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A Cross-cultural Investigation of the Relationship between Customer Demographics and Hotel Room Price Perception

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A CROSS- CULTURAL INVESTIGATION OF THE RELATIONSHIP BETWEEN

CUSTOMER DEMOGRAPHICS AND HOTEL ROOM PRICE PERCEPTION

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ABSTRACT

In this paper, the researcher explored the significant effect of multiple demographics, age, gender, marital status and culture, on a customer's perception of hotel room prices. The customer's perception of hotel room rates was assessed by three variations, perceived value, perceive fairness, and willingness to pay. Descriptive statistics, MANOVA and ANOVA test were applied in this study. The results demonstrated that age, gender, and marital status had a significant impact on a customer's perceived value; age, gender, and culture significantly influenced a customer's perception of fairness; yet, none of these demographics had a significant impact on a customer's willingness to pay. Ultimately, the researcher provided implications for future studies and practical suggestions for hotel dynamic pricing strategy.

ACKNOWLEDGEMENT

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Revenue management (RM) is the art and science of predicting real time guest

demand at the micro level and optimizing the price and availability of products to match that

demand (Cullen & Helsel, 2006). In recent years, revenue management systems have gained

significant worldwide adoption in the hotel industry and have become increasingly more

sophisticated at least for higher room rate hotels, as hotel managers strive to increase

occupancy rates, revenues, and profits (Bayoumi, Saleh, Atiya, & Aziz, 2013; Wilson,

Enghagen, & Lee, 2015). In the hospitality industry, revenue management is a key

operational strategy to maximize revenues by utilizing both pricing (e.g., dynamic pricing,

rate fences) and non-pricing (e.g., overbookings, minimum length of stay control) revenue

management system factors (Ivanov, 2014; Kimes, 2002).

Hotel revenue systems can be partitioned into two major groups, the quantity

control approach and the dynamic pricing approach (Aziz, Saleh, Rasmy, & El-Shishiny,

2011; Ingold, McMahon-Beattie & Yeoman, 2000; Talluri & Van Ryzin, 2005). The dynamic

pricing approach groups all-similar rooms into one category and is constantly updating the

room rate based on occupancy and availability. This study will focus on the dynamic pricing

strategy of revenue management.

Problem Statement

Dynamic pricing involves maximizing revenue; taking into account the hotel

occupancy, and the current and expected demand. (Bayoumi et al., 2013). The nature of hotel

rooms as a perishable asset is prompting hoteliers to maximize their revenue by trying to

achieve optimal dynamic prices using different strategies (Abrate, Fraquelli, & Viglia, 2012).

For instance, InterContinental Hotels Group has focused on expanding the use of dynamic

pricing in corporate transient programs, including an aggressive push of the model in the

Asia/Pacific region and an effort targeted at making the concept more palatable for large market buyers (Baker, 2011). Although dynamic pricing is beneficial to hotels (Daripa & Kapur, 2001; Garbarin & Lee, 2003; Kannan & Kopalle, 2001), it is possible that negative emotional reactions among customers will be elicited (Campbell, 1999; Xia, Monroe & Cox, 2004); specifically, customers can strategically change their purchase plans in order to pay as little as possible.

The factors affecting guests' choice of a hotel are complicated (Lockyer, 2005), but recognizing features that are perceived as being important by guests helps hoteliers to make optimal decisions for hotel development and pricing strategy. How to satisfy customer while maximizing profit? To answer this question, the customer's perception towards hotel room rate needs to be explored. According to previous research (Ashton, Scott, Solnet, & Breakey 2010; El Haddad, Hallak & Assaker, 2015; Masiero, Heo & Pan, 2015; Škare & Gospic, 2015), customer's perception of hotel room rate can be explored from three aspects: the customer's perceived value, perception of fairness, and willingness to pay. Perceived value assists in creating competitive advantage, as consumers will only purchase products or services they value (Doyle & Stein, 1998). Dynamic pricing is a form of price discrimination, where firms charge different prices to different customers for the same product or service, based on various variables (Škare & Gospic, 2015). Although legal, dynamic pricing in the airline industry is often perceived as unfair (Maxwell, 2002).

Hotel managers and revenue managers frequently ask these questions: how much will our guests pay for a higher floor room? How much should we charge for a room with an ocean view (Masiero et al., 2015)? In a recent MIT technology review article (2014) discussing the pricing model of Uber transportation company, Surowiecki states that "dynamic pricing is a way for companies to maximize profits by exploiting demand-charging higher prices to people who can and will pay more.(p74)". Although abundant studies have

been conducted on pricing issues in the hospitality literature, most of them emphasized on the cost, occupancy and demand, only relatively limited studies focus on hotel room pricing from a customer's perspective (Masiero et al., 2015). Among these limited studies, none of the studies focused on the "Who", and the characteristics of "Who" can be crucial in differentiating prices.

Customer price perception can vary in accordance with an individual's sociodemographic profile; including age, gender, marital status, education, and income level (Rosa-Diaz, 2004). In addition, previous research suggests culture can have an impact on a customer's perception of price; individuals from different cultures tend to display different perspectives in terms of the dimensions of price (Jin and Sternquist, 2003; Zhou and Nakamoto, 2001). It is important that hoteliers understand how the customer's perception of price established so that they generate and communicate their pricing strategies (Xia, 2003). It is also crucial to understand whether price perception differs among groups of customers with different demographics. Although evidence shows that customers' perceptions of price are sensitive to their demographic differences (Jin and Sternquist, 2003; Rosa-Diaz, 2004; Zhou and Nakamoto, 2001), none of these studies involves age, gender, marital status, education, and income level, with culture altogether. This study utilizes a quantitative methodology to explore the relationship between a customer's demographics, especially culture, and his/her perception of hotel room rates. Furthermore, the problem of balancing between the customer's perspective and optimization the revenue management can be solved.

Purpose

The main purpose of this research is to explore the relationship between a customer's perception on hotel room rates and the individual's demographics, especially culture.

Objectives

The researcher will use quantitative research methods to identify influential demographics on customers' perceptions of hotel room rate and analyze the potential relationship between the room rate and these customers' demographics. The goal is to use the result of this dynamic pricing strategy research and provide insight to the hotel professional on how to set the price in order to maximize revenue while maintaining a high customer satisfaction level.

Research Questions

These are some research questions that this study attempts to answer:

1.   What are the customer demographics that influence a customer's perception of hotel room rates?

   a. Which customer demographics influence a customer's perceived value of hotel room rates?

   b. Which customer demographics influence a customer's willingness to pay on hotel room rates?

   c. Which customer demographics influence a customer's perception of fairness towards hotel room rates?

Justifications

This research has implications that may provide insights to hotel managers when accounting for the significance of the maximization of hotel revenues by exploring the influences of customers' demographics. Discovering the degrees of impacts that different demographics have on a customer's perception of hotel room rate is imperative to a hotel's revenue management. This study may assist hoteliers in identifying what customer demographics significantly influence a customer's perception of a specific room rate, which then help the hotel design a proper pricing strategy to achieve higher revenue.

Limitations

First, in this study, surveys are conducted on samples randomly selected through the Internet, thus, the demographics of the samples may be unevenly distributed. Selecting samples through online survey platforms may lead to inappropriate choices of unrepresentative demographics of samples (Fricker, 2008), and may skew results on the customer's perception of hotel room rates. Furthermore, since the surveys are completed through the Internet, the respondents' reactions can be difficult to control, causing invalid survey results.

Second, the demographics are chosen based on the researcher's knowledge, so there may be more demographics, such as religion, ethnicity, or home ownership, which can be influential to the customer's perception of hotel room rates. In addition, most of the demographics are not further researched because they have less impact on customers' perceptions.

Last, since this study is solely in reference to the demographics influences on hotel room rate pricing strategies which are normally adjusted base on hotel occupancy, costs, and demand may be avoided. The price is adjusted in accordance with a customer's demographics.

Definitions

The followings are definitions of the key terms used in this study:

Revenue management is most commonly defined as the process of allocating the right type of capacity to the right kind of customer at the right price so at maximize revenue or yield (Kimes, 1989a; Guillet & Mohammed, 2015).

Dynamic Pricing is a price discrimination strategy. This pricing strategy suggests prices to be charged according to customer, product, time, or location (Armstrong, & Kotler, 2000).

Perceived value: Zeithaml (1984) defines perceived value as ''the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given (p.14).''

Perceived Price fairness is defined as "a consumer's assessment and associated emotions of whether the 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).

Demographics: In this study, hotel customers' age, gender, marital status, education, household income, and culture are mainly investigated to discover how they influence a customer's perception of hotel room price.

Organization

This study consists of five chapters: Introduction, Literature Review, Methodology, Data Analysis, and Discussions. In Chapter 2, the Literature Review discusses a customer's demographics and their impacts on an individual's perceptions of hotel room rates. Chapter 3 discusses the methodology, sampling, the procedure of data collection, survey design, and statistical data analysis process. The results of the data analysis are presented in Chapter 4. The final chapter discusses the results of this study, their implications to the hotel industry, the research limitations, and advice for future studies.

CHAPTER II

LITERATURE REVIEW

Revenue Management

How does each company decide on the prices to charge for the products and services they bring to the market? What strategy should be adopted when a company tries to sell the right products or services to the right customers, at the right time, for the right price to generate maximum revenue (Kimes, 1989b)? To answer these questions, revenue management (RM), which represents one of the most successful and popular newer applications of operations research, must be brought into discussion (Kimms & Klein, 2007).

Origin of Revenue Management

The starting point for revenue management (RM) was the Airline Deregulation Act of 1978 (Talluri & Van Ryzin, 2004). This act led to the development of numerous air travel companies, creating an environment of strong competition (Poutier & Fyall, 2013). With this act, the U.S. Civil Aviation Board loosened control of airline prices, meaning that established carriers were now free to change prices without the board's approval (Talluri & Van Ryzin, 2004). Price cutting, the weapon that was most rapidly set in motion, enabled companies to recapture or keep their market share points (Poutier & Fyall, 2013). However, a problem had to be solved to avoid a price war completely or partially, and to balance the desire for high capacity utilization (or load factor) and the desire for selling seats at the maximum price (Kimes, 1989b; Poutier & Fyall, 2013). As a result, RM emerged and became pervasive in the airline industry (Talluri & Van Ryzin, 2004).

Definition

RM is a sophisticated type of supply-and-demand management, which acts simultaneously on prices and available capacity (Poutier & Fyall, 2013). It can also help a firm sell the right inventory unit to the right type of customer, at the right time, and for the

right price. It also serves as a tool to guide the decision of how to allocate undifferentiated units of capacity to available demand in such a way as to maximize profit or revenue (Kimes, 1989b).

Revenue Management Applications in the Hotel Industry

Originating from the airline industry, RM is now used by hotels, tour operators, shipping companies, car rental firms, and many other industries, with further applications on the horizon (Kimms & Klein, 2007). In addition to the airline industry, the hotel industry is another field in which RM is well established and extensively applied (Talluri & Van Ryzin, 2004).

Hotels became aware of RM primarily as a rooms-related function, and as such this method was usually employed in the reservations department, which in the late 1980s and early 1990s was most frequently located within the front office department (Kimes, 2016). In the mid-1990s, some hotels began to move the RM function, or in some cases the entire reservation department, into the sales and marketing department, although most hotels still associated RM with the reservation department (Kimes, 2016). Marriott was one of the early pioneers of RM and in a 1992 paper discussed their foray into rate fences and length of stay controls, representing a fundamental shift in hotel RM practice (Hanks, Noland, & Cross, 1992).

Today, hotel managers are implementing RM practices by balancing supply and demand to improve hotel performance on a daily level, through which they can achieve the goal of maximizing potential revenues for the company (Tanpanuwat, 2011). RM applies and adapts to the hotel industry when it meets the following conditions (Kimes, 2000; Tanpanuwat, 2011):

- perishable units of inventory,
- high fixed costs,

- limited capacity,

- market segmentation,

- advance purchase of service/product and,

- uncertain future demand.

Due to the diversity in the types and operations of hotels, RM practices tend to exhibit greater variation than Rairline RM practices. These are summarized below (Talluri & Van Ryzin, 2004).

Forecasting Demand

For hoteliers, an accurate estimate of future room demand is essential to the effective operation of their hotels because it allows hotel department leaders to be more efficient in scheduling departmental staff. It gives those who are responsible for purchasing supplies the information required to buy needed items in the correct quantities and allows managers to estimate the future profitability of their properties and make better decisions about how to modify and manage the prices of their products and services (Hayes & Miller, 2011). There has been increasing interest in forecasting methods for hotel RM, and it has been recognized that timely and accurate hotel daily occupancy forecasts according to market segments contribute to maximizing revenues through demand-management decisions, such as pricing and inventory allocation (Talluri & Van Ryzin, 2004). Cullen and Helsel (2006) also indicate that RM decisions about prices, capacity availability, and policies should be based on accurate demand forecasts.

According to Hayes and Miller (2011), to create accurate and ultimately useful demand forecasts revenue managers look to three types of data: historical, current, and future. Figure 1 illustrates the four components of an effective demand forecast, in which insight involves the skillful analysis of what each data type reveals.
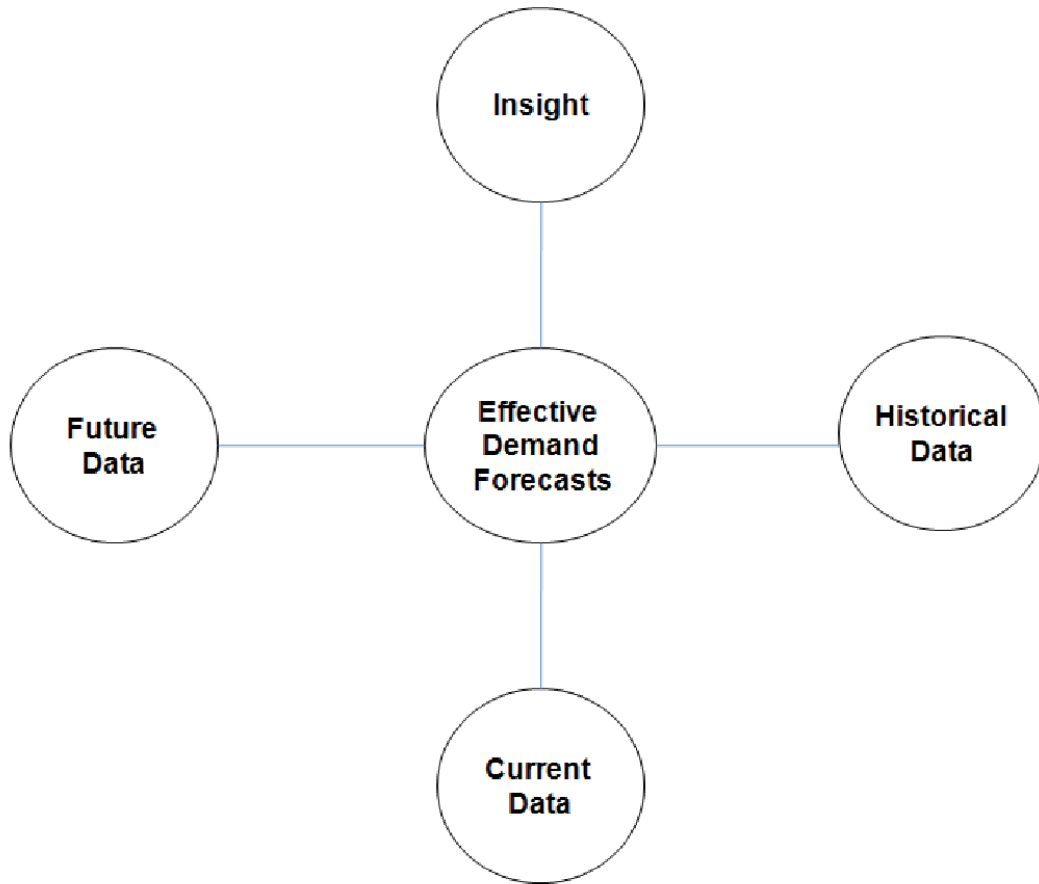
Figure 1. Four components of effective demand forecast. Adapted from Hayes, D. K., &

Miller, A. A. (2011). *Revenue management for the hospitality industry.* Hoboken, NJ: John

Wiley & Sons, Inc., p.167.

An accurate forecast should not simply be created on the basis of hope, deception, or greed as

an overriding forecast strategy (Hayes & Miller, 2011). Ideally, the optimization of demand is

at the heart of a hotel's RM (Mehrotra & Ruttley, 2003).

Market Segmentation

   Gupta (2014) defines market segmentation as the simple separation of a

heterogeneous group of customers with different needs into homogenous subgroups or

segments of customers with similar needs and preferences. There are a variety of different

ways to segment consumers, such as by age, income, lifestyle, etc. Figure 2 lists the common

segmentation variables for consumer products.

Geographic	Country, region, city, urban/rural, climate
Demographics	Age, income, gender, generation, marital status, family size, occupation, education, ethnicity, religion
Psychographics	Lifestyle, personality, activities, interests, opinions
Behavioral	Usage rate, loyalty, product knowledge, involvement, purchase occasion, buying stage
Benefits Sought	Convenience, value, safety, status

Figure 2. Major segmentation variables for consumer markets. Adapted from Gupta,

S. (2014). *Marketing Reading: Segmentation and Targeting.* Core Curriculum Readings

Series. Boston, MA: Harvard Business Publishing.

There is various research based different segmentation variables. However, it is

difficult to determine precisely which variables should be used in which research.

Overbooking

Overbooking is widely practiced in the hotel industry (Talluri & Van Ryzin, 2004).

When the demand for rooms is equal to or greatly exceeds a hotel's supply, the temptation for

RMs to overbook a hotel can be very strong (Hayes & Miller, 2011).

All hotels overbook; however, in general hotels are conservative in overbooking

(Hayes & Miller, 2011; Talluri & Van Ryzin, 2004). In some cases, overbooking is

unintentional while in other cases it is intentional (Hayes & Miller, 2011). Hayes and Miller

(2011) state that the reasons for unintentional overbooking can include damaged rooms, staff

errors, inventory availability errors and guest overstays. When such situations occur, hotels

normally choose to walk "less valuable" customers (e.g. a one-night stay guest) to avoid

walking "more valuable" customers, including members of the hotel loyalty program, group

meeting or event attendees, contracted rooms such as airline crew rooms, and couples

celebrating special occasions (Hayes & Miller, 2011; Talluri & Van Ryzin, 2004). Revenue

managers intentionally overbook their hotels for various reasons, but a common theme

throughout the industry is to simply utilize overbooking as a legitimate revenue optimization strategy.

Inventory Control

Controlling inventory is one of the important practices in RM because it determines available capacity and how much each room should be priced (Tanpanuwat, 2011). Inventory control is often based on the length of stay (Talluri & Van Ryzin, 2004). Table 1 presents some of the most common stay controls.

Table 1

Most Common Stay Controls

Stay Control	How the Tool is Used
Open	Free sell. No restriction on availability.
Closed	No availability is for sale.
No arrival or closed to arrival	No arrivals are allowed on a particular day/date. This is to extend bookings into the surrounding dates or only accept lengths of stay that will include one or more of the shoulder dates.
No departure/closed to departure	No reservations are accepted that depart on a particular day/date.
Maximum length of stay	Restricts stays to a maximum time period. This may be applied when the goal is to restrict a discounted rate or package availability.
Minimum length of stay	Requires stays for a specific time period. This is applied during periods when occupancy of one or more nights surrounding a high demand night is low. (Note: Some systems read this stay control differently, and it only impacts arrival dates that touch this restriction.)
Allocations	Specific numbers of rooms are allotted for sale. The total allocated does not have to equal hotel capacity.

Note: Adapted from "Defining revenue management: Top line to bottom line," by K. Cullen and C. Helsel, 2006, McLean, VA: *Hospitality Sales and Marketing Association International Foundation*, p. 50.

These length-of-stay controls can utilize the high demand period by closing shorter stay and lower rate patterns to achieve greater profits for the hotel (Tanpanuwat, 2011), but they are somewhat redundant if a hotel RM system uses a bid price system (Talluri & Van Ryzin, 2004). However, past studies have emphasized that length of stay controls is a key non-pricing tool of RM systems that enable hotels to maximize their revenue and build

effective RM systems (Choi & Kimes, 2002; Walls, 2013).

Pricing

Today, hotel professionals must decide the best prices at which to sell their rooms (Hayes & Miller, 2011). Dynamic practices in strategic pricing are important to the RM cycle and the company's revenue performance (Tanpanuwat, 2011). Pricing strategy should be adjusted according to the fluctuations in demand in order to optimize a hotel's revenues.

<div align="center">

Dynamic Pricing

</div>

Dynamic pricing is the concept of flexible pricing for goods or services that shift based on supply and demand metrics and other factors known to influence supply and demand (Kimes, 2000). Dynamic pricing is as old as commerce itself; in fact, it has been used across a wide array of industries including in airlines, hotels, and car rentals (Talluri & Van Ryzin, 2004). The purpose of dynamic pricing is to best estimate demand and thereby optimize revenues (Bayoumi et al., 2013).

With the goal of balancing supply and demand, early applications of dynamic pricing methods have been mainly utilized in industries where the short-term capacity (supply) is difficult to change, such as seen in airlines, cruise ships, hotels, electric utilities, sporting events, and healthcare (Galleg, & Van Ryzin, 1994, 1997; McGill & Van Ryzin, 1999; Weatherford, & Bodily, 1992). Thanks to advances in technology and the increasing prevalence of e-retailing prices have become personalized and tailored to the needs of customers, while still respecting a company's need for profitability (Haws & Bearden, 2006; Vlasic, Mandelli, & Mumel, 2007).

Furthermore, each industry has its own innovations in dynamic pricing strategies. For example, airlines are now introducing fare changes on a daily basis to reflect changes in demand, seat capacity, availability between two destinations, and airline traffic conditions

with the objective of selling tickets at maximum prices to increase revenues (Monroe, 2003).

Lin (2003) describes how perishable products feature several characteristics, including fixed

quantity and impossible reordering, sales deadlines, and the low marginal cost of selling one

or more items. Applying these characteristics to the air travel industry may reveal that a seat

on a specific flight is also a typical perishable good (Lin, 2003). Thus, instead of pricing

different products represented by booking classes, seats can also be priced dynamically,

directly in relation to demand (Burger & Fuchs, 2005). Airlines attempt to sell tickets at

higher prices for those market segments with smaller demand elasticity and at lower prices

for market segments with greater demand elasticity (Petrovic, Petrovic, & Burazor, 2012).

Unlike in other service industries, in air travel the seller can only use historical data to

estimate the customer reservation price. Through preliminary pre-sales market research, an

airline obtains a prior distribution of the customer arrival rate. With this information, the

airline may use real-time sales data to update demand distribution and then dynamically set

prices (Burger & Fuchs, 2005).

   Retailers have been at the forefront in deploying dynamic pricing, driven primarily

by the importance of pricing decisions for retailers' profit (Talluri & Van Ryzin, 2004).

Dynamic pricing is a significant tool for both online and in-store retailers to not only increase

flexibility in prices but also remain competitive (Levy, Grewal, Kopalle, & Hess, 2004). A

great deal of research on dynamic pricing focus on the control of supply and demand and the

elasticity of prices (Cunningham & Kerber, 2000; Esary, Sarkar, Lee, & Marais, 2008; Nijs,

Srinivasan, & Pauwels, 2007; Schroeder et al., 2010; Štěpnička, Cortez, Donate, &

Štěpničková, 2013). These studies find that historical sales data plays a pivotal role in

forecasting future sales and consequently developing a framework for pricing strategy. They

also find that developing a sales forecast for a particular product category is a key concern for

retail organizations. Seasonality and time series analyses are also important in forecasting sales, and price sensitivity towards a product, the market price of the product, and sales forecasts are significant variables that determine pricing strategy and systems. Finally, the major drivers for a retailer's price are a competitor's price, sales volume or traffic, manufacturer's price and price elasticity of the product.

In addition to the focus placed on retailors, Hiltbrand (2013) argues for the critical position of customer perception. In his study, Hiltbrand finds that companies can make small, subtle changes to prices dynamically to respond to market environmental or customer behavioral factors. The online retailor Amazon has employed this method successfully, using pricing practices that lead to variation in the discount of certain products such as DVDs. Another option is to establish pre-defined price lists for different types of customers and dynamically manage membership within the group, effectively matching a set of prices to the individual consumer based on past behavior (Hiltbrand, 2013).

Dynamic Pricing Applications in the Hotel Industry

In recent years, the RM field in the hotel industry has witnessed an increased adoption of dynamic pricing policies (Aziz, Saleh, Rasmy, & ElShishiny, 2011). As previously mentioned, hotel RM practices exhibit greater variation than airline RM, and this applies to dynamic pricing in hotels as well. Several studies find that dynamic pricing practices differ between various hotels. The higher the quality of service provided, the greater the probability that the establishment will raise its prices – and that this raise will span a larger range. Large establishments, 5-star hotels, and hotels belonging to a hotel chain have a higher probability of increasing and decreasing their prices (Ropero, 2011). Abrate, Fraquelli, and Viglia (2012) confirm this hypothesis by determining that high star hotels maintain more consistent prices in a price decreasing scenario but a more pronounced increase when prices

rise during an overall period. They also confirm that prices are significantly higher when fewer hotels with similar star ratings have availability. Aziz et al. (2011) designed a model different from previous research that uses a highly sophisticated simulator for estimation of arrivals instead of pre-defined probability distribution. Because it uses a non-linear programming formulation instead of a dynamic programming formulation this model can be applied to any class of hotel.

Based on Wilson, Enghagen, and Lee's (2015) study of the most popular cities and states for lodging it is clear that length of stay controls and dynamic pricing are implemented by a large number of hotels. However, some applications in dynamic pricing regarding the four influencing variables (hotel capacity, time until arrival, length of stay, and group size) can be adjusted or removed according to the hotel's preferences (Bayoumi et al., 2013). Ultimately, having custom-made pricing systems would be the better strategy.

Newer applications of dynamic pricing in hotels emphasize understanding customer behaviors, through which different prices can be specifically designed for certain groups. For example, in Lee and Bai's study (2014), high involvement consumers are classified as those that appreciate a discounted rate more, and are more likely to spread the word about the hotel and show an intention to return. Consumers with young children are expected to pay a certain price to stay at a Disney hotel due to the uniqueness of having a theme park on the property and Disney hotels are not willing to offer discounted rates to this group of consumers (Duman & Mattila, 2004). Finally, Tattoli (2012) claimed in the reality show "Behind Closed Doors at Marriott," that Marriott tracks customers' booking histories online, and searches their profile, purpose of travel, and preferences so that dynamic pricing strategies can be conducted optimally based on the customer.

<center>**Customer's Perception of Hotel Room Rates**</center>

Do customers value different aspects and levels of product and service quality? Due to the characteristics of the service industry, customers have limited indicators for evaluating services compared with products (Amin, Yahya, Ismayatim, Nasharuddin, & Kassim, 2013; Nguyen & Leblanc, 2002). Many previous studies have demonstrated that perceived value, perceived price fairness, and willingness to pay are three indicators that contribute to a customer's perception of hotel room price (Ashton, Scott, Solnet, & Breakey 2010; El Haddad, Hallak & Assaker, 2015; Masiero et al., 2015; Škare & Gospic, 2015).

Perceived Value Theory

From the consumer's perspective, price is something given up or sacrificed to obtain a product. The early conceptual proposal made by Zeithaml (1988, p. 14), that "the overall assessment of the utility of a product based on the perceptions of what is received and what is given" is the most universally accepted definition of perceived value. Jacoby and Olson (1977) distinguish between objective price (the actual price of a product) and perceived price (the price as encoded by the consumer). Studies reveal that consumers do not always know or remember actual prices of products. Instead, they encode prices in ways that are meaningful to them (Dickson & Sawyer, 1985; Zeithaml 1982, 1984). There are limited studies researching the impact of a customer's demographics on their perceived value, yet in some studies, demographics are applied as variables.

Perceived value with regard to age and gender. Gender has a significant effect on teenagers' perceived value during mall shopping. Female teens exhibit a lower perceived value compared to male teens (Kim & Kim, 2005). Similar results have been presented in a research by Rosa-Diaz (2004), who finds that gender has a significant impact on perceived value; specifically, females assign a lower (and more accurate) perceived value to products or

<center>18</center>

services than men. Age has also been found to be significant, with younger groups of consumers having a more correct understanding of a product's perceived value.

A study on demographic and category effects on consumer price knowledge outlines the age and gender composition of the sample (Estelami, 1998). However, the empirical results of this study indicate that of the demographic variables studied, none has any significant effects on consumer price knowledge.

Perceived value and education and income. Education and income levels of customers are commonly used in perceived value studies. Rosa-Diaz (2004) indicates that income and education level have a significant effect on the accuracy of perceived value; customers with higher incomes and education levels have more accurate understanding of a product's perceived value. Another study summarized sample demographics into groups based on education and income. Education was divided into different levels, including holding a secondary school certificate, a further education diploma, a graduate degree, or a postgraduate degree, while available income was distributed across different ranges (Cacciolatti, Garcia, & Kalantzakis, 2015). In this study, a model revealed a direct and positive relationship between perceived value, available income, and education level with effective purchase. This result indicates that higher available income and higher education level increases the chance of purchase.

Perceived value and marital status. Marital status is a rarely used variable in most research. Only in one study was marital status shown to have a significant relationship with perceived value. Widowed participants assigned the lowest perceived values, while married participants exhibited the best perceived values, which were higher than those of single participants who had been never been married (Cacciolatti et al., 2015).

Perceived value and culture. Culture is an uncommon demographic in most

19

research. Typical approaches to understanding consumers' perceptions of value and intentions focus largely on individual consumers in isolation of their cultural and religious identities (Jamal & Sharifuddin, 2015). However, Jamal and Sharifuddin find that culture and religion do have significant impacts on customers' perceptions of value.

Perceived Value in the Hotel Industry

Although there are various studies indicating the relationship between customers' demographics and perceived value in other industries, using demographics as a variable in studies of the hotel industry is rare. Previous research has focused on the impacts of hotel characteristics and brand images on customers' perceived values (Danziger, Israeli, & Bekerman, 2006). The results of Bojanic's (1996) study indicates that there is a significant positive relationship between perceived value and staff and hotel condition for an overall consumer sample. Perceived brand image, perceived quality, and perceived sacrifice are often mentioned in studies of the hotel industry (Ashton et al., 2010; Bojanic, 1996). However, considering the literature findings in other industries, the influences of customers' demographics on perceived value cannot be ignored. It is imperative to investigate the relationship between customers' perceived values and their demographics.

Perceived Fairness Theory

Price fairness is defined as "a consumer's assessment and associated emotions of whether the difference between a seller's price and the price of a comparative other party is reasonable, acceptable, or justifiable" (Xia, Monroe & Cox, 2004, p. 3). Xia, Monroe, and Cox (2004) also state that fairness in prices occurs when no discrepancies or inequalities exist. In comparison, Maxwell, Anselstetter, Comer, and Maxwell (2009) contend that there is fairness in prices when a reasonable and fair price is fixed. They also note that sometimes a price that is considered fair is found to be below the expected price. Regarding the previous

arguments, it is pointed out that usually price fairness is studied from the point of view of the buyer. Hence, investigating characteristics, especially demographics of customers, is fundamental to discovering the perceived fairness discrepancies among different customers.

   Perceived fairness and age, gender, employment status, and income. Age, gender, employment status and income levels have rarely been applied as variables in previous studies and instead have been used as categories of a sample population's demographics. Nguyen (2013) explored consumers' perceptions and attitudes towards fairness in the retail industry. He profiles interviewees using age ranges, household income levels, employment status, and gender, but none of these demographics are researched with regard to their relationship to customers' perceptions of fairness in retailing. In another study conducted by Shapiro, Dwyer, and Drayer (2016), of 505 participants, the average age was 36.1. The vast majority of respondents were male (84.2%) and Caucasian (94%), and had a family income level of above $100,000 (55.2%). Most held a bachelor's degree or higher level degree (63.4%). The variables of age, gender, income and education were not explored in relation to customer's perceived fairness. While many studies collect demographic data from participants, no further research on the relationship between demographics and perceived fairness is conducted, creating a gap in the literature on this topic.

   In a study by Choi and Mattila (2006), American and Korean travelers differed significantly in gender (59% of Americans studied were male while this number was 75% for Koreans studied), but age distribution was evenly spread. However, neither gender nor age showed any significant effect on customers' fairness perceptions. When Malc, Mumel, and Pisnik (2016) researched the effect of personal income on price fairness perceptions, a one-way ANOVA revealed that people with different incomes significantly differ in price fairness perception scales for individual items as well as on a general measure of price fairness

perceptions. People with lower income levels reported lower perceptions of fairness (Malc et al., 2016).

Perceived fairness and culture. The influence of culture on a customer's perception of fairness is often discussed in different studies. One study on how perceived fairness varies across cultures used Chinese and American cultures as two indicators. Chinese collectivist consumers appeared more sensitive to relationship loyalty when judging fairness than U.S. individualist consumers (Bolton, Keh, & Alba, 2010). This provides robust evidence for cultural differences in perceptions of price fairness as they relate to a cross-consumer price comparison.

Choi and Mattila (2006) compared respondents' fairness perception in two countries, America and Korea. The findings of this study demonstrate that cross-cultural differences exist in customers' fairness perceptions of variable-pricing strategies, where American consumers perceive this practice to be fairer than do Korean consumers. In a study of coupon programs there was also a significant country effect, with Swedish respondents indicating the highest acceptance of such programs, followed by Americans and Singaporeans (Kimes & Wirtz, 2003).

The sample from another study conducted by Beldona and Kwansa (2008) was comprised of 287 students who were U.S. citizens (58.9%) and 200 students who were citizens of 52 other countries (41.1%). Among all cultural orientations, only vertical individualism is significantly related to perceived fairness; the greater the individualistic orientation, the higher the level of perceived fairness.

Perceived Fairness in the Hotel Industry

Research on the relationship between customers' perceived fairness and their demographics are commonly found in the hotel industry than in other industries. Many

studies use several demographic dimensions to profile their survey respondents. Sanghavi (2005) applies age, gender, income, and education level as variables to explore the impact of demographics on customers' perceptions of fairness. According to the findings, using Crosstabs Significant, ANOVA Significant, and Correlation Significant, all of these demographic dimensions show significant impact on the perception of fairness with regard to different hotel room rates. Females tend to perceive unfairness more frequently than males when hotel room rates fluctuate. Younger groups are more sensitive to price and dissatisfied or angry when they pay a higher price. Groups with higher incomes and education levels are less dissatisfied with price changes.

Moreover, research by Heo and Lee (2011) demonstrates that among all demographics, age and education appear to be the most significant factors determining the perception of fairness or unfairness; more educated and younger guests tend to perceive hotel pricing as fair, household income reflects a marginal significance, and gender does not appear to be a significant variable in the analysis, contrary to the findings of a study conducted by Beldona and Namasivayam (2006).

Willingness to Pay Theory

Breidert (2007) defines willingness to pay as the highest price an individual is willing to pay for some good or service. There are many factors that can affect customers' willingness to pay, such as the application of new technologies, the quality of products or services, and brand image. This section of the literature review aims to explore the relationship between willingness to pay and customers' demographics.

Willingness to pay and age. Prior research has shown that younger consumers are more likely to be willing to pay for online-only retailers (Barton, Koslow, & Beauchamp, 2014; O'Neil, 2001). Other findings demonstrated that age has a significant negative impact

on participants' willingness to pay for salad mix (Rihn & Yue, 2016). In a study focusing on the air travel industry, Balcombe, Fraser, and Harris (2009) concluded that older respondents are willingness to pay more for aspects such as seat comfort, whereas younger respondents are WTP more for an on-board bar and screen. Thus, differences in age indicate that older travelers are more concerned with comfortability.

Willingness to pay and gender. Several researchers use gender as a variable to determine customers' willingness to pay. Wang, Fan, Wang, and Li (2015) find that gender does not have a significant impact on customer's willingness to pay for perishable foods. Another study exploring customers' willingness to pay for inflight services found that females are WTP more for seat width and males for set pitch. Males are also willingness to pay far more for an on-board entertainment screen than females but females require a significantly higher willingness to pay for no meal (Balcombe et al., 2009).

Willingness to pay and education. Previous studies have indicated that consumers who are more educated are more likely to trust online-only retailers (Barton et al., 2014; O'Neil, 2001). However, the coefficient for education is insignificant in the sample of Comscore data and was dropped from further analysis in another study (Chatterjee & Kumar, 2017). When researching the willingness to pay for inflight services, Balcombe et al. (2009) discovered that higher levels of education are related to lower willingness to pay for seat pitch but much higher willingness to pay for seat width. Additionally, lower levels of education yield a much higher willingness to pay for use of the bar.

Willingness to pay and income. Household income is insignificant and was dropped from further studies in the research of willingness to pay across retail channels (Chatterjee & Kumar, 2017). Interaction effects from another study reveal that participants with higher incomes are willing to pay more for locally and domestically produced apple

juice, and also that income has a significantly negative impact on participants' willingness to pay for salad mix (Rihn & Yue, 2016). Interestingly and conversely, regarding inflight services, lower income respondents require a higher willingness to pay for no meal compared to higher income respondents (Balcombe et al., 2009).

Willingness to Pay in the Hotel Industry

Research on willingness to pay in the hotel industry considers hotel size, floor, room size, room view, and access to hotel facilities (Masiero et al., 2015). Only Wong and Kim (2012) list demographic profiles of respondents, including age, gender, marital status, and education level in their study of willingness to pay for different room views. The results show that age and culture have significant impacts on the willingness to pay for different views from different hotel rooms. The results of the regression analysis notably reveal that both older, and American rather than British tourists exhibited higher WTP amounts for this dimension.

<div align="center">Summary</div>

As discussed, previous research has considered age, gender, education, household income, marital status, and employment status as variables to determine the significance of their impact on perceived value, perceived fairness, and willingness to pay in the hotel industry and others. To summarize the findings of the literature review, age, gender, income, and education level are more frequently significant in multiple studies and more influential on the dependent variables. In contrast, culture and marital status are barely considered as variables in most studies.

In particular, the review of relevant literature revealed no studies that investigated the relationship between culture and customer price perception. However, considering growing economic globalization, cultural differences appear to be increasingly crucial in

business research. For this reason culture is the focus of this study. All of the studies discussed above show the same results with regard to the relationship between the independent variables of income and education, and the dependent variables of perceived value, perceived fairness, and willingness to pay: higher income and education levels lead to higher perceived value, perceived fairness, and willingness to pay. However, there are contradictory results regarding the relationship between the independent variables of age, gender, marital status, and cultural background and the dependent variables of perceived value, perceived fairness, and willingness to pay. In this study, these demographics are utilized and further explored in order to discover how, and to what degree, these customer demographics affect a customer's perceived value, perceived fairness, and willingness to pay with regard to hotel room rates.

CHAPTER III

METHODOLOGY

In this chapter the methodology is presented in five sections. In the first section, the hypotheses are listed and in the second section, the questionnaire design is described. Different variables and measurements are discussed in the third section. The fourth section states the sampling method and data collection procedures, and the last section presents data analysis methods.

Hypotheses

This study proposed several hypotheses as follows:

H1A1: Age significantly relates to a customer's perceived value of hotel rooms.

H1A2: Gender significantly relates to a customer's perceived value of hotel rooms.

H1A3: Marital status significantly relates to a customer's perceived value of hotel rooms.

H1A4: Culture significantly relates to a customer's perceived value of hotel rooms.

H1B1: Age significantly relates to a customer's perception of fairness of hotel room rates.

H1B2: Gender significantly relates to a customer's perception of fairness of hotel room rates.

H1B3: Marital status significantly relates to a customer's perception of fairness of hotel room rates.

H1B4: Culture significantly relates to a customer's perception of fairness of hotel room rates.

H1C1: Age significantly relates to a customer's willingness to pay for hotel rooms.

H1C2: Gender significantly relates to a customer's willingness to pay for hotel rooms.

H1C3: Marital status significantly relates to a customer's willingness to pay for hotel rooms.

H1C4: Culture significantly relates to a customer's willingness to pay for hotel rooms.

Questionnaire Design

The questionnaire (see Appendix A) designed for this research was presented to respondents in four sections. Since this study emphasizes the relationship between culture and customer price perceptions, participants were screened according to culture first. When people migrate from one culture to another, knowledge and expressions of that culture come with them. Once they settle, they either assimilate into the new local culture or become bicultural (Bhugra, 2004), thus it is necessary to explore and treat the culture of origin and the culture raised in separately. In this study, participants were required to answer the questions "What is your country of origin?" and "What was the primary culture in which you grew up?" The screening question was "In the past 24 months, have you stayed in a hotel?" All respondents who selected "no" were eliminated from the survey. The respondents who selected "yes" continued to section 1 and answered questions about their booking history, perception of the hotel pricing policy, and their travelling type (either leisure or business) for further screening. Respondents who had travelled for leisure in the past 24 months were required to complete section 2, while respondents who had travelled for business in the past 24 months were required to complete section 3. Respondents who had travelled for both leisure and business completed both sections.

Both section 2 and section 3 presented the same questions with a difference only in the purpose of travelling. In sections 2 and 3, respondents who had travelled for leisure and business were asked about their price fairness perceptions based on their booking history in the past 24 months. Then, respondents were asked about their perceived values for the hotel rooms they had stayed in, considering what they paid for and their experience. Finally, several scenarios with attached word and picture descriptions were presented to the respondents, investigating how much respondents were willing to pay for each scenario.

The fourth and final section was designed to collect respondents' demographic information. Respondents were asked their age, gender, education level, household income, employment status, marital status, and country of origin. A detailed description of each variable is explained in the next section.

Variables and Measurements

According to the literature review, age, gender, and marital status have been shown to have a significant impact on a customer's perceived value, perceived price fairness, and willingness to pay. However, the results regarding the direction of this significance for some variables were contradictory. For example, some studies stated that younger customers had a stronger willingness to pay for a product (Barton et al., 2014; O'Neil, 2001), while others stated that older customers were more willing to pay for a product (Fraser and Harris, 2009). Culture, on the other hand, has not been deeply researched in existing literature, and for this reason was explored as one of the independent variables in this research.

On the contrary, the results regarding how education and household income affect a customer's perception of perceived value, perceived fairness, and willingness to pay were identical across previous research (Balcombe et al., 2009; Choi & Mattila, 2006; Cacciolatti et al., 2015; Heo & Lee, 2011; Malc et al., 2016; Rihn & Yue, 2016; Rosa-Diaz, 2004; Sanghavi, 2005). Customers with higher education and higher household incomes have more accurate perceptions of value and price fairness and are willing to pay more for products. For this reason, education and household income were not examined in this research.

This study divided customers into two groups based on travel type (business or leisure), and these types served as reference groups. There were three dependent variables: perceived value, perceived fairness, and willingness to pay. Participants evaluated their perceived value and price fairness on a scale from 1 (extremely fair/extremely

reasonable/strongly agree) to 7 (extremely unfair/extremely unreasonable/strongly disagree),

which was adopted from the 7 scales applied by Campbell (1999). Willingness to pay was

evaluated through participants' responses to price after reviewing the word and picture

descriptions.

Perceived Value

Perceived Value (PV) was explored through the two questions below. The

customer's perceived value of the hotel accommodation and service were two dependent

variables, PV1 and PV2.

Question 1: How reasonable do you think the price charged by the hotel, given the

costs (e.g. room, amenities, breakfast or facilities) associated with your accommodations?

(PV1)

Question 2: You received your expected level of service, considering the price that

you paid. How much do you agree with this statement? (PV2)

Both aspects were measured using differential scales where 1 = Extremely

Reasonable/Strongly Agree, 2 = Reasonable/Agree, 3 = Slightly Reasonable/Somewhat

Agree, 4 = Neither Reasonable nor Unreasonable/Neither Agree nor Disagree, 5 = Slightly

Unreasonable/Somewhat Disagree, 6 = Unreasonable/Agree, and 7 = Extremely

Unreasonable/Strongly disagree. Based on a previous study, both variables were significantly

affected by age, gender, marital status, and culture (Rondan-Cataluña, & Rosa-Diaz, 2014).

Perceived Fairness

Perceived Fairness (PF) was explored through the four scenarios below. The

customer's perceived fairness of these four scenarios served as four dependent variables, PF1,

PF2, PF3, and PF4.

Scenarios 1 and 2: When travelling for leisure, if you visited the same hotel again

and the hotel operator quoted you a higher (PF1)/lower (PF2) price than the last time you

stayed in that hotel, how fair would you consider this situation?

Scenarios 3 and 4: When travelling for leisure, if you and your friend/colleague

were staying in the same hotel on the same day and your friend/colleague had paid a higher

(PF3) /lower (PF4) room rate for the same room type, how fair do you feel about this

situation?

Each scenario was measured using a differential scale where 1 = Extremely Fair, 2

= Fair, 3 = Slightly Fair, 4 = Neither Fair nor Unfair, 5 = Slightly Unfair, 6 = Unfair, and 7 =

Extremely Unfair. The customer's perceived fairness of these four scenarios were affected by

the differences in age, gender, marital status, and culture (Sanghavi, 2005).

Willingness to Pay

To investigate a respondent's willingness to pay, a scenario was presented that

included words and photos. Participants were required to review hotel descriptions, as well as

pictures of hotel facilities and rooms. Considering the information given, respondents wrote

down the price they would be willing to pay for the room described.

Demographics

The independent variables covered by the survey include age, gender, marital

status, and culture. AGE was marked as 1 for 66 years or more, 2 for 56-65 years, 3 for 46-55

years, 4 for 36-45 years, 5 for 26-35 years, and 6 for 18-25 years. GENDER was assigned the

2 for male and 1 for female, and MARITAL STATUS was given 1 for widowed, 2 for

separated, 3 for divorced, 4 for never married, and 5 for married.

In this study, culture was divided into groups utilizing a "Consensus Cluster,"

which encompasses 11 culture clusters: Anglo, Latin American, Far East, Confucian Asian,

African, Germanic, Nordic, Latin European, Eastern European, Near Eastern, and Arab

(Ronen & Shenkar, 2013). Previous studies have proven that cross-cultural differences exists with regard to customers' fairness perception of hotel pricing strategies. This was seen, for example, in the finding that American consumers perceived pricing practices to be fairer than Korean consumers did. Based on the "Consensus Cluster," Korean consumers belong to the Confucian Asian group, while America is a part of the Anglo culture. To expand this study, two more culture groups – the Latin American and the Far Eastern – were selected for this research because they have characteristics that vary significantly from the Anglo and the Confucian Asian cultures. People from Latin America and Anglo cultures exhibit opposite societal values. People from Latin America tend to embrace life as it comes, regarding its unpredictability as the nature of life, and tend to not worry about results. In contrast, those from Anglo cultures are value based, and they tend to believe that rewards are based on merit and rules are not meant to be intrusive. Germanic and Nordic cultures, although adjacent to Anglo culture, do not differ significantly from Anglo culture in terms of social values (Gupta, Hanges, & Dorfman, 2002). Countries in the Far East and the Confucian culture groups are also in close proximity to each other. Countries geographically close to one another may differ in terms of their religious, linguistic, and ethnic heritage, as well as their institutional histories (Bonikowski, 2010). Thus, only four culture groups, Anglo, Latin American, Confucian Asian, and Far East were chosen for exploration in this study, due to their unique characteristics and the limitation of the sample size. Respondents with a background of Anglo, Latin America, Confucian Asian, or Far East cultures were able to continue the survey; all respondents who selected "other" exited the survey. The four culture groups are coded as follows, 1= Confucian, 2= Far East, 3= Latin America, and 4= Anglo.

Pilot Study

Pilot study was conducted first to examine the validity of the questionnaire.

Samples were selected from the University of Nevada, Las Vegas, and consisted of students and faculty. It has been suggested that a suitable sample size for a regression model analysis must include at least 20 respondents in each cell (preferably more), so the sample size for the pilot study was set at 20 individuals (Hair, Anderson, Tatham, & Black, 1998).

According to feedback from the respondents, some skip and display logics of the survey were modified so that survey questions would be more comprehensive. The data collected from the pilot study was discarded.

Sampling and Data Collection

The survey was built in Qualtrics. Subsequently, the questionnaires were distributed through Qualtrics, and respondents were sought and rewarded through Qualtrics as well, including 50% of total participants who had travelled for leisure in the past 24 months and 50% of total participants who had travelled for business in the past 24 months. For each culture group (in which respondents were either born or raised in), at least 100 qualified participants were selected to answer the survey. The population of the study included leisure and business travel customers who had booked a mid-scale hotel room at least once in the past 24 months. All participation was voluntary and anonymous.

Data Analysis Procedure

The data analysis included different stages. First, it was necessary to ensure that no outliers existed. Then, descriptive analysis was conducted on both dependent and independent variables, and cross-tabulations were applied to explore the distribution of variables. The results are reported in Chapter IV.

In the last stage, homogeneity of variance was tested using Levene's test, which was expected to be non-significant. Next, homogeneity of variance-covariance matrices was examined using Box's M test, which was expected to be non-significant as well (French,

Macedo, Poulsen, Waterson, & Yu, 2008). For both tests, 0.05 was used as the cutoff point for significance. Then, both univariate and multivariate statistical tests, MANOVA and ANOVA, were applied to test hypotheses. In business research, MANOVA is utilized when a multi-item scale is compared across a few groups; the means of the items on the scale can then be compared simultaneously across groups in a single test rather than using separate ANOVAs for each item. In comparison, ANOVA is an important and much applied statistical method that is used to compare the means of a single variable across groups (McQuitty, 2018). In this study, PV and PF were explored through multiple vectors, thus, MANOVA was the most appropriate method to determine statistical differences among demographic groups. As a single dependent variable, the mean score of WTP was compared across different demographic groups to determine statistical differences among these groups. The cutoff point for rejecting or accepting the hypotheses was 0.05.

CHAPTER IV

DATA ANALYSIS

This chapter demonstrates the process of data analysis and the results of hypotheses testing. The research survey is presented in APPENDIX A. The data analysis process is divided into three sections. First, the outliers are removed. Then, the descriptive statistics provides the frequency and cross-tabulation for each variables. Last, MANOVA and ANOVA tests are utilized to test if there is a statistical significance existed between the dependent variable and the independent variable.

Reliability

The online survey was designed to make sure the respondents to answer all questions, so there was no missing variable. Dependent variables (perceived value and perceived fairness) follow and are restrained by the seven-point scale. Owning to the Qualtrics' sample selection policy, all samples that had invalid answers were excluded from the data collection. Thus, there was no outlier detected. However, the other dependent variable, willingness to pay, was filled by numeric data without range limitation. Six outliers were found and removed by using Box Plot diagram.

Descriptive Statistics

First, the frequency analysis of the demographic variables and dynamic price perception statement are provided below. Then, the cross-tabulation analysis provides the distribution of perceived value, perceived fairness, willingness to pay, and each demographic.

Frequency Statistics

Table 2 shows the frequency of demographic variables. The largest age group was 26-35 years old (44.2%), followed by 36-45 years old (23.2%), 18-25 years old (16.4%), 46-55 years old (7%), 56-65 years old (5.8%) and 66 years old or more (3.1%). There were more

male participants (54.8%) than female participants (44.7%). Of 414 participants, 62.8% of

them are married, 27.8% of them have never been married, 5.3% of them are divorced, 2.2%

of them are widowed, and only 1% of them are separated from their spouses. The four culture

groups are evenly distributed for both the culture of origin and the culture raised in.

Table 2

Demographic Variables from Survey Respondents (N=414)

Variable	n	%
Age		
18-25	68	16.4
26-35	183	44.2
36-45	96	23.2
46-55	29	7.0
56-65	24	5.8
66 or more	13	3.1
Prefer not to answer	1	.2
Total	414	100
Gender		
Male	227	54.8
Female	185	44.7
Prefer not to answer	2	.2
Total	414	100
Marital status		
Never married	115	27.8
Married	260	62.8
Divorced	22	5.3
Separated	4	1.0
Widowed	9	2.2
Prefer not to answer	4	1.0
Total	414	100
Country of Origin		
Anglo	103	24.9
Confucian Asia	98	23.7
Far East	114	27.5
Latin America	99	23.9
Total	414	100
Culture Raised in		
Anglo	104	25.1
Confucian Asia	104	25.1
Far East	105	25.4
Latin America	101	24.4
Total	414	100

Table 3 displays the frequency of respondents' perception of six statements about hotel dynamic room pricing strategy. Of 414 respondents, about 90% of them, to some extent, agreed with the first statement that hotels are business entities, so they are entitled to change their price. About 77% of the respondents strongly agree, agree, or somewhat agree with the second statement that it is ethical that the hotel increases the room rates during high seasons and decreases the room rates during low seasons. Almost 60% of the respondents strongly agree, agree, or somewhat agree with the third statement that it is fair that booking a standard room over different channels would provide different room rates. Over 75% of the respondents felt strongly agreeable, agreeable or somewhat agreeable that hotels change room rates frequently. Over 80% of the respondent, in general, considered that hotels change room rates according to demand. About 82% of the respondents, identified with the last statement that hotel room price can be different when booking through different channels.

Table 3

Distribution of respondents' perceptions of dynamic room pricing in the hotel industry

(N=414)

	Strongly agree		Agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree		Disagree		Strongly disagree	
Scale	1		2		3		4		5		6		7	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
P1	108	26.1	179	43.2	82	19.8	32	7.7	9	2.2	4	1.0	0	0.0
P2	87	21.0	132	31.9	100	24.2	43	10.4	25	6.0	17	4.1	10	2.4
P3	73	17.6	129	31.2	79	19.1	63	15.2	41	9.9	19	4.6	10	2.4
P4	80	19.3	136	32.9	93	22.5	64	15.5	25	6.0	10	2.4	6	1.4
P5	119	28.7	151	36.5	76	18.4	42	10.1	15	3.6	3	0.7	8	1.9
P6	117	28.3	162	39.1	73	17.6	35	8.5	13	3.1	8	1.9	6	1.4

Note: P1: Hotels are business entities, so they are entitled to change their price. P2: It is ethical that the hotel increases the room rates during high seasons and decreases the room rates during low seasons. P3: It is fair that booking a standard room over different channels would provide different room rates. P4: Hotels change room rates frequently. P5: Hotels change room rates according to demand. P6: Price can be different when booking through different channels. (e.g. booking.com, kayak, orbitz, priceline)

Descriptive Statistics of Variables

  This section presents descriptive statistics of variables. The descriptive tables show how the mean of perceived value, perceived fairness, and willingness to pay varies by each group of demographics; age, gender, marital status, and culture.

  Perceived value. Table 4 shows the mean scores of PV1 and PV2 in accordance with different age groups. For leisure customers, age group 56-65 presents the highest mean score of PV1 (Mean=2.92, SD=1.35), and age group 56-65 shows the highest mean score of PV2 (Mean= 2.79, SD=1.29); both mean scores are close to 3, which is "Somewhat Agree" and "Slightly Reasonable" respectively. On the contrary, age group 26-35 shows the lowest mean

score of PV1 (Mean=2.17, SD=0.99) and PV2 (Mean=2.09, SD= 0.95), and both means are

close to 2, "Agree". Overall, younger groups have lower mean scores than older groups. For

business customers, age group 66 or more shows the highest mean score of PV1 and PV2;

both mean scores are close to 5, which is "Somewhat Disagree". However, age group 36- 25

shows the lowest mean of PV1, and group 56- 65 shows the lowest mean of PV2; both are

close to 2, which is "Agree". Overall, the younger respondents are more likely to agree with

PV1 and PV2 scenarios.

Table 4

Descriptive Statistics of Perceived Value and Age

		Leisure		Business	
Demographics		Mean	SD	Mean	SD
PV1	66 or more	2.58	1.08	5.00	0.00
	56-65	2.92	1.35	2.33	1.16
	46-55	2.81	1.24	2.33	0.89
	36-45	2.59	1.17	2.14	1.27
	26-35	2.17	0.99	2.16	1.04
	18-25	2.27	0.87	2.29	0.85
PV2	66 or more	2.58	0.90	4.50	0.70
	56-65	2.79	1.29	1.67	0.58
	46-55	2.59	1.34	2.42	1.24
	36-45	2.29	0.96	2.23	1.24
	26-35	2.09	0.95	2.15	1.02
	18-25	2.18	0.90	2.18	0.91

As shown in Table 5, for leisure and business customers, the female group has higher

mean values of PV1 and PV2 than the male group, but the discrepancies are small; the mean

scores are close to 2, which is "Agree" and "Reasonable" respectively. In general, both

female and male groups were more likely to agree to PV1 and PV2 scenarios.

Table 5

Descriptive Statistics of Perceived Value and Gender

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PV1	Female	2.51	1.10	2.33	1.12
	Male	2.28	1.06	2.14	1.08
PV2	Female	2.39	1.07	2.25	1.01
	Male	2.13	0.97	2.17	1.15

The mean values of PV1 and PV2 depending on different marital status groups have bigger variations than different gender groups. For leisure customers, the separated (Mean=3.50, SD=1.00) and the divorced group (Mean= 3.00, SD=0.88) present higher mean values of PV1 than other groups; the separated group shows the highest mean value of PV2 (Mean=3.75, SD= 1.50) among all marital status groups. The married group has the lowest mean value of PV1 and the widowed group has the lowest mean value of PV2. Overall, the separated and the divorced group have mean values close to 4, which is "Neither Agree nor Disagree"; these two groups were more likely to hold neutral opinions of PV1 and PV2. The married, the never married and the widowed group have mean values close to 2, which is "Agree". For business customers, the divorced group shows the highest mean value of 3, regarding PV1 and PV3, which means the divorced group was more likely to respond "Somewhat Agree" or "Slightly Reasonable" to PV1 and PV2 scenarios; other groups, with mean values close to 2, were more likely to feel "Agree" or "Reasonable" on PV1 and PV2 scenarios (see Table 6).

Table 6

Descriptive Statistics of Perceived Value and Marital Status

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PV1	Widowed	2.38	1.30	1.67	0.58
	Separated	3.50	1.00	-	-
	Divorced	3.00	0.88	3.00	1.41
	Never married	2.42	1.13	2.32	1.21
	Married	2.30	1.06	2.14	1.03
PV2	Widowed	2.00	0.76	2.33	2.31
	Separated	3.75	1.50	-	-
	Divorced	2.68	1.11	3.00	1.27
	Never married	2.28	0.97	2.03	0.99
	Married	2.18	101.	2.24	1.09

Mean values of PV1 and PV2 have small variations among different culture groups, for leisure and business customers (see Table 7 & 8). The Anglo culture raised in shows a mean value of 2.61 for PV1 and PV2, which is close to 3; the Anglo culture raised in was more likely to answer "Somewhat Agree" or "Slightly Reasonable" to PV1 and PV2 scenarios. However, other culture groups have mean values close to 2, which means they were more likely to respond "Agree" or "Reasonable" to PV1 and PV2 scenarios.

Table 8

Descriptive Statistics of Perceived Value and Culture of Origin

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PV1	Confucian Asia	2.19	0.95	2.20	1.06
	Far East	2.31	1.13	2.21	1.18
	Latin America	2.50	1.08	2.18	1.03
	Anglo Cultures	2.56	1.12	2.29	1.15
PV2	Confucian Asia	2.16	0.91	2.17	1.09
	Far East	2.18	1.02	2.04	1.13
	Latin America	2.27	1.01	2.27	1.00
	Anglo Cultures	2.40	1.13	2.54	1.14

Table 8

Descriptive Statistics of Perceived Value and Culture Raised in

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PV1	Confucian Asia	2.20	0.95	2.21	1.05
	Far East	2.27	1.10	2.15	1.05
	Latin America	2.48	1.07	2.15	1.01
	Anglo Cultures	2.61	1.17	2.46	1.45
PV2	Confucian Asia	2.16	0.89	2.18	1.09
	Far East	2.18	1.00	1.97	0.97
	Latin America	2.24	1.00	2.29	1.05
	Anglo Cultures	2.42	1.16	2.61	1.34

Perceived fairness. As presented in Table 9, for leisure customers, older age groups have higher mean values of PF1, PF2, PF3 and PF4, than younger groups. Especially, mean value of PF3, for age group 56-65 (Mean=5.58, SD=1.44), is close to 6, which is "Unfair"; mean value of PF4, for age group 66 or more (Mean=5.67, SD=1.37), is close to 6 as well. Age group 26-35 presents the lowest mean value of PF1, PF3, and PF4. Thus the older age groups were more likely to feel "Unfair" about PF1, PF2, PF3 and PF4 scenarios. For the business group, similar to the leisure group, older groups show higher mean values of PF1, PF2, PF3 and PF4 than younger groups do. Particularly, the age group 56- 65 shows the highest mean score of PF3 (Mean= 6.33, SD=1.44), and PF4 (Mean=6.33, SD=1.73), which is close to 6. However, age group 26-35 has the lowest mean value of PF1, PF3, and PF4, which are close to 3; age group 18- 25 shows the lowest mean value of PF2, which is close to 2. Thus, older age groups were more likely to perceived PF1, PF2, PF3 and PF4 scenarios as unfair.

Table 9

Descriptive Statistics of Perceived Fairness and Age

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PF1	66 or more	3.50	1.00	4.00	0.00
	56-65	4.42	1.82	3.67	2.52
	46-55	3.89	1.81	4.08	2.07
	36-45	3.60	1.68	3.23	1.76
	26-35	2.86	1.51	3.02	1.55
	18-25	3.47	1.52	3.54	1.82
PF2	66 or more	2.83	1.34	2.50	0.71
	56-65	2.21	1.18	3.33	2.52
	46-55	2.83	1.55	3.17	1.64
	36-45	2.45	1.28	2.61	1.32
	26-35	2.29	1.10	2.34	1.17
	18-25	2.71	1.30	2.32	1.06
PF3	66 or more	5.42	1.38	5.00	0.00
	56-65	5.58	1.44	6.33	1.16
	46-55	4.96	2.01	4.92	2.23
	36-45	4.39	1.97	3.86	1.99
	26-35	3.38	1.94	3.39	1.80
	18-25	4.05	1.71	3.71	1.68
PF4	66 or more	5.67	1.37	5.00	0.00
	56-65	5.29	1.73	6.33	1.16
	46-55	4.74	2.01	4.25	2.38
	36-45	4.06	2.05	3.33	1.93
	26-35	3.34	1.89	3.01	1.77
	18-25	3.90	1.91	3.14	1.80

Different gender groups present close mean values of PF1, PF2, PF3 and PF4, for both leisure and business customers. However, in general, the female group shows higher mean values of PF1, PF2, PF3 and PF4 than the male group. Thus, the female group was more likely to feel about PF1, PF2, PF3 and PF4 are "Unfair" scenarios (see Table 10).

Table 10

Descriptive Statistics of Perceived Fairness and Gender

		Leisure		Business	
Demographics		Mean	SD	Mean	SD
PF1	Female	3.55	1.68	3.36	1.73
	Male	3.12	1.57	3.12	1.66
PF2	Female	2.40	1.18	2.40	1.07
	Male	2.49	1.28	2.49	1.34
PF3	Female	4.35	1.98	3.80	1.87
	Male	3.77	1.98	3.58	1.90
PF4	Female	4.27	2.06	3.45	1.89
	Male	3.58	1.92	3.12	1.88

Mean values of PF1, PF2, PF3 and PF4 depending on different marital status groups are listed in Table 11. For leisure customers, the separated group shows the highest mean value of PF1 (Mean=4.50, SD=1.00); the divorced group presents the highest mean value of PF3 (Mean=5.47, SD=1.54); the divorced group has the highest mean value of PF4 (Mean=5.05, SD=1.99). All these mean values are close to 5, which represents "Slightly Unfair". Thus, the divorced and the separated group were more likely to feel unfair about PF1, PF2, PF3 and PF4 scenarios, while the never married and the married group were more likely to feel fair about PF1, PF2, PF3 and PF4 scenarios. For the business group, although the mean values of different marital status groups are not much different from each other, the divorced group shows higher mean values than other groups.

Table 11

Descriptive Statistics of Perceived Fairness and Marital Status

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PF1	Widowed	3.00	1.31	3.00	1.73
	Separated	4.50	1.00	-	-
	Divorced	4.42	1.47	3.83	1.33
	Never married	3.34	1.59	3.48	1.81
	Married	3.22	1.67	3.08	1.64
PF2	Widowed	2.88	1.36	1.67	0.58
	Separated	2.25	1.50	-	-
	Divorced	2.84	1.50	3.50	1.23
	Never married	2.45	1.17	2.47	1.16
	Married	2.39	1.24	2.44	1.29
PF3	Widowed	4.50	2.07	2.67	1.53
	Separated	4.50	0.58	-	-
	Divorced	5.47	1.54	4.50	1.52
	Never married	4.06	1.85	3.61	1.93
	Married	3.90	2.07	3.71	1.91
PF4	Widowed	4.13	2.30	2.00	1.73
	Separated	4.75	1.26	-	-
	Divorced	5.05	1.99	3.50	1.05
	Never married	3.82	1.93	3.21	1.84
	Married	3.82	2.05	3.27	1.94

As shown in Table 12, for leisure customers, the Anglo group shows higher mean values of PF1, PF2, PF3 and PF4 than other culture of origin groups. Especially, the Anglo group has a mean value of 4.57 for PF3, and a mean value of 4.54 for PF4; both are close to 5, which represents "Slightly Unfair". Thus, the Anglo group was more likely to perceived PF1, PF2, PF3 and PF4 scenarios as unfair as other groups. On the other side, for business customers, there is not much difference among mean values of PF1, PF2, PF3 and PF4, depending on different culture groups.

Table 12

Descriptive Statistics of Perceived Fairness and Culture of Origin

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PF1	Confucian Asia	3.02	1.58	2.80	1.50
	Far East	3.40	1.70	3.66	1.93
	Latin America	3.14	1.50	3.20	1.57
	Anglo Cultures	3.66	1.67	3.11	1.45
PF2	Confucian Asia	2.40	1.12	2.40	1.17
	Far East	2.16	1.22	2.37	1.40
	Latin America	2.86	1.24	2.55	1.08
	Anglo Cultures	2.46	1.26	2.71	1.38
PF3	Confucian Asia	3.60	2.01	3.39	1.89
	Far East	3.96	1.02	3.90	2.04
	Latin America	3.98	1.81	3.80	1.72
	Anglo Cultures	4.57	2.02	3.64	1.87
PF4	Confucian Asia	3.41	1.91	3.03	1.81
	Far East	3.87	2.09	3.54	2.12
	Latin America	3.70	1.83	3.09	1.64
	Anglo Cultures	4.54	2.05	3.29	1.90

Similar to culture of origin groups, the Anglo group of culture raised in has higher mean values of PF1, PF2, PF3 and PF4 than other groups. The Anglo group was more likely to feel unfair about PF1, PF2, PF3 and PF4 scenarios than other groups. However, for business customers, the mean values of PF1, PF2, PF3 and PF4 are rather close, depending on different culture groups (see Table 13).

Table 13

Descriptive Statistics of Perceived Fairness and Culture Raised in

Demographics		Leisure		Business	
		Mean	SD	Mean	SD
PF1	Confucian Asia	3.04	1.57	2.86	1.54
	Far East	3.37	1.70	3.60	1.90
	Latin America	3.11	1.49	3.17	1.56
	Anglo Cultures	3.71	1.69	3.25	1.62
PF2	Confucian Asia	2.31	1.11	2.35	1.17
	Far East	2.18	1.14	2.33	1.30
	Latin America	2.83	1.26	2.53	1.06
	Anglo Cultures	2.53	1.34	2.96	1.60
PF3	Confucian Asia	3.60	1.99	3.39	1.86
	Far East	3.95	2.00	3.85	2.02
	Latin America	3.90	1.81	3.71	1.73
	Anglo Cultures	4.65	2.03	3.96	2.03
PF4	Confucian Asia	3.37	1.91	3.01	1.78
	Far East	3.89	2.05	3.49	2.08
	Latin America	3.63	1.82	3.03	1.65
	Anglo Cultures	4.62	2.06	3.61	2.08

Willingness to pay. As shown in Table 14, for leisure customers, the age group 36-45 has the highest mean value (Mean=$189.1) among all other groups. The male group has higher mean value than the female group. The never married (Mean= $161.6) and the married group (Mean =$159.25) have higher mean value than widowed (Mean = $118.62), the separated (Mean =$141.25) and the divorced (Mean = $144.11) group. The Latin America group has the highest mean values for both origin culture and culture raised in, which are $189.37 and $191.48.

Table 14

Descriptive Analysis of Demographics on WTP, Leisure Customers

Demographics		Mean	SD	Minimum	Maximum
Age	66 or more	119.64	40.19	45	180
	56-65	119.75	59.74	30	300
	46-55	131.33	75.69	30	300
	36-45	189.10	164.34	10	600
	26-35	160.59	141.55	20	600
	18-25	153.78	128.27	10	550
Gender	Female	153.98	130.85	20	600
	Male	164.70	140.53	10	600
Marital Status	Widowed	118.62	56.20	50	200
	Separated	141.25	175.42	30	400
	Divorced	144.11	82.54	50	300
	Never married	161.60	144.56	10	600
	Married	159.25	135.70	10	600
Origin Culture	Confucian Asia	155.78	137.45	15	600
	Far East	157.26	147.57	10	600
	Latin America	189.37	165.88	30	600
	Anglo Cultures	139.48	73.27	28	400
Culture Raised in	Confucian Asia	157.46	139.24	15	600
	Far East	155.55	148.01	10	600
	Latin America	191.48	165.52	30	600
	Anglo Cultures	138.49	73.24	28	400

Note: WTP is USD $

Table 15 displays the descriptive analysis between demographics and willingness to pay for business customers. Same as leisure customers, the age group 36-45 has the highest mean value (Mean = $224.84) among all business age groups. The male group has higher mean value than the female group as well. Unlike leisure customers, for business customers, the divorced group has the highest mean value of $296.67. Similar to leisure customers, for business customers, the Latin America group has the highest mean values among origin culture groups and culture raised in groups, which are $251.82 and $253.76.

Table 15

Descriptive Analysis of Demographics on WTP, Business Customers

Demographics		Mean	SD	Minimum	Maximum
Age	66 or more	65.00	49.50	30	100
	56-65	103.33	87.37	30	200
	46-55	120.83	79.05	20	300
	36-45	224.84	226.97	22	1000
	26-35	188.24	195.66	20	1000
	18-25	161.42	172.47	10	800
Gender	Female	176.46	175.15	20	1000
	Male	191.41	207.16	10	1000
Marital Status	Widowed	50.00	30.00	20	80
	Separated	-	-	-	-
	Divorced	296.67	277.61	30	800
	Never married	190.24	214.45	10	1000
	Married	185	187.19	20	1000
Origin Culture	Confucian Asia	173.33	164.44	20	800
	Far East	155.38	152.42	10	600
	Latin America	251.82	277.39	35	1000
	Anglo Cultures	182.61	149.58	20	600
Culture Raised in	Confucian Asia	170.82	163.52	20	800
	Far East	157.04	155.81	10	600
	Latin America	253.76	275.64	20	1000
	Anglo Cultures	169.93	124.36	30	500

Note: WTP is USD $

Hypothesis Testing

H1A1: Age significantly relates to a customer's perceived value of hotel rooms.

As shown in Table 16, since the p-values of Box's test for the leisure (p<0.001) and the business (p=0.009) group, were less than 0.05, the results were significant. Thus, the assumption of homogeneity of covariance across the groups was not met. However, the Box's M is sensitive to large data file, meaning it can detect small deviation from homogeneity. An additional check of covariance matrices, Levene's test was applied, and p-values for the leisure and the business group were not significant. The MANOVA analysis for perceived value and age was reliable. According to the results of MANOVA test, for the leisure group,

49

there was a significant effect (p<0.0001) of age on the set of perceived value variables (PV1 & PV2), as a group. However, for the business group, overall the results (p>0.05) were not significant, for MANOVA test.

Table 16

MANOVA Analysis for Relationship between Perceived Value and Age

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	3.752	0.000	2.439	0.009
Levene's test				
PV1		0.116		0.616
PV2		0.075		0.375
MANOVA				
Pillai's Trace	738.000	0.000	1.754	0.067
Wilks' Lambda	736.000	0.000	1.761	0.066
Hotelling's Trace	734.000	0.000	1.768	0.064
Roy's Largest Root	369.000	0.000	2.952	0.013

H1A2: Gender significantly relates to a customer's perceived value of hotel rooms.

As shown in Table 17, for the leisure group, both the Box's test and Levene's test were not significant, which means MANOVA can be performed. For the business group, although Box's test was significant, p=0.007, the Levenes's test showed adverse results, which means MANOVA can be performed. For the leisure group, the results of MANOVA were barely significant, F=3.008, p=0.051. Thus, there was a significant relationship between perceived value and gender. On the contrary, for the business group, the results were not significant, p>0.128, for MANOVA.

Table 17

MANOVA Analysis for Relationship between Perceived Value and Gender

		Leisure		Business	
		F	p	F	p
Box's test of equality of covariance		1.938	0.121	4.090	0.007
Levene's test					
	PV1		0.556		0.808
	PV2		0.156		0.360
MANOVA					
	Pillai's Trace	3.008	0.051	1.148	0.333
	Wilks' Lambda	3.008	0.051	1.146	0.334
	Hotelling's Trace	3.008	0.051	1.145	0.335
	Roy's Largest Root	3.008	0.051	2.078	0.128

H1A3: Marital status significantly relates to a customer's perceived value of hotel rooms.

Both leisure group and business group passed the Box's test and Levene's test, which means the assumption of homogeneity, was not violated. According to the results of MANOVA, for both leisure and business groups, there was no significant effect ($p<0.05$) of marital status on the set of perceived value variables (PV1 & PV2), as a group (see Table 18).

Table 18

MANOVA Analysis for Relationship between Perceived Value and Marital Status

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	1.464	0.112	1.647	0.101
Levene's test				
PV1		0.678		0.259
PV2		0.353		0.013
MANOVA				
Pillai's Trace	2.009	0.030	2.066	0.038
Wilks' Lambda	2.016	0.029	2.067	0.038
Hotelling's Trace	2.022	0.029	2.068	0.038
Roy's Largest Root	3.395	0.005	3.165	0.015

H1A4: Culture significantly relates to a customer's perceived value of hotel rooms.

As displayed in Table 19 & 20, none of the results of Box's test and Levene's test was significant, not violating the assumption, thus there was no suspicion to conduct MANOVA. Based on the results of MANOVA test, overall, none of p-value is smaller than 0.05 for both culture of origin and culture raised in. Thus, there was no significant relationship between culture of origin and perceived value, as well as between culture raised in and perceived value.

Table 19

MANOVA Analysis for Relationship between Perceived Value and Origin Culture

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	0.893	0.530	1.588	0.112
Levene's test				
PV1		0.267		0.629
PV2		0.414		0.705
MANOVA				
Pillai's Trace	1.329	0.242	1.246	0.282
Wilks' Lambda	1.330	0.241	1.250	0.279
Hotelling's Trace	1.330	0.241	1.254	0.277
Roy's Largest Root	2.383	0.069	2.483	0.062

Table 20

MANOVA Analysis for Relationship between Perceived Value and Culture Raised in

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	1.097	0.361	1.790	0.065
Levene's test				
PV1		0.167		0.100
PV2		0.121		0.226
MANOVA				
Pillai's Trace	1.633	0.135	1.631	0.137
Wilks' Lambda	1.635	0.135	1.634	0.136
Hotelling's Trace	1.637	0.134	1.638	0.135
Roy's Largest Root	2.900	0.035	2.946	0.034

H1B1: Age significantly relates to a customer's perception of fairness on hotel room rates.

Although the Box's test for the leisure group has failed (p=0.009), the Levene's tests for both leisure and business groups were not significant, as shown in Table 21, which means the assumption of homogeneity was not violated. Based on the overall results of MANOVA analysis, age had a statistically significant (p<0.0001) relationship with perceived fairness variables as a group. However, since the overall p-value for the business group was greater than 0.05, there was no statistically significant relationship between age and perceived fairness, for MANOVA test.

Table 21

MANOVA Analysis for Relationship between Perceived Fairness and Age

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	1.535	0.009	0.659	0.922
Levene's test				
PF1		0.083		0.068
PF2		0.259		0.169
PF3		0.128		0.041
PF4		0.418		0.029
MANOVA				
Pillai's Trace	3.059	0.000	1.433	0.098
Wilks' Lambda	3.153	0.000	1.450	0.092
Hotelling's Trace	3.233	0.000	1.464	0.086
Roy's Largest Root	9.824	0.000	4.367	0.001

H1B2: Gender significantly relates to a customer's perception of fairness on hotel room rates.

As shown in Table 22, although the Box's test for the leisure group has failed (p=0.03), the Levene's tests for both leisure and business groups were not significant, which means the assumption of homogeneity was not violated. Statistical significance interaction

was found between perceived fairness and gender, for both leisure group, F=3.803, p = 0.005, and business group p= 0.00, using MANOVA test. MANOVA test showed there is a significant relationship between gender as a group and these four perceived fairness variables together.

Table 22

MANOVA Analysis for Relationship between Perceived Fairness and Gender

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	1.990	0.030	1.173	0.303
Levene's test				
PF1		0.060		0.672
PF2		0.481		0.034
PF3		0.919		0.632
PF4		0.106		0.633
MANOVA				
Pillai's Trace	3.803	0.005	3.209	0.001
Wilks' Lambda	3.803	0.005	3.261	0.001
Hotelling's Trace	3.803	0.005	3.314	0.001
Roy's Largest Root	3.803	0.005	6.155	0.000

H1B3: Marital status significantly relates to a customer's perception of fairness on hotel room rates.

Both leisure and business groups passed the Box's test and Levene's test, p>0.05, which means the MANOVA was appropriate to perform. However, according to the results, p-value MANOVA was not significant, for either leisure or business group, thus, there was no significant relationship between marital status and perceived fairness variables as a group (see Table 23).

Table 23

MANOVA Analysis for Relationship between Perceived Fairness and Marital Status

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	1.075	0.357	1.005	0.453
Levene's test				
PF1		0.383		0.090
PF2		0.671		0.398
PF3		0.011		0.421
PF4		0.234		0.200
MANOVA				
Pillai's Trace	1.151	0.290	1.012	0.441
Wilks' Lambda	1.151	0.290	1.008	0.446
Hotelling's Trace	1.151	0.290	1.004	0.450
Roy's Largest Root	2.821	0.016	2.070	0.086

H1B4: Culture significantly relates to a customer's perception of fairness on hotel room rates.

For the leisure group, although the Box's test has failed ($p<0.0001$), the overall Levene's tests was not significant (see Table 24). After performing MANOVA, the results, $p<0.0001$, showed a statistical significance between origin culture and perceived fairness. Nevertheless, for the business group, both Box's test ($p=0.002$) and Levene's test ($p=0.007$) were failed, which means the assumption of homogeneity was not met. The MANOVA analysis for business was unreliable.

Table 24

MANOVA Analysis for Relationship between Perceived Fairness and Origin Culture

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	3.267	0.000	1.883	0.002
Levene's test				
PF1		0.093		0.007
PF2		0.396		0.173
PF3		0.445		0.347
PF4		0.252		0.007
MANOVA				
Pillai's Trace	3.279	0.000	1.577	0.093
Wilks' Lambda	3.309	0.000	1.586	0.091
Hotelling's Trace	3.328	0.000	1.592	0.089
Roy's Largest Root	6.783	0.000	3.713	0.006

As shown in Table 25, for the leisure group, the Box's test for the leisure group has failed (p<0.0001), but the overall Levene's tests was not significant (p>0.05). After performing MANOVA, the results, p<0.0001, presented a statistical significance between culture raised in and perceived fairness. However, for the business group, both Box's test (p=0.002) and Levene's test (p=0.006) were failed, which means the assumption of homogeneity was not met. The MANOVA analysis for business was suspicious.

Table 25

MANOVA Analysis for Relationship between Perceived Fairness and Culture Raised in

	Leisure		Business	
	F	p	F	p
Box's test of equality of covariance	3.498	0.000	1.882	0.002
Levene's test				
PF1		0.069		0.065
PF2		0.101		0.150
PF3		0.478		0.330
PF4		0.311		0.006
MANOVA				
Pillai's Trace	3.461	0.000	1.616	0.083
Wilks' Lambda	3.489	0.000	1.616	0.083
Hotelling's Trace	3.503	0.000	1.613	0.083
Roy's Largest Root	6.439	0.000	3.177	0.015

H1C1: Age significantly relates to a customer's willingness to pay for hotel rooms.

For the leisure group, the Levene's test failed, $p<0.0001$, so the assumption of homogeneity was violated (see Table 26). The ANOVA result was suspicious. For the business group, the Levene's test, $p=0.072$, showed no significant value, thus ANOVA was eligible to perform. There was no statistically significant relation existed between age and willingness to pay, $F=1.053$, $p=0.388$.

Table 26

ANOVA Analysis for Relationship between Willingness to Pay and Age

		Leisure		Business	
		Mean	SD	Mean	SD
Levene's test			0.000		0.072
AGE	66 or more	119.636	40.190	65.000	49.497
	56-65	119.750	59.740	103.333	87.369
	46-55	131.333	75.689	120.833	79.052
	36-45	189.104	164.341	224.842	226.969
	26-35	160.587	141.554	188.244	195.666
	18-25	153.787	128.270	161.429	172.465
F			1.360		1.053
p			0.230		0.388

H1C2: Gender significantly relates to a customer's willingness to pay for hotel rooms.

As displayed in Table 27, both leisure group and business group passed the Levene's test, with p=0.131 and p=0.359. According to the results of ANOVA analysis, both leisure group, F=0.570, p=0.451, and business group, F=2.326, p= 0.1 had failed to meet the significant level. Thus, gender was not significant related to willingness to pay.

Table 27

ANOVA Analysis for Relationship between Willingness to Pay and Gender

		Leisure		Business	
		Mean	SD	Mean	SD
Levene's test			0.131		0.359
Gender	Female	153.982	130.853	176.464	175.155
	Male	164.700	140.525	191.417	207.164
F			0.570		2.326
p			0.451		0.100

H1C3: Marital status significantly relates to a customer's willingness to pay for hotel rooms.

Both leisure group and business group passed the Levene's test, with p=0.288 and p=0.375 (see Table 28). However, based on the ANONA results, F=1.225, p=0.297 for the leisure group, F=0.833, p=0.505 for the business group, none of the group had a significant level. Thus, there was not a statistical significance existed between marital status and willingness to pay.

Table 28

ANOVA Analysis for Relationship between Willingness to Pay and Marital Status

		Leisure		Business	
		Mean	SD	Mean	SD
Levene's test			0.288		0.375
Marital Status	Widowed	118.625	56.196	50.000	30.000
	Separated	141.250	175.422	-	-
	Divorced	144.111	82.548	296.667	277.609
	Never married	161.598	144.561	190.242	214.448
	Married	159.254	135.699	185.980	187.193
F			1.225		0.833
p			0.297		0.505

H1C4: Culture significantly relates to a customer's willingness to pay for hotel rooms

For the business group, a statistical significance was found between origin culture and willingness to pay, F=2.826, p=0.04 (see Table 29). According to the mean value of each culture group, the Latin America was willingness to pay the highest amount (Mean=251.82). However, the Levene's test had failed for both leisure and business groups, p<0.0001, thus the ANOVA results were not reliable.

Table 29

ANOVA Analysis for Relationship between Willingness to Pay and Origin Culture

		Leisure		Business	
		Mean	SD	Mean	SD
Levene's test			0.000		0.000
Origin Culture	Confucian Asia	155.779	137.452	173.329	164.441
	Far East	157.259	147.573	155.380	152.422
	Latin America	189.372	165.880	251.821	277.390
	Anglo Cultures	139.484	73.266	182.607	149.582
F			2.038		2.826
p			0.108		0.040

As shown in Table 30, for the business group, there was a statistically significant relationship between culture raised in and willingness to pay, F=3.102. p=0.028. Based on the mean value of each culture group, Latin America had the highest willingness to pay (Mean=253.76). Nevertheless, since levene's tests failed for both leisure and business groups, p<0.0001, the results of ANOVA were not reliable.

Table 30

ANOVA Analysis for Relationship between Willingness to Pay and Culture Raised in

		Leisure		Business	
		Mean	SD	Mean	SD
Levene's test			0.000		0.000
Culture Raised in	Confucian Asia	157.462	139.238	170.817	163.516
	Far East	155.553	148.017	157.045	155.812
	Latin America	191.480	165.521	253.763	275.641
	Anglo Cultures	138.489	73.239	169.929	124.364
F			2.336		3.102
p			0.074		0.028

Summary of Hypotheses Testing

The summary of hypotheses testing results are listed in Table 31. For leisure customers, age, gender, and marital status are significant related to perceived value; for

61

business customers, only marital status is significant related to perceived value. Age, gender, marital status, culture of origin, and culture raised in have significant relationships with perceived fairness, for leisure customers, however, only gender has a significant relationship with perceived fairness, for business customers. None of these demographics is significantly related to willingness to pay.

Table 31

Summary of Hypotheses Testing Results

	PV		PF		WTP	
	Leisure	Business	Leisure	Business	Leisure	Business
Age	***	NS	***	NS	NS	NS
Gender	*	NS	**	***	NS	NS
Marital Status	**	**	NS	NS	NS	NS
Culture of Origin	NS	NS	***	NS	-	-
Culture Raised in	NS	NS	***	NS	-	-

Note: *. The mean difference is significant at the .05 level. **. The mean difference is significant at the .01 level. ***. The mean difference is significant at the .0001 level. -. The data failed the Levene's test. NS. Not significant.

CHAPTER V

DISCUSSION AND CONCLUSION

This chapter is divided into four sections. First, the findings of the study are

summarized, followed by the practical implications for the hotel industry, limitations of this

study, and future research directions.

Summary of the Study

The purpose of this research is to explore the relationship between a customer's

perception on hotel room rates and the individual's demographics, especially culture. The

independent variables, demographics were categorized into several groups. Three dependent

variables were evaluated by different questions; perceived value was assessed by two

questions, perceived fairness was assessed by four scenarios, and willingness to pay was

assessed by one scenario presented with pictures.

Four hundred and fourteen qualified respondents who had stayed in a mid-scale hotel

room and involved in the purchasing decision in the past 24 months took the survey.

Respondents were chosen specifically from four different cultures Anglo, Latin American,

Far East, and Confucian Asia. The respondents were able to complete either or both of the

leisure or business part of the survey.

First, the descriptive statistics showed that for leisure customers, younger age groups,

18-25, 26-35, and 36-45, were more likely to think that the price charged by the hotel,

regarding the accommodation cost and services received, was reasonable. However, business

customers, aged 66 or more, were more likely to think the price they paid was unreasonable.

Both female and male groups felt the same about the price charged by the hotel; no obvious

difference appears between the two groups. The separated and the divorced groups were less

likely to feel reasonable about the price charged by the hotel than married and never married

groups, given the accommodation costs and services received. All culture groups tended to believe that the hotel room rates paid were reasonable; little difference existed among different culture groups, for both culture of origin and culture raised in.

From the descriptive statistics, it is concluded that when customers were quoted a higher or lower price than last time stayed in the same hotel, younger groups, age 18-25, 26-35, and 36-45, were more likely to think this situation was fair than older groups, age 46-55, 56-65, and 66 or more. When customers paid a higher or lower price than their friend or colleague staying in the same hotel for the same room type, the younger the customers were, the more they were likely to perceive the price charged as fair. Regarding both situation, the female group were less likely to feel fair about the priced charged. When customers were quoted a higher or lower price than last time stayed in the same hotel, the married and the never married groups were more likely to feel fair about the price quoted, while the divorced and the separated groups were more likely to perceive the price quoted as unfair. When customers paid a higher or lower price than their friend or colleague staying in the same hotel for the same room type, compared to the never married and the married groups, the separated and the divorced groups were more likely to feel unfair about the price charged. The Anglo group was more likely to feel unfair towards both scenarios.

After comparing the mean of each group, customers aged from 36 to 45 years old were most likely to pay the highest price for hotel rooms. Females tend to pay less than males for hotel rooms. For leisure customers, the never married and the married groups were more likely to pay a higher price for hotel rooms than the other three groups. However, for business customers, the divorced group was more likely to pay the highest price for hotel rooms. The Latin America group was most likely to pay the highest price for hotel rooms.

Second, MANOVA and ANOVA were applied to test hypotheses. Age was proven to be significantly related to a customer's perceived value, for the leisure group only. For the leisure group, gender had a significant relationship with a customer's perceived value, but for the business group, there was no significance found. Only for the leisure group, marital status was significantly related to a customer's perceived value. No significance existed between culture and a customer's perceived value.

Age was significant related to perceived fairness only for the leisure group. Gender was found to be significantly related to perceived fairness, while no significant relationship was found between marital status and perceived fairness for both leisure and business groups. For the leisure group, culture had a significant relationship with perceived fairness.

Age, gender, nor marital status had a significant relationship with willingness to pay for both leisure and business group. Since the Levene's test results of the leisure and the business groups were not significant for neither culture of origin nor culture raised in, it is meaningless to perform ANOVA.

Discussion of Results

The purpose of this study is to investigate if demographics significantly relate to a customer's perceived value, perceived fairness and willingness to pay. By using MANOVA and ANOVA analysis, it is proven that age, gender, and marital status are significantly related to perceived value; age, gender, and culture have a significant relationship with perceived fairness. Age, gender, marital status nor culture shows significant relations with willingness to pay.

The study's finding that age and gender are significantly related to perceived value, is consistent with findings of Rosa-Diaz (2004), for retail industry; since there is no previous research, in hospitality industry, investigate the relationship between customers' perceived

65

values and demographics, findings of this study establish the basis for future studies. Marital status is also significant related to perceived value, and the married group has better perceived value than the widowed group. This finding supports the findings of Cacciolatti et al. (2015). However, this study's finding is contradictory to the results from the Jamal and Sharifuddin's (2007) study, which shows a significant relationship between culture and perceived value. The reason for the contradictory finding may be the similar sample sizes of four culture groups.

This study also finds that age and gender show a significant relationship with perceived fairness, which contradicts Choi and Mattila's (2006) finding, for airline industry, but correspond with Sanghavi's (2005) finding for the hospitality industry. However, another finding in this study, that older groups are more likely to feel unfair when paying a price different than last time or other people, is inconsistent with Sanghavi's (2005) finding. The finding that the female group is more likely to feel unfair than men when hotel room rates fluctuate, is in line with Sanghavi's (2005) finding. The relationship between marital status and perceived fairness is absent in previous research, thus, this study's finding fills the gap. Culture presents a significant relationship with perceived fairness, and the Anglo group is more likely to feel unfair about the variable prices. This finding is contrary to Choi and Mattila's (2006) finding that American perceive the variable-pricing strategies to be fairer than Korean. Since previous research on the relationship between culture and perceived fairness of hotel room prices included limited culture groups, this study extends the scope of the study by adding two more culture groups.

This study finds no significant relationships between age and willingness to pay, which contradicts findings from several research for industry in general (Balcombe et al., 2009; Barton et al., 2014; O'Neil, 2001; Rihn & Yue, 2016). The reason for the opposite

findings may be the insufficient sample size for each age group. The finding that gender is not significantly related to willingness to pay also contradicts the findings of Balcombe et al. (2009). The finding that marital status has no significant relationship with willingness to pay fills the gap of previous research and provides instructions for future studies.

Other interesting findings are that results of how culture of origin affects perceived value, perceived fairness, and willingness to pay show no difference from how culture raised -in affects perceived value, perceived fairness and willingness to pay. The reason may be that samples are selected from population who currently reside in US, thus no matter what cultures of origin, or raised in, they share common perceptions. Another reason may be that respondents from different cultures of origin and cultures raised in were selected from the same sampling frame, thus, such sampling method may have higher sampling error than other sampling techniques, and fail to reflect the diversity in the sampling frame. Ideally, the sampling would be carried out differently and the respondents should be across continents.

Another finding is that significant relationships are often found among leisure customers, whereas there is no significant relationship found among business customers. Business travelers are proven to be less price sensitive and concerned with room rates than leisure travelers due to the fact that the companies may be sponsoring their accommodation (Taylor & Kimes, 2010). Thus, for business customers, it is hard to find significant relationship between customers' price perception and their demographics. In addition, business customers are subjected to the fixed budget their companies provide; they may not have a clear perceived value on hotel room prices.

Implications

Many previous research show that perceived value, perceived price fairness and willingness to pay are three indicators to evaluate a customer's perception on hotel room

price (Ashton, Scott, Solnet, & Breakey 2010; El Haddad, Hallak & Assaker, 2015; Masiero et al., 2015; Škare & Gospic, 2015). This study explored the impact of demographics on these three indicators. The current study not only supplemented previous research but also validated results found in hospitality industry (Cacciolatti et al., 2015; Rosa-Diaz, 2004; Sanghavi's, 2005). Especially, culture as a variable rarely appeared in prior studies, was preliminarily explored; in this thesis, the relationship discovered between culture and a customer's perceived value, perceived fairness and willingness pay offers a foundation for future studies.

This study also reconciled the contradictory results of previous studies (Balcombe et al., 2009; Cacciolatti et al., 2015; Choi & Mattila, 2006; Jamal & Sharifuddin, 2007; Sanghavi, 2005), and improved prior studies by two steps. First, this study is the first to include age, gender, marital status and culture together as independent variables, and studies the effects of all four demographics on perceived value, perceived fairness and willingness to pay. Second, introducing different scenarios to each of the three dependent variables extended the scope and depth of previous studies.

Even though no difference exists between culture of origin and culture raised in, in their relationship with perceived value, perceived fairness and willingness to pay, there are still some academic values exist in this study. It can be concluded that regardless the ways of asking the culture, the culture of origin and culture raised in exhibit no difference in relation to price perception. It is also assumed that if other expressions of acquiring for culture were applied, the results may be different. This study suggests two ways of asking culture backgrounds that should be avoided in future studies.

Several significant implications are recommended for hotels to apply a better dynamic pricing strategy. Although hotel companies can't control demographics factors, it still makes

sense to establish price information communications and specific promotions tailored to different age groups, men and women, as well as to customers with different marital status. If a hotel were to set difference prices for difference age groups, it is feasible to quote a higher price to younger customers, about age 18-55. For older customers, age 56 or more, a senior discount or a promotion package may be recommended. Thus, the hotel can maximize its revenue and maintain customer satisfaction. Female customers are more sensitive to price than male customers, thus, the same promotion package or price discounts may appeal to women more than men. Culture has an impact on customers' price perception. It is suggested that when global hotel companies expanding their market to other countries with Anglo, Latin America, Confucian or Far East Asian cultures, they should develop pricing strategies and provide promotions accordingly. Also, it is crucial to educate customers from different culture backgrounds the dynamic pricing strategy, and train them to understand and accept different price-related information. Last, since business customers are less sensitive to price differences than leisure customers, hoteliers should emphasize on advertising promotion and discounts to leisure customers.

Limitations

This study has some limitations that need to be addressed. First, this study only explored customers' perception on midscale hotel room rates. To understand the hotel dynamic pricing strategy comprehensively, all scales of hotels should be included in the future study.

Second, the sample size of some groups were too small to meet the minimum size of 20 (Hair, Anderson, Tatham, & Black, 1998). Even for larger groups, the sample size might not be sufficient to discover the potential variations on dependent variables. The hypotheses, which were not supported by this study, may be approved by future studies, when larger sample sizes are utilized.

Third, this study only applied descriptive analysis, MANOVA and ANOVA, which were not sufficient to fully understand the relationship between a customer's perception on hotel room rates and the customer's demographics. However, due to the limited sample size, MANOVA and ANOVA are the best model for current study. With larger sample size, a more extensive model is recommended to apply to this study in the future.

Fourth, there might be interactions exist between each demographics. For example, widowed and older customers take business trip anymore or they define business travel differently. Other factors, not measured in this study, such as education and income level, may have impacts on customers' price perception. However, due to the limited sample size, in this study, it is hard to conduct a treatment to the interactions among demographics.

Last, to collect enough sample sizes, the population of this study is the leisure and business customers who had booked a hotel room at least once in the past 24 months. Customers may not have accurate memories dating back 24 months.

Future Studies

This thesis provides several potential directions for future studies. First, all scales of hotel room prices can be included, not only the midscale hotel room rates. Second, a future study with larger sample sizes will be beneficial to the accuracy of hypotheses testing. Culture may be proved to be significantly related to customer's perception of hotel room rates when large sample sized are deployed. Third, more culture types should be included in to the study. Last, several types of neural networks, such as convolutional neural network or recursive neural network can be applied to build model and predict an optimized hotel room price.

APPENDIX A

SURVEY

Q1 You have been invited to participate in a survey being conducted by a Master's student at the University of Nevada, Las Vegas. The survey is intended to gauge customer's perceptions of hotel revenue management techniques. There are no right or wrong answers to this survey, only your opinions. The survey should take no longer than 10 -12 minutes to complete. You will not be compensated for your time by the university, but you will be compensated by the provider who invited you to participate in this study. Your participation in this study is voluntary and you may withdraw at any time. By selecting NEXT I agree that I have read the above and agree to participate in this study and that I am at least 18 years of age. The principal investigator is Dr. Toni Repetti and can be reached at 702-895-4408 or toni.repetti@unlv.edu with any questions about this survey. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office of Research Integrity – Human Subjects at 702-895-2794, toll free at 877-895-2794, or via email at IRB@unlv.edu.

Page Break

Q2 What is your country of origin?

○ Anglo Cultures (e.g. Australia, Canada, England, Ireland, New Zealand, South Africa(white), USA) (1)

○ Latin America (e.g. Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Panama, Peru, Puerto Rico, Venezuela) (2)

○ Far East (e.g. India, Indonesia, Iran, Malaysia, Philippines, Thailand, Pakistan, Zimbabwe) (3)

○ Confucian Asia (e.g. China, Hong Kong, Japan, Nepal, Singapore, South Korea, Taiwan) (4)

○ Other (5)

Q3 What was the primary culture in which you grew up? (This is likely to be the same as your country of origin unless your childhood household embraced a culture different from the predominant one in your country of origin.)

○ Anglo Cultures (e.g. Australia, Canada, England, Ireland, New Zealand, South Africa(white), USA) (1)

○ Latin America (e.g. Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Panama, Peru, Puerto Rico, Venezuela) (2)

○ Far East (e.g. India, Indonesia, Iran, Malaysia, Philippines, Thailand, Pakistan, Zimbabwe) (3)

○ Confucian Asia (e.g. China, Hong Kong, Japan, Nepal, Singapore, South Korea, Taiwan) (4)

○ Other (5)

Q4 In the past 2 years, have you stayed in a hotel?

○ Yes (1)

○ No (2)

Q5 In your family, are you involved in purchasing decisions?

○ Yes (1)

○ No (2)

Q6 Have you stayed in the same hotel more than once?

○ Yes (1)

○ No (2)

Q7 During the past 2 years, how many times have you stayed in the same hotel?

○ 2-5 (1)

○ 6-10 (2)

○ 11-15 (3)

○ 16-20 (4)

○ 21 -25 (5)

○ 26-30 (6)

○ 31 or more (7)

Q8 During the past 2 years, have you paid the same room rate each time you stayed in the same hotel?

○ Yes (1)

○ No   (2)

○ Don't remember (3)

Q9 During the past 2 years, how many times have you paid the same room rate at the same hotel?

○ 2-5 (1)

○ 6-10 (2)

○ 11-15 (3)

○ 16-20 (4)

○ 21 or more (5)

Q10 How much do you agree with the following statements?

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
Hotels are business entities, so they are entitled to change their price. (1)	○	○	○	○	○	○	○
It is ethical that the hotel increases the room rates during high seasons and decreases the room rates during	○	○	○	○	○	○	○

low seasons. (2)

It is fair that booking a standard room over different channels would provide different room rates. (3)

○　　　○　　　○　　　　　○　　　○　　　○　　　○

Hotels change room rates frequently. (4)

○　　　○　　　○　　　　　○　　　○　　　○　　　○

Hotels change room rates according to demand. (5)

○　　　○　　　○　　　　　○　　　○　　　○　　　○

Price can be different when booking through different channels. (e.g. booking.com, kayak, orbitz, priceline) (6)

○　　　○　　　○　　　　　○　　　○　　　○　　　○

Q11 Which have you traveled for in the past 2 years?

○ Leisure (1)

○ Business (2)

○ Both (3)

Q12 In the past 2 years, how many times have you traveled for leisure?

○ 1-5 (1)

○ 6-10 (2)

○ 11-15 (3)

○ 16-20 (4)

○ 21-25 (5)

○ 26-30 (6)

○ 31 or more (7)

Q13 When traveling for leisure, I prefer booking a published price (e.g. Hotels.com, Booking.com, Expedia, Kayak, hotel websites)

○ Strongly agree (1)

○ Agree (2)

○ Somewhat agree (3)

○ Neither agree nor disagree (4)

○ Somewhat disagree (5)

○ Disagree (6)

○ Strongly disagree (7)

Q14 When traveling for leisure, I prefer to bid the price.(e.g. Priceline, Hotwire)

○ Strongly agree (1)

○ Agree (2)

○ Somewhat agree (3)

○ Neither agree nor disagree (4)

○ Somewhat disagree (5)

○ Disagree (6)

○ Strongly disagree (7)

Page Break

Q15 Have you ever stayed at a mid-scale hotel (e.g. Holiday Inn, Holiday Inn, Hampton Inn, Legacy, Metropolo Jinjiang, Red Lion, Best Western, Ibis etc.) during a leisure trip?

○ Yes (1)

○ No (2)

✳

Q16 Thinking about your last mid-scale hotel stay, how much US($) did you spend per night (tax not included) on a hotel room?

_____

Q17
How reasonable do you think the price charged by the hotel, given the costs (e.g. room, amenities, breakfast or facilities) associated with your accommodations?

○ Extremely reasonable (1)

○ Moderately reasonable (2)

○ Slightly reasonable (3)

○ Neither reasonable nor unreasonable (4)

○ Slightly unreasonable (5)

○ Moderately unreasonable (6)

○ Extremely unreasonable (7)

Q18
You received your expected level of service, considering the price that you paid. How much do you agree with this statement?

○ Strongly agree (1)

○ Agree (2)

○ Somewhat agree (3)

○ Neither agree nor disagree (4)

○ Somewhat disagree (5)

○ Disagree (6)

○ Strongly disagree (7)

Page Break

Q19 When traveling for leisure, if you visited the same hotel again and you were quoted you a HIGHER price than the last time you stayed in that hotel, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

Q20 When traveling for leisure, if you visited the same hotel again and you were quoted you a LOWER price than the last time you stayed in that hotel, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

Q21 When traveling for leisure, if you and your friend /colleague were staying in the same hotel on the same day and your friend/colleague/relative had paid a HIGHER room rate for the same room type, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

Q22
When traveling for leisure, if you and your friend /colleague were staying in the same hotel on the same day and your friend/colleague/relative had paid a LOWER room rate for the same room type, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

✱

Q23 Scenario 2: You are going to travel for leisure and find a standard room that is located in a mid-scale hotel (e.g. Holiday Inn, Holiday Inn, Hampton Inn, Legacy, Metropolo

Jinjiang, Red Lion, Best Western, Ibis etc.). Mid-scale hotel features: large well-equipped rooms, an average level of service, business convenience, 200 rooms, 2 restaurants, 2 small meeting rooms, an in-room pool, a fitness room, a business center. How much US($) would you willing to pay for this room?

Q24 In the past 2 years, how many times have you traveled for business?

○ 1-5 (1)

○ 6-10 (2)

○ 11-15 (3)

○ 16-20 (4)

○ 21-25 (5)

○ 26-30 (6)

○ 31 or more (7)

Q25 When traveling for business, I prefer booking a published price (e.g. Hotels.com, Booking.com, Expedia, Kayak, hotel websites)

○ Strongly agree (1)

○ Agree (2)

○ Somewhat agree (3)

○ Neither agree nor disagree (4)

○ Somewhat disagree (5)

○ Disagree (6)

○ Strongly disagree (7)

Q26 When traveling for business, I prefer to bid the price.(e.g. Priceline, Hotwire)

○ Strongly agree (1)

○ Agree (2)

○ Somewhat agree (3)

○ Neither agree nor disagree (4)

○ Somewhat disagree (5)

○ Disagree (6)

○ Strongly disagree (7)

Page Break

Q27 Have you ever stayed at a mid-scale hotel (e.g. Holiday Inn, Hampton Inn, Legacy, Metropolo, Jinjiang, Red Lion, Best Western, Ibis etc.) during your business trip?

○ Yes (1)

○ No (2)

✳

Q28
Thinking about your last mid-scale hotel stay, how much US($) did you spend per night (tax not included)?

_____

Q29
How reasonable do you think the price charged by the hotel, given the costs associated with your accommodations?

○ Extremely reasonable (1)

○ Moderately reasonable (2)

○ Slightly reasonable (3)

○ Neither reasonable nor unreasonable (4)

○ Slightly unreasonable (5)

○ Moderately unreasonable (6)

○ Extremely unreasonable (7)

Q30 You received your expected level of service, considering the price that you paid. How much do you agree with this statement?

○ Strongly agree (1)

○ Agree (2)

○ Somewhat agree (3)

○ Neither agree nor disagree (4)

○ Somewhat disagree (5)

○ Disagree (6)

○ Strongly disagree (7)

Page Break

Q31
When traveling for business, if you visited the same hotel again and you were quoted you a HIGHER price than the last time you stayed in that hotel, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

Q32
When traveling for business, if you visited the same hotel again and you were quoted you a LOWER price than the last time you stayed in that hotel, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

Q33
When traveling for business, if you and your friend /colleague were staying in the same hotel on the same day and your friend/colleague/relative had paid a HIGHER room rate for the same room type, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

Q34
When traveling for business, if you and your friend /colleague were staying in the same hotel on the same day and your friend/colleague/relative had paid a LOWER room rate for the same room type, how fair do you feel about this situation?

○ Extremely fair (1)

○ Moderately fair (2)

○ Slightly fair (3)

○ Neither fair nor unfair (4)

○ Slightly unfair (5)

○ Moderately unfair (6)

○ Extremely unfair (7)

Page Break

Q35 Scenario 1: You are going to travel for leisure and find a standard room that is located in a mid-scale hotel (e.g. Holiday Inn, Holiday Inn, Hampton Inn, Legacy, Metropolo Jinjiang, Red Lion, Best Western, Ibis etc.). Mid-scale hotel features: large well-equipped rooms,   an average level of service,   business convenience,   200 rooms,   2 restaurants, 2 small meeting rooms,   an in-room pool,   a fitness room,   a business center.How much US($) would you willing to pay for this room?

Page Break

Q36 What is your gender?

○ Male (1)

○ Female (2)

○ Prefer not to answer (3)

Q37 What is your age?

○ 18-25 (1)

○ 26-35 (2)

○ 36-45 (3)

○ 46-55 (4)

○ 56 -65 (5)

○ 66 or more (6)

○ Prefer not to answer (7)

Q38 What is the highest degree of level of education you have completed?

○ Less than high school (1)

○ High school graduate (or equivalent) (2)

○ Some college (3)

○ Bachelor's degree (4)

○ Master degree and above (5)

○ Prefer not to answer (6)

Q39 What is your marital status?

○ Married (1)

○ Widowed (2)

○ Divorced (3)

○ Separated (4)

○ Never married (5)

○ Prefer not to answer (6)

Page Break

Q40 Which of the following categories best describes your employment status?

○ Employed full time (1)

○ Employed part time (2)

○ Unemployed (3)

○ Retired (4)

○ Student (5)

○ Prefer not to answer (6)

Page Break

Q41 Which of the following best describes your ethnicity?

○ White (1)

○ Black or African American (2)

○ American Indian or Alaska Native (3)

○ Asian (4)

○ Native Hawaiian or Pacific Islander (5)

○ Other (6)

○ Prefer not to answer (7)

Q42 How many people live in your household?

○ 1 (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 or more (5)

○ Prefer not to answer (6)

Q43 What was your total household income before taxes during the past 12 months?

○ Less than $20,000 (1)

○ $20,000 - $29,999 (2)

○ $30,000 - $49,999 (3)

○ $50,000 - $69,999 (4)

○ $70,000 - $99,999 (5)

○ $100,000 - $149,999 (6)

○ $150,000- $199,000 (7)

○ $200,000 or more (8)

○ Prefer not to answer (9)

End of Block: Demographics

UNLV

UNLV Social/Behavioral IRB - Exempt Review
Exempt Notice

DATE:	November 22, 2017
TO:	Toni Repetti
FROM:	Office of Research Integrity - Human Subjects
PROTOCOL TITLE:	[1072918-2] A study of relationship between a customer's perception of hotel room rates and the customer's demographics
ACTION:	DETERMINATION OF EXEMPT STATUS
EXEMPT DATE:	November 21, 2017
REVIEW CATEGORY:	Exemption category # 2

Thank you for your submission of Revision materials for this protocol. This memorandum is notification that the protocol referenced above has been reviewed as indicated in Federal regulatory statutes 45CFR46.101(b) and deemed exempt.

We will retain a copy of this correspondence with our records.

PLEASE NOTE:

Upon final determination of exempt status, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI - HS and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials.

If your project involves paying research participants, it is recommended to contact Carisa Shaffer, ORI Program Coordinator at (702) 895-2794 to ensure compliance with the Policy for Incentives for Human Research Subjects.

Any changes to the application may cause this protocol to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced protocol has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI - HS of its closure.

If you have questions, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 702-895-2794. Please include your protocol title and IRBNet ID in all correspondence.

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Demographics and Hotel Room Price Perception

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