4 PRICE (UN)FAIRNESS AND ITS IMPACT ON REPURCHASE INTENTIONS IN REVENUE MANAGED MARKETS

If you were planning for a vacation in Switzerland, do call a hotel’s reservation-staff by telephone, write an email to the hotel, check their website prices and use the reservation requests forms on their website for securing hotel room-rates. Two in a three chance, you may receive four different prices, differing by over 200%, though you may have indicated, while requesting for prices across these four channels, the same date, the same type of room as preference and for the same period (Murphy, Schegg and Qui, 2006). Prices fluctuate by time, seasons, and even across consumers. You may consider such pricing very unfair. Yet, Revenue Management practices are widely prevalent in many industries. We examine the relative role of PPU in such Revenue Managed Markets.

We identify several antecedents and consequents to PPU that impact (re)purchase intentions. We propose that such price differences do cause PPU. PPU does lower repurchase intentions. However, repurchase intentions are predicted better by Service Usage Satisfaction than by PPU.

4.1 Introduction to Revenue Management

Revenue Management is practiced in a wide variety of services industries, such as airline (Smith, Leimkuhler and Darrow, 1992), car rental (Geraghty and Johnson, 1997), hotel (Hanks, Noland, and Cross, 1992) broadcasting, health care, golf, restaurant (e.g., Wirtz and Kimes, 2007; Kimes, 1994), communications (land or mobile telephony, internet access), public utilities (e.g., buses, railways, electricity), college education, software product, cinema house, fitness center, etc and at various levels of intensity.

Revenue management, a term more prevalent in services industries in lieu of the term dynamic pricing, is based on price customization, i.e. different prices for every consumer at every instance of purchase. Economists confirm that profits or revenue is
maximized only when price is customized because revenue management allows the firm to capture a larger share of the consumer surplus. In revenue management, prices are seldom based on cost\footnote{The price could be lower than marginal costs, e.g. Microsoft distributes Internet Explorer for free, losing an estimated $5 billion in the US market alone. This loss can be seen as an investment that eliminates competitors in the short run (e.g. Netscape) and reducing competition in the long-run.} but rather on differing demand at differing prices. According to Reinartz (2001), there are three degrees of price discrimination:

1. First degree price discrimination is setting a price based on what each consumer is willing to pay. Considering there are ‘n’ consumers with differing levels of willingness to pay, there will be ‘n’ different prices. It has not been cost-effective for firms to practice first degree price discrimination. However, with the advent of advanced information technologies that enhances capturing of relevant information at greatly reduced costs, first degree price discrimination may be a possibility, provided consumers accept it.

2. Second degree price discrimination is when a firm offers differing pricing options and consumers self-select based on individual willingness to pay. The primary assumption is that there exist groups of consumers with differing levels of valuations; however, the firm has no ability to identify them. Most common e.g. of second degree price discrimination is volume discounts or even volume surcharge. For e.g. BSNL Broadband services offer different packages with different prices, based on increased usage possibilities. Or consider most electric utility firms in India charge increasing rates for increasing levels of consumption.

3. Third degree price discrimination is when the firm identifies different segments within an overall market and charges prices according to willingness to pay of each segment. This is widely practiced in marketing.

Revenue Management is practiced in services industries that are characterized by (1) relatively finite capacity, (e.g. demand after all cars have been rented cannot be met), (2) perishable inventory, (e.g. an empty seat in an scheduled flight is a lost revenue), (3) micro-segmented markets (e.g. time-sensitive and price sensitive markets), (4) fluctuating demand, (e.g., evening shows in a theater are always more in demand than morning shows), (5) services can be sold in advance, (e.g. by way of reservation), (6)
low variable to fixed cost, (allows a price that is less than cost but more than marginal cost) (Wirtz, Kimes, Theng and Patterson, 2003).

4.2 Revenue Management and Perception of (Un)Fairness

In revenue managed markets, rates vary across customers (e.g. regular or rare, retail or corporate, student or otherwise, aged or young, single or bulk, etc.), time (e.g. off-season and peak-season, day or night, early or near consumption time, etc.), physical sections (e.g. in hotels, room with a view or not; in airlines, high-traffic or low-traffic sectors), gender (e.g. women have free admission rates in certain bars and discos), pricing channel (e.g. internet, brick-and-mortar agent, direct sales, etc.), within one channel (e.g. prices may vary even across websites, all other aspects remaining the same), weather\(^{34}\), etc. For instance, no longer is the product or service sold on a first-come-first-serve basis. Rather, some inventory is saved for the last-moment purchasers who are willing to pay a higher price. Since an offline management of revenue is ‘sticky’, many are also moving with great speed to exploit the internet’s capabilities, such as easier revision of posted prices, better customer information and identification\(^{35}\), etc. Consequently, online prices are more heterogeneous than offline (Brynjolfsson and Smith, 2000); and customers are wary of potential misuse of identification techniques (Iyer, Miyazaki, Grewal and Giordano, (2002). Puntoni, (2002), Huang, Chang and Chen, (2004) and Dixit, Braunsberger, Zinkhan and Pan (2005) and several others propose that whether conventional or online, revenue management techniques offer situations rife with possibilities for unfair price perceptions among consumers. Field studies of Dickson and Kalapurakal (1994) confirm this fear; consumers feel raising prices to cope with excess demand is unfair. Further, Gabarino and Slonim (2003) cautioned that practice of such techniques may lower perceptions of trust.

KKT, (1986a) argue why there are possibilities of PPU by proposing that customers are “[...] likely to adopt off-peak prices as a reference in evaluating the fairness of the price charged to peak customers. A revenue-maximizing (low) price in the off-season

\(^{34}\) The Coco-Cola company is experimenting with a concept whereby vending machines will automatically raise the price if the outside temperature rises and that offer a discount once it starts to chill (Reinartz, 2001)

\(^{35}\) Various internet-enabling technologies, such as cookies, user logins and membership, are used to identify consumers and track their purchase and/or visit histories.
may suggest that the profits achievable at the peak are unfairly high” (p 738). Or, when some consumers find out what a few other consumers paid for a product was lower than what they paid – as in the case of Amazon.com.

Attention to perils of price customization intensified in September 2000, when loyal customers of Amazon.com found out that new customers were paying a lot less for DVD Movies. Ensuing protests at various chat-forums, blogs and websites forced Amazon to withdraw the price discrimination and refund excess monies received from customers.

Feinberg, Krishna and Zhang (2002), analyzed the case of Amazon.com’s targeted promotions in a mathematical model and provided a strong case for why such strategies would fail in the long run. For one, a small set of upset consumers can derail a well-planned dynamic pricing strategy in a big way; negative word-of-mouth spreads faster than thought in the internet world and soon every one is aware. For the other, they propose that deals to switchers will be seen as betrayal by loyals and loyals respond as any betrayed would.

Yet, the experience of Amazon signals no death-knell for price customization. We see this practice rampant and continuing. Airline industries have been practicing revenue management at least for the last 15 years in the US (Wirtz and Kimes, 2007) and in India since the turn of the millennium. Does that mean consumers do not regard fluctuating and differential pricing under revenue management to be unfair? What is the PPU of consumers who are in advantageous inequity vis-à-vis disadvantaged inequity?

We now review literature in the area of Revenue Management and PPU/F to answer the questions and for a better understanding of why the practice prevails, in spite of concerns of PPU affecting sales.

4.3 Background

There are indeed very few studies with empirical evidence in the area of PPU in revenue managed markets. Earliest of the studies that investigated with some empirical proof was from Kimes (1994). The study provided some mixed results; Revenue Management was seen as more acceptable in airlines than hotel. Even within
any industry, certain rate-fencing was less acceptable than others. In the conclusion section, she hypothesized that consumers’ familiarity of the dynamic pricing system and firm’s transparency in such pricing techniques may be playing an important role in attenuating the perception of unfairness and impressed upon the industry to provide as much information to improve both firm’s transparency and pricing policy’s familiarity. We draw attention to the wordings in the foregoing sentences, especially the ones in italics. While Kimes (1994) set out to investigate the PPU, the questions to the respondents are about acceptability of prices from out of such practices. Clearly, “unacceptable” and “unfair” are different constructs and cannot be used interchangeably.

Taking a cue from Kimes (1994), the role of information (provided by the firm about pricing practices with an objective to be more transparent) was empirically tested by Choi and Mattila (2004). Much against expectations, when the actual price was compared with the last price encountered, PPU/F did not differ between presence or absence of information and interestingly there was no difference even across situations of advantaged inequity, equity and disadvantaged inequity. The reason for failure of information in moderating PPU may have been because of low trust of consumers of information from firms or familiarity with such heterogeneous rates; the authors had not manipulated levels of familiarity or trust that may have provided some clarity to the results.

The role of familiarity in accentuating perception of fairness was empirically proven in a subsequent research by Mcguire and Kimes (2006) and Wirtz and Kimes (2007).

Several other studies have investigated reasons and conditions in which RM practices may or may not be acceptable. For instance, Kimes and Wirtz (2003) investigating impact of different rate fences (both physical and non-physical) in hotel / restaurants on perception of fairness, the authors concluded that some rate fences are more acceptable than others (such as differential lunch vs. dinner pricing was more acceptable than table location pricing, etc.); similar results were obtained in an application to golf industry (Kimes and Wirtz, 2003a and to hotel industry across

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36 A physical rate fences include location, furnishings, and presence of amenities or a view. A non-physical rate fences include time of consumption, transaction characteristics, buyer characteristics and controlled availability. See also note 13 in page no: 24.
countries (Kimes and Wirtz, 2003b). Grewal, Hardesty and Iyer (2004) provided evidence to the fact that while consumers accept differences in pricing due to purchase timing tactics, they considered buyer identification techniques to price as mistrusting, unfair and consequently consumers professed low purchase intentions.

Feinberg, Krishna and Zhang (2002) propose very strict conditions in which RM may work – a world of poor information flow, or there are barriers to information exchange, or when consumers see the dynamic pricing as beneficial to all, or when the firms can explain convincingly that such pricing techniques as not having profit motive - conditions, as one can notice, are near impossible to achieve.

In conclusion, the key findings of several past studies are that (1) familiarity moderates the impact of price differences on PPU, (2) certain rate fences are acceptable while certain others not, (3) acceptance of Revenue Management as a practice differs across industries.

4.4 The Research Question

But none of the past research, in the Revenue Management area, has addressed the relative role that PPU plays on Purchase Intentions, especially Repurchase Intentions. This aspect is particularly worthy of investigation considering (1) several researchers hypothesizing dynamic pricing may be considered unfair by consumers (e.g. KKT, 1986a; Puntoni, 2002; etc.), (2) two studies providing empirical evidence: that it is indeed deemed unfair (Dickson and Kalapurakal, 1994) and worthy of no trust (Garbarino and Slonim, 2003), and (3) several studies in the non-revenue-management literature positing that PPU lowers purchase intention (e.g., Campbell, 1999; Maxwell, 2002, Carlson and Weathers, 2007) and yet Revenue Management is prevalent and successfully operational in several industries and in fact firms enjoy significant gains from it (see for e.g., Smith, Leimkuhler and Darrow, 1992, Carroll and Grimes, 1995).

One may argue that familiarity attenuates PPU. However, the consumers who endure a state of disadvantaged inequity, even when they are familiar with the pricing practices, do still consider prices to be unfair (see absolute levels of Fairness Perceptions in the study by Wirtz and Kimes, 2007). We are not surprised with such
results; what is unfair stays unfair regardless whether one is familiar with the practice or not. Closely related to the concept of price unfairness is price unacceptability; that is what is usually considered unfair may be also unacceptable (KKT, 1986a). However, over time, what is today unacceptable may become acceptable tomorrow. But what is perceived as unfair today usually stays unfair for long. Further, Feinberg, Krishna and Zhang (2002) warn that disadvantaged consumers may vociferously spread negative word of mouth. Lastly, even the few studies that have investigated the effect of revenue management practices on PPU have not investigated the consequent effect on (re)purchase intentions.

Therefore, the critical questions, both empirical and theoretical, about the relative role of PPU in revenue managed markets remain unanswered, especially among consumers who are familiar with such practices. The key question is why revenue management is so prevalent when there are possibilities of PPU and consequent negative impact on sellers. It is worthy of mention here that much of the research concerning PPF and its impact on (re)purchase intentions have been piecemeal or bivariate in approach, i.e. the variables have been tested in isolation of other critical variables; for e.g., Campbell (1999b) tests the impact of firm reputation and Wirtz and Kimes (2007) test the effect of familiarity on PPF and its consequent impact on Purchase Intentions. The critical question is what is the relative role of PPF on (re)purchase intentions when other variables, such as Perceived Price, Perceived Quality, Satisfaction, Perceived Value, etc., are tested simultaneously? Testing the relative role of PPF on repurchase intentions, along with other variables that impact repurchase intentions, gains credence as Farris, Parry and Ailawadi (1992) and Rust and Donthu (1995) have noted that piecemeal approach to testing can result in incorrect conclusions because of the misspecification that results when variables that affect a dependent variable (besides the variable of interest) are excluded. Further, Cronin, Brady and Hult (2000) opine:

“We believe that partial examinations of the simple bivariate links between any of the constructs and behavioral intentions may mask or overstate their true relationship due to omitted variable bias. In order for a more pragmatic picture of the underlying relationships that exists among these variables to emerge, an investigation of a more collective model is needed.” (p 198)
We believe, there is a strong case for testing the role of PPF in an integrated model that includes other key variables that impact (re)purchase intentions.

### 4.5 Conceptual Framework

We commence discussion by stating briefly two parsimonious integrated models of behavioral intentions: one from the pricing literature stream and another from services literature stream. Later, we amalgamate the two models in line with our study requirements and delve into deeper discussions.

![Diagram](image.png)

**Figure 8 : Monroe and Krishnan (1985) Model of Antecedents of Purchase Intentions**

The integrated model from the pricing research stream depicting the psychological steps from exposure to a price stimulus to (Re)Purchase Intention is the one conceptualized by Monroe and Krishnan (1985) (heretofore the MK Model). The model proposes that an exposure to an objective price information triggers sequential play among Perception of Price, Perceived Quality & Perceived Sacrifice and Perceived Value, which in the end influences Purchase Intention (see Figure 8). An exposure to price may conceivably be perceived as expensive, which may trigger a perception that the product or service is of high quality due to price-quality nexus. Price while influencing perceived quality may also be an indicator for Perceived Sacrifice needed to purchase a product or service. Higher the Perceived Price, higher is the Perceived Quality and hence higher the Purchase Intention. However, higher the Perceived Price, higher is the Perceived Sacrifice and hence lower is the Purchase Intention. The cognitive trade-off between Perceived Quality and Perceived Sacrifice
results in Perceived Value. The relationship between Perceived Value and Purchase Intention is straightforward.

The MK model has been further developed and integrated to explain Purchase Intentions in diverse markets such as retail stores (Dodds, Monroe and Grewal, 1991), where Brand and Store information are also seen to influence Perceived Quality. The MK model has been extensively tested also in a services environment.

The integrated model from the service research stream depicting the antecedents of behavioral intentions with significantly greater fit than other competing models is that of Cronin, Brady and Hult (2000) (see Figure 9 and heretofore the CBH Model).

The CBH model differs from the MK model in some key ways. First, the CBH model is more specific to services, hence more relevant to the subject research. Recall, Revenue Managed Markets are mostly services. Second, unlike Price Perceptions guiding consequent perceptions of sacrifice and quality in the MK model, the CBH
model commences with an assumption of a comprehensive exposure to a service (that includes exposure to price and service quality). In that sense, the model predicts repurchase intentions than mere purchase intentions. Third, unlike the MK model, perceived sacrifice is defined in the CBH model more broadly; i.e. not only does the sacrifice component include price or money but also other consumer sacrifices such as time and effort. Fourthly, the CBH model includes satisfaction predicting behavioral intentions. Fifthly and lastly, the Price / Quality nexus is broken in the CBH Model; we shall revert to this aspect momentarily.

We amalgamate the two models, incorporate recent advancement in studies related to Repurchase Intent from the Fairness Literature, Perceived Price, Perceived Quality, etc., and incorporate certain larger modification pertaining to certain unique characteristics of Revenue Managed Markets. We briefly state the conceptual framework now, draw the model and then we proceed for discussion.

Previous research that have examined the relationship between price perceptions and perceived quality have come to the conclusion that higher the price, more likely a higher perception of quality (e.g., the MK Model, Scitovszky, 1945; Rao and Monroe, 1989); and they find that such perception is not irrational, for there is indeed a natural ordering of products on a price scale at the market place and with an actual positive relationship between product or service quality and price. However, considering heterogeneity of prices in industries that practice Revenue Management, this link is likely to be weak or non-existent. For example, given that a Chennai-Mumbai ticket can be procured for any price between (say) Rs.1,000/- and Rs. 5,000/-, it is but natural that a higher price paid would have a very insignificant relationship to perceived quality. This is so since the customer experience remains the nearly the same regardless of the price paid.

The classic proposal of price-quality nexus even in the case of goods is under considerable fire from various researchers (e.g. Lichtenstein, Ridgway, and Netemeyer, 1993; Sinha and Batra, 1999) who now contend that a generalized price-quality relationship does not exist. Such lack of nexus is more likely in service (almost all Revenue Managed Markets are services) where Perceived Quality is held to be a difficult to evaluate and a multidimensional construct (Parasuraman, Zeithaml, and Berry, 1988). In any case, consumers’ product class knowledge moderates the
price-quality relationship. Consumers, who are familiar with Revenue Management practices, are least likely to harbor the notion that higher price may be an indicator of quality.

Perceived value or customer value is defined by Zeithaml (1988) as a “consumer’s overall assessment of the utility of a product or service based on perceptions of what is received and what is given.” (p 2). What is received, i.e. benefits, and what is given, i.e. sacrificed have most often been operationalized in term of the trade-off between quality (benefit) and cost (price) (e.g. Bolton and Drew, 1991; Monroe, 1990). While the impact of Price Perceptions on Perceived Value is known, recent advancements in Price Fairness Literature indicates that PPF also has an impact on Perceived Value (e.g., Bobinski, Cox and Cox, 1996; Shehryar and Hunt, 2005; Kukar-Kinney, Xia and Monroe, 2007). PPU/F is a result of a price comparison (Xia and Monroe, 2004). Compared are the actual price and the IRP (Oh and Jeong, 2004). IRP is usually the Fair Price (Thaler, 1985). Therefore, Perceived Value is impacted by (1) Perceived Price, (2) PPU/F and (3) Perceived Quality. Perceived Value has, in line with the models in Figure 8 in page 82 and Figure 9 in page 83, has known impact on Purchase Intentions. PPU/F too has known direct impact on Purchase Intentions (e.g. Campbell, 1999); we extend it to Repurchase Intentions.

Perceived Quality impacts Service Usage Satisfaction (e.g. Cronin and Taylor, 1992; Spreng and Mackoy, 1996) and also has a direct impact on Repurchase Intentions (Bolton and Drew, 1991; Fornell, Johnson, Anderson, Cha and Bryant, 1996). Service Usage Satisfaction impacts Repurchase Intentions (Homburg, Hoyer and Koschate, 2005).

We incorporate the changes to the initial models in Figure 8 (page 82) & Figure 9 (page 83) and propose the following model (Figure 10, in the next page):
The major objective of this chapter is to estimate the relative impact of PPU/F on Perceived Value and Repurchase Intentions with respect to other variables, primarily service quality and service usage satisfaction. Recall, the key question is to understand why revenue management practices are so popular with service firms, in spite of the fact that consumers find dynamic prices in revenue managed markets to be unfair. The answer lies in understanding the relative predictive power of PPU/F vis-à-vis other variables, such as perceived quality and satisfaction, on repurchase intentions.

One underlying theme in this chapter – as one may notice from the conceptualization of the research model – is that Repurchase Intentions are modeled to be a function of essentially two attributes of a service: one the quality and the other the price. Price and quality should lead to perception of value and satisfaction and which in turn leads to repurchase intentions. The standard definition of satisfaction in literature is comprehensive; it is usually a global overall measure of satisfaction; it measures not only satisfaction about what was delivered out of a service of a certain quality, but also satisfaction about price, etc.; satisfaction impacts repurchase intentions. However, the purpose is to delineate the effect of quality and price on repurchase intentions. Since the effect of price and quality on repurchase intentions is mediated by satisfaction, we are forced to depart from the standard conceptualization of
satisfaction. Instead of measuring the overall satisfaction, we measure just the service usage satisfaction arising from perceived quality at the exclusion of price satisfaction.

Such a conceptualization of satisfaction helps delineate the effect of price and quality on repurchase intentions. Therefore, to avoid construct overlaps and consequent confounds, we adopt narrower definition of the term satisfaction. We realize that the end dependent variable may have larger error variance due to omitted variable or narrow conceptualization error; however, considering the research agenda – which is to delineate and estimate the relative impact of PPU vis-à-vis service quality and service usage satisfaction – we believe that such a conceptualization is necessary.

Lastly, we wish to mention here that several of the links in the research model have been tested as a bivariate model; we cite those researches and extend a potential linkage in our multivariate, multi-linkages model. It is not necessary that what is significant in a bivariate model be significant in our model. We now review literature and build the conceptual framework as depicted in Figure 10 page 86.

4.5.1 Perceived Price, Perceived Price Unfairness and Perceived Quality as antecedents of Perceived Value

Perceived value or customer value is defined by Zeithaml (1988) as a “consumer’s overall assessment of the utility of a product or service based on perceptions of what is received and what is given” (p 3). What is received, i.e. benefits, and what is given, i.e. sacrificed have most often been operationalized in term of the trade-off between quality (benefit) and cost (price) (e.g. Bolton and Drew, 1991; Monroe, 1990).

The actual cost or price to the consumer produces two subjective evaluations: one is Price Perceptions and the other is PPU/F. Both these terms have linkages with acquisition and transaction utilities.

Thaler (1985) posits that in every transaction, there are two kinds of utilities. One is the acquisition utility and the other the transactional. Acquisition utility is the individual’s value for a product or service compared to the outlay. Most studies have operationalized acquisition utility as the difference between the reservation price and market/observed/actual prices (Bearden, Kaicker, de Borrero, and Urbany, 1992; Kalwani, Yim, Rinne and Sugita, 1990). Reservation price is the price above which
the product or service will not be purchased, or the most that one is willing to pay (Garbarino and Slonim, 2003). Transaction utility represents the value of the deal and is based on the comparison of the fair price and market/observed/actual price (Thaler, 1985).

Price Perception is the subjective evaluation of a consumer about the objective price information (Monroe and Lee, 1999). For instance price perception of a pen objectively priced at Rs. 5 may be subjectively evaluated by the consumer to be ‘cheap / expensive,’ or ‘acceptable / unacceptable’ and stored in the memory along with the objective price information. Such objective and subjective coding happens automatically and unintentionally (Monroe and Lee, 1999). The subjective evaluation of the objective price information requires a comparative referent. This referent is usually the reservation price. The consumer is likely to encode an objective price as cheap when it is lower than that maximum price that s/he is willing to pay and code it as expensive when it is above the maximum price that s/he is willing to pay. The perceived difference between reservation price and the actual price reflects the price perceptions.

\[ H1: \text{Higher the difference between Reservation Price and Actual Price lower the Price Perceptions.} \]

\[ H2: \text{Higher the Price Perceptions lower the Perceived Value.} \]

Perceived Price (Un)Fairness is the subjective evaluation after a price comparison (usually between the observed price and an IRP), as to whether the price is fair, just, reasonable etc (Campbell, 1999; Xia, Monroe, and Lee, 2004). The IRP is usually the fair price (Thaler, 1985). The perceived difference between fair price and the actual price reflects the PPF. A large positive difference between fair price and actual price will result in a situation of advantageous inequity (Adams, 1965) or gains (Kahneman and Tversky, 1979) and a large negative difference between fair price and actual price will result in a situation of disadvantageous inequity or loss. What is advantageous or a gain will be perceived as fair and what is disadvantageous or a loss will be perceived unfair.
\[ \text{H3: Higher the difference between Fair Price and Actual Price lower the Perception of Price Unfairness.} \]

\[ \text{H4: Higher the Perception of Price Unfairness lower the Perceived Value.} \]

Therefore, while perception of price drives the acquisition utility part of the perceived value, the PPU/F drives the transactional utility part of perceived value. Together, i.e. Perceived Price and PPU can be considered as the Sacrifice (a term noticed often in research literature, e.g. Athanassopoulos, 2000; Ostrom and Iacobucci, 1995; Wakefield and Barnes, 1996) that a consumer offers for enjoying a product or service.

Several past studies confirm that overall quality drives perceived value (e.g. Monroe and Krishnan, 1985; Bolton and Drew, 1991). Perceived Quality in the case of goods can be measured in an ‘objective’ manner, say by measuring durability or number of defects (Garvin, 1983). However, perceived quality, in the case of services (Revenue Managed markets are almost entirely services) has been defined and conceptualized in different ways; for instance, as the consumer’s judgment about an entity’s overall excellence or superiority (Zeithaml, 1987); or an overall evaluation of a service, similar to attitude (Olshavsky, 1985); or a global judgment, or attitude, relating to the superiority of the service or as the degree and direction of discrepancy between consumers’ perceptions (what is) and expectations (what should be) of various components of service quality measure such as safety, timeliness etc. (Parasuraman, Zeithaml and Berry, 1985). Expectations may be of two types; one is the consumer’s expectations of what will be the level of service and the other is what should be (Boulding, Staelin, Kalra and Zeithaml, 1993).

Perceived quality when conceptualized not as an attitude, but as a gap between expectations and performance may inaccurately predict consequent dependent variables such as satisfaction or purchase intention (Cronin and Taylor, 1992). In fact, marketing literature appears to offer considerable support for the superiority of simple performance based measures of service quality (Churchill and Surprenant 1982; Mazis, Ahtola, and Klippel 1975; Woodruff, Cadotte, and Jenkins 1983). Once we accept performance-based measures of service quality, one may contend that the relative importance of performance measures (adequacy-importance paradigm) may
play a role. However, Cronin and Taylor (1992) show that performance-alone measure is a better predictor of consequent dependent measures than performance weighted by a consumer's importance evaluations. Performance may be over several measures of services such as timeliness of a service delivery or safety, etc. (see Cronin and Taylor, 1992 for several and comprehensive performance measures of service quality). Clearly, for e.g., a safe flight or a safe bank, is of considerable value, i.e., perceived performance is positively associated with perceived value (Patterson and Spreng, 1997).

We draw attention to the fact that we have departed from the earlier linkages tested in several past studies, viz. between overall product / service quality and perceived value; we are testing linkages between specific service performance measures such as safety, timeliness etc. on Perceived Value. Therefore,

**H5: Higher the Perceived Quality higher the Perceived Value.**

4.5.2 Relative Impact of Price Perceptions, Perceived Price (Un)Fairness and Perceived Quality on Perceived Value

In Revenue Managed market prices are heterogeneous (Brynjolfsson and Smith, 2000). When prices are heterogeneous, consumers may pay more attention to prices, i.e. the monetary sacrifices (Xia, Monroe and Cox, 2004) or become price conscious (Sinha and Batra, 1999) or become more price sensitive (Shankar and Krishnamurthi, 1996). Consequently, consumers may engage in more searches for deals and better prices; more so the consumers who are familiar with such RM markets.

Thaler (1985) opines, though not empirically testing such an opinion, that consumers may weight transaction utility more than acquisition utility; the key equation is reproduced here below:

\[
w(z, p, p^*) = v(p, -p) + \beta v(-p, -p^*)
\]

Equation (1)

where, the value of buying good \( z \) at price \( p \) with reference \( p^* \) is defined as \( w(z, p, p^*) \).

The term \( 'p' \) is defined as the actual price charged for a good \( z \). The term \( \tilde{p} \) is defined as the value equivalent of \( z \), i.e. the amount of money which would leave the
individual indifferent between receiving $p$ or $z$ as a gift. Many studies (e.g., Garbarino and Slonim, 2003) operationalize $p$ as the reservation price or the maximum price a consumer is willing to pay for a good. The term $p^*$ is the fair or just price. The acquisition utility is defined as the value of the compounded outcome $(z, -p)$ = $(p, p)$. This is designated as $v(p, -p)$. Acquisition utility is the net utility that accrues from the trade of $p$ to obtain $z$ (which is valued at $p$); i.e., acquisition utility is the difference between reservation price and actual price. Since $v(p, -p)$ will generally be coded as the integrated outcome $v(p, -p)$, the cost of good is not treated as loss. Given the steepness of the loss function near to the reference point, it is hedonically inefficient to code costs as losses, especially for routine transactions.

Transaction utility depends upon the price the consumer pays compared to the fair or just price $p^*$. It is defined as the outcome $\beta v(p, -p^*)$, i.e. the value of paying $p$ when the fair price is $p^*$ or the difference between fair price and actual price. The differing weight for the transaction utility part of the equation $\beta v$ is to account for the differing value for a bargain. Usually, for price sensitive or conscious consumer, who hunts for good prices, such as in revenue managed markets, would have $\beta > 1$.

Over and above the differential weighting of the transaction utility, Darke and Dahl (2003) show that the mere fact that the actual price was considered fair would provide improved value to the consumer, i.e. even when there was no economic gain due to a transaction or when actual price equals the fair price.

Reservation price is likely to be around the highest observed historical prices (Garbarino and Slonim, 2003). Fair price is likely to be anchored to and adjusted by the lowest of the observed historical prices (KKT, 1986a). Seen together, reservation price is usually greater than fair price; further, fair price and actual price would be near about each other. Therefore, a lowering of acquisition utility (say due to a new actual price encountered) implies a likely a negative transaction utility, even though acquisition utility remains positive. For e.g., consider a reservation price of Rs. 5,000 for a one-way airfare between two locations and a fair price of Rs. 3,800/-; if the actual fare was say Rs. 4,000/-, acquisition utility is Rs. 1,000/- and transaction utility...
is Rs. – 200/-. Negatively valenced information is more readily accessible from memory than positively valenced information and elicits stronger consumer response (Mittal, Ross, and Baldasare, 1998). Further, if actual price is more than fair price, the resultant in transaction disutility may reduce overall utility at a faster rate considering an increased weighting of $\beta v$ and the loss function is steeper near reference base or origin. Therefore,

**H6: Perception of Price Unfairness will have stronger influence on Perceived Value than Perceived Price.**

The most appropriate conceptualization of Perceived Quality in services is in the form of attitude and not in the form of gap between expectations and performance (Cronin and Taylor, 1992). Oliver (1981) posits that attitude is the consumer’s relatively enduring affective orientation for a product, store, or process (e.g., service delivery process); it is a long-run overall evaluation (Cronin and Taylor, 1992). Experience guides formation of attitudes (Woodruff, Cadotte and Jenkins, 1983), i.e. service quality perceptions about a service provider’s organization should be based on consumer’s experience with that specific type of service organization.

Consumers familiar with revenue managed markets will have the knowledge that prices are dynamic. Further, a consumer’s experience that drives formation of quality perceptions about the core service would be regardless of the price paid in such revenue managed markets. For instance, the customer’s experience of a set of flights from a service provider or a class of similar service providers would be independent of the different prices paid for such experiences.

We contend that when there are two attributes, one stable (in this study quality, since conceptualized as an enduring attitude about specific performance measures) and the other unstable (in this study price, since as a practice in RM markets it is dynamically set), the stable attribute would have a larger voice in the dependent measures than unstable attribute. Thus enduring attitude about perceived service quality formed out of prior experiences and familiarity would impact perceived value more than changing prices that have been sacrificed.
**H7:** Perceived Quality will have stronger influence on Perceived Value than Perception of Price Unfairness.

4.5.3 Perceived Price and Perceptions of Price (Un)Fairness

Perceived price unfairness and perceived price are different constructs. What is unacceptable or expensive may be considered fair (Urbany, Madden and Dickson, 1989) and what is unfair may be considered acceptable or cheap (Franciosi, Kujal, Michelitsch, Smith and Deng 1995). However, Perceived Price has known influences on Perceptions of Price Fairness (Herrmann, Xia, Monroe and Huber, 2007). More expensive the Perceived Price, more likely the consumers will consider it as unfair. One can expect a high correlation between perception of price and PPU; i.e. what is unacceptable is usually unfair (KKT, 1986b) and vice versa. Therefore,

**H8:** Higher the Perceived Price higher the Perception of Price Unfairness.

**H9:** Higher the Perception of Price Unfairness higher the Perceived Price.

4.5.4 Perceived Quality, Perceived Price Unfairness and Perceived Value as antecedents of Service Usage Satisfaction

Satisfaction has been conceptualized both as an emotion and an evaluation. Oliver (1981) defines Satisfaction as “a summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer’s prior feelings about the consumption experience” (p 98). It is therefore, rather transaction specific, fuelled by an enduring attitude of perceived quality (Parasuraman, Zeithaml and Berry, 1988); and such disconfirmations arise from discrepancies between prior expectations and actual performance (Olshavsky and Miller, 1972), and such expectations and actual performance is in fact the perceived quality.

Satisfaction is also described as an evaluation of an emotion (Hunt, 1977) suggesting that it reflects the degree to which a consumer believes that the possession and/or use of a service evokes positive feelings (Rust and Oliver, 1994). It is a fulfillment response (Bolton and Lemon, 1999), i.e. For instance, a consumer may be delighted /
terrible, happy / sad, joyful / unhappy, surprised / flat, amazed / let down, etc. after an experience – all emotional expressions; or the consumer may agree that the use of the service was a ‘wise’ one or the ‘right’ thing – all evaluative responses; thus a multidimensional construct (Cronin, Brady and Hult, 2000).

At the first level, it comprises two dimensions: emotional responses and beliefs. At the second level, the belief component may be further sub-divided into satisfaction about the core service, price, etc. We focus on the satisfaction about the core service since the perceived quality, here, is about the core service alone.

There is considerable research evidence that overall service quality lead to improved overall satisfaction (e.g., Parasuraman, Zeithaml, and Berry, 1988; Cronin and Taylor, 1992). We extend similar logic to the relationship between Perceived Quality about the core service and Satisfaction about the service usage.

\[ H10: \text{Higher the Perceived Quality higher the Service Usage Satisfaction} \]

There are again several researches confirming perceived value as impacting overall satisfaction (e.g. Patterson and Spreng, 1997; Woodruff, 1997). However, in all such conceptualizations of perceived value, perceived sacrifice is a major contributor. That is, price paid and its consequent perceptions of sacrifice impact perceived value that in turn impacts overall satisfaction; overall satisfaction not only includes satisfaction about the service performance but also about the satisfaction related to appropriateness of price. However, in our study, we wish to exactly delineate this confound. Recall, we wish to see the relative impact of quality vs. price on repurchase intentions; overall satisfaction that includes satisfaction about the performance measures (i.e. resulting from Perceived Quality) and satisfaction about price mediates repurchase intentions and consequently we may not be able to segregate the effect of quality and price on repurchase intentions. Therefore, we have conceptualized satisfaction as that of product usage satisfaction alone (i.e. without the effect of price satisfaction). Consequently,

\[ H11: \text{Perceived Value may not significantly impact Service Usage Satisfaction} \]
PPU may also modeled as an outcome of disconfirmation with respect to expected fair price (e.g. Oliver and Swan, 1989a; Oliver and DeSarbo, 1988). That is, when a consumer expects a fair price the actual price may be lower resulting in positive inequity or higher resulting in negative inequity, or the same resulting in satisfaction. However, as discussed, the conceptualization of satisfaction is about the service usage and not from overall satisfaction that may include value satisfaction or price satisfaction. Therefore,

\[ H12: \text{Perception of Price Unfairness may not significantly impact Service Usage Satisfaction.} \]

4.5.5 Relative Impact of Perceived Quality, Perceived Price Unfairness and Perceived Value on Service Usage Satisfaction

Since we have hypothesized earlier that both Perceived Value and PPU may not impact Service Usage Satisfaction, the resulting hypotheses about the relative impact of perceived quality, perceived value and PPU is rather obvious:

\[ H13: \text{Perceived Quality will have stronger influence on Service Usage Satisfaction than Perceived Value.} \]

\[ H14: \text{Perceived Quality will have stronger influence on Service Usage Satisfaction than Perception of Price Unfairness} \]

4.5.6 Perceived Value, Service Usage Satisfaction, Perceived Quality, Price Perceptions and PPU as antecedents of Repurchase Intentions

What is perceived as valuable may stand a better chance of repurchasing than what is not. This very obvious hypothesis has been confirmed in several past studies (Bolton and Drew, 1991; Grewal, Monroe and Krishnan, 1998; Monroe and Krishnan, 1985) and we re-test it:

\[ H15: \text{Perceived Value will have a positive impact on Repurchase Intentions} \]
Similarly, Overall Satisfaction is known to impact Repurchase Intentions (Anderson and Sullivan, 1993; Swan and Oliver, 1991). We extend the same to the relationship between Service Usage Satisfaction and Repurchase Intentions.

\[ H16: \text{Service Usage Satisfaction will have a positive impact on Repurchase Intentions} \]

Perceived Quality too has known and direct impact on Repurchase Intentions, over and above its indirect impact mediated by Overall Satisfaction (Boulding, Staelin, Kalra and Zeithaml, 1993; Kordupleski, Rust and Zahorik, 1993; Zeithaml, Berry and Parasuraman, 1996). We re-test the same:

\[ H17: \text{Perceived Quality will have a direct and positive impact on Repurchase Intentions.} \]

Several studies have explored the relationships between Perceived Price and Repurchase Intentions and some show no direct effects (e.g., Oliver, 1993; Cronin, Brady, Hult, 2000). Impact of Price perception is mediated only through Perceived Value. Therefore,

\[ H18: \text{Price Perceptions will not have a direct impact on Repurchase Intentions.} \]

There are some studies that show direct impact of PPU on Purchase Intentions (e.g. Campbell, 1999a) and Repurchase Intentions (e.g., Grewal, Hardesty and Iyer, 2004). There are certain reasons why PPU may have a direct impact on Repurchase Intentions, over and above its impact through Perceived Value. Normally, one may expect a direct correspondence between what is considered unfair, valuable and purchase worthy. Recall one of the paths earlier hypothesized was that higher the Perceived Price Unfairness lower the Perceived Value and lower the perceived value lower the repurchase intentions. However, what is considered unfair price may still be considered valuable. Recall, value is operationalized purely in economic terms of cost and benefit. Therefore, what is valuable in the economic sense may be valueless in the moral sense. What is valuable in economic sense may not have override the effect on
Repurchase Intentions by what is considered as valueless in moralistic sense. Therefore,

\[ H19: \text{Perception of Price Unfairness will have a negative direct impact on Repurchase Intentions.} \]

4.5.7 Relative Impact of PPF and Service Usage Satisfaction on Repurchase Intentions

As we saw in the earlier sections, Service Usage Satisfaction was influenced by Perceived Quality. Perceived Quality is rather an enduring disposition towards the performance measures of the service such as timeliness, safety etc. As indicated earlier, these two are stable attributes and in case of services where the consumer is familiar with fluctuating prices due to the marketer practicing revenue management, the PPU is rather a transaction specific and unstable attribute. The consumer may overweight the importance of perceived quality and service usage satisfaction when compared to perceived price unfairness. Typically, the role of perceived quality and satisfaction as opposed to other variables such as perceived value or sacrifice have been stronger on repurchase intentions in other studies (Cronin, Brady and Hult, 2000). Therefore,

\[ H20: \text{Service Usage Satisfaction will have a stronger influence on Repurchase Intentions than Perceived Price Unfairness.} \]

4.6 Methodology

We chose a simple survey design procedure. Most purchase evaluations, more especially price perceptions are context specific (Kahneman and Tversky, 1979). Another meta-analytic study shows that most studies involving multiple products suffer from cross-product response heterogeneity (Oh, 2003). A similar result is also witnessed in a study by Cronin, Brady and Hult, 2000, who used six different service industries and found non-significant results in four of the industries while the combined data produced results in line with hypotheses. Therefore, only one industry, viz. air travel, is chosen. Further, the chosen industry also practices dynamic pricing policy or revenue management for quite some time in the country, is the subject of our
study in the context of familiarity. Choice of one industry may limit its generalizability but it strengthens the study’s internal reliability.

A large set of MBA students in a major Southern Indian city comprising four different business schools were approached over two phases. A number of students were expected to move to different locations in India for their summer internship as part of their MBA program or for their place of employment at the conclusion of their MBA program or were going to return home for a brief vacation before they commence their summer internship or employment. A set of circumstances and students’ behavior is interesting, important and desirable. Students can fix on the date of travel only in the second last month of the academic year ending March / April. This is so because, the end dates are usually flexible in most schools and can deviate usually by a week or so from the stated schedule. Data homogeneity is ensured in several ways: for one a large proportion of respondent-pool is known to scout the internet for best prices, is familiar of revenue management practices, usually opt for low cost airlines and time of booking from date of travel is usually the same. From the same batch of students, some may leave earlier and others later (but no more than ten days apart) depending upon what courses students have chosen; therefore, few opt for bulk-bookings.

In the first phase\(^{37}\), at the beginning of the last trimester of the MBA course (Jan / Feb) and much before any respondent could potentially book tickets for their travel a survey was undertaken regarding preferred brand, reservation price, fair price asked for the focal industry, i.e. airlines, along with a set of other products such as fitness centers, consumer electronics, music players and external flash / pen drives to mask the real focus. The first phase data collection ensured that the reservation price and fair prices are not influenced by actual prices that the students may secure in Phase – II. The reservation price was asked as “what is the MOST you would pay for a flight from _______ to _________” and were requested to fill one for their journey to home town or the nearest airport and the other for their journey to the city of summer internship or the nearest airport. Similar responses were also obtained for fair prices. Two fair prices were collected; one was a request for “what do you think is the FAIR price for a flight sector that you have mentioned above” and the other request was

\(^{37}\) The data collection commenced in Jan 2007.
“what do you think is the FAIR price that most consumers for the airlines for the same sector as above consider”. The first question was to elicit what is considered as fair by the consumer and the second is to elicit a more market based fair price (Garbarino and Slonim, 2003). The average of the two was considered as Fair Price. Lastly, with respect to the air travel, the students responded to the number of times they had traveled in the last 18 months in the stated brand or similar airlines. Lastly, respondent’s e-mail ID, age and gender was collected.

In the second phase, the students who had indicated that they had traveled at least twice by air were again contacted by e-mail with a structured questionnaire concerning recent air travel they had undertaken, mostly in the month of April. From a total of 456 questionnaires sent in second phase, 287 were received duly filled in. Thirty four responses were rejected due to inaccuracies / incompleteness in filling the questionnaire; respondents whose travel was sponsored by the employer or travel in premium class or airlines were excluded. The final sample size is 253. The 69% of the responses were male and mean age 24. The respondents were more or less equally dispersed across the three major air-sectors of nearly equal distances except for twenty five responses to other shorter or longer distances.

None of the students were compensated for participating in the study. There are several meta-analytic researches that confirm use of student population without loss of external validity in studies concerning judgment of fairness (e.g. Konow, 2003).

4.7 Measurements and Validity

LISREL 8.3 was used to analyze the structural equations resulting from the hypothesis formulated. Structural Equation Modeling was chosen primarily since most constructs were measured using multiple item scales. Also, complex relationships, both direct and indirect, as hypothesized can only be analyzed using Structural Equation Modeling.

Subjects evaluated perceived price, perceived price (un)fairness, product usage satisfaction, perceived value, perceived quality, and repurchase intentions. Scales were (except the measurement of IRPs and Actual Price) 7-point scales that were developed from previous research. Some of the scales were reversed for avoiding
measurement errors. All the items of each of the scales indicated below are listed in Annexure 3. The means and standard deviation of the scale items are in Annexure 4. The bivariate correlations are in Annexure 5.

Data was verified for their underlying assumptions of normality, skewness, kurtosis, etc, since LISREL is known to be very sensitive to departures from such assumptions. The Univariate Tests of Normality for all the items in the scale shows that the items are normally distributed (all p > .201), except for one item in the Perception of Price scale. That one item was not normal (p<0.039). Therefore, the overall multivariate normality was also not achieved. Attempts to normalize that one item was not attempted since normalization meant a serious departure from representativeness of the sample. However, we consider this departure to be not serious (we shall come back to this issue momentarily). Number of times traveled in the past, age and sex did not have any significant impact in the model and hence was dropped from the analysis. The sector of the flight and brand also did not have any effect on the variables and hence dropped from further analysis.

The psychometric properties of the six constructs were evaluated by employing the method of confirmatory factor analysis via the use of LISREL (Joreskog and Sorbom, 1993). All the six scales were tested simultaneously in one confirmatory factor model. Each scale item was only allowed to load on one factor and could not cross-load on any other factors. The specific items were evaluated based on the item’s error variance, modification index, and residual covariation (Anderson and Gerbing, 1988; Fornell and Lacker, 1981; Joreskog and Sorbom, 1993). The model fit was evaluated using the CFI, GFI, AGFI, NFI and NNFI fit indices that are recommended based on their relative stability and insensitivity to sample size (Hu and Bentler, 1999; Gerbing and Anderson, 1992). Utilizing these criteria, the Comparative Fit Index (CFI) = 1.0; Goodness of Fit Index (GFI) = 0.96; Adjusted Goodness of Fit Index (AGFI) = 0.93 and Root Mean Square Residual (RMSR) = 0.046. All such results point out to a robust measurement model. Further, Normed Fit Index (NFI) = 0.97 and Non-Normed Fit Index (NNFI) = 0.99 point out to very satisfactory results in spite of departures
from overall normality\textsuperscript{38}. Lastly, the Minimum Fit Function Chi-Squares = 74.34; \( p > 0.14 \) and Normal Theory Weighted Least Squares Chi-square = 70.82; \( p > 0.21 \).

Construct Reliability was calculated using the procedures outline by Fornell and Larcker (1981) which include the examination of the parameter estimates, their associated t-values, and assessing the average variance extracted for each construct (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988). Discriminant validity between constructs in the model was established by comparing the shared variances between constructs to the average variance extracted. Total variance extracted is 86.72\%. Each item in the scale loaded on stated and expected factor alone.

\textsuperscript{38} We also state that the problem of lack of normality of one item in the scale is not serious due to hindsight. The construct Perceived Price did not prove to be significantly related to important construct such as Repurchase Intentions. Even if was significant, e.g. with Perceived Value, it turned out to possess least of the effect sizes. We wish to point out the fact that departure from normality ought to produce significant effects when there may be none. So therefore, we reiterate that the departure from normality of that one item of the scale is not a serious one.
The key results of the Confirmatory Factor Analysis are provided here below (Table 2):

<table>
<thead>
<tr>
<th>Construct</th>
<th>Reliability</th>
<th>Average Variance Extracted</th>
<th>Parameter Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of Price Unfairness (PPU; 2 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct Reliability</td>
<td>0.89</td>
<td></td>
<td></td>
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<tr>
<td>Average Variance Extracted</td>
<td>0.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter Estimates</td>
<td>0.88-0.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Price (PP; 2 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct Reliability</td>
<td>0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Variance Extracted</td>
<td>0.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter Estimates</td>
<td>0.86-0.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Value (PV; 2 items)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Construct Reliability</td>
<td>0.87</td>
<td></td>
<td></td>
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<tr>
<td>Average Variance Extracted</td>
<td>0.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter Estimates</td>
<td>0.88-0.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Quality (PQ; 3 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct Reliability</td>
<td>0.85</td>
<td></td>
<td></td>
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<tr>
<td>Average Variance Extracted</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter Estimates</td>
<td>0.79-0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Usage Satisfaction (PUS; 2 items)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Construct Reliability</td>
<td>0.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Variance Extracted</td>
<td>0.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter Estimates</td>
<td>0.86-0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repurchase Intention (RPI; 3 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct Reliability</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Variance Extracted</td>
<td>0.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter Estimates</td>
<td>0.86-0.90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: All parameter estimates' t-value ranged from 14.47 (p < 0.00) to 18.32 (p < 0.00)

Table 2: Confirmatory Factory Analysis Results

Recall, Reservation (Internal Reference) Price and Fair Price were collected in Phase – I. Actual Price was collected in Phase – II was what the subjects reported as actual airfare paid.

Perceived Price: A modified (from Dodds, Monroe and Grewal, 1991) two-item ($\alpha = 0.87$) scale was used to measure the subjective perceptions about the airfare paid.

Perceived Price (Un)Fairness: Was measured by using a two item\(^{39}\) scale ($\alpha = 0.89$) used in several other studies (e.g. Campbell, 1999).

Perceived Value: Cronin, Brady and Hult’s (2000) scale was modified for the purposes of the study. The modified two-item scale has a reliability of 0.87.

Perceived Quality: A modified SERVPERF (Cronin, Brady and Hult, 2000) with three items scale ($\alpha = 0.85$) was used.

Product Usage Satisfaction: We use a two item scale that maps both emotions and evaluation of the service modified from Danaher and Haddrell (1996). The two-item scale’s reliability is high ($\alpha = 0.85$).

Repurchase Intention: A modified Dodds, Monroe and Grewal’s (1991) three item scale was used with a reliability of 0.92.

4.8 Analysis and Results

Maximum Likelihood estimation procedure on the correlation matrix with the raw data as input was used for model validation. Correlation matrix was used as opposed to variance-covariance matrix since we are interested only in the direction of the effects and the comparison of the effect-sizes. The model resulted in an acceptable Minimum Fit Function Chi-Square = 85.26, d.f. = 88, p = 0.56 and Normal Theory Weighted Least Squares Chi-square = 81.77, p = 0.67. Such results point to acceptance of the proposed model. Other indices that reflect positively on this conclusion are: Normed Fit Index (NFI) = 0.98, Non-Normed Fit Index (NNFI) = 1.00, Comparative Fit Index (CFI) = 1.00, Standardized RMR = 0.022, Goodness of Fit Index (GFI) = 0.96 and Adjusted Goodness of Fit Index (AGFI) = 0.94.

\(^{39}\) A two-item scales’ reliability may be measured both by high correlation and Cronbach’s Alpha. All the scales in this thesis are checked for reliability in both the ways; We just report alpha.
The results of comprehensive model testing are presented in Table 3 below:

<table>
<thead>
<tr>
<th>Hypotheses:</th>
<th>Effect Size</th>
<th>t-value</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Difference (Reservation Price - Actual Price) -&gt; PPU</td>
<td>-1.02</td>
<td>-12.95</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Price Difference (Fair Price - Actual Price) -&gt; PP</td>
<td>-0.50</td>
<td>-5.55</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>PPU -&gt; PP</td>
<td>0.38</td>
<td>4.16</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>PP -&gt; PPU</td>
<td>-0.10</td>
<td>-1.44</td>
<td>0.153</td>
<td>*=</td>
</tr>
<tr>
<td>PP -&gt; PV</td>
<td>-0.35</td>
<td>-5.16</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>PPU -&gt; PV</td>
<td>-0.43</td>
<td>-6.43</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>PQ -&gt; PV</td>
<td>0.63</td>
<td>13.63</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>PPU -&gt; PUS</td>
<td>-0.22</td>
<td>-1.23</td>
<td>0.222</td>
<td></td>
</tr>
<tr>
<td>PV -&gt; PUS</td>
<td>-0.29</td>
<td>-1.23</td>
<td>0.222</td>
<td></td>
</tr>
<tr>
<td>PQ -&gt; PUS</td>
<td>0.97</td>
<td>5.59</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>PP -&gt; RPI</td>
<td>-0.14</td>
<td>-1.34</td>
<td>0.184</td>
<td></td>
</tr>
<tr>
<td>PPU -&gt; RPI</td>
<td>-0.39</td>
<td>-3.07</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>PV -&gt; RPI</td>
<td>0.22</td>
<td>0.87</td>
<td>0.387</td>
<td>*=</td>
</tr>
<tr>
<td>PQ -&gt; RPI</td>
<td>0.10</td>
<td>0.53</td>
<td>0.597</td>
<td>*=</td>
</tr>
<tr>
<td>PUS -&gt; RPI</td>
<td>0.49</td>
<td>6.17</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

* Denotes results not as hypothesized

Table 3: Model Testing Results

Price Difference between Fair Price and Actual Price significantly and negatively drives PPU (t=-12.95; p < 0.00) supporting H3. That is higher the transactional utility (i.e. the difference between Fair Price and Actual price (in line with Thaler (1985)) lower the PPU.

Price Difference between Reservation Price and Actual Price significantly and negatively impacts Perception of Price (t=-5.55; p < 0.00) supporting H1. Lower the acquisition utility (i.e. the difference between Reservation Price and Actual Price (in line with Thaler (1985)) higher the perceptions of price.

If the Price was perceived to be unfair, it was likely that Price was perceived to be unacceptable too (t=4.16; p < 0.000), lending support to H9. However, if the price was perceived to be high and unacceptable, price was not perceived to be unfair (t=-1.44; p > 0.153) not lending support to H8. Together, i.e. results of H8 and H9, do
lend credence to hypothesis of researchers (e.g. Urbany, Madden and Dickson, 1989), who have contended that what is unacceptable and expensive may be considered fair, even though KKT, (1986a) consider that what is unacceptable and expensive may also be considered unfair. We add to the body of knowledge a new dimension. The implications to marketers are clear; that price may be considered unacceptable or expensive may be a lesser evil than the fact that price was considered unfair.

The predictors of perceived value, viz. Perception of Price, PPU and Perceived Quality, have all turned out to be significant and thus lending support to H2, H4 and H5. Price perceptions significantly and negatively impacts perceived value (t= - 5.16; p < 0.00) indicating that when consumers perceive a product / service to be expensive, the value is diminished and vice versa. Likewise, PPU is also significantly and negatively impacting perceived value (t= - 6.43; p < 0.00) indicating that when consumers perceive a product / service to be priced unfairly, the value is diminished and vice versa. Lastly, Perceived Quality also significantly and positively impacts perceived value (t= 13.63; p < 0.00) indicating that Perceived Quality is a driver of value.

Interestingly, and as hypothesized in H6, the effect size (-0.43) of Perceived Price Unfairness on Perceived Value is larger than the effect size (-0.35) of Perception of Price. That is PPU has a stronger influence on Perceived Value than Price Perceptions. This is also in line with the results of H8 and H9 where it was seen that PPU impacts Perception of Price and not vice versa.

The impact of Perceived Quality on Perceived Value when compared to PPU is also as expected (H7). The effect size of Perceived Quality on Perceived Value of 0.63 is greater than the absolute value of the effect size (0.43) of Perception Price Unfairness on Perceived Value.

The predictors of Service Usage Satisfaction turned out to be just Perceived Quality and not PPU or Perceived Value lending support to H10, H11 and H12. Recall, we have conceptualized service usage satisfaction, narrowly and with a purpose such that we may avoid the confound due to construct overlap in the use of a ‘overall satisfaction’ construct since it comprises both satisfaction about performance (i.e. Perceived Quality) and satisfaction about Value (i.e. Perceived Value and PPU). Only
Perceived Quality impacts Service Usage Satisfaction ($t = 5.59; p < 0.00$), indicating the fact that higher the Perceived Quality, higher the Service Usage Satisfaction. More importantly, Perceived Value and Perceptions of Price Unfairness do not predict Service Usage Satisfaction ($H12: t=-6.43, p > 0.22; H11: t = -1.23; p > 0.22$). Therefore, it also directly reflects on the relative impact of Perceived Quality on Product Usage Satisfaction with respect to Perceived Value (effect size $\text{PQ} \rightarrow \text{PUS} = 0.97$ vs. $\text{PV} \rightarrow \text{PUS} = 0.29$) thereby lending support to $H13$. Similarly, the relative impact of Perceived Quality on Product Usage Satisfaction with respect to PUS ($\text{effect size PQ} \rightarrow \text{PUS} = 0.97$ vs. $\text{PPU} \rightarrow \text{PUS} = -0.22$) is also stronger, lending support to $H14$.

The predictors of Repurchase Intentions, viz. Perception of Price, PPU, Perceived Value, Perceived Quality and Service Usage Satisfaction, all did not turn out as hypothesized. That Perception of Price may not have a significant direct impact was as predicted ($t = -1.34; p > 0.18$), lending support to $H18$. Similarly, that PPU will have a significant direct impact on RPI was also as predicted ($t= -3.07; p < 0.00$) lending support to $H19$. Most importantly, that Service Usage Satisfaction will have a positive impact on RPI is supported ($t= 6.17; p < 0.00$). However, both Perceived Quality ($t= 0.53; p > 0.59$) and Perceived Value ($t= 0.87; p > 0.38$) are not significantly impacting Repurchase Intention, much against hypothesis. Therefore, results of both $H15$ and $H17$ are against predictions. It is perhaps easy to reconcile lack of result for Perceived Quality on Repurchase Intentions. Clearly, Perceived Quality and Service Usage Satisfaction are different constructs. A consumer may hold a service as of great quality but not necessarily purchase it if it does not result in satisfaction; that is satisfaction due to usage of a product of good quality alone drives repurchase intentions. However, that Perceived Value does not lead to Repurchase Intentions is surprising to us. Clearly, respondents seem to suggest that more than perceived value it is fairness of price and satisfaction that is more important, that is a service even though perceived as valuable may not be (re)purchased if the price is seen as unfair or satisfaction was not experienced.

Lastly, service usage satisfaction has a stronger influence on repurchase intentions than PPU. This is evident from the effect size where $\text{PPU} \rightarrow \text{RPI}$ is -0.39 as opposed to stronger $\text{PUS} \rightarrow \text{RPI}$ being equal to 0.49, thus validating $H20$. 

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Out of the twenty hypotheses, seventeen were adequately supported by the data indicating presence of a robust model. We now discuss the results in a larger setup of the theories that underlie this study and other studies.

4.9 Discussions and Conclusions

The findings of this chapter are first in several different ways and contribute to a rich understanding of consumer behavior in the context of dynamic pricing. In this section, first we elaborate the findings not only in the context of this study’s conceptual underpinnings but also in the larger context of other theories. We simultaneously discuss the implications for marketers.

A notable contribution is the finding that Perceived Price is fueled by the difference between Reservation Price and Actual price. The past studies go not beyond providing the actual price to elicit Price Perceptions without delving further into what Internal Price cues such perceptions. Similarly, we also validate Thaler’s (1985) conceptualization of PPU as the difference between Fair Price and Actual Price.

Importantly, we have distinguished the effects of Perceived Price and PPU on various other dependent variables such as Perceived Value and Repurchase Intentions. We show that between the two, PPU is a more important construct. This has serious implications for marketers. Considering that Reservation Price is usually near the highest of the observed prices and fair price is near the lowest of the observed prices (Garbarino and Slonim, 2003), a customer will react or will be more sensitive to price changes. Consider a usual fare of Rs. 4000/- for a given service with a customer’s fair and reservation price to be Rs. 4,200/- and Rs. 5,000/- respectively. The transaction utility is Rs. 200/- and the acquisition utility is Rs. 1,000/-. Consider now a price increase of Rs. 200/-. While the price change wipes out entirely the transaction utility, the acquisition utility remains still positive at Rs. 800/-. The consumer may yet refrain from purchasing the product; when the price is increased from Rs. 4,000/- to Rs. 4,200/-, a loss of Rs. 200 in transaction utility over a base of Rs 4,200 hurts more than a loss of Rs. 200 in acquisition utility over a base of Rs. 5,000. This is in line with prospect theory (Kahneman and Tversky, 1979) where the loss curve is steeper at the origin. The predicament of a marketer is only acerbated if the consumers weight more the transaction utility than acquisition utility. In the same vein, it is easy to see that a
small increase in transaction utility will go a long way in improving sales. The most often method used by marketers is to provide discounts; however, the primary method ought to be improve perceptions of price fairness at higher price levels.

The importance of PPU construct is evident also from the fact that it has a direct and significant negative impact on Repurchase Intentions. Considering the fact that Price Perception has no impact on Repurchase Intentions provides ample scope for marketers to ensure that price is perceived as fair, even if the price is perceived as expensive.

That Perceived Value does not impact Repurchase Intention is a surprising finding. The true statement of consumers with respect to lack of impact of perceived value on repurchase intentions has to be read in conjunction with that fact that PPU has a direct impact on Repurchase Intentions. Consumers appear to say that true value may not matter in such markets if the price is unfair. This may be a particularly daunting challenge in Revenue Managed markets.

Perhaps, the most significant contribution and a finding that may provide succor to marketers is the fact that the impact of repurchase intentions is much stronger due to the influence of service usage satisfaction than PPU. Consumers seem to place more importance to satisfaction than price fairness. The implication to marketers is that in the order of priority, they have to commence with improving service usage satisfaction and later move to ensuring PPF. Not surprisingly, service usage satisfaction is predicted strongly by perceived quality. As one may recall, perceived quality is consumer evaluation of or judgment on performance parameters such as timeliness, safety, etc. If satisfaction is to be improved via perceived quality, one way is to manage the performance expectations of consumers downwards.

The finding that perceived quality does not have a direct impact on repurchase intentions (much against several studies that posit so) is not surprising to us. Many of such studies examine the perceived quality and repurchase intentions in a bivariate model (e.g. Boulding, Staelin, Kalra and Zeithaml, 1993; Kordupleski, Rust and Zahorik, 1993; Zeithaml, Berry and Parasuraman, 1996). In fact, Parasuraman, Zeithaml and Berry (1988), discuss an intuition that perceived quality indeed may not have a direct impact on behavioral intentions. They contend that what is perceived as
high on quality may not be purchased if it does not result in satisfaction; similarly, what is satisfying may be purchased even if held to be of low quality. We, though accidentally, provide proof for their intuition.

In conclusion, the findings show why revenue managed markets get away practicing dynamic pricing. That is because of customer service usage satisfaction playing a more important role on repurchase intentions than PPU. Of course, the findings do not suggest that PPU is not an important construct. We only show that the perils of dynamic pricing are not as severe as intuitively suggested in earlier studies (e.g. KKT, 1986a).

4.10 Limitations and suggestions for future research

As is the case with any research project, the studies presented exhibit limitations that should be considered.

First, we stress that this model is not designed to include all possible influences on consumer decision-making for services. We limit our consideration to the identified variables simply because the focus of the investigation is on the composite set of links between consumer’s price perceptions, perceptions of price unfairness, service quality, value perceptions, the satisfaction they attribute to a service provider, and their behavioral intentions.

Second, one may consider sample as a limitation. While student sample is known to be not an impediment in generalization of results at least in justice and fairness literatures (Konow, 2003), some researchers do have a point against it.

Third, one may consider selection of one industry alone as a limitation. Selection of multiple service industries meant differing levels of familiarity of consumers with Revenue Management and hence selection of one industry alone was unavoidable. Recall, the objective of the study is to understand the relative impact of PPF on repurchase intentions.

Fourth, we have conceptualized satisfaction not as an overall evaluation but rather as a measure of satisfaction about the service quality performance parameters alone. One
direction of future research may be to include an overall satisfaction construct with price satisfaction.

Fifth, we have departed from the standard definitions as found in literature for service quality. For instance, Perceived Quality in an airlines setting may comprise perceptions about the quality of flight, timeliness, safety etc and other aspects such as quality of ticket booking procedures, sales personnel, empathy, responsiveness etc. Specific to this chapter, we mean Perceived quality to be the core service quality (e.g. time, safety, etc.) and not a global overall measure of quality. While this may be considered as a limitation, Parasuraman, Zeithaml and Berry (1988) show that in of all the five factors that comprises services quality construct, the average relative importance (i.e. slopes of the regression function to overall quality) are 0.08, 0.43, 0.11, 0.15 and 0.02 for Tangibles, Reliability, Responsiveness, Assurance and Empathy respectively; further, Tangibles and Empathy were not significant in predicting the overall quality construct. We have included in the Perceived Quality construct the core service quality constructs of Reliability, Responsiveness and Assurance alone – the most important ones; such a practice to use a narrow set of scale items is not new (e.g. Cronin, Brady and Hult, 2000). While we consider that the limited operationalization of the service quality construct is not a serious one, a future research may include a wider set of predictors of overall service quality.

Sixth, LISREL methodology may be construed as a limitation. The results presented here are based on the analysis of a causal model with a cross-sectional data. Because the model is not tested using an experimental design, strong evidence of causal effects cannot be inferred. Rather, the results are intended to support the a priori causal model.

Seventh, the use of additional items, while increasing the survey length, might improve the inherent reliability and validity of the measures used.

Finally, measures of actual purchase behavior, as opposed to repurchase intentions, could also enhance the validity of the study. Unfortunately, such data are often difficult and costly to gather.
Some of the limitations are easily resolved by retest using a different sample and across other industries. Yet there is a scope beyond such limitations to improve upon the proposed model. We discuss some of the scope for further research.

While we have mapped the antecedents of behavior in a repurchase situation, future research may extend to a first buy situation, where evaluation of satisfaction may not be present to override the negative influence of PPU. In such a study, one may include the positive effects of word of mouth.

We have operationalized familiarity via number of times the service has been used in the past. However, familiarity may include knowledge about how to secure prices in the most effective manner in such markets. That is consumers may be familiar with the fact that prices may be dynamic may not mean that s/he thinks that s/he has the familiarity / capability to secure best prices. Mapping such knowledge may provide an interesting avenue for further research.

Extending the idea of knowledge to secure best prices is the idea of perceived control of the consumer over the pricing scenario. Perceived control has been shown to positively affect a wide range of feelings and evaluations, including pleasure and satisfaction (e.g., Bateson and Hui, 1992). In real life, consumers usually self-select rate-fences in revenue managed markets; i.e., consumers may select the time of booking, class of flight-cabins, time of flight etc.