



# **The Effect of Yield Management Strategies on Customer Retention: The Mediating Role of Customers' Perception of Fairness In 5-star Hotels in Ethiopia**

**A Thesis Submitted to Addis Ababa University College of Business and Economics, Graduate Studies in Partial Fulfillment of the Requirements for the Degree of Master of Business Administration, Specialization in Management**

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***Declaration***

I, ***HabtuTeka***, hereby declare that the thesis entitled "***The Effect of Yield Management Strategies on Customer Retention: The Mediating Role of Customers' Perception of Fairness in 5-star Hotels in Ethiopia***" is my own original work and has not been submitted for any degree in any other University. It is offered for the award of the degree of Masters of Business Administration, management stream.

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## ***Statement of Certification***

This is to certify that the thesis prepared by **Habtu Teka** entitled: “***The Effect of Yield Management Strategies on Customer Retention: The Mediating Role of Customers’ Perception of Fairness in 5-star Hotels in Ethiopia***” and submitted in partial fulfillment of the requirements for the degree of Masters of Business Administration, management stream, complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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## ABSTRACT

Yield Management strategies: dynamic pricing, capacity management, price discrimination and duration control are used in high rated hotels to optimize room occupancy and in turn profitability. These strategies were examined extensively if they had effect on customer retention via the customers' perception of fairness. Customers' perceived fairness towards yield management had been given little attention; thus, this study examined its mediating effect between yield management strategies and customer retention. This study adopted quantitative research approach for the investigation through questionnaires of valid measure and interviews with managers of 5-star hotels in Ethiopia and their corresponding customers. This study utilized simple and multiple regression research analysis techniques and PROCESS macro for SPSS and presents findings in the topic. And the research findings reveal that the application of the above yield management strategies has significant effect on customer retention via customer's perceived fairness. Managers' decision making and their flexibility in the application of the yield management strategies was also found to be indispensable in maintaining lasting relationships with their customers. Customers' perceived fairness fully mediates duration control and customer retention. And recommendations were made for hotels to rationally integrate their yield management strategies with customer relationship management.

**Key Words:** Capacity Management, Dynamic Pricing, Price Discrimination, Duration Control, and Customer Retention.

## CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study

Firstly, developed by the airline industry, Yield management has expanded to its current state as a common business practice in a wider range of industries. Kimes (1989) and Wirtz, Kimes, Theng and Patterson (2003) outline that revenue or yield management can have an essential contribution to businesses that share the following characteristics: perishable inventory, restricted capacity, volatile demand, micro segmented markets, availability of advanced reservation/purchase, and low variable to fixed cost ratio (although Schwartz (1998) shows that these do not need to be necessarily fulfilled in order for yield management to be successfully implemented).

In contrast to customer and relationship orientation, which are management philosophies focusing on customer needs and retention, yield management is a sophisticated form of supply and demand management that balances both pricing strategies and inventory management. Its primary purpose is managing customer demand through the use of variable pricing, capacity management and duration control to maximize profitability. It is essentially the process of allocating the right type of capacity to the right customer at the right time at the right price. It focuses the service organization on maximizing profitability by applying disciplined tactics to forecast consumer behavior at the micro-market level and control inventory availability at each price level at any one time. Revenue management has been a well-researched topic in the hotel industry management literature; however, how it is related with customer retention appears to be somewhat neglected.

Perceived fairness has been studied in a variety of industries (Campbell 1999a, 1999b; Kahneman, Knetsch, and Thaler 1986; Kaufmann, Ortmeier, and Smith 1991; Kimes 1994; Kimes and Wirtz 2002b; Thaler 1985; Urbany, Madden, and Dickson 1989) and has been found to be a key factor to maintaining customer satisfaction, loyalty, and long-term profitability. But how hotel yield management practices are perceived by customers is still given little attention.

Hence, the aim of this research is to investigate the effect of yield management strategies on customer retention and the mediating role of customers' perception of fairness towards the application of yield management strategies.

## 1.2 Statement of the Problem

According to Xuan Lorna Wang (2006), hotel companies have become increasingly driven by a focus on short-term business to maximize yield and the longer term "relationship" value dimension has been devalued. As a result, Ho Pheng and Patterson (2003) argue that such practices might be perceived by customers as unfair, thus leading to decreased customer satisfaction and goodwill, and ultimately to business loss from these customers.

In light of preceding advantages of conducting relationship marketing, a hotel company may benefit financially from such practice by maximizing revenue from selling its fixed capacity, but on the other hand, it may alienate its customers, Kimes (2003).

High yield from profits should not be considered as a successful financial performance for the company, without investigating the price that has been paid in terms of customer retention. Indeed, in the hotel industry context, there is no reported empirical research that examines the effect of yield management practice on customer retention. This gap is reiterated in a study by Writz et al. (2003) who "states that customers seem to have been forgotten in this stream of research. The growing importance of customer satisfaction, customer retention, changes in market demand, and competitive intensity has led to a paradigm shift from transactional marketing to relationship marketing, Baran & Strunk, (2008).

Wang and Bowie, (2009) in their findings reported that one of the biggest threats for companies, which adopt price discrimination, is that customers recognize this as evidence of firms seeking for profits instead of developing their relationship with customers. Philip Kotler (2003) concluded that customers are becoming hard to please. They are smarter, more price conscious, more demanding, less forgiving and many more competitors approach them. The challenge according to Jeffrey Gitomer (1998) is not to produce satisfied customers; several competitors can do this. The challenge is to produce delighted and loyal customers. Therefore, this study focused on how yield management strategies may affect customers' perception of fairness and their retention level.

### Customer retention

Customer retention is the maintenance of continuous trading relationships with customers over the long term. Customer retention is the mirror image of customer defection or churn.

High retention is equivalent to low defection.

Conventionally, customer retention is defined as the number of customers doing business with a firm at the end of a financial year, expressed as a percentage of those who were active customers at the beginning of the year. However, the appropriate interval over which retention rate should be measured is not always one year. Rather, it depends on the customer repurchase cycle. Car insurance and magazine subscriptions are bought on an annual basis. Additional complexity is added when companies sell a range of products and services, each with different repurchase cycles. Automobile dealers might sell cars, parts, fuel and service to a single customer. These products have different repurchase cycles which make it very difficult for the dealer to have a whole of customer perspective on retention. Philip Kotler, the internationally renowned professor at Northwestern University, states that the key to customer retention is customer satisfaction. He notes that satisfied customers:

- stay loyal longer

- talk favorably about the organization.

- pay less attention to the competition

- are less price sensitive

- offer service ideas to the organization and

- cost less to serve than new customers.

Hence, the study sought to examine the effect of yield management strategies on customer retention in five-star hotels in the case of Ethiopia.

### **5 – Star Hotel Classification**

Hotel ratings system was started in 1937 by AAA (American Automobile Association) a federation of independent motels which used diamonds rather than stars to categorize restaurants and lodgings. The AAA's Five Diamond award is similar to a Five Star rating of hotels, ratings from 'Good' to 'Outstanding'. The star classification system is common for rating hotels and is often used to classify according to quality. From the initial purpose of informing travelerson basic facilities that can be expected, the objective of hotel rating is expanded to focus on the hotel experience as a whole. Higher star ratings indicate more luxury. This system has also been adopted in

Ethiopia recently by Ministry of Culture and Tourism based on more than 230 criteria in June 2014.

The study was conducted on five-star rated hotels in Ethiopia, excluding the ones which were in pipeline for rating. Among the 5 star rated hotels in Ethiopia (as of January, 2019) the majority are found in Addis Ababa except 1 resort hotel which is located in Debre Zeit. Hotels of such category are typical to use one or more yield management strategies into their business operation to optimize their profit.

**Table 1: The 5-star hotels (as of January, 2019)**

No	Hotel
1	Sheraton Addis Hotel
2	Ellily International Hotel
3	Capital Hotel & Spa
4	Radisson Blu
5	Golden Tulip
6	Getfam International Hotel
7	Marriot Executive Apartments
8	Kuriftu Resort and Spa, Debre Zeit

### 1.3 Research Questions

1. What is the effect of capacity management on customer retention?
2. What is the effect of dynamic pricing on customer retention?

3. What is the effect of price discrimination on customer retention?
4. What is the effect of duration control (putting minimum and maximum stay limit) on customer retention?
5. What is the effect of managerial decision making on customer retention?
6. What is the mediating effect of perception of fairness between yield management strategies and customer retention?

#### **1.4 Objectives of the Study**

##### **General Objective:**

The main objective of the research was to examine the effect of yield management strategies on customers' perception of fairness and customer retention in 5-star hotels in Ethiopia.

##### **Specific Objectives:**

The specific objectives were:

- i. To examine the effect of capacity management (inventory control methods like overbooking and closing room availability) on customer retention in five-star hotels
- ii. To determine the effect of dynamic pricing on customer retention in five-star hotels
- iii. To determine the effect of price discrimination on customer retention in five-star hotels
- iv. To investigate the effect of duration control (putting minimum and maximum stay limit) on customer retention in five-star hotels
- v. To explore the effect of managerial decision making on customer retention in five-star hotels
- vi. To explore the mediating effect of the customers' perception of fairness between yield management strategies and customer retention.

#### **1.5 Research Hypotheses**

- i. Dynamic pricing has significant effect on customer retention in five-star hotels
- ii. Capacity management has significant effect on customer retention in five-star hotels
- iii. Price discrimination has significant effect on customer retention in five-star hotels

- iv. Duration control has significant effect on customer retention in five-star hotels
- v. Managerial systematic decision has significant effect on customer retention in five star hotels
- vi. Customers' perception of fairness has significant mediating effect between yield management strategies and customer retention

## 1.6 Significance of the Study

This research has a prominent significance to business owners, investors, and management in the hospitality sector, as it reveals how yield management strategies affect customers' perception of fairness and thereby the customers' decision to continue trading with the providers. Thus, the findings and recommendations there-of would help them realign their yield management strategies to balance the benefits of yield management application and customer retention. The study would also help the business owners, investors and management in other sectors realign their revenue management strategies on both their corporate clients and individual customers for long term relationship.

The study will also be a source of reference material for future researchers and students as they will find this study useful in learning the potential effects yield management strategies have on customer retention and use the research as an empirical source for future research. Furthermore, the knowledge gained will be useful for pedagogical purposes and any gap in the study not researched or under researched by the researcher in the course of providing the evidence supporting the research topic and research problems will be investigated further by academics or researchers.

## 1.7 Scope of the Study

The study was confined and carried out in 8 (Eight) 5-star hotels in Ethiopia to investigate the effect of yield management strategies on customers' perception of fairness and retention. The study focused on corporate and walk-in customers and hotel management staff as the main targeted population to determine their perspective of the effect of yield management strategies on customer retention.

## **Operational Definition of Key Terms**

**Yield Management:** is an umbrella term for a set of strategies that enable companies with capacity-constrained, perishable service and customer differentiating features, to realize optimum revenue from operations.

**Dynamic Pricing:** is a variable pricing method based on the current occupancy and demand.

**Price Discrimination:** is a term to describe where sales of identical goods or services are transacted at different prices by different customers based on their value to the provider

**Capacity Management:** is a systematic presentation of hotel room inventories on the market to optimize occupancy and revenue.

**Price Fences:** are conditions under which specific products are offered at different prices on the market.

**Duration Control:** is the act of setting limits on the minimum and, rarely, maximum number of nights in customer bookings.

**5-star:** is a rating and classification type used to refer to hotels with high quality of facilities and services.

**Customer Retention:** is the maintenance of continuous trading relationships with customers over the long term

## **Abbreviations and Acronyms**

**RM:** Revenue Management

**RevPAR:** Revenue per Available Room

**ADR:** Average Daily Rate/Revenue per Occupied Rooms

**GDS:** Global Distribution System

## **ORGANIZATION OF THE RESEARCH REPORT**

This research report has been organized with the following five chapters.

**CHAPTER ONE – BACKGROUND OF THE STUDY:** begins with introduction and discusses statement of the problem, research questions, research hypotheses, objectives, significance of the study and organization of the research report.

**CHAPTER TWO-LITERATURE REVIEW:** discusses, in detail, reviews of the related literatures and conceptual framework.

**CHAPTER THREE- RESEARCH METHODOLOGY:** discusses the research design, study area, target population, sampling design and procedure, data collection instruments, measurements of variables, method of data analysis, research model specification, validity and reliability of the measurements and ethical considerations of the study.

**CHAPTER FOUR- DATA ANALYSIS and INTERPRETATION:** discusses questionnaires' return rate, customers' demographic information, mean of individual constructs, diagnosis of regression assumptions, and regression and mediation analysis with hypothesis testing. Hypothesis testing is performed by using multiple regression analysis and PROCESS macro for SPSS to test the effect of the mediation variable.

**CHAPTER FIVE – SUMMARY OF FINDINGS, CONCLUSION, and RECOMMENDATIONS AND FUTURE STUDIES:** In this section the main findings of the research is summarized and conclusions on major findings is presented. Recommendations are given based on the research findings and the limitation of the study is mentioned. Finally, the study forwarded some suggestions for further investigations.

## **CHAPTER TWO: REVIEW OF RELATED LITERATURES**

### **2.1 Introduction**

This chapter covers theoretical literature review, empirical literature review, and the conceptual framework.

Yield management, also known as revenue management, is an essential instrument for matching supply and demand by dividing customers into different segments based on

their purchase intentions and allocating capacity to the different segments in a way that maximizes a particular firm's revenues, El Haddad, Roper & Jones (2008). Kimes (1989) and Kimes & Wirtz (2003) define revenue management as the application of information systems and pricing strategies to allocate the right capacity to the right customer at the right price at the right time. This puts revenue management practice into the realm of marketing management where it plays a key role in demand creation, Cross, Higbie & Cross (2009) and managing consumer behavior, Anderson & Xie (2010).

Initially developed by the US airline industry after the deregulation process in the 1970s, revenue management has expanded to its current state as a common business practice in a wider range of industries. It is profitably applied by airlines, hotels, restaurants, golf courses, shopping malls, telephone operators, conference centers and other companies. This has triggered significant theoretical research in revenue management fundamentals and its application in various industries.

While there are general revenue management principles easily applied across different industries, each industry has also specific characteristics that determine the practical aspects of revenue management application in companies that work in it. What is a successful strategy for the airlines, for example, is not always a working solution for the hotel or restaurant.

Building on Kimes (1989) and Kimes & Wirtz (2003) we could define hotel yield/revenue management as the constellation of tools and actions dedicated toward the achievement of an optimal level of the hotel's net revenues and gross operating profit by offering the right product to the right customers via the right distribution channel at the right time at the right price with the right communication.

Yield management involves the utilization of different yield management tools or strategies, which can be defined as instruments by which hotels can influence the revenues they get from their customers.

The widely used yield management strategies in hotel establishments are capacity management, price discrimination, dynamic pricing and duration control and each employs several techniques.

**Capacity management** refers to the set of activities dedicated to hotel's capacity control.

Pullman & Rogers (2010) distinguish between strategic and short-term (tactical) capacity

management decisions. The first include capacity and expansion (e.g. number of rooms), carrying capacity (the optimal use of the physical capacity before tourist's experience deteriorates, e.g. optimal occupancy rate), and capacity flexibility (hotel's ability to respond to fluctuations in demand by changing its capacity). Tactical decisions refer to the set of activities related to managing capacity on a daily basis—work schedules, guests' arrival/departure times, service interaction time, application of queuing and linear programming models to service processes, customers' participation in the service process, etc.

Widely used capacity management technique is overbooking, which is based on the assumption that some of the customers that have booked rooms will not appear for check-in (so called "no show"), others will cancel or amend their bookings last minute, while third will prematurely break their stay in the hotel (due to illness, personal reasons, traffic, bad weather, force majeure or other reasons). In order to protect itself from losses the hotel confirms more rooms than its available capacity with the expectation that the number of overbooked rooms will match the number of no shows, last minute cancellations and amendments. Regardless of how well the optimal level of overbookings is planned differences between the planned and the actual number of no shows, last minute cancellations and amendments are inevitable. If fewer guests appear for check-in than planned (i.e. the actual number of no shows, last minute cancellations and amendments is higher than planned) the hotel loses revenues. In the opposite situation when more guests appear for check-in, the hotel finds itself in a situation when some of the guests have to be walked to different property.

**Duration/Length of stay control** is a much-neglected research area (Ismail, 2002; Kimes & Chase, 1998; Vinod, 2004). It allows hotels to set limits on the minimum and, rarely, maximum number of nights in customer bookings. Length of stay control allows hotels to protect themselves from losing revenues when customers book rooms for short stays in periods of huge demand (e.g. during special events). They also provide the possibility to generate additional revenues from overnights in days when demand is historically low (e.g. when a business hotel requires compulsory stayover Saturday nights for all bookings that include a Friday overnight). Vinod (2004) highlights that

length of stay control has one major disadvantage—it is static and, therefore, not very flexible.

**Price discrimination** is the heart of pricing RM tools (Hanks, Cross & Noland, 2002; Kimes & Wirtz, 2003; Ng, 2009b; Shy, 2008; Tranter et al., 2008). In essence, price discrimination means that the hotel charges its customers different prices for the same rooms and the economic rationale for this are the differences in price sensitivity of hotels' market segments (e.g. business travelers are less price sensitive compared to leisure travelers and could afford to pay higher prices). However, in order to avoid migration from high to low priced products, hotels introduce price fences (Zhang & Bell, 2010) that are defined as conditions under which specific products are offered on the market. Hotel price fences include day of the week, duration of stay, guest characteristics (e.g. belonging to a club, government employee), cancellation, amendment and payment terms, lead period, age (Hanks, Cross & Noland, 2002; Kimes, 2009; Kimes & Chase, 1998). In practical terms the rate fences are integrated into the booking terms and conditions. In order to avoid any claims from customers, these conditions should be completely clear to the customer at the time of booking.

One of the integral concepts of pricing nowadays is **dynamic pricing** (Palmer & Mc Mahon-Beattie, 2008; Tranter et al., 2008). It allows hotels to maximize the RevPAR and yield by offering a price that reflects the current level of demand and occupancy and amend it according to changes in demand and occupancy rate. By virtue of this, customers frequently pay different prices even when they have one and the same booking details (period of stay, board basis, number and type of rooms) depending on the moment of reservation. In this regard, dynamic pricing is subject to criticism by customers. Nevertheless, from financial point of view dynamic pricing can provide high profitability, but it should be applied carefully and accompanied with ample information about booking terms and conditions, similarly to price discrimination.

Sometimes hotels provide to their customers lowest price guarantee (Carvell & Quan, 2008; Demirciftci, Cobanoglu, Beldona & Cummings, 2010). According to it, if the customer finds a lower price for the same or similar hotel within 24 hours after their booking, the hotel will match that lower price. Carvell and Quan (2008) examine this practice by applying the financial option pricing model and determine that it has no

practical value for the customers. In order for customers to benefit from lowest price guarantee authors stipulate that the guarantee should cover the full period from the booking date till the arrival date, not only the period spanning 24 hours after the booking day. Similarly, Demirciftci et al. (2010) negate the lowest price guarantee claim by several US hotel chains, advertised on their websites.

### **Perceived Fairness**

The issue of fairness has been studied extensively in the field of marketing, and although most studies have involved non-travel products, we can learn from the general issues presented. Several researchers have shown that fair behavior is instrumental to the maximization of long-run profits.

Researchers use the concept of a “reference transaction” when discussing fairness. Reference transaction is how customers think a transaction should be conducted and how much a given service should cost. Reference prices come from market prices, posted prices, and past experience with the company. For example, customers of a particular hotel may know that they generally pay \$80 for a standard room, and so the reference price for a room at that hotel would be \$80.

Customers believe that the value to the firm should equal the value to the customer. If that relationship becomes unbalanced by increasing the value to the firm or decreasing the value to the customer, the customer may view subsequent transactions as unfair. For example, if a hotel increases the price for its rooms for no apparent reason, it is increasing the firm value without increasing the customer value. The customer may then view the transaction as unfair. Similarly, if a hotel imposes substantial restrictions on customers in exchange for only a somewhat lower price or without lowering the price at all, customers may view the transaction as unfair. Fairness has been defined as a judgment of whether an outcome and/or the process to reach an outcome are reasonable, acceptable and just, Bolton et al. (2003); Monroe and Xia, (2005). It is important in this respect to underline that fairness evaluations are necessarily comparative Xia et al. (2004).

The subject of perception of fairness has been studied especially with regard to pricing policies. However, perceived unfairness may also depend on decisions that affect the nature of the service itself and/or reduce the service quality. Moreover, it may be observed

that some techniques for capacity management, like inventory control, length of stay restrictions and overbooking, may lead to perceived unfairness as well.

### **Managerial decisionmaking**

As cited by Bichage M. Richard (2011) Managers play a significant and useful role in an organization to ensure the operation procedures and systems and the resources function of the company are useful towards enabling the organization meet its goals. Delaney (1996) posits that management delivers knowledge with a purpose of verifying whether existing knowledge is effectively used to generate the desired outcomes. Some of the key characteristics of an effective management include creativity, innovativeness, logical and productive in the process of meeting set objectives. Managerial skills enable managers to manage their firms effectively.

According to Yang and Wang (2004), a competent manager ought to have good leadership skills, multitasking and motivational skills, and decision-making abilities that will enable them to come up with right practice and methods to steer their companies to success. These skills comprise qualities and attributes characteristic with the personality of a manager, which enable effective managerial thought and action. Lewis and Chambers (2000) argued that good managerial skills define the efficiency and performance of an organization. This is attributed to the influence managers have on workers, and customers.

In the service industry, employees have a significant role to play in relationship marketing. For instance, Bitner (1995) acknowledges the importance of the relationship between customers and employees. He argues that when the contact between a customer and an employee increases, their relationship grows as well. Customers of intangible products are more concerned on how the service they get is packaged and delivered. As such, the relationship and contact between employees and customers is crucial. However, an employee has the ability to behave poorly in front of the customer hence cause poor relationship that can affect customer loyalty. As such, with the knowledge of how important relationships should be, managers ought to equip their employees adequately on how to relate with customers. This, however, requires specialized managerial skills from a manager, Ongoro et al (2013).

A skilled manager will also increase contact points between customers and employees so as to give his/her employees a chance to sell the company's image to its customers hence

create relationships that will lead to enhanced satisfaction and loyalty Reichheld, (1993). Skilled and experienced managers who have effective leadership will also influence customer satisfaction and loyalty by creating a feedback system and acting on the various concerns customers request. Evidence shows that a customer who feels their needs are considered is likely to be satisfied and loyal than one who perceives an organization as arrogant and unconcerned based on its lack of response to complaints raised. Customers also get satisfied when handled on one-on-one basis and a manager able to implement this wins many loyal customers, Barlow (1992). Kumar (2005) also suggests that a good manager in a service company is able to tailor make the different services on offer to meet each customer's needs and satisfy them. This also influences relationships hence loyalty. Through effective management, organizations can withstand the market pressures while creating superior customer experience. Hospitality industries like many other industries around the globe have embraced the concept of customer experience management, with many incorporating the notion into their mission statement.

Companies' management create experiential marketing by allowing their customers feel, sense, act and relate to the company and its brands, Schmitt (1999). Moreover, Berry and Haeckel (2002) suggest that companies aiming to provide their customers with satisfactory experience must meet all conditions buyers exhibit when making a purchase. Customer relationship is one key factor leading to loyalty. However, hotel managers experience the challenge of being able to build and sustain customer relationships that will lead to loyalty Yen & Su, (2004). The key question therefore is how managers can build those important relationships with customers as it is important to first know the importance of managing customers hence customer relationships. As Chapman (2009) points out, managing customers enables an organization understand what its customers need or want thus making the organization aware of the quality and quantity of products and services it needs to supply to them. Knowing customers also enables an organization identify products and customers with highest growth potential and profitability. As such, the organization is able to focus on such products or customers for highest profitability and competitiveness. Managers therefore need to have skills to know their customers for these basic reasons. It is only with such knowledge that managers will supply services and products that enhance customer relationship and satisfaction, Chapman (2009).

Despite their perceived positive impact on hotels' bottomline, RM techniques have received a huge amount of criticism in terms of grievances and lack of sensible benefits, Bitran & Caldentey, (2003); Koide & Ishii, (2005). This is especially valid for price discrimination and inventory control techniques. Customers feel lied if they find that they have paid higher price for the same room or if they have to be moved to another hotel. This can be a result of lack of or incomplete information about booking, cancellation and amendment terms. Many service businesses are reluctant to implement demand-based pricing because of potential customer backlash. If customers believe that increased prices are not based on cost increases or changes in market conditions, they may view demand-based pricing as unfair, Kimes and Wirtz (2002).

It's evident that customers believe that they deserve a reasonable price and that firms are entitled to make a reasonable profit. When this relationship becomes unbalanced in favor of the firm, the transaction may be viewed as unfair. This would in turn result in customer defection.

Similarly, when a wide variety of prices are charged for essentially the same service, customers are likely to compare the price they paid with the price that other customers pay, Bolton et al (2003); Chen et al (1998); Martins and Monroe (1994).

In a business-to-business relationship context, research findings suggest that hotel revenue management has had both positive and negative impacts on relationships with hotel key accounts, though there appears to be an imbalance between the positive benefits to the company as opposed to the mainly negative consequences for key clients, Wang and Bowie (2009). Furthermore, the possibility of revenue management may be at odds with the relationship trust that has been highlighted by McMahan-Beattie et al. (2002) and McMahan-Beattie (2006). Nonetheless, the dilemma of choosing between a long-term relationship and immediate revenue gain continues to be troublesome. McCaskey (1998) warns that firms could maximize today's revenue but lose tomorrow's customer. It's also worth noting that conflict can arise from the use of various allocation and availability inventory control restrictions, Wirtz et al., (2003), such as limited allocation for certain rate categories and availability control restrictions that tend to link to length-of-stay requirements, which are in the best interest of the company but not the customers; hence researchers' concern over customers' acceptance towards revenue

management practices, Kimes and Wirtz (2003), its negative effects on customer satisfaction, Kimes and Wirtz (2002); Lindenmeier and Tscheulin (2008), and trust McMahon-Beattie et al., (2002). Similarly, its effect towards customer retention could be imagined as inevitable.

Kimes (2002) pinpoints the RM practices that customers consider acceptable or unacceptable. Obviously, when information about booking, cancellation and amendment terms is available and understood by the customers or when different prices are charged for products perceived by them as different, customers are more inclined to accept revenue management practices. In other cases, when discounts are insignificant compared to booking amendment/cancellation restrictions or the latter are changed after the booking has been confirmed customers will be dissatisfied. Choi and Mattila (2005) furthermore specify that only informing the customers about hotel's rates is not enough to improve their perceived fairness of yield management—they have to know the basis for rates variability (day of the week, duration of stay) and booking conditions. In general, the research in the area will focus to address the effect of yield management strategies on customers' perception and retention from the view point of the customers and hotel management staff.

## **2.2 Conceptual Framework**

The conceptual framework underlying the study is based on the concept that yield management tools or strategies as independent variables have significant effect on customer retention, which is the dependent variable through the customers' perception of fairness. Price discrimination will be operationalized by the varied price offer on identical products or services to different customers. Dynamic pricing is operationalized by the application of different prices based on the occupancy and demand levels. Capacity management will be operationalized by the tactical presentation of hotel room inventories to the market.

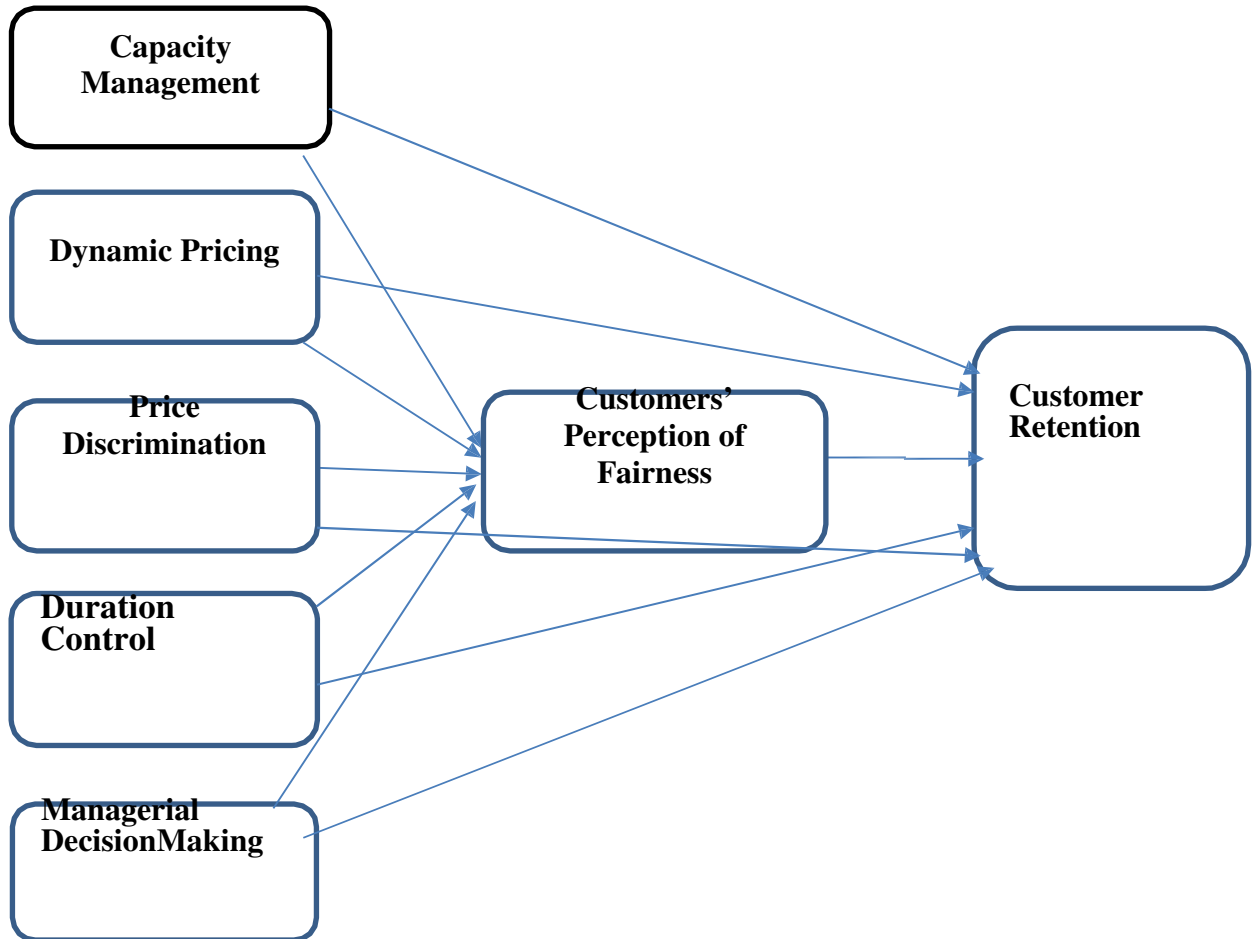
Managerial decision making in the study will be operationalized by assessing the rigidity and flexibility of decision making with regard to yield management and whether they have customer relationship management strategies. Duration control in the study will be operationalized by the implementation of minimum and/or maximum length of stay requirements during special events. The mediating variable, perception of fairness will be operationalized by the customers' judgment of whether the value and the process to reach the value are reasonable, acceptable and just. The dependent variable in the study will be operationalized through customer retention that will be measured through either repeat purchase or no repeat purchase made following the yield management strategies.

**Figure2:ConceptualFramework**

**IndependentVariables**

**Mediating Variable**

**DependentVariable**



## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

This chapter covers the proposed methodology to follow to achieve the research objectives; the research design, study area, target population, sample size and sample techniques, data collection instruments, data collection procedure, data analysis and presentation and ethical considerations.

#### Research Design

Causal research, also known as explanatory research is conducted in order to identify the extent and nature of cause and effect relationships. Hence, this quantitative research adopted an explanatory design where the impact of independent variable (yield management strategies) on the dependent variable (customer retention) through customers' perception of fairness is observed.

#### Study Area

The study was conducted in 8 Five-star rated hotels in Ethiopia. As such hotels are found in Addis Ababa and Debre Zeit, it was convenient for the researcher to carry out the research.

### 3.2 Target Population

The target populations were customers of both corporate and individual business travelers who made stays in these hotels and the hotels' front office, revenue, marketing and/or reservation managers.

To draw sample, the researcher made calls to the personnel who had access to the hotels' databases to determine the total number of available customer segments which had transacted with the hotels during the period of the last quarter year in 2018. The contacted staff acknowledged on average that each 5-star hotel accommodated not less than 250 corporate clients and 150 walk-in guests.

**Table: Distribution of Target Population**

<b>Strata</b>	<b>Population</b>
Corporate clients	2000
Walk in Clients	1200
<b>Total</b>	<b>3200</b>

### 3.3 Sampling Design and Procedure

The study used convenience sampling method, a non-probability sampling method that relies on data collection from population members who are conveniently available to participate in the study. However, to draw the sample size the population of both corporate clients and walk-in clients who transacted with the hotels was used. The rationale to incorporate both groups is because they are usually given varied rates by the hotels which may impact their perception differently. A sample of 320 customers, representing 10% of the population was used as a sample size as advised in Mugenda and Mugenda (2003) that 10% of accessible population would suffice for such study if the population units are more than 30. Additionally, sixteen (16) managers, two (2) from each hotel under study were taken to form the sample. The total sample size was therefore 336 respondents.

**Table 3: Sample Population**

Strata	Population	Sample R	Sample Size
Corporate clients	2000	0.1	200
Walk in Clients	1200	0.1	120
Revenue/Reservation Manager Marketing manager.	8	1.00	8
Front Office Manager	8	1.00	8
Total	3216	0.1	336

### 3.4 Data Collection Instruments

The main data collection instruments were questionnaires and interview schedules. Primary and secondary data sources were used to collect relevant information. Self-completion questionnaires were the main research instruments, which were used to collect information about customers' attitude, opinions and perceptions regarding the area of study. Questionnaires had both open and closed ended questions and ensured the collection of data from many respondents within a specified period of time. Interview schedules were based on an interview guide where open-ended-question approach was used by the researcher. The interview guide aided in collecting data on yield management strategies, customer relationship management policies, operational rules and regulations and other variables like administrative experience of the subject managers. The questionnaires were piloted to justify the appropriateness of the variables and the feedbacks were not used in the actual data collection.

## Measurements of variables

Items (Questionnaires)	Source Literatures)
<p><b>Capacity Management:</b></p> <p>C1: The act of overbooking by the hotel doesn't cause you inconvenience</p> <p>C2: Your demand is fulfilled even when there is overbooking</p> <p>C3: The number of rooms allotted for you (when shown up in a group) is often enough</p> <p>C4: When overbooked there is proper displacement management (walking to another hotel), recovery programs</p> <p>C5: The hotel sets acceptable restrictions, and make clear communication on how many rooms to block.</p> <p>C6: Your demand to lower room categories is always fulfilled.</p> <p>C7: The management considers special privilege with regard to room type and number of rooms when you make repeat stay</p> <p>C8: Your intended and actual number and type of room you're provided is acceptable</p>	<p>Pullman &amp; Rogers (2010)</p> <p>Kimes and Wirtz (2002)</p>
<p><b>Dynamic Pricing</b></p> <p>D1: Varied rates set by the hotel according to changes in demand and occupancy rate are reasonable</p> <p>D2: The hotel offers justifiable prices based on the quality of services and room type offered</p> <p>D3: The high and low demand periods prices on the hotel's products and services meet your value expectations.</p> <p>D4: The hotel offers attractive price packages to its customers to enhance relationship and loyalty</p> <p>D5: High prices reduce your purchasing probabilities in this hotel</p>	<p>(Palmer &amp; Mc-Mahon-Beattie, 2008; Tranter et al., 2008). Kimes and Wirtz (2002)</p>

Items	
<p><b>PriceDiscrimination.</b></p> <p>P1: Pricing bed rooms based on the difference in price sensitivity across segments is reasonable</p> <p>P2: Hotel price differences (day of the week, duration of stay, segment, cancellation, amendment and payment terms, lead period) are justified and increase your benefits</p> <p>P3: Hotel price differences - booking, cancellation and amendment terms are communicated well when the booking is made.</p> <p>P4: The basis for rates variability - day of the week, duration of stay and booking conditions are communicated in advance</p> <p>P5: The varied rates given don't prevent your willingness to pay.</p> <p>P6: This hotel, compared to other hotels, offers you the best value for money</p>	<p>(Hanks, Cross &amp; Noland, 2002; Kimes &amp; Wirtz, 2003; Ng, 2009b; Shy, 2008; Tranter et al., 2008) (Zhang &amp; Bell, 2010 <u>Kimes &amp; Chase, 1998</u>, <u>Kimes, 2009</u>;</p>
<p><b>DurationControl</b></p> <p>DC 1: Implementation of minimum length of stay requirements during periods of high demand is acceptable for you</p> <p>DC2: Implementation of maximum length of stay requirements during special events is acceptable for you</p> <p>DC3: Length of stay controls are flexible, not static</p> <p>DC4: Length of stay control is reasonable as the hotel needs to protect itself from loss of revenues during fluctuating demands</p>	<p>(Ismail, 2002; Kimes &amp; Chase, 1998; Vinod, 2004).</p>
<p><b>Perceived fairness</b></p> <p>PF1: With the application of the above yield management strategies, the value to the hotel is equal to the value you acquire.</p> <p>PF2: The above strategies result in increasing the value to the firm and increasing value to you.</p> <p>PF3: The above strategies result in increasing the value to the firm and decreasing the value to you</p>	<p>Bolton et al. (2003); Monroe and Xia, (2005). Choi and Mattila (2005)</p>

<p>PF4: The above yield management strategies are not visible and don't make a difference in your perception of fairness.</p> <p>PF5: The rationale of applying these strategies is communicated in advance, and therefore acceptable</p> <p>PF6: The management flexibility in applying these strategies brings you fair value</p>	
<p><b>Managerial Decision Making (interview items)</b></p> <p>M 1: What is your managerial role in customer relationship management?</p> <p>M 2: What prudent measures do you practice in relation to customer relationship management?</p> <p>M 3: How do you measure value for money paid by your guests? M 4: Are your yield management strategies free from guest dissatisfactions or complaints?</p> <p>M 5: Do your yield management strategies help you in maintaining guest relations?</p> <p>M 6: As manager, how do you ensure revenue management strategies are in line with customer relationship management?</p> <p>M 7: Are there any situations where yield management strategies might have affected customer relationships? Why do you think that happened?</p> <p>M 8: Does managerial commitment to customer service in the hotel enhance customer loyalty? How?</p> <p>M 9: What do you do to your customers to feel, sense, act, relate to your company and brand?</p>	<p>Yang and Wang, (2004), Ongoro et al. (2013) Reichheld, (1993). Barlow, (1992). Kumar (2005) Schmitt (1999). Berry and Haeckel (2002) Yen &amp; Su, (2004). Chapman (2009)</p>

<p><b>Customer retention</b></p> <p>I will</p> <p>C 1: stay loyal long to the hotel</p> <p>C 2: talk favorably about the organization.</p> <p>C 3: pay less attention to the competition</p> <p>C 4: be less price sensitive compared to the service</p> <p>C 5: offer service ideas to the organization and</p>	<p>Philip Kotler (2000)</p>
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### 3.5 Data Analysis and Presentation

Qualitative data collected from questionnaires and interview schedules were interpreted according to the emerging, which were then coded and descriptive analysis of the codes was done. Quantitative data was processed by tabulation in form of frequency tables, pie charts and graphs, Macmillan and Schumacher (2001) and descriptive analysis of data were represented by involving uni-variate and multi-variate analysis. Primary data involved calculation of several measures mostly concerning one variable (uni-variate analysis) with respect to measures of central tendency (mean, mode and median) and measures of dispersion (variance, standard deviation and inter-quartile range). Frequency distributions were used to establish the number of respondents giving certain information.

Multiple regression analysis was used to predict relationship among independent variables (IV), mediating variable (MV) and the dependent variable (DV). The multi-variate analysis involved simultaneous analysis of the independent variables under study and the relationship between the IV and DV. Data analysis incorporated Statistical Package for Social Science (IBM SPSS Statistics Version 26) as suitable software, which was easily accessible and easy to use. Besides, extension software, PROCESS V3.4 by Andrew F. Hayes was used to analyze the effect of the mediating variable on the research's outcome.

### 3.8 Research Model Specification

To examine the direct effect of yield management strategies on customer retention and the effect of the mediating variable between those variables the following regression model has been applied.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_n X_{ni} + \epsilon_i$$

Where:

$Y_i$  is dependent variable for  $i^{\text{th}}$  observation  $X_i$  is

independent variable for  $i^{\text{th}}$  observation;

$\beta_0$  is the intercept;

$\beta$ s are regression coefficients  
 $\epsilon_i$  is the error term for  $i^{\text{th}}$  observation

This basic regression model is rewritten in terms of the variables used in this research to show the relationship among them based on the research conceptual framework.

$$CR = \beta_0 + \beta_1 CM + \beta_2 DC + \beta_3 DP + \beta_3 PD + \epsilon \dots\dots\dots 1$$

$$CR = \beta_0 + \beta_1 CM + \beta_2 DC + \beta_3 DP + \beta_3 PD + \beta_4 PF + \epsilon \dots\dots\dots 2, \text{ where:}$$

CR is Customer Retention

CM is Capacity Management

DC is Duration Control

DP is Dynamic Pricing

PD is Price Discrimination

$\beta_0 + \beta_1 CM + \beta_2 DC + \beta_3 DP + \beta_3 PD + \epsilon$  is the constant and the likely relationship of IV

with DV, and

$\beta_0 + \beta_1 CM + \beta_2 DC + \beta_3 DP + \beta_3 PD + \beta_4 PF + \epsilon$  is the constant and the intervention effect of perceived fairness with IVs to predict the relationship with DV.

### 3.9 Validity and Reliability

Validity indicates the degree to which an instrument measures what it is supposed to measure. One of the methods to test validity, content validity, refers to whether or not the content of the manifest variables, questionnaires, are right to measure the latent concept that we are trying to measure, Muijs (2010). In this study, the researcher developed content-valid constructs by extensive search of literature to select carefully all the yield management variables and their measurements from prominent sources.

The reliability of a measure refers to its consistency. One of the types of reliability, internal reliability, is particularly important in connection with multiple-item scales. It refers to whether each scale is measuring a single idea, and hence whether the items that make up the scale are internally consistent, Bryman & Cramer (1999). Cronbach's alpha scores range from 0 to 1. The closer the score gets to 1, the better the internal reliability of the construct is. Authors researching Cronbach's alpha do not always agree on the minimum outcome of the alpha score for it to be reliable, but it can be generally assumed that a score of at least 0.6 makes a construct considered to be reliable (Hair et al., 2006). Looking at alpha if item deleted scores can provide some insight into which items make a construct less reliable and should therefore be deleted to increase higher internal reliability. Also, item-rest correlation values were considered when deciding to delete items. Here the rule of thumb is the higher the item-rest correlation, the better the overall correlation of items in one construct with a preferable correlation higher than 0.6.

Reliability Statistics

Chronbach's Alpha	.782
Items	5

### **3.6 Ethical Considerations**

Ethical considerations were made pertaining to the progress of the research. Permission letter was sought from Addis Ababa University to get access to the hotels and to stand with the hotel on keeping confidential issues of the subjects. The potential subjects were informed to voluntarily participate. Besides, information given by the respondents were treated confidentially and used only for academic purposes and the identity of the respondents was not revealed to anyone.

## CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

### 4.1 Introduction

This chapter presents the collected data, its analysis, presentation, and interpretation. The data is presented according to the category of respondents: customers and hotel managers. In each category, the presentation is done according to the objectives of the study.

### 4.2 Questionnaire Return Rate

The study targeted 336 respondents, 320 being corporate and walk-in customers who visited 5-star hotels in Ethiopia while 16 being reservation, revenue and/or front office managers of the 5-star hotels. 246 customers responded while the researcher only met 8 managers to participate in the study. This comprised a return rate of 75%, which comprises a majority of the sample targeted. As such, the researcher chose to go ahead with the analysis since the return rate represented a majority of the targeted sample and was more than the recommended rate of 50%.

### 4.3 Demographic Information of Customers

#### Frequency Table

Gender of the respondents		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	189	76.8	76.8	76.8
	Female	57	23.2	23.2	100
	Total	246	100	100	
Age of the respondent					
Valid	18-25	8	3.3	3.3	3.3
	26-35	123	50	50	53.3
	36-45	90	36.6	36.6	89.8
	46-55	16	6.5	6.5	96.3
	over 55	9	3.7	3.7	100
	Total	246	100	100	
Educational background of the respondent					
Valid	Diploma	8	3.3	3.3	3.3
	Degree	130	52.8	52.8	56.1
	Masters and above	49	19.9	19.9	76
	None	59	24	24	100
	Total	246	100	100	

Employment status of the respondent					
Valid	Employed	182	74	74	74
	Selfemployed	56	22.8	22.8	96.7
	Retired	8	3.3	3.3	100
	Total	246	100	100	

Majority (52.8%) had achieved a degree as their highest education level, 19.9% had postgraduate education while 24% did not have any certification. Only 3.3% had diploma.

This shows that majority of the customers interviewed were well educated to make good reason out of the questions the study presented to them. It also shows that the choices the customers made were made out of knowledge as opposed to out of ignorance. Besides, majorities 76.8% of the respondents were males and 50% of the respondents' age lies in the range of (26-35). The fact that majority of the respondents were employed shows their travel intention was business.

#### 4.4 How long have you been using the service of this hotel?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 years	182	74.0	74.0	74.0
	5 to 10 years	48	19.5	19.5	93.5
	Above 10 years	16	6.5	6.5	100.0
	Total	246	100.0	100.0	

Majority 74% of the respondents had used the services of the hotels for a period of less than five years while 19.5% had used the services for between five and ten years. The least number of customers (6.5%) had patronaged the hotels for above 10 years. This result shows behavior that customers don't use the services of a single hotel for long periods of time. The fact that the number of customers reduces as time increases shows that most customers only prefer using the services of their hotels for short periods (few years) before they change or stop.

#### Mean of Constructs

The corresponding mean (total mean of each scale which makes a construct) and standard deviation of the constructs is depicted in the following table. In order to analyze the effect of yield management strategies on customer retention through customers' perception of fairness, the score of the responses of the customers were entered on SPSS v26. The impact on customers' perception and retention due to the application of yield management strategies has been analyzed with SPSS v26.

Based on the table below the result of SPSS V20 Descriptive statistics on the yield management strategies every construct of customer retention has a score above the mean score 3 which is above the midpoint. This result implies the majority of the respondents were aware that 5-star hotels in Ethiopia have applied either of the yield management strategies to optimize occupancy and revenue. Based on the result, capacity management and dynamic pricing have the highest mean (3.0779 & 3.0602) with Standard deviation (SD) of .50436 and .74415 respectively which implies that customers of these hotels were highly convinced that these two strategies have something to do with their return decision. Price discrimination and duration control have relatively the lowest mean (2.0820 & 2.1333) with SD of (1.22953 and 1.31656) respectively, which shows the variations in respondents' view concerning the relationship of these two strategies and customer retention is weak.

#### Descriptive Statistics

	Mean	Std. Deviation	N
Customer Retention	2.9951	.71209	246
Capacity Management	3.0779	.50436	246
Dynamic Pricing	3.0602	.74415	246
Price Discrimination	2.0820	1.22953	246
Duration Control	2.1333	1.31656	246
Perceived Fairness	2.3164	.66347	246

Correlation Table:

Correlations		CustomerR	PerceivedF	DuratioC	PriceDisc	DynamiP	CapacitM
		CustomerRetentionPearson	PerceivedFairnessPearson	DurationControlPearson	PriceDiscriminationPearson	DynamicPricingPearson	CapacityManagementPearson
		1	.404**	-.214**	-.312**	.326**	.317**
	Correlation						
	Sig.(2-tailed)		.000	.002	.002	.000	.000
	N	246	246	246	246	246	246
		.404**	1	.279**	.104	.490**	.125*
	Correlation						
	Sig.(2-tailed)	.000		.000	.105	.000	.049
	N	246	246	246	246	246	246
		-.214**	.279**	1	.762**	-.147*	.027
	Correlation						
	Sig.(2-tailed)	.002	.000		.000	.021	.669
	N	246	246	246	246	246	246
		-.312**	.104	.762**	1	-.098	.093
	Correlation						
	Sig.(2-tailed)	.002	.105	.000		.123	.148
	N	246	246	246	246	246	246
		.326**	.490**	-.147*	-.098	1	.282**
	Correlation						
	Sig.(2-tailed)	.000	.000	.021	.123		.000
	N	246	246	246	246	246	246
		.317**	.125*	.027	.093	.282**	1
	Correlation						
	Sig.(2-tailed)	.000	.049	.669	.148	.000	
	N	246	246	246	246	246	246

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

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

Correlation analysis shows the degree of association between variables and indicates the direction in which the variables associate—positively or negatively (Saunders, Lewis, & Thornhill, 2009, p.490). The value of correlation ranges from -1 to 1 and the strength of association can be categorized from very low with correlation coefficient (r) less than 0.2 to very high with coefficient greater than 0.9.

The table above illustrates the correlation coefficients for the associations between all the variables; independent, mediating and dependent variables. In this correlation analysis it is relevant to note mainly the relationship that exists between the dependent variable and the other categories. Perceived fairness of customers, the mediating variable, as compared to the independent variables has strong relationship (higher correlation coefficient of .404)

with the dependent variable. The fact that all independent variables have correlation coefficient of less than 0.5 is they are not strong predictors of the dependent variable and their relationship mainly lies when the mediating variable is involved.

### **Diagnosis of Regression Assumptions**

The study employed both simple regression (for direct effects) and multiple regression analysis (for the indirect and total effects). And regression is a parametric approach.

'Parametric' means it makes assumptions about data for the purpose of analysis. Due to its parametric side, regression is restrictive in nature. It fails to deliver good results with data sets which don't fulfill its assumptions. Therefore, for a successful regression analysis, it's essential to validate these assumptions. Hence, the researcher checked (validated) if the data set met the following regression assumptions using the regression plots along with some statistical test.

1. There should be a linear and additive relationship between dependent (response) variable and independent (predictor) variable(s). A linear relationship suggests that a change in response  $Y$  due to one-unit change in  $X^1$  is constant, regardless of the value of  $X^1$ . An additive relationship suggests that the effect of  $X^1$  on  $Y$  is independent of other variables.
2. There should be no correlation between the residual (error) terms. Absence of this phenomenon is known as Autocorrelation.
3. The independent variables should not be highly correlated. Absence of this phenomenon is known as multicollinearity.
4. The error terms must have constant variance. This phenomenon is known as homoscedasticity. The presence of non-constant variance is referred to heteroscedasticity.
5. The error terms must be normally distributed.

### **Autocorrelation**

It is an assumption that the value of residual should be independent from one another (or uncorrelated). To check this assumption, we need to look at the regression output of model summary box. Durbin-Watson statistic is used to test the assumption that our residuals are independent or uncorrelated. This statistic can vary from 0 to 4. For no autocorrelation assumption, Durbin-Watson statistic value needs to be close to 2. A value of two indicates no autocorrelation. A value of towards zero indicates positive autocorrelation. A value towards 4 indicates negative autocorrelation Saunders et al. (2009).

Table: Autocorrelation test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.766 <sup>a</sup>	.587	.580	.46499	1.967

a. Predictors: (Constant), Price Discrimination, Capacity Management, Dynamic Pricing, Duration Control

b. Dependent Variable: Customer Retention

Thus, from the above table, we can see that Durbin-Watson value for model is 1.967, which is close to 2 indicating that the residuals are independent or no problem of autocorrelation is detected.

### Linearity

The relationship between the dependent variables and independent variables need to be linear function to apply linear regression analysis Darlington (1968). One method of preventing nonlinearity is to use the theory of previous research to inform the current analysis to assist in choosing the appropriate variables Osborn & Waters (2002). To test the linearity of associations, scatter plot diagram with line of fit can be used to see if the distribution can be represented by linear relationship.

In this research, as indicated in Chapter Two, all the variables were selected from previous researches which applied linear relationship between the variables. Furthermore, as shown in Figure below, all the relationships between dependent and independent variables (capacity management, duration control, price discrimination, dynamic pricing and customer retention) fit reasonably with linear pattern and it holds that linearity assumption is met.

### Multicollinearity

If there is a high degree of correlation between independent variables, we have a problem of what is commonly described as the problem of multicollinearity. This is essentially the assumption that the predictors are not too highly correlated with one another.

When predictor variables are very highly correlated, we have to wonder whether they are not in fact measuring the same thing and would be better combined into one new variable, Muijs (2010).

As we can see from table below there is no strong pair-wise correlation between yield management strategies (Independent Variables). As a rule of thumb, Bryman and Cramer (1999), stated that the independent variables that show a relationship in excess of 0.80 suspected of exhibiting multicollinearity. In this study as shown in table below there is no relationship that equals or exceeds Pearson correlation coefficients of 0.80.

We can also test this assumption by looking at the coefficient table. As explained by Muijs (2010, p. 181) Tolerance and Variance Inflation Factors (VIF) do exactly the same thing,

tolerance is the amount of variance in the individual variable not explained by the other predictor variables. It varies from 0 to 1, a value close to 1 indicates that the other predictors do not explain the variance in that variable. A value close to 0 implies almost all the variance in the variable is explained by the other variables. This permits us to more formally check that our independent variables are not too highly correlated. To meet multiple regression assumptions, we need tolerance scores of above 0.2 and VIF scores below 10.

As we see from the below table, analysis of collinearity statistics show this assumption has been met, as no relationship of predictor equals or above coefficient value of 0.8 and VIF scores shown below 10, and tolerance scores above 0.2.

Coefficients												
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Partial	Tolerance	VIF
	(Constant)	.0875	.213		4.115	.000	.456	1.294				
Duration Control	-.013	.035	-.006	-.096	.924	-.012	.066	-.202	-.006	-.004	.863	.094
Capacity Management	.062	.063	.043	.988	.324	-.061	.185	.223	.064	.041	.830	.089
Dynamic Pricing	.702	.042	.730	16.789	.000	.620	.785	.756	.734	.695	.858	.074
Price Discrimination	.069	.037	.118	1.838	.067	.142	.005	.204	.118	.076	.692	.067

## Normality

This assumption is used to determine whether the residuals are normally distributed. This can be tested by looking at the Histogram and P-P plot for the model. To say the normality assumption of this study is met, the Histogram should be symmetrical along the center 0 and the dots at the P-P plot should be close to the diagonal line; Normal P-P plot points should lie in reasonably straight diagonal line from bottom left to top right. In this case Histogram is symmetric and the P-P plot the dots are drawn close to the diagonal line, indicating that assumption of normality is met. The following residual statistics support this idea.

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.4984	4.4142	2.9951	.55005	246
Std. Predicted Value	-2.721	2.580	.000	1.000	246

StandardErrorofPredicted Value	.031	.158	.061	.025	246
AdjustedPredictedValue	1.3477	4.5447	2.9949	.55456	246
Residual	-1.88938	1.75780	.00000	.46118	246
Std.Residual	-4.063	3.780	.000	.992	246
Stud.Residual	-4.118	3.851	.000	1.009	246
DeletedResidual	-1.94055	1.82374	.00025	.47703	246
Stud.DeletedResidual	-4.262	3.966	-.002	1.027	246
Mahal.Distance	.381	10.831	2.925	2.303	246
Cook's Distance	.000	.1259	.050	.198	246
CenteredLeverage Value	.010	.278	.075	.059	246
a. Dependent Variable: CustomerRetention					

MahalDistance, CooksDistance, and CenteredLeverage Values in the residuals statistics are used to indicate if there are outliers in the data.

For the MahalDistance, we want to look at the maximum value, which, in this case is 10.831. High score in the MahalDistance tends to indicate that there is no outlier. However, this is based on the number of independent variables we have as this affects the degree of freedom. Degree of freedom is equal to the number of predictors and in this case, we have 4 independent variables, therefore our degree of freedom is 4. To check our critical value for the Mahal.Distance, we need to check in the Chi-square distribution table. The critical value at 0.05 level or at the 95% confidence interval is 7.81 and any values in the data with Mahal.Distance score of greater than 7.81 could be considered as outliers.

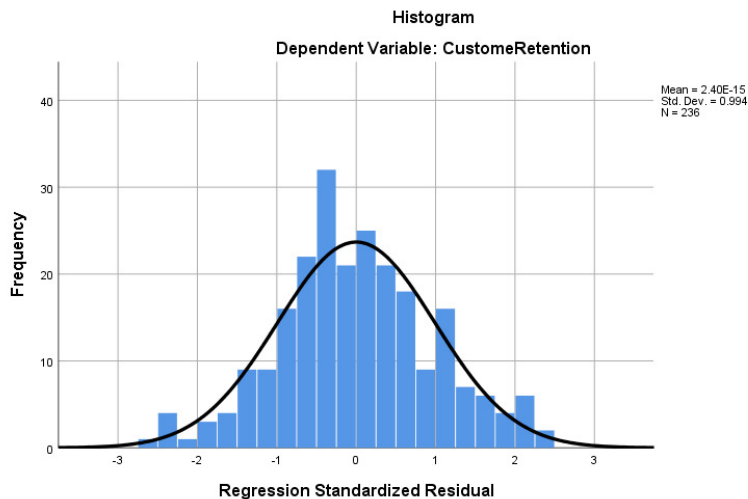
The Cooks distance also gives an indication of any extreme values within the data. And it's suggested that any values which are  $>1$  should be given scrutiny or perhaps removed. Therefore, the researcher removed 12 cases from the data with Mahal distance score of above 7.81 and Cook's distance of values greater than 1 so as to meet the normality assumption.

### Descriptives

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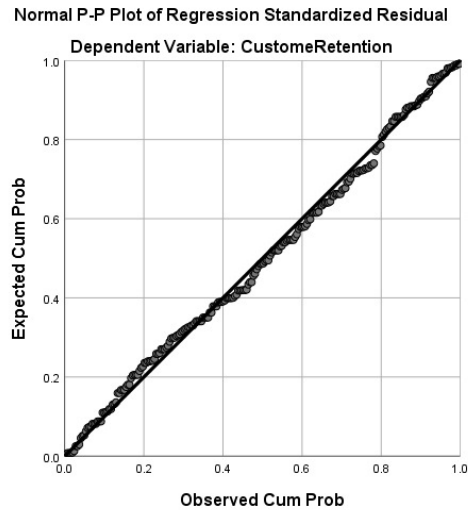
		Statistic	Std.Error	
StandardizedResidualfor CustomerRetention	Mean	.0000	.11101	
	95%Confidence Intervalfor Mean	LowerBound	-.1248	
		UpperBound	.1248	
	5%Trimmed Mean	-.0074		
	Median	-.0363		
	Variance	.887		
	Std.Deviation	.94198		
	Minimum	-2.28		
	Maximum	2.70		
	Range	4,98		
	Interquartile Range	1.44		
	Skewness	.194	.283	
	Kurtosis	.003	.559	

Besides, the above descriptive data for the residuals show that both Skewness and Kurtosis values are less than the standard errors showing there is no significant degree of skewness and kurtosis in the data.



### **Homoscedasticity**

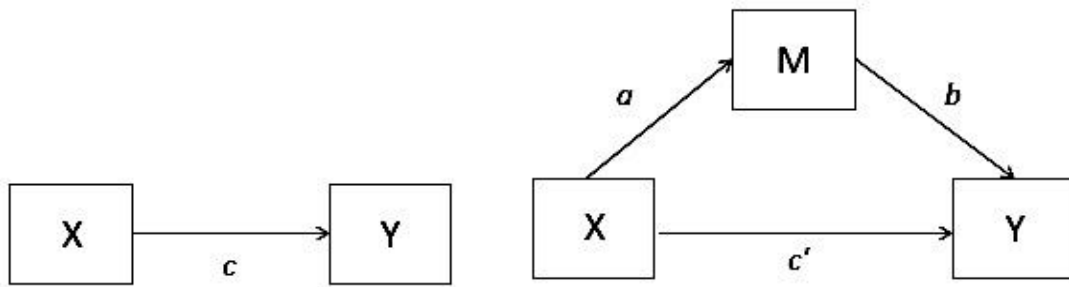
This assumption requires even distribution of residual terms or homogeneity of error terms throughout the data. Homoscedasticity can be checked by visual examination of a plot of the standardized residuals by the regression standardized predicted value (Osborn & Waters, 2002). If the error terms are distributed randomly with no certain pattern, then the problem is not detrimental for analyses. The figure below shows that the standardized residuals in this research are distributed evenly indicating heteroscedasticity is not a serious problem for this data.



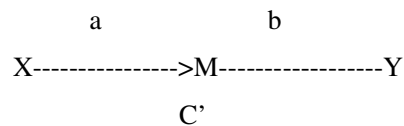
## Regression Analysis and Hypotheses Testing

### Introduction: Testing Mediation with Regression Analysis

Mediation is a hypothesized causal chain in which one variable affects a second variable that, in turn, affects a third variable. The intervening variable,  $M$ , is the mediator. It “mediates” the relationship between a predictor,  $X$ , and an outcome,  $Y$ . Graphically, mediation can be depicted in the following way:



Or



Paths  $a$  and  $b$  are called direct effects. The mediational effect, in which  $X$  leads to  $Y$  through  $M$ , is called the *indirect effect*. The indirect effect represents the portion of the relationship between  $X$  and  $Y$  that is mediated by  $M$ .

The researcher found it easy and convenient to use the PROCESS macro for SPSS and SAS v 3.4 which generally follows the Mediation hypotheses test by the Baron and Kenny (BK)

method, and a partial or full mediation decision is made according to the result of this test. In the BK method, mediation relationships are established in four steps (with three regression equations).

Baron, & Kenny (1986) explained these steps as follows:

1. Variable X significantly predicts variable Y (path c).
2. Variable X significantly predicts M (path a).
3. When the effect of variable X is controlled, variable(s) M significantly predicts Y ( $H_0: b=0$ ).
4. When the effect of variable M is controlled, there is a significant decrease in the relationship between X and Y or the relationship between these two variables is no longer significant ( $H_0: c'=0$ ). According to this method, the greater the reduction in coefficient c, the greater the degree of mediation. Coefficient c' being zero or too close to zero indicates the presence of a mediator variable, and a smaller decrease in coefficient c' (without approaching zero) suggests that there may be more than one mediator variable. As a result, Baron and Kenny's approach makes a distinction between a full/excellent mediation (all effect of X on Y is through M) and partial mediation (only part of the effect of X on Y is through M). When the effect of M is controlled, if the relationship between X and Y completely disappears, then the data confirm the full mediation hypothesis, and the relationship is still present but significantly reduced, this supports the partial mediation hypothesis (Pardo & Moran)

Using the above analysis procedures all hypotheses were tested and summarized as follows:

**Hypothesis 1: Dynamic pricing has significant effect on customer retention in five-star hotels.**

Dependent Variables	Variables	Beta( $\beta$ )	SE	t	F	R <sup>2</sup>	P		
C, CR(dependent variable)	Constant	.2863	.0102	.0281		.3425			
	DynamicPricing	1.064	.2492	4.6748	18.9189				
Step1 (a)PF (dependentvariable)	Constant	7.653	2.4033	3.1844					
	DynamicPricing	.2302	.0587	3.922	15.3818			.2096	.0002
Step2 (b) CR (dependentvariable)	Constant								
	Perceived Fairness	.9452	.1142	4.7052	12.1576			.2832	.0073
Step3 (C')CR (dependentvariable) DP(independent variable) PF(mediating variable)	Constant	11.3457	10.4201	-1.0881					
	DynamicPricing	.1519	.5252	2.8937	14.8489			.3425	.0054
	Perceived Fairness	.1073	.008	2.7805					

The direct effect in the above table essentially reflects the relationship between dynamic pricing and perceived fairness, Path a. And we can see the regression coefficient (unstandardized slope) is .2302 and this indicates it's statistically significant at .05 level.

In other words, our data is consistent with the notion that dynamic pricing has a predictive effect on perceived fairness.

And the above unstandardized coefficient tells us that for 1-unit increase in dynamic pricing, perceived fairness increases by about 23%.

And the R<sup>2</sup> is 20% and this means 20% of variability in perceived fairness is explained by dynamic pricing and that effect is statistically significant at .05 level.

The direct effect of perceived fairness on customer retention (path b) is also statistically significant ( $p, .0073 < .05$ ). Thus, we have some evidence or we are inconsistent with the idea that perceived fairness has a mediating effect between dynamic pricing and customer retention.

And this tells us that for every 1-unit increase in dynamic pricing, customer retention increases by 15% & for every 1-unit increase in perception of fairness, customer retention increases by 10% and this is statistically significant at .05 level. And the overall R<sup>2</sup> that's explained in customer retention by dynamic pricing and perceived fairness is 34%.

In the above model, the total effect of dynamic pricing on customer retention is positive (1.0640) indicating that the indirect effect of dynamic pricing via the mediator, perceived fairness, is positive at 95% confidence level. And so the null hypothesis that the indirect effect of dynamic pricing on customer retention is 0 ( $H_0: c' = 0$ ).

And if  $\beta_0$  falls between the bootstrap lower and upper bound, we maintain the null hypothesis and infer that the indirect effect is essentially 0 within the population. But in this case,  $\beta_0$  falls outside the boundary and indirect effect is significantly different from 0 within the population, hence the alternative hypothesis holds true.

**Hypothesis 2: Capacity management has significant effect on customer retention in five-star hotels**

Dependent Variables	Variables	Beta( $\beta$ )	SE	t	F	R <sup>2</sup>	P
C, CR(dependent variable)	Constant	.1812	.0650	9.5054			
	Capacity Management	.3431	.0182	35.4175	1254.3991	.2372	.0002
Step1 (a) PF(dependent variable)	Constant	1.9234	.2543	2.3254			
	Capacity Management	.0547	.0742	7.3653	53.5364	.2795	.0000
Step2 (b) CR(dependent variable)	Constant	.3231	.2231	.1219	139.24	.2188	.0000
	Perceived Fairness	.3114	.0423	2.1532	112.4977	.1912	.0000
Step3 (C') CR(dependent variable) CM(independent variable) PF(mediating variable)	Constant	1.7302	.2064	8.3824			
	Capacity Management	.2281	.0596	3.8465	37.5706	.3542	.0000
	Perceived Fairness	.2662	.0581	4.5815			

Path 'a' is essentially reflecting the relationship between capacity management and perceived fairness. And so we can see the regression coefficient (unstandardized slope) is .5427 and this indicates it's statistically significant at .05 level. In other words, our data is consistent with the notion that capacity management has predictive effect on perceived fairness.

And the above unstandardized coefficient tells us that for 1-unit increase in dynamic pricing perceived fairness increases by about 5%.

And the R<sup>2</sup> is .2795% and this means 28% of variability in perceived fairness is explained by capacity management and that effect is statistically significant at .05 level.

The direct effect of perceived fairness on customer retention (path b) is also statistically significant ( $p < .05$ ). Thus, we have some evidence or we are inconsistent with the idea that perceived fairness has a mediating effect between capacity management and customer retention. And this tells us that for every 1-unit increase in capacity management, customer retention increases by 22%. For every 1-unit increase in perception of fairness, customer retention increases by 26%, and this is statistically significant at the .05 level. And the overall  $R^2$  that's explained in customer retention by capacity management and perceived fairness is 35%.

Again, the total effect of capacity management on customer retention is positive (.3431) indicating that the indirect effect of capacity management via the mediator, perceived fairness, is positive at the 95% confidence level. And so the null hypothesis is that the indirect effect of capacity management on customer retention is 0 ( $H_0: c' = 0$ ). And if 0 falls between the bootstrap lower and upper bounds, we maintain the null hypothesis and infer that the indirect effect is essentially 0 within the population. But in this case, 0 falls outside the boundary and the indirect effect is significantly different from 0 within the population, thus, the alternative hypothesis holds true.

**Hypothesis 3: Price discrimination has a significant effect on customer retention in five-star hotels**

Dependent Variables	Variables	Beta ( $\beta$ )	SE	t	F	R <sup>2</sup>	P
C, CR (dependent variable)	Constant	.0548	.0087	17.8729			

	Price Discrimination	.0346	.0025	95.5824	156.419	.0984	
Step1 (a) PF(dependent variable)	Constant	.1076	.0631	11.2118			
	Price Discrimination	.0741	.0185	35.1214	1233.5154	.1649	.0000
Step2 (b) CR(dependent variable)	Constant	.0214	.0023	15.2336	112.240	.1234	.0002
	Perceived Fairness						
Step3 (C') CR(dependent variable)	Constant	.1097	.0095	11.5951			
	Price Discrimination						
PD(independent variable)	Perceived Fairness	.0632	.0055	73.6715	37.5706	.0788	.0000
PF(mediating variable)		.0527	.0078	8.1733			

Path 'a' is essentially reflecting the relationship between price discrimination and perceived fairness. And so we can see the regression coefficient (unstandardized slope) is .0741 and this indicates it's statistically significant at .05 level. In other words, our data is consistent with the notion that price discrimination has predictive effect on perceived fairness. And the above unstandardized coefficient tells us that for 1-unit increase in price discrimination, perceived fairness increases by about 7%.

And the  $R^2$  is 16% and this means 16% of variability in perceived fairness is explained by price discrimination and that effect is statistically significant at .05 level.

In the above table, the direct effect of perceived fairness on customer retention (path b) is also statistically significant ( $p < .05$ ). Thus, we have some evidence or we are in consistent with the idea that perceived fairness has mediating effect between price discrimination and customer retention. And this tells us that for every 1-unit increase in price discrimination customer retention increases by 6% for every 1-unit increase in perceived fairness, customer retention increases by 5% and this is statistically significant at .05 level. And the overall  $R^2$  that's explained in customer retention by price discrimination and perceived fairness is 7%.

And the total effect of price discrimination on customer retention is positive (.0346) indicating that the indirect effect of price discrimination via the mediator, perceived fairness is positive at 95% confidence level. And so, the null hypothesis is that the indirect

effect of price discrimination on customer retention is 0 ( $H_0: c' = 0$ ) and if 0 falls between the bootstrap confidence interval of lower and upper bound, we maintain the null hypothesis and infer that the indirect effect is essentially 0 within the population. But in this case, 0 falls outside the boundary and indirect effect is significantly different from 0 within the population, hence, the alternative hypothesis holds true.

**Hypothesis 4: Duration control has significant effect on customer retention in five-star hotels**

Dependent Variables	Variables	Beta( $\beta$ )	SE	t	F	R <sup>2</sup>	P
(C), CR (dependent variable)	Constant	1.0315	.0189	54.6368	385.5659	.4812	
	Duration Control	.0815	.0076				
Step 1 (a) PF (dependent variable)	Constant	1.2973	.0460	28.2110			
	Duration Control	.0629	.0172	36.1234	1304.8989	.8425	.0000
Step 2 (b) CR (dependent variable)	Constant	1.0013	.0017	.75.124	182.305	.3818	.0000
	Perceived Fairness	.4863	.0023				
Step 3 (C') CR (dependent variable)	Constant	.0372	.0189	54.6368			
DC (independent variable)	Duration Control	.0033	.0086	108.1866	385.5659	.5269	.0000
PF (mediating variable)	Perceived Fairness	.0064	.0127	2.8562			

Path 'a' is essentially reflecting the relationship between duration control and perceived fairness. And so we can see the regression coefficient (unstandardized slope) is .0629 and this indicates it's statistically significant at .05 level. In other words, our data is consistent with the notion that duration control has predictive effect on perceived fairness.

And the above unstandardized coefficient tells us that for 1-unit increase in duration control, perceived fairness increases by about 6%.

And the R<sup>2</sup> is 84% and this means 84% of variability in perceived fairness is explained by duration control and that effect is statistically significant at .05 level.

And the direct effect of duration control on customer retention (path b) is also significant ( $p, .0000 < .05$ ). According to the above analysis result, the greater the reduction in coefficient c, the greater the degree of mediation. When the effect of M (perceived fairness) is controlled, the relationship between duration control and customer retention disappears and the data confirm that perceived fairness fully mediates the independent and dependent variables.

## **CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSION, RECOMMENDATIONS AND FUTURE STUDIES**

### **Summary of Findings**

The summary table of hypothesis 1 in chapter 4 illustrates that the F value (14.8489) indicates our model was meaningful as a whole at all levels (Sig., .0054). It's evident that the statistical

tvalues of the parameters that each variable included in the model is individually significant at .05 significance level. The perception of customers towards dynamic pricing is positive and so are customers likely to be retained. When customers perceived fairness of dynamic pricing increases, customer retention level also increases. The perceived fairness level, which also affects the dynamic pricing, explains the level of customer retention at the rate of 34% ( $R^2 = .3425$ ). Thus, dynamic pricing affects customer retention directly and through perceived fairness. Perceived fairness therefore has partial mediating effect between dynamic pricing and customer retention. In line with this finding; **H1 dynamic pricing has significant effect on customer retention is accepted.**

Hence, the result was inconsistent with the previous studies which supported that the act of demand based pricing, if managed to convince the customers, would be perceived fair.

Many service businesses are reluctant to implement demand-based pricing because of potential customer backlash. If customers believe that increased prices are not based on cost increases or changes in market conditions, they may view demand-based pricing as unfair (Kimes and Wirtz 2002a). Consumers may view the demand-based pricing associated with revenue management as unfair for several reasons. For example, reference prices can affect customer reaction to demand-based pricing. If customers view peak-demand prices as higher than their reference price or if they view regular prices as higher than their reference price due to frequent low-demand prices, then customers may view the prices charged as unfair. In addition, if customers believe that companies are not providing more value for the higher peak-demand price, their dual entitlement beliefs may be violated. In general, customers believe that they deserve a reasonable price and that firms are entitled to make a reasonable profit. When this relationship becomes unbalanced in favor of the firm, the transaction may be viewed as unfair.

The principle of dual entitlement (Kahneman, Knetsch, and Thaler 1986) posits two hypotheses: Customers believe that (a) if costs increase, price increases are fair, and (b) if costs do not increase, price increases are viewed as unfair. For example, if the utility costs for a hotel increase, customers will view room rate increases as fair, but if a hotel raises its

room rates without a corresponding increase in costs, the price increases will be viewed as unfair. Based on the theory of dual entitlement, most price discrimination and demand-based pricing approaches would be seen as unfair.

Customers consider both the reference transaction (how they think the transaction should be conducted) and the reference price (how much they think the service should cost) when evaluating fairness. Both reference transactions and prices are based on consumer

expectations, and reference prices are often used to evaluate the fairness of a transaction (Kahneman, Knetsch, and Thaler 1986).

The question becomes one of how a firm can raise prices or charge different prices without risking customer perceptions of unfairness. Thaler (1985) suggested four possible approaches: (a) tie lower prices to restrictions, (b) offer additional perceived value for higher prices, (c) raise the reference price, and (d) obscure the reference price. Reference prices, in which certain rules are associated with different prices, can help a firm implement the first two approaches and will be discussed below. Offering a "suggested" price and then having a series of discounted prices can help increase the reference price. For example, hotels do this with their "rack rate," and airlines use "full fare." If customers feel that they are receiving a discount, they are apt to view the price charged as fairer than in the presence of no apparent discount. Bundling the service with other products or services so that customers do not know the true price of each component of the package can obscure the reference price (Ng, Wirtz, and Lee 1999). And the customers would consider the transaction fair and make repeat stays.

The summary table of hypothesis 2 in chapter 4 illustrates that the F value (37.5706) indicates our model was meaningful as a whole at all levels (Sig., .0000) and according to this method, the greater the reduction in coefficient c, the greater the degree of mediation. Coefficient c' being zero or too close to zero indicates the presence of a mediator variable, and a smaller decrease in coefficient c' (without approaching zero) suggests that there may be more than one mediator variable. This, as in the above hypothesis 2 table's scenario, in the indirect effect the coefficients significantly decreased from the direct effect, meaning that perceived fairness has a strong effect but not complete effect or fully mediating the variables. It's evident that the statistical t values of the parameters that each variable included in the model is individually significant at .05 significance level. The perception of customer towards capacity management is positive and so are customers likely to be retained. This means that when customers' perceived fairness of capacity management increases, customer retention level also increases. The perceived fairness level, which also affects the capacity management, explains the level of customer retention at the rate of

35% ( $R^2 = .3542$ ). Thus, capacity management affects customer retention directly and through perceived fairness. Perceived fairness therefore has a partial mediating effect between capacity management and customer retention. In line with this finding; **H2 capacity management has significant effect on customer retention is accepted.**

Hence, the result was inconsistent with the previous studies which supported the idea of capacity or inventory control should first be perceived fair by customers in that customers would make value out of it. And inventory control strategies such as restricted availability, overbooking and length of stay restrictions can change the balance of the reference transaction and can cause customer conflicts since they view the transaction as unfair (Kimes, 1994). Basically, while using capacity restrictions, hotels are saving the inventory to the high yield customer disregarding their regular customers. This intermittent availability to regular customers is likely to result in customer dissatisfaction, damage customer loyalty and endanger future repeat business (Writz et al., 2003).

Moreover, firms practicing overbooking are faced with the trade-off between the opportunity cost of unused inventory and the cost of customer displacement (Writz et al., 2003). Such practice helps hotels reduce their number of empty and unsold rooms on high demand days at a risk of damaging the customer relationship.

Furthermore, other problems may stem from the practice of overbooking. Overbooking in the hospitality industry is the practice of intentionally selling more reservations for a date than the actual room availability of the hotel. Hotels use overbooking to offset the effects of clients' cancellations and no-shows. Overbooking is based on forecasts. However, in the event that the forecasts don't turn out to be exact, the firm over stretches the booking limit, the hotel then has to deal with the excess of clients. The displacement decision may be based on time of arrival, frequency of use, perceived importance or on a voluntary basis (Kimes and Chase, 1998). In these cases, it is important to set up appropriate service recovery strategies by the hotel (McColl-Kennedy and Sparks, 2003). In effect, customers wouldn't be discouraged to make repeat stays in the same hotel.

The summary table of hypothesis 3 in chapter 4 illustrates that the F value (37.5742) indicates our model was meaningful as a whole at all levels (Sig., 0.000). It's evident that the statistical t values of the parameters that each variable included in the model is individually significant at .05 significance level. The perception of customer towards price discrimination is positive and so are customers likely to be retained. When customers perceived fairness of price discrimination increases, customer retention level also increases. The perceived fairness level, which also affects the price discrimination, explains the level

of customer retention at the rate of 35% ( $R^2 = .3542$ ). Thus, price discrimination affects customer retention directly and through perceived fairness. Perceived fairness therefore has partial mediating effect between dynamic pricing and customer retention. In line with this finding; **H3 price discrimination has significant effect on customer retention is accepted.**

Hence, the above result was inconsistent with the previous studies which supported the idea that price discrimination, unless justified and applied with value for money principle, customers would perceive it unjust and this may result in customer backlash.

Rate fences are the rules that hotels use to segment customers and justify why different people pay different prices. Correctly designed rate fences let hotel guests self-segment on the basis of their willingness to pay and can help companies to effectively target lower prices to those clients who are disposed to accept certain restrictions on their purchase and consumption experiences (Hanks et al., 1992; Kimes and Wirtz, 2003b).

We must note, however, that perceptions of fairness may be affected not only by the price paid, but also by the rules used in setting prices (fences), if they are considered unjust (Kimes and Wirtz, 2003a). Therefore, fences and penalties (Fram and McCarthy, 1999) must be established with great care. It is also important to consider consumer psychology in pricing decisions (Shoemaker, 2005) in order to anticipate negative reactions of customers to price differences. Studies have shown, in fact, that offering customers preventive information on hotels' pricing practices can substantially enhance their perceptions of fairness (Choi and Mattila, 2005, 2006).

With regard to price discrimination, we can observe that hotels often endeavor to increase occupancy rates by selling rooms to different kinds of customers. But this policy may be risky enough, if it involves categories of clients who are incompatible (i.e. individual tourists and groups). In order to avoid dissatisfaction, it is therefore necessary to verify the compatibility of service customers; in other words, to correctly manage the "customer mix" (Martin and Pranter, 1989). For instance, in some cases it is possible to spatially or temporarily segregate different kinds of non-compatible customers.

The summary table of hypothesis 4 in chapter 4 illustrates that the F value (385.5659) indicates our model was meaningful as a whole at all levels (Sig., .0000). It is evident that the statistical t values of the parameters that each variable included in the model is individually significant at .05 significance level though a greater reduction in coefficient value of C when the mediating variable is controlled. The perception of customer towards duration control determines whether they make repeat stays. When customers perceived

fairness of duration control increases, customer retention level also increases. The perceived fairness level, which also affects the duration control, explains the level of customer retention at the rate of 35% ( $R^2 = .5269$ ). Thus, duration control affects customer retention through perceived fairness. Perceived fairness therefore has full mediating effect between duration control and customer retention.

In line with this finding; **H4: duration control has significant effect on customer retention is accepted but through perceived fairness.**

Hence, the result was in consistent with the previous studies which supported the idea that customers immediately change their mind if they are told about the duration restriction and obliged to commit for minimum length of stay even if the demand is high and there are events. Length-of-stay control is a much-neglected area of research (Ismail, 2002; Kimes & Chase, 1998; Vinod, 2004), yet usually applied in hotel business practice. Through it, hotels set limit on the minimum and, rarely, maximum number of nights in the customer bookings. Length-of-stay control allows hotels to protect themselves from losing revenues when customers book rooms for short stays in periods of huge demand (e.g. during special events such as exhibitions, fairs, congresses, sports events, etc.). It also provides the possibility to generate additional revenues from overnights in days when demand is historically low (e.g. when a business hotel requires compulsory stay over Saturday nights for all bookings that include a Friday night). Vinod (2004) highlights that length-of-stay control has one major disadvantage – it is static and, therefore, not very flexible. In practice, limitation on the length-of-stay should be explicitly stated in the pricing section of hotel's website and hotel rate's conditions in OTAs'/GDSs'/tour operators' websites. However, it is also possible that the length-of-stay is not explicitly stated but implied – this is the case when the hotel does not appear at all in the list of hotels in the OTAs'/GDSs'/tour operators' websites for booking requests for stay shorter than the minimum required number of overnights during a particular period. The maximum length of stay is very rarely used by hotels – usually when a hotel would be closed after a particular date due to the start of renovation works or the end of the season.

Length-of-stay control may be successfully implemented only if it is applied by most of the hotels at a destination during a given period. If, for example, only a handful of properties out of many hotels available require that guests spend a minimum number of nights during a particular period of time, they will not be competitive because potential customers would very easily find and book rooms in properties that do not impose such

limitations. Cooperation among hotels at a destination proves, again, to be a prerequisite for successful revenue management.

## **Interview results on managerial decision making**

The managers' role in customer relationship management and profitability, their practice in relation to customer relationship management, if there may be guest dissatisfaction or complaints towards yield management practice and the managers' commitment in enhancing customer loyalty were questions the researcher asked the hotels' managers.

While the application of pricing and restriction controls might cause customers to perceive the transaction as unfair, the interview results provide mixed evidence of the impact these decisions have had on customers. In fact, some managers stated that RM decisions had no impact on customers' perceptions and others assert that there has been a drop in scores in guest recommendations and their views on value for money. However, overall there appears a lack of research in the chain to really quantify the impact of RM decisions on customers.

When the interviews have been completed with hotel managers, further documents collected and observations of customer online reviews were made hoping that there would be further insight into the impact of RM implementation on customers' perceptions and attitudes.

The shifting expectations of customers and the changing nature of the competition imply that the relationship with customers is becoming ever more significant. As a result of the gap identified in both the initial findings of the study and the literature, the managers' response justified towards their flexibility in applying yield management strategies, and working on customer relationship management as the optional strategies to maintain good relationship with their customers.

They also clarified that both yield management and customer relationship management have an influence on profit maximization but work in a different way with different objectives.

Revenue management allows the hotels to maximize their revenue, customer relations programs are also correspondingly being undertaken by majority of the hotels; the provision of least price guarantee for advance bookings, availability of credit facilities for company guests, discounts based on frequency and duration of stays, flat rates for group arrivals, the provision of contracted rates for regular guests, the act of room upgrades, long stay discounts, blocking of lower room categories, recognition of most profitable customers based on their spending power and lifetime value, and other benefit schemes

influence their customers and obscure the negative impact that yield management might have on customers.

Besides, they confirmed that once customers are impressed with the hotels' customer service culture, good cuisine, location, complimentary services, and others, customers don't bother

looking for another service provider, hence, they tend to stay loyal, talk favorably about the hotel, pay less attention to some price variations they may encounter.

Customers are also encouraged and given attractive discounts and packages to make direct bookings rather than using the GDSs and by doing so the hotels would retain the commission costs that they would have incurred for using distribution channels.

They added, some customers complain over the prices and ask why people who stay at identical hotel room sizes end up paying different prices. However, if the hotel does not set a loyalty program, loyal customers may find out that others pay less because they booked earlier or later and never book a room in the same hotel anymore.

Using revenue management, hotels maximize their profit and increase their revenue in short term but might lose some clients, and not perform in the long term if they underevaluate the customer relationships management.

Thus, the value the customers get should be compared with the prices and other restrictions when fairness issues are raised as is the case in airline companies. The fact that majority of the 5 star hotels are in the capital, Addis Ababa, their regular guests are business tourists who come for meetings, convention and other business affairs. For such reasons most business tourists, who are way more time sensitive do not consider the price fences and the other restrictions as opposed to pleasure travelers who are price sensitive and make travel plans ahead of time.

## **Conclusion**

The outcome of this study contributes to the knowledge about how yield management strategies may be perceived by customers and suggests on key issues to consider in integrating revenue and customer retention by answering the question of how yield management could negatively affect customers' perception. The findings confirm that, depending on whether or not the relationship value has been taken into consideration, yield management could indeed damage relationships.

An important conclusion that can be drawn from this study is, as has been revealed in this study, the principle of maximizing revenue (El Gayar et al., 2011) could be at odds with relationship development needs and, to a certain extent, with the customer-centric philosophy of many hospitality organizations, unless the marketing and operations management interface is properly managed. The findings of this study show that hospitality organizations should have holistic and strategic perspectives to the management of yield and strike a balance between increasing revenue and developing customer relationships. Moreover, this study reveals that the extent of the damaging effects of yield management on customer relationship was also influenced by the managerial decision making in every interaction with customers.

This paper also offers insights into why duration control, unlike the other strategies affect customers' perception boldly.

Despite their role in optimizing occupancy and revenues, hotel yield management strategies especially duration control should be given utmost attention to build long term relationship with customers. Managers of such hotels should have also better decision making ability and flexibility. So that customers won't perceive these strategies unfair, managers implement customer relationship management and tend to make value for money transactions by bundling services into packages.

Yield management emphasizes on maximizing hotel occupancy and revenue but to do so it was revealed that some attractive packages or complimentary services tend to impress customers and influence their perception positively and result in good relationships.

### **Recommendations**

Managers of five star hotels should be proactive as well as responsive to the dynamic phenomena of hotel environment. They should be able to align their business strategies with the changing needs of their customers.

The managers should also be responsible enough to create adequate and elaborate feedback mechanisms so that they comprehend customer needs and concerns.

To enhance the relationship and loyalty of a customer to a hotel, managers should guarantee value for money transactions thereby convincing their customers that the rationale of applying varied rates.

Professionalism and putting customers' concerns first build good impressions and lasting relationships, hence, owners and managers of any hotel should also give due emphasis to their employees and work in strong collaboration.

Advance communication on the terms of payment or price fences is very important as customers would balance their expectation with the prices offered and this in turn is perceived fair by customers.

Hotels are advised to offer additional perceived value for higher prices set. If they provide their guests with some additional but not costly complimentary service or packages, customers will likely perceive the additional price fair.

As yield management involves forecasting future demand, the lack of certainty means that customers may occasionally not get their expected level of service. It is important to anticipate and back up the yield management program with well-designed service recovery procedures, a standardized response to customers.

For some capacity management tactics like overbooking, when guests show up the hotel should have proper displacement or turning away policy even at the cost of the hotel if the hotel wishes to maintain relationships over short term revenue.

It is also important to consider consumer psychology in pricing decisions in order to anticipate negative reactions of customers to price differences in the case of price discrimination. Studies have shown, in fact, that offering customers preventive information on hotels' pricing practices can substantially enhance their perceptions of fairness (Choi and Mattila, 2005, 2006)

All employees who have a role to play, including frontliners and sales staff, must be trained and educated in the aim, fundamental practices and nuances of their company's yield management programs so that they would be able to justify the practice to their customers. Employees at all levels must be trained and educated in the concepts of yield

management. Employees should also understand that yield management is not about systematically abusing the customer, but is about creating win-win situations by providing different price and value balances to allow a broader spectrum of customers to self-segment and enjoy the service.

Besides, the following table recommends how causes of unfairness can be treated by hotels so as to reduce conflicts or negative perceptions with customers, while applying the yield management strategies.

Revenue management	Causes of	
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levers	unfairness	How to reduce conflicts
Capacity management	Not compatible customer mix	Segments segregation (spatial and temporal), differentiated and additional service benefits (extra-service)
	Unfulfilled demand caused by overbooking	Proper displacement management, recovery programs
	Restrictions to service use	Set logical and acceptable restrictions, clear communication
	Unfulfilled of regular customers	Preferred availability policies (Last room availability)
	Overcrowding	Set optimal capacity limit
Price discrimination	Unfair price	Fencing, bundling of services, service differentiation, privacy of
	Unjust fencing	Set logical and acceptable fences, clear communication offences
	Increase in perceived risk	Guarantees (Best available rate)
	No reference price (increase in search efforts)	Transparent communication, increase of the rack rate
Duration Control	Min & max stay restrictions	Advance communication and complimentary Services, displacement management,
Dynamic pricing	Fluctuating, or hurdle rates	Fair price based on value for money

Source: Adapted from Pullman & Rogers (2010)

### Limitations and recommendations for future research

As with any research, this study is not without its weaknesses. Lack of empirical research on the related study area, and the non-availability of adequately published and documented data on the topic was also another limitation.

In the course of the study, some of the challenges and constraints that the researcher encountered included: limited availability of information and literature, inaccurate data, poor cooperation by respondents, gathering and interpreting background research, and

difficulties with getting schedules with interviewees. However, during the course of this study, a continuous, detailed and scrupulous research was carried out.

Some participants may have responded, deliberately, with the 'right' attitude rather than their real one. Efforts were, however, made to minimize this potential effect and to enhance the rigor of the study by guaranteeing informants and interviewees' anonymity in advance and by comparing data that was collected from divergent sources, such as client interviews.

It was anticipated that some managers would not give all the information freely as required by this study. The researcher however explained the importance of the study and indebted to the Hotel Owners Association and the Ministry of Culture and Tourism Act on research matters. Respondents were also reluctant to give certain information that they considered confidential. This is because participants would often give answers that they believe to be desirable, Donaldson and Preston (1995).

Future research may wish to address the limitations noted above and also investigate the role revenue managers and account managers play in integrating yield management and customer relationship management.

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## Appendices

### Revenue management tools – review of selected papers

Research topic		Selected papers	
<b>Non-pricing RM tools</b>			
Inventory management	Capacity management in general		Pullman & Rogers (2010)
	Overbookings	Optimal level of overbookings	Hadjinicola & Panayi (1997); Ivanov (2006, 2007); Koide & Ishii (2005); Netessine & Shumsky (2002)
		Walking guests	Baker, Bradley & Huyton (1994); Ivanov (2006)
	Length of stay control		Ismail (2002); Kimes & Chase (1998); Vinod (2004)
	Room availability guarantee		Noone, Kimes & Renaghan (2003)
Channel management	Choi & Kimes (2002); Hadjinicola & Panayi (1997); Myung, Li & Bai (2009); Tranter, Stuart-Hill & Parker		

	(2008)
	<b>PricingRMtools</b>
Pricing in general	Collins&Parsa(2006);Hung,Shang&Wang(2010);Shy(2008)
Price discrimination and rate fences	Hanks,Cross&Noland (2002);Kimes&Wirtz(2003);Ng(2009b);Shy(2008);Tranter,Stuart-Hill&Parker(2008)
Determination of optimal room rates	Pan(2007)
Dynamic pricing	Palmer&Mc-Mahon-Beattie(2008);Tranter,Stuart-Hill&Parker (2008)
Price presentation	Noone&Mattila(2009)
Lowest price guarantee	Carvell&Quan(2008);Demirciftci,Cobanoglu,Beldona&Cummings(2010)
Optimal room-rate allocation (room distribution)	Baker,Murthy&Jayaraman(2002);Bitran&Gilbert(1996);Bitran&Mondschein (1995);ElGayar,Saleh,Atiya,El-Shishiny, Zakhary&Habib(2011); Guadix,Cortes,Onieva&Munuzuri(2010);Harewood(2006)