, & Willson, 2002, p. 21) and also one can infer causation from the proved correlated relationship if "there is a solid base of knowledge about theory and research" (Kline, 2005, p. 95), it is true that SEM

has limitations for showing the direction of the causal relation and establishing causal relationships among variables. Thus, experimental research could be considered to cope with this limitation for further research.

7.3.2 Future Research

Other possible variables related to price fairness could be considered for further research. In line with the stream of price perception research, this study included only variables related to reference price and additional variables relevant to attribution theory. It is also understandable that other variables (e.g. satisfaction, perceived value, and perceived quality) could be to some extent associated with price fairness and/or its antecedents and consequences. As reviewed earlier, it is obvious that perceived price, perceived quality, and perceived value significantly influence behavioral intentions, and accordingly, it is anticipated that this group of variables considerably influences or is interconnected with price fairness. Trust and reputation could be also considered as predictors of price fairness (Campbell, 1999a; Xia, et al., 2004).

Further, a review of the moderating effect of price familiarity on the price fairness model is recommended. Depending to the degree of familiarity with a pricing mechanism (e.g. yield management), individuals would be expected to show different levels of psychological reaction and fairness perception. Thus, individuals' price familiarity could be related to their perceptions of price fairness, thus future research should measure respondents' frequency of flights or knowledge of pricing practices in tourism.

Although the current study demonstrated that price fairness is unidimensional, research on other dimensions of the concept is also suggested. For example, as Xia et al. (2004) proposed, affective fairness could be considered as distinct to a concept of negative emotional responses. Since the concept is in its infancy, an exploratory research (e.g. scale development) would be suggested. Additionally, alternative items for procedural fairness could be developed. As mentioned earlier, since this study adapted measurements from a limited number of previous studies, attempts to develop reliable scales are recommend.

Finally, it is most likely understandable to argue that there are some differences in price fairness between diverse cultural contexts. For instance, it has been found that in some cultures, people are more likely to blame others for failures, but in some cultures, they tend to blame other external factors (e.g. fate or luck) for failures (Kelley, 1973; Maxwell, 1999, 2008; Suh & Hess, 1996). Therefore, the revised model in this study is suggested to be applied in other cultures (i.e. Europe or Asia).

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APPENDIX A

PILOT SURVEY QUESTIONNAIRE

SURVEY QUESTIONS

1. How many times have you attended college football game for this season?
   1) Never (=> drop the survey)
   2) Once
   3) 2 ~ 3 times
   4) 4 ~ 5 times
   5) 6 ~ 7 times
   6) More than 7 times

Please think about the recent college football game which you've been to. All of the following questions will be asked about the game you recently attended.

2. Before attending the game, how much had you expected the single game ticket price would be? *(Please adjust the slider)*

0	10	20	30	40	50	60	70	80	90	100

3. Approximately, how much did you pay the game ticket? *(Please adjust the slider)*

0	10	20	30	40	50	60	70	80	90	100

SECTION A: Cognitive attribution

The following table shows the Aggie Football Ticket Prices ('05 ~ '09).

	2005	2006	2007
Season ticket (only football)	$187.5	$187.5	$199.5
vs. Texas	$42.5	$45.0	$50.0
vs. Oklahoma State	$27.5	$35.0	$40.0
vs. Baylor	$30.0	$35.0	$35.0

The items below concern your opinions of the reason(s) for the ticket price changes over the years.

Please mark only one for each of the following questions.

1. Do you think the reason(s) for the ticket price changes is something intended by the University or not?

Unintended	1	2	3	4	5	6	7	Intended

2. Do you think the reason(s) for the ticket price changes is something the University had control over or not?

Uncontrollable	1	2	3	4	5	6	7	Controllable

3. To what extent do you think there are actions the University could take but has not to keep the price unchanged?

Nothing the University could do	1	2	3	4	5	6	7	Definitely are actions

4. Do you think the reason(s) for the ticket price changes is something that is fairly temporary and unusual, or is it something that almost always takes place?

Temporary/ Unusual	1	2	3	4	5	6	7	Always/Usual

5. Do you think the reason(s) for the ticket price changes is something that is from outside or inside of the University?

Outside	1	2	3	4	5	6	7	Inside

6. Do you think the reason(s) for the ticket price changes is something that is variable or stable over time?

Variable over time	1	2	3	4	5	6	7	Stable over time

7. Do you think the reason(s) for the ticket price changes is something for which no one is responsible?

No one is responsible	1	2	3	4	5	6	7	Someone is responsible

SECTION B: Emotional response

The following questions concern your emotional response to the reason(s) for the football ticket price changes.
Please circle only one number for each of the following questions.

	Not at all		Neutral		Very much
8. How important was it to you that you pay a fair price?	1	2	3	4	5
9. How angry were you at the University for ticket price changes?	1	2	3	4	5
10. How disappointed were you that the University changed the ticket price?	1	2	3	4	5
11. How much distress did you feel that the University changed the price?	1	2	3	4	5

SECTION C: Distributive price fairness

The following statements concern your opinion about the football ticket price changes.

Please circle only one number for each of the following questions.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
12. The price changes were clearly understandable	1	2	3	4	5
13. All fans were treated equally by the University's pricing policy	1	2	3	4	5
14. I think the price changes were based on cost	1	2	3	4	5
15. The price changes were independent of fans' needs	1	2	3	4	5
16. The price changes were acceptable	1	2	3	4	5
17. The price changes were fair	1	2	3	4	5

SECTION D: Procedural price fairness

Please read the following statements.

Please circle only one number for each of the following questions.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
18. The University's pricing decision processes were fair	1	2	3	4	5
19. The University's pricing decision processes were reasonable	1	2	3	4	5
20. The University's pricing decision processes were acceptable	1	2	3	4	5

SECTION E: Satisfaction

The following statements concern the products/services that you may have experienced at the very recent game.

Please circle only one number for each of the following questions.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. The stadium was painted in attractive colors.	1	2	3	4	5
22. The stadium's architecture gave it an attractive character.	1	2	3	4	5
23. The stadium was decorated in an attractive fashion.	1	2	3	4	5
24. The scoreboards were entertaining to watch.	1	2	3	4	5
25. The scoreboards added excitement to the game.	1	2	3	4	5
26. The stadium provided interesting statistics.	1	2	3	4	5
27. The stadium had high quality scoreboards.	1	2	3	4	5
28. Signs at the stadium helped you know where you are going.	1	2	3	4	5
29. Signs at the stadium gave clear directions of where things are located.	1	2	3	4	5
30. The stadium layout made it easy to get to your seat.	1	2	3	4	5
31. The stadium layout made it easy to get to the restrooms.	1	2	3	4	5
32. The opposing team was a high quality team.	1	2	3	4	5
33. The opposing team had a good history.	1	2	3	4	5

34. The opposing team had good win/loss records.	1	2	3	4	5
35. Your team's players performed well-executed plays.	1	2	3	4	5
36. Players on your team have superior skills.	1	2	3	4	5
37. Your team gives 100% every game.	1	2	3	4	5
38. Players on your team always try to do their best.	1	2	3	4	5
39. You could rely on the employees at the stadium being friendly.	1	2	3	4	5
40. The attitude of the employees at the stadium demonstrated their willingness to help attendees.	1	2	3	4	5
41. You could rely on the stadium employees taking actions to address your needs.	1	2	3	4	5

SECTION F: Behavioral intentions

The following statements concern your intentions to go to another game in the future.

Please circle only one number for each of the following questions.

	Very low	**low**	**Neutral**	**high**	**Very high**
42. The probability that I keep attending college football game is	1	2	3	4	5
43. The probability that I will complain to the University regarding the price changes is	1	2	3	4	5
44. If you were going to attend another college sport game, the probability of attending a football game is	1	2	3	4	5

SECTION G: Information about Yourself

The following information will be kept confidential.

1. Are you? _____ Male _____ Female

2. Are you? (*Please check one*)
   ____ Freshman ____ Sophomore ____ Junior ____ Senior ____ Others

3. Age? _____ years-old

APPENDIX B

FINAL SURVEY QUESTIONNAIRE

SCREENERS

1. Have you taken any **U.S. domestic flights** in the past **12 months** (since March 2009) for **leisure** travel?
   1) Yes
   2) Never (=> Drop the survey)

IF YOU HAVE NOT TAKEN ANY U.S. DOMESTIC FLIGHTS IN THE PAST 12 MONTHS, PLEASE DISREGARD THIS SURVEY.

THANK YOU FOR YOUR WILLINGNESS TO HELP!

SECTION: Price sensitivity

2. If YES, which of the following airlines did you use when traveling on your most recent trip for leisure purposes? (please check only one airline)
   1) ~ 20) *(list of major U.S domestic airlines)*
   21) Other U.S. Airline (Please specify :_____)

Please mark only one for each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3. I usually buy airline tickets when they are on sale.	1	2	3	4	5
4. I try to buy the lowest priced airline tickets that will suit my needs.	1	2	3	4	5
5. When it comes to buying airline tickets for me, I rely heavily on price.	1	2	3	4	5

6. How many times, on average, do you take U.S. domestic flights per year (per round trip, both for leisure and business travel)?

   _____

SECTION: Price comparison

The below questions ONLY concern your <u>most recent U.S. domestic leisure flight</u>.

In this section, we would like to know about the fees (i.e., checked baggage fees, booking fees, meals/beverage on board…) you paid.

The fees I paid were…	**Extremely less**	**Slightly less**	**Same**	**Slightly more**	**Extremely more**
1. (_____) than what I paid for my previous flights.	1	2	3	4	5
2. (_____) than other passengers on the flight.	1	2	3	4	5
3. (_____) than the fees of other competitive airlines toward the same destination.	1	2	3	4	5
4. (_____) than what I thought it would be appropriate prices.	1	2	3	4	5

*In this section, we would like to know about how much you paid for your airfare (**NOT including additional fees**)*

The Airfare I paid was…	**Extremely less**	**Slightly less**	**Same**	**Slightly more**	**Extremely more**
5. (_____) than what I paid for my previous flights.	1	2	3	4	5
6. (_____) than other passengers on the flight.	1	2	3	4	5
7. (_____) than airfares of other competitive airlines toward the same destination.	1	2	3	4	5
8. (_____) than what I thought it would be appropriate prices.	1	2	3	4	5

PART I

SECTION: Cognitive attribution

Please think about the reason(s) for the airfare changes or extra fees you experienced on most recent trip. The below questions concern your opinion of these causes for the price changes. *Please mark only one number for each of the following questions.*

Is the cause(s) of price changes something:

That reflects an aspect of the airlines	1	2	3	4	5	6	7	That reflects an aspect of the situation
Inside the airlines	1	2	3	4	5	6	7	Outside the airlines
Something about the airlines	1	2	3	4	5	6	7	Something about other situations
Permanent	1	2	3	4	5	6	7	Temporary
Stable over time	1	2	3	4	5	6	7	Variable over time
Unchangeable	1	2	3	4	5	6	7	Changeable
Controllable by the airlines	1	2	3	4	5	6	7	Uncontrollable by the airlines
Intended by the airlines	1	2	3	4	5	6	7	Unintended by the airlines
For which someone is responsible	1	2	3	4	5	6	7	For which no one is responsible

SECTION: Emotional response

The below questions concern your emotional response to the airfare changes and/or extra fees you have experienced.

	Not at all		Neutral		Very much
1. How angry were you at the company for the price changes?	1	2	3	4	5
2. How disappointed were you that the company changed the price?	1	2	3	4	5
3. How much distress did you feel because the company changed the price?	1	2	3	4	5

SECTION: Price fairness

The below statements concern your opinion about the airfares and/or fees changes.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The price changes were clearly understandable	1	2	3	4	5
2. The price changes were acceptable	1	2	3	4	5
3. The price changes were fair	1	2	3	4	5
4. All passengers were treated equally by the airline's pricing policy	1	2	3	4	5
5. I think the price changes were based on cost	1	2	3	4	5
6. The airline's pricing decision processes and procedures were fair	1	2	3	4	5
7. The airline's pricing decision processes and procedures were reasonable	1	2	3	4	5
8. The airline's pricing decision processes and procedures were acceptable	1	2	3	4	5

SECTION: Behavioral intentions

The below statements concern <u>your behaviors and intended behaviors after the most recent flight trip</u>.

	Very unlikely	unlikely	Neutral	likely	Very likely
1. I will say positive things about the airline to other people.	1	2	3	4	5
2. I will recommend the airline to someone who seeks my advice.	1	2	3	4	5
3. I will encourage friends and relatives to use the airline.	1	2	3	4	5
4. I will consider the airline my first choice to take future leisure flights.	1	2	3	4	5
5. I will use the airline more in the next few years.	1	2	3	4	5
6. I am willing to continue to use the airline if its prices increase somewhat.	1	2	3	4	5
7. I am willing to pay a higher price than competitors charge for the benefits I will receive from the airline.	1	2	3	4	5
8. I will complain to other customers about the airfares and/or extra fees from my most recent trip.	1	2	3	4	5
9. I will complain the airfares and/or extra fees from my most recent trip to external agencies, such as the Better Business Bureau.	1	2	3	4	5
10. I will complain about the airfares and/or extra fees from my most recent trip to the airlines' employees.	1	2	3	4	5
11. I will switch to other competitors because of the price changes on the most recent trip with the airline.	1	2	3	4	5
12. I will use the airlines less in the next few years.	1	2	3	4	5
13. I will use other competitors that offer better prices.	1	2	3	4	5

14. I will report the airfares and/or extra fees from my most recent trip to the media.	1	2	3	4	5
15. I will report the airfares and/or extra fees from my most recent trip to legal and regulatory agencies (e.g., Federal Aviation Administration).	1	2	3	4	5

PART II

SECTION: Experiences

The below statements concern your experiences on your most recent flight trip.

	Strongly Disagree		Neutral		Strongly Agree
1. The flight was a good buy.	1	2	3	4	5
2. The flight was worth the money.	1	2	3	4	5
3. The flight was fairly priced.	1	2	3	4	5
4. The flight was reasonably priced.	1	2	3	4	5
5. The flight was economical.	1	2	3	4	5
6. The flight appeared to be a good bargain.	1	2	3	4	5
7. The flight was easy to buy.	1	2	3	4	5
8. The flight required little energy to purchase.	1	2	3	4	5
9. The flight was easy to shop for.	1	2	3	4	5
10. The flight required little effort to buy.	1	2	3	4	5
11. The flight was easily bought.	1	2	3	4	5

	Strongly Disagree		Neutral		Strongly Agree
1. The flight was outstanding quality.	1	2	3	4	5
2. The flight was very reliable.	1	2	3	4	5
3. The flight was very dependable.	1	2	3	4	5
4. The flight was very consistent.	1	2	3	4	5

The below statements concern the services on your most recent flight trip.

Please rate the following services for your most recent leisure flight.	Very Poor		Neutral		Very Good	N/A
1. Comfort and cleanness of seat	1	2	3	4	5	N/A
2. Food and beverage on-board	1	2	3	4	5	N/A
3. On-board entertainment	1	2	3	4	5	N/A
4. Appearance of crew	1	2	3	4	5	N/A
5. Professional skill of crew	1	2	3	4	5	N/A
6. Timeliness	1	2	3	4	5	N/A
7. Safety	1	2	3	4	5	N/A
8. Courtesy of crew	1	2	3	4	5	N/A
9. Responsiveness of crew	1	2	3	4	5	N/A
10. Actively providing service	1	2	3	4	5	N/A
11. Convenient departure and arrival time	1	2	3	4	5	N/A
12. Crew's language skill	1	2	3	4	5	N/A
13. Convenient ticketing (check-in) process	1	2	3	4	5	N/A
14. Customer complaints handling	1	2	3	4	5	N/A
15. Extended travel service	1	2	3	4	5	N/A

	Strongly Disagree		Neutral		Strongly Agree
1. The flight made me feel good.	1	2	3	4	5
2. The flight gave me pleasure.	1	2	3	4	5
3. The flight gave me a sense of joy.	1	2	3	4	5
4. The flight made me feel delighted.	1	2	3	4	5
5. The flight gave me happiness.	1	2	3	4	5

	Strongly Disagree		Neutral		Strongly Agree
1. The flight has good reputation.	1	2	3	4	5
2. The flight is well respected.	1	2	3	4	5
3. The flight is well thought of.	1	2	3	4	5
4. The flight has status.	1	2	3	4	5
5. The flight is reputable.	1	2	3	4	5

	Very low	Low	Neutral	High	Very high
1. Overall, the value of the most recent flight to me was (_____).	1	2	3	4	5
2. Compared to what I had to give up, the overall ability of the airline to satisfy my wants and needs was (_____).	1	2	3	4	5
3. My most recent flight was (_____) value-for-money flight.	1	2	3	4	5

	Very low	Low	Neutral	High	Very high
1. Despite the price changes, the probability that I keep using the airline is (_____).	1	2	3	4	5
2. The probability that I will complain to the airline company regarding the price changes is (_____).	1	2	3	4	5
3. If I am going to take another flight in the near future, the probability of using the same airline is (_____).	1	2	3	4	5
4. The likelihood that I would consider re-purchasing the airline in which I experienced the price changes is (_____).	1	2	3	4	5

	Strongly Disagree		Neutral		Strongly Agree
1. My choice to use the airline was a wise one.	1	2	3	4	5
2. I think that I did the right thing when I used the airline.	1	2	3	4	5
3. I was satisfied with my decision to use the airline.	1	2	3	4	5
4. High expectations were met.	1	2	3	4	5
5. The airline delivered satisfaction well.	1	2	3	4	5
6. Overall, I was satisfied with my most recent flight.	1	2	3	4	5

SECTION: Information about Yourself

The following information will be kept confidential.

1. Are you? _____ Male _____ Female

2. What year were you born? 19___

3. How many years of education have you completed? (*Please circle one*)

6 7 8 9	10 11 12	13 14 15 16	17 18 19 20 21 22
	High School	Technical College	Master's Doctorate

4. What was the approximate total pre-tax income for your entire household last year? (*Please check one*)

_____ $0 - $24,999 _____ $25,000 - $34,999 _____ $35,000 - $49,999
_____ $50,000 - $74,999 _____ $75,000 - $99,999
_____ $100,000 and more _____ Prefer not to say

5. What is your race or ethnicity as reported on the U.S. Census? (*Please check one*)
_____ Black or African-American _____ Asian/Pacific Islander
_____ White _____ Native American/American Indian
_____ Hispanic/Latino _____ Other ( )
_____ Prefer not to say

6. What is your home zip code? ___ ___ ___ ___ ___

APPENDIX C

INFORMATION SHEET

INFORMATION SHEET
The antecedents and consequences of price fairness in tourism

Thank you for participating in the study of "The antecedents and consequences of price fairness in tourism". The purpose of this study is to examine what you think about price changes or extra charges in flight trips. This study will involve domestic flight passengers who travelled in the past 12 months, who are over 18 years old and volunteer to complete this survey.

This study is confidential in that no identifiers linking you to the study will be included in any sort of report that might be published. If you agree to be in this study, you will be asked to fill out the questionnaire, which will take approximately 15minutes. All your responses will be used only for the purpose of the study. You understand that your participation in this study is very important.

Your decision whether or not to participate will not affect your current or future relations with Texas A&M University. If you decide to participate, you are free to refuse to answer any of the questions that may make you uncomfortable. You can withdraw at any time without your relations with the university, job, benefits, etc…, being affected.

This research study has been reviewed by the Human Subjects' Protection Program and/or the Institutional Review Board at Texas A&M University. For research-related problems or questions regarding your rights as a research participant, you can contact these offices at (979)458-4067 or irb@tamu.edu.

Responding to this survey, you acknowledge that you understand the following: your participation is voluntary; you can elect to withdraw at any time; there are no positive or negative benefits from responding to this survey; the researcher has you consent to publish materials obtained from this research.

If you have further questions, you can contact Dr. James Petrick, Department of Recreation, Park, and Tourism Sciences at (979)845-8806, jpetrick@tamu.edu, or Jin Y. Chung at (979)845-6538, jy0914@tamu.edu. By clicking on the button below you confirm that you have read and understood the information provided above and that you agree to participate in this survey.

I have read and understood the information provided above and I agree to participate in this survey

APPENDIX D

ONLINE SURVEY INVITATION (e-mail)

Hello ZoomPanel Member,

Share your opinions and reap the rewards!

There's a new survey in progress and we'd like you to participate. Your opinions matter and they determine how our clients develop and improve their products and services.
-- Receive ZoomPoints if you complete the survey

Take this survey today and get closer to your next reward!
http://deploy.ztelligence.com/start/index.jsp?PIN=15WQTMXK8KJ6Y

Sincerely,
Christina Parker
ZoomPanel Member Support
ZOOMPANEL INFORMATION
Some ISP's & Email Programs use Spam filtering software (e.g. Earthlink, AOL, Outlook). Please be sure to enter survey@zoompanel.com in your address book to ensure you continue receiving ZoomPanel online surveys. Learn more.

This is a ZoomPanel mailing.
If you no longer wish to be a ZoomPanel member, click here.
Please allow 48 hours for your request to be processed.
ZoomPanel
150 Spear Street, #600
San Francisco, CA 94105-1535

APPENDIX E

FINAL ONLINE SURVEY

2

* If YES, which of the following airlines did you use when traveling on your most recent trip for leisure purposes? (please check only one airline)

- American Airlines
- Continental Airlines
- Delta Air Lines
- Northwest Airlines
- United Airlines
- US Airways
- AirTran
- Alaska Air
- Allegiant
- ExpressJet
- Frontier Airlines
- Go
- Hawaiian
- JetBlue
- Midwest
- Southwest Airlines
- Spirit
- Sun Country
- Virgin America
- Other, please specify

Questions marked with an asterisk (*) are mandatory.

The below questions are about your behavior of leisure flight trip.

3 *** Please select the appropriate answer for each statement.**

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
I usually buy airline tickets when they are on sale.	1	2	3	4	5
I try to buy the lowest priced airline tickets that will suit my needs.	1	2	3	4	5
When it comes to buying airline tickets for me, I rely heavily on price.	1	2	3	4	5

4 * How many times, on average, do you take U.S. domestic flights per year (per round trip, for leisure travel)?

SUBMIT

After this, all questions in this survey ONLY concern <u>your most recent U.S. domestic leisure flight</u>.

5

* In this section, we would like to know about **<u>the fees</u> (i.e., checked baggage fees, booking fees, meals/beverage on board...)** you paid.

	1 Extremely less	2 Slightly less	3 Same	4 Slightly more	5 Extremely more
The fees I paid were (_____) than what I paid for my previous flights.	1	2	3	4	5
The fees I paid were (_____) than other passengers on the flight.	1	2	3	4	5
The fees I paid were (_____) than the fees of other competitive airlines toward the same destination.	1	2	3	4	5
The fees I paid were (_____) than what I thought it would be appropriate prices.	1	2	3	4	5

6

* In this section, we would like to know about how much you paid for **<u>your airfare</u> (NOT including additional fees)**.

1 Extremely less	2 Slightly less	3 Same	4 Slightly more	5 Extremely more
The Airfare I paid was (_____) than what I paid for my previous flights.				
1	2	3	4	5
The Airfare I paid was (_____) than other passengers on the flight.				
1	2	3	4	5
The Airfare I paid was (_____) than the airfares of other competitive airlines toward the same destination.				
1	2	3	4	5
The Airfare I paid was (_____) than what I thought it would be appropriate prices.				
1	2	3	4	5

SUBMIT

Please think about the reason(s) for the airfare changes or extra fees you experienced on most recent trip.

<u>What caused the flight to change the airfare or charge extra fees?</u>

The below questions concern your opinion of these causes for the price changes. Please select the appropriate answer from 1 to 7 for the space in each statement.

7

* The cause(s) of price changes is something _____.

inside the airlines	<<---	<---	---	--->	--->>	outside the airlines
1	2	3	4	5	6	7

8

* The cause(s) of price changes is something about _____

the airlines	<<---	<---	---	--->	--->>	other situations
1	2	3	4	5	6	7

9

* The cause(s) of price changes is something that reflects an aspect of _____.

the airlines	<<---	<---	---	--->	--->>	the situation
1	2	3	4	5	6	7

10

* The cause(s) of price changes is something _____.

permanent	<<---	<---	---	--->	--->>	temporary
1	2	3	4	5	6	7

11

* The cause(s) of price changes is something _____.

stable over time	<<---	<---	---	--->	--->>	variable over time
1	2	3	4	5	6	7

12

* The cause(s) of price changes is something _____.

unchangeable	<<---	<---	---	--->	--->>	changeable
1	2	3	4	5	6	7

13

* The cause(s) of price changes is something _____.

controllable by the airlines	<<---	<---	---	--->	--->>	uncontrollable by the airlines
1	2	3	4	5	6	7

14

* The cause(s) of price changes is something _____.

intended by the airlines	<<---	<---	---	--->	--->>	unintended by the airlines
1	2	3	4	5	6	7

15

* The cause(s) of price changes is something for which _____.

someone is responsible	<<---	<---	---	--->	--->>	no one is responsible
1	2	3	4	5	6	7

SUBMIT

The below questions concern your emotional response to the airfare changes and/or extra fees you have experienced.

Please select the appropriate answer.

16

* How did the airfare changes or extra fees make you feel?

Negative	<---	Neutral	--->	Positive
1	2	3	4	5

17

* How did the airfare changes or extra fees make you feel?

Annoyed	<---	Neutral	--->	Pleased
1	2	3	4	5

18

* How did the airfare changes or extra fees make you feel?

Unhappy	<---	Neutral	--->	Happy
1	2	3	4	5

19 * How angry were you at the company for the airfare changes or extra fees?

Not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

20 * How disappointed were you that the company changed the airfare or charged extra fees?

Not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

21 * How much distress did you feel because the company changed the airfare or charged extra fees?

Not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

SUBMIT

The below statements concern your opinion about the price (airfares and/or fees) changes.

22 *** Please select the appropriate answer for each statement.**

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
The price changes were clearly understandable.	1	2	3	4	5
The airline's pricing decision processes and procedures were fair.	1	2	3	4	5
I think the price changes were based on cost.	1	2	3	4	5
The price changes were fair.	1	2	3	4	5
The airline's pricing decision processes and procedures were reasonable.	1	2	3	4	5
The price changes were acceptable.	1	2	3	4	5
The airline's pricing decision processes and procedures were acceptable.	1	2	3	4	5
All passengers were treated equally by the airline's pricing policy.	1	2	3	4	5

SUBMIT

The below statements concern <u>your behaviors and intended behaviors after the most recent flight trip.</u>

23

*** Please select the appropriate answer for each statement.**

	1 Very unlikely	2 Unlikely	3 Neutral	4 Likely	5 Very likely
I will say (said) positive things about the airline to other people.	1	2	3	4	5
I will recommend (recommended) the airline to someone who seeks my advice.	1	2	3	4	5
I will encourage (encouraged) friends and relatives to use the airline.	1	2	3	4	5
I will consider the airline my first choice to take future leisure flights.	1	2	3	4	5
I will use the airline more in the next few years.	1	2	3	4	5

24

*** Please select the appropriate answer for each statement.**

	1 Very unlikely	2 Unlikely	3 Neutral	4 Likely	5 Very likely
I am willing to continue to use the airline if its prices increase somewhat.	1	2	3	4	5
I am willing to pay a higher price than competitors charge for the benefits I will receive from the airline.	1	2	3	4	5
I will complain (complained) to other customers about the airfares and/or extra fees from my most recent trip.	1	2	3	4	5
I will complain (complained) the airfares and/or extra fees from my most recent trip to external agencies, such as the Better Business Bureau.	1	2	3	4	5
I will complain (complained) about the airfares and/or extra fees from my most recent trip to the airlines' employees.	1	2	3	4	5

25

*** Please select the appropriate answer for each statement.**

	1 Very unlikely	2 Unlikely	3 Neutral	4 Likely	5 Very likely
I will switch to other competitors because of the price changes on the most recent trip with the airline.	1	2	3	4	5
I will use the airlines less in the next few years.	1	2	3	4	5
I will use other competitors that offer better prices.	1	2	3	4	5
I will report (reported) the airfares and/or extra fees from my most recent trip to the media.	1	2	3	4	5
I will report (reported) the airfares and/or extra fees from my most recent trip to legal and regulatory agencies (e.g., Federal Aviation Administration).	1	2	3	4	5

SUBMIT

The following information will be kept confidential.

33 * Are you?

- Male
- Female

34 * What year were you born? (YYYY)

35 How many years of education have you completed?

36 * What was the approximate total pre-tax income for your entire household last year?

- $0 - $24,999
- $25,000 - $34,999
- $35,000 - $49,999
- $50,000 - $74,999
- $75,000 - $99,999
- $100,000 and more
- Prefer not to say

37 What is your race or ethnicity as reported on the U.S. Census?

- Black or African-American
- Asian/Pacific Islander
- White
- Native American/American Indian
- Hispanic/Latino
- Prefer not to say
- Other, please specify

38 What is your home zip code?

SUBMIT

APPENDIX F

MEASUREMENT SCALES

Concept	Research	Measurement scales
Satisfaction	Crosby and Stephens (1987) * Bipolar scale	• dissatisfied/satisfied • displeased/pleased • unfavorable/favorable • negative/positive
	Petrick and Backman (2002) * Adapted from Spreng, Mackenzie, and Olshavsky (1996)	• Very dissatisfied ↔ Very satisfied • Very displeased ↔ Very pleased • Frustrated ↔ Contented • Terrible ↔ Delighted
	Lee, Petrick, and Crompton (2007) *Adapted from Oliver (1997) and Westbrook and Oliver (1991)	• My choice to use ( ) was a wise one. • I think that I did the right thing when I used ( ). • I am satisfied with my decision to use ( ). • High expectations were met. • ( ) delivered satisfaction well.
	Petrick et al. (2001) Petrick (2004b) Petrick and Backman (2002)	• Thinking just about each of the following attributes, how satisfied were you with it? (e.g. airfare, onboard service, on time departure…) • How satisfied were you with overall experience?
	Petrick (2004a, 2004b)	• Overall, were you satisfied with the experience?

	Herrmann, Xia, Monroe, and Huber (2007)	• I am satisfied with… (e.g. attributes of service or product) • I am satisfied with… (e.g. overall purchase). • There is no reason to complain.
Behavioral intention	Petrick and Backman (2002) * Adapted from Grewal, Monroe, and Krishnan (1998)	• Despite the price change, the probability that I keep using ( ) is… • The probability that I will complain to ( ) regarding the price changes is… • If you were going to take another flight, the probability of using ( ) is… • The likelihood that you would consider re-purchasing ( ) in which you have experienced the price changes is…
Perceived value	Petrick (2004a, 2004b) * Adapted from Gale (1994)	• Extremely poor value ↔ Extremely good value
	Cronin, Brady, and Hult (2000)	• Overall, the value of the flight trip to me was (_____). • Compared to what I had to give up, the overall ability of the airlines to satisfy my wants and needs was (_____).
Price perception (Perceived monetary price)	Petrick (2002), Petrick (2004a, 2004b), Lee et al. (2007) *SERVPERVAL	• ( ) is a good buy. • ( ) is worth the money. • ( ) is fairly priced. • ( ) is reasonably priced. • ( ) is economical. • ( ) appears to be a good bargain

Price perception (Behavioral price)	Petrick (2002), Petrick (2004a, 2004b), Lee et al. (2007) *SERVPERVAL	• ( ) is easy to buy. • ( ) required little energy to purchase. • ( ) is easy to shop for. • ( ) required little effort to buy. • ( ) is easily bought.
Perceived quality	Petrick (2002), Petrick (2004a, 2004b), Lee et al. (2007) *SERVPERVAL	• ( ) is outstanding quality. • ( ) is very reliable. • ( ) is very dependable. • ( ) is very consistent.
	Tasur, Chang, and Yen (2002) *Adapted from SERVQUAL (Parasuraman et al. 1985a, 1985b)	• 15 items under 5 dimensions: tangibility, reliability, responsiveness, assurance, empathy
	Gilbert and Wong (2003) *Adapted from SERVQUAL (Parasuraman et al. 1985a, 1985b)	• 26 items under 6 dimensions: reliability, assurance, facilities, employees, flight patterns, customization, and responsiveness.
Reputation	Petrick (2002), Petrick (2004a, 2004b), Lee et al. (2007) *SERVPERVAL	• ( ) has good reputation. • ( ) is well respected. • ( ) is well thought of. • ( ) has status. • ( ) is reputable.

Emotional response to the services	Petrick (2002), Petrick (2004a, 2004b), Lee et al. (2007) *SERVPERVAL	• ( ) makes me feel good. • ( ) gives me pleasure. • ( ) gives me a sense of joy. • ( ) makes me feel delighted. • ( ) gives me happiness.

APPENDIX G

MODIFICATION INDICES FOR THE INITIAL MODEL

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

	M.I.	Par Change
err33 <--> WTP!	6.578	.044
err32 <--> WTP!	42.989	-.203
err32 <--> LOY!	5.698	.065
err32 <--> FEE!	6.649	.084
err32 <--> EMO!	13.854	.140
err32 <--> err33	7.241	-.072
err27 <--> REV!	22.588	-.069
err27 <--> LOY!	4.600	-.053
rr27 <--> EMO!	10.257	.109
err27 <--> err32	35.239	.256
err29 <--> REV!	6.430	-.027
err29 <--> EMO!	7.120	.069
err29 <--> err27	9.836	.091
err34 <--> err33	5.556	.029
err34 <--> err32	24.051	-.129
err34 <--> err27	30.421	-.131
err34 <--> err29	8.092	-.051
err31 <--> REV!	8.634	-.047
err31 <--> WTP!	15.937	-.124
err31 <--> FEE!	9.433	.100
err31 <--> EMO!	9.139	.115
err31 <--> err33	7.537	-.073
err31 <--> err32	115.478	.516
err31 <--> err27	22.689	.207
err31 <--> err29	4.819	.072
err31 <--> err34	15.530	-.104
err30 <--> REV!	14.532	-.057
err30 <--> COM!	6.551	.083
err30 <--> WTP!	29.516	-.157
err30 <--> FEE!	11.834	.104

	M.I.	Par Change
err30 <--> EMO!	8.258	.101
err30 <--> err33	9.632	-.077
err30 <--> err32	166.621	.575
err30 <--> err27	24.410	.199
err30 <--> err34	13.473	-.090
err30 <--> err31	143.332	.536
err28 <--> REV!	19.672	.044
err28 <--> EMO!	15.346	-.094
err28 <--> err32	5.026	-.068
err28 <--> err34	33.447	.096
err28 <--> err31	8.413	-.088
err26 <--> REV!	14.747	.050
err26 <--> err33	10.077	.068
err26 <--> err32	37.991	-.237
err26 <--> err27	4.694	-.075
err25 <--> REV!	5.638	-.024
err25 <--> err32	6.653	-.078
err25 <--> err27	9.828	.086
err25 <--> err31	10.430	-.098
err25 <--> err30	16.858	-.116
err24 <--> WTP!	19.235	.098
err24 <--> LOY!	11.737	-.068
err24 <--> FEE!	7.391	-.064
err24 <--> err34	4.015	.038
err24 <--> err31	27.749	-.183
err24 <--> err30	8.258	-.092
err24 <--> err25	9.836	.068
err23 <--> COM!	4.804	.048
err23 <--> WTP!	26.756	.102
err23 <--> LOY!	7.440	-.047
err23 <--> FEE!	5.969	-.050
err23 <--> PF!	6.120	-.033
err23 <--> err33	4.512	-.036
err23 <--> err32	4.198	-.062
err23 <--> err30	7.903	-.080
err23 <--> err25	14.953	.074
err23 <--> err24	46.197	.149
err21 <--> WTP!	7.094	-.031

	M.I.	Par Change
err21 <--> LOY!	5.331	.023
err21 <--> FEE!	7.099	.033
err21 <--> err34	5.495	-.024
err21 <--> err31	5.233	.042
err21 <--> err30	6.330	.043
err21 <--> err26	4.860	-.032
err21 <--> err24	13.393	-.048
err21 <--> err23	8.969	-.034
err20 <--> WTP!	7.705	-.042
err20 <--> EMO!	4.208	-.038
err20 <--> PF!	9.771	.032
err20 <--> err27	15.283	-.084
err20 <--> err24	12.169	-.059
err20 <--> err23	11.289	-.050
err20 <--> err22	4.599	-.021
err20 <--> err21	28.151	.046
err16 <--> err34	8.263	-.051
err16 <--> err26	10.087	-.083
err16 <--> err25	6.391	.052
err16 <--> err22	4.123	-.028
err16 <--> err21	5.218	.028
err17 <--> REV!	12.149	.032
err17 <--> COM!	5.069	-.045
err17 <--> LOY!	7.743	.043
err17 <--> EMO!	8.100	.061
err17 <--> err33	4.309	.032
err17 <--> err27	4.187	-.050
err17 <--> err25	5.642	-.041
err18 <--> REV!	5.322	.027
err18 <--> LOY!	8.932	-.059
err18 <--> err30	9.379	.098
err18 <--> err26	7.301	.074
err18 <--> err25	6.228	-.054
err18 <--> err17	4.033	.039
err19 <--> REV!	9.697	-.034
err19 <--> COM!	6.069	.059
err19 <--> PF!	8.340	-.042
err19 <--> err33	4.276	-.038

			M.I.	Par Change
err19	<-->	err27	17.789	.125
err19	<-->	err25	5.243	.048
err19	<-->	err24	4.402	-.050
err19	<-->	err17	4.733	-.040
err13	<-->	LOY!	5.369	-.039
err13	<-->	FEE!	12.207	-.069
err13	<-->	err30	6.367	-.069
err13	<-->	err28	7.414	-.051
err13	<-->	err22	12.537	.045
err13	<-->	err21	14.691	-.043
err13	<-->	err16	10.491	-.064
err14	<-->	REV!	6.471	-.025
err14	<-->	LOY!	5.218	.038
err14	<-->	FEE!	17.086	.081
err14	<-->	CAU!	9.729	-.109
err14	<-->	err32	9.050	.087
err14	<-->	err27	20.740	.119
err14	<-->	err34	11.626	-.054
err14	<-->	err31	8.284	.083
err14	<-->	err30	14.166	.101
err14	<-->	err26	5.761	-.056
err14	<-->	err21	6.655	.028
err14	<-->	err16	5.145	.044
err15	<-->	CAU!	6.216	.091
err15	<-->	err27	5.724	-.065
err15	<-->	err25	7.036	-.050
err7	<-->	err21	5.818	.033
err8	<-->	err23	7.453	-.042
err8	<-->	err22	5.180	.024
err9	<-->	WTP!	4.175	.030
err9	<-->	err24	6.058	.040
err10	<-->	WTP!	5.186	-.036
err10	<-->	LOY!	4.249	.029
err10	<-->	err25	7.106	-.042
err10	<-->	err9	19.327	-.051
err11	<-->	err34	6.885	-.034
err11	<-->	err31	6.504	.060
err11	<-->	err30	4.144	.044

			M.I.	Par Change
err11	<-->	err9	4.925	.024
err12	<-->	REV!	4.885	.017
err12	<-->	err20	5.826	.027
err12	<-->	err8	5.698	-.026
err12	<-->	err10	16.160	.046
err4	<-->	PF!	4.260	.038
err4	<-->	err28	4.286	.055
err4	<-->	err15	4.145	.054
err5	<-->	REV!	5.180	.036
err5	<-->	err32	4.460	-.100
err5	<-->	err20	6.756	.061
err1	<-->	err32	5.158	.102
err1	<-->	err21	6.617	.044
err1	<-->	err15	4.367	.059
err1	<-->	err7	4.192	.068
err1	<-->	err10	4.022	-.047
err1	<-->	err4	5.223	.089
err1	<-->	err5	8.311	-.127
err2	<-->	EMO!	4.330	.065
err2	<-->	err22	5.433	.040
err2	<-->	err21	4.483	-.032
err2	<-->	err9	5.350	-.043
err2	<-->	err4	8.032	-.098
err2	<-->	err5	6.599	.100
err3	<-->	err20	5.157	-.052
err3	<-->	err15	9.025	-.088
err3	<-->	err9	4.202	.045

VITA

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