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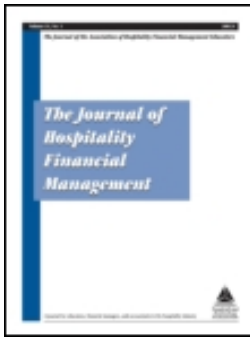
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EXPLORING THE ROLE OF HUMAN JUDGMENT IN MAKING DISCOUNT DECISIONS IN THE LODGING INDUSTRY

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ABSTRACT. This study assesses the process of making pricing decisions, specifically discounts, in the lodging industry. The study applied a qualitative technique employing structured interviews of hotel managers in the United States. The assessments included the narration of events, stages, and cycles of choices made by hotel managers. The findings of the study enhanced the understanding of how management's discount choice was constructed. In addition, this study identified the habitual management practices in the lodging industry such as "less-than-35 rule," "trial and error," and "follow suit." To confirm the findings from the interviews, a follow-up study was conducted. The survey was designed to learn what kinds of information managers rank highly when considering price adjustments in their operations. Different rankings on information attributes among departments were investigated; results show that managers from different departments rank some information elements differently. Learning the process of a discount choice provided new insights on managerial resources and capabilities required to set and change prices in the lodging industry.

INTRODUCTION

Pricing decisions have been based mainly on rational choice perspective and focused solely on the efficiency of the choice (Dutta, Zbaracki, & Bergen, 2003; Ghali & Wang, 2000; Jones, 1999; Phillips, 1999). A pricing choice is considered efficient only if it prompts an optimal decision that leads to revenue maximization. The latter is a closely followed tradition that still permeates the management literature (Haleblian & Finkelstein, 1999). However, the unique characteristics of the lodging industry make the application of rational choice perspective problematic, because it is continually confronted with time restraints and a variable environment (Dane & Pratt, 2007; Khatri & Ng, 2000).

The nature of a lodging operation involves time-constrained decisions in response to an unstable and dynamic business environment. A decision to change prices needs to be done quickly (Phillips, 1999). However, the accuracy of those decisions and predictions tends to suffer if grounded on rational theory. The permutation of decision accuracy and decision speed creates a discrepancy between prediction and reality that has spawned a debate on whether price discounting works for the lodging industry (Croes & Semrad, 2012; Enz, Canina, & Lomanno, 2009).

This study argues that under conditions of uncertainty, instability, and unstructured problems, human judgment becomes relevant for solving pricing dilemmas. Human judgment in this study can be understood as intuitive

judgment, which often reveals a “habitual response” (Barnard, 1938; Collet, 2009; Nicotra, 2005) from hotel managers who are directly involved in making pricing decisions. The study contends that the lodging industry is better served when looking at the role of human judgment by hotel managers completing the strategic task of determining the right price. Consequently, the study shifts the unit of analysis from outcome to process, and from posing the question of *what* decision to *how* a pricing decision is made.

This goal of this study is to contribute to the ongoing debate with regard to price discounting in the lodging industry by shifting the unit of analysis from outcomes (e.g., a discount leads to better performance) to processes. This entails refocusing on the required informational space to better understand pricing choices made by hotel managers. The discount-choice-oriented approach is contested on three grounds: (a) its epistemological tradition grounded in the positivist approach, (b) its informational space requiring understanding price setting in the lodging industry, and (c) the neglect of the role of luck in decision making.

By looking at the pricing decision from this perspective, the study solves the lingering empirical and methodological problems that have plagued studies focusing on the outcome of pricing in the lodging literature. Explanations related to the effectiveness of discounting, for example, have often assumed unidirectional causal effects concerning financial performance of hotels. Financial performance could be an outcome of pricing, but also an explanation for all kinds of behavior, including actions of hotel managers. The study will specifically look into the process of making discount decisions and the role of human judgment.

The remainder of the study is organized as follows. The next section reviews the pertinent literature and provides the justification of this study, followed by the methodology. The subsequent section presents and discusses the results in a narrative manner. Finally, the discussion and conclusion will be provided.

LITERATURE REVIEW

Discount Literature

In the lodging industry, the development of discount literature has advanced to a rational model of strategic choice. A search using EBSCO Hospitality and Tourism Complete delivered only 61 articles related to discounting in a hotel context, as of April 26, 2013. The search was done using the key words “discount, price reduction, price promotion, or price cut” and “hotel or lodging.” A careful review showed that only 16 articles were directly related to discounting in the lodging industry, as shown in Table 1.

Studies that engage in assessing discounting are limited to two approaches: market segmentation and market equilibrium. From a market segmentation approach, discounts can be used to segment groups based on price sensitivity. For example, customers traveling for leisure purposes (Ghalia & Wang, 2000; Kashyap & Bojanic, 2000; Relihan, 1989), females, less-educated customers (Lee, Bai, & Murphy, 2012), and customers in limited-service hotels (Tanford, Raab, & Kim, 2012) tend to seek discounts. These studies suggest that discounts should be offered exclusively to such customers. From a market equilibrium perspective, where neoclassical economic theories are often applied, the studies focus mainly on either the impact of discounting (Enz et al., 2009; Croes & Semrad, 2012) or the drivers for discounting (Koide & Ishii, 2005; Lee & Jang, 2013; Schwartz & Cohen, 2003; Shapiro & Shi, 2008).

Market segmentation and market equilibrium are derived from rational models and positivist approaches, sophisticated statistical techniques, and the development of technology that enables researchers to conduct studies using new tools (Slovic, 2001). However, positivist research is limited to observable and measurable factors. Even if positivist researchers believe that unobservable or immeasurable factors are necessary for making predictions and offering explanations, these factors tend not to be included in empirical tests (Friedman, 1953; Treviño & Weaver, 2003). By omitting

TABLE 1. Discount Literature in the Lodging Industry 2000–2013.

Definition of discount	Approach	Theory	Method	Predictors	Outcome	Author
Price reduction based on age	Market segmentation		Manova	Senior discount	Attitudes and behaviors of discount usage	Pennington-Gray, Beland, & Sklar (2002)
Discount% = current rate \times (1 - discount percent)	Market equilibrium		Modeling	Hotel's capacity, number of rooms sold to the group; demand for rooms at the regular rate; Regular rate	Group discount rate	Schwartz & Cohen (2003)
% difference in ADR - (hotels annual ADR- annual ADR of competitive set)/annual ADR of competitive set	Market equilibrium	Microeconomic theory	Descriptive	% difference in ADR	% difference of RevPAR	Enz, Canina, & Loinamito (2004; 2009)
Price reduction based on lead time	Market equilibrium		Room allocation model; modeling	Early discount, cancellation, overbooking	Room allocation	Koide & Ishii (2005)
Pattern of price change	Market segmentation	Neoclassical economic theory, reference theory	Logistic regression	Room rate change pattern	Propensity of book	ChihChien & Schwartz (2008)
Equal to the marginal cost	Market equilibrium	Rational expectations theory	Ellison's model; modeling	Opaque feature	Symmetric equilibrium	Shapiro & Shi (2008)
Price reduction based on time	Market segmentation			Last-minute sales to consumers vs. through an opaque intermediary	Expected profit	Jerath, Netessine, & Veeraraghavan (2010)
Short-term reduction of the listed price of a service	Market segmentation		Manova	Price discount frames; price discount levels	Quality, value, purchase intentions, willingness to spread WOM about the discount	Nusair, Yoon, Naipaul, & Parsa (2010)
Percentage off from ADR	Market segmentation		Anova; Manova	Reward membership, commitment	Switching cost	Tanford Raab, & Kim (2011)
Discount% = a single room/the price of a double room	Market equilibrium	Theory of product differentiation	Ordinary least squares and structural equation modeling	Category (number of stars) chain local competition (number of hotels in the same category, the average geographical distance to direct competitors)	Listed room price; discount	Becerra, Santalo, & Silva (2012)
Discount\$ = Actual room rate charged \the premium rate to arrive to the percentage rate	Market equilibrium	Rational expectations theory	Error correction model	Lagged discounted rate	ProfitPAR	Croes & Semrad (2012)
Percentage off from ADR	Market segmentation		Auova; t-test	Consumer age, gender, income, and education	Involvement in discount seeking	Lee, Bai, & Murphy (2012)
ADR during shoulder season	Market equilibrium	Classic theory	Aspatial and Spatial Models	Number of in-room amenities, number of on-site amenities, distance from city center (in miles), number of rooms, function space	ADR	Lee & Jaug (2012)
Discount amount that a hotel has to offer for customers to switch from a preferred brand	Market segmentation		Factor analysis; t-test	Segment (Full-service: limited-service)	Switching discount	Tanford, Raab, & Kim (2012)
Discount% = (ADR- ADRt-1)/ADRt-1	Market equilibrium	Choice theory	Spatial econometric model	Segment quality (ADR of the segment), number of rooms, number of competitors, distance from competitors (hi miles)	Ln(ADR)	Lee & Jaug (2013)

Note: A search in EBSCO Hospitality and Tourism Complete might not capture all studies on the subjects.

these factors, the positivist approach could compromise managerial decision-making.

The existing discounting literature does not account for activities beyond neoclassical price theory. The concepts of economic rationality, costs and markets, and the key actors reflect price decisions; and institutions' key actors provide a cognitive framework for interpreting sense data and intellectual routines for transforming information into useful knowledge (Hodgson, 1998). However, analytical theories are not sufficient to reflect the real picture of business practices. For example, hotels expect to have nice weather over the weekend and hold rooms for last-minute reservations. If a cold storm unexpectedly arrives that weekend, room rates need to be adjusted, given the external factor, in the short run. With last-minute reservations not being made because of a cold storm, hotel managers adjust room rates to respond to the lower-than-expected actual demand. Lowering room rates to adjust to the unexpected event will impact the revenue stream of the hotel, potentially affecting the bottom line.

Thus, the lodging industry needs a better understanding of the discounting decision-making process beyond rationalism in order to discern commonly agreed-upon features that can be utilized by both academics and practitioners. In order to provide a broader picture drawn from the management perspective, the process of a price decision serves as a unit of analysis and reflects the assessment of information integrated within the institutional and sociological context.

Human Judgment in Pricing

Revenue management system claims that by integrating past information and present trends through a number of algorithms, prices efficiently incorporate all available information. This implicit assumption mangles the concept of human judgment, which is at the heart of management theory (Blattberg & Hoch, 1990; Child, 1972; Duhaime & Schwenk, 1985; Makridakis & Wheelwright, 1979). The notion of efficient markets has been strongly contested in financial economics, because prices are not

perfect and they reflect a high degree of human error (Phillips, 1999; Ghalia & Wang, 2000; Makridakis & Wheelwright, 1979). These errors are attributed to how managers interpret signals from imperfect markets and how managers bend their expectations based on their interpretation of given information.

In the lodging industry, high fluctuation of uncertainty over demand is a fundamental issue. The lodging demand fluctuates. Seasonality provokes a large number of people to travel during a certain period to a certain destination and affects many business and leisure activities (Jang, 2004). In addition, unexpected factors, such as hurricanes, no-shows, and last-minute cancellations, give rise to demand fluctuation. For example, there is some probability for customers to cancel or fail to arrive, and managers face the risk of loss of revenue from unsold rooms. The lodging business environment is unpredictable and uncertain (Phillips, 1999), limiting management's ability to make optimal pricing decisions. Managers are thus required to understand the market dynamics and consumer behavior thoroughly.

Market instability makes human interpretation prone to mistakes and these mistakes have consequences in terms of pricing. These consequences are interpreted through individual and social lenses, thereby rendering meaning, organizing experiences, and guiding actions. Thus, how management reads and interprets these signals and acts on them in relation to revenue management determines pricing practices. This process over time produces particular outcomes.

The pricing process does not happen in a vacuum but depends on contextual realities such as industry trends (Hodgson, 1998; Mattimoe, 2007; Mattimoe & Seal, 2011; Phillips, 2012; Phillips, Lawrence, & Hardy, 2004). These conditions shape possible courses of action with regard to the pricing of hotel rooms. Pricing decisions are made around institutional and social activities, and such decision-making behavior is considered as a particular type of social interaction and outcomes of economic interaction with a society

(Phillips, 2012). For example, institutional economics recognizes that human behavior and cognition shape a distinctive view of prices (Mattimoe, 2007; Mattimoe & Seal, 2011).

Human judgment, thus, plays a significant role in pricing decisions. Although past literature fails to capture rich interactions in managers' decisions with regard to revenue management, this proposed study goes beyond market equilibrium stemming from economic theories and includes other influences such as social surroundings, institution, and management.

Intuitive Human Judgment

Intuitive human judgment and rational judgment can be clearly distinguished in the literature. Human judgment resembles cognitive processes that are relatively rapid, experiential, and automatic, whereas rational judgment reflects processes that are slow, deliberate, and conscious, underlying dual-process accounts (Dane & Pratt, 2007; Evans, 2008; Kahneman, 2003; Stanovich & West, 2000).

First, human judgment through intuitive information processing makes relatively rapid decisions, although managers do not attempt to learn information deliberately in order to engage in analyses in an attentive manner (Kahneman, 2003; Stanovich & West, 2000). The decision process involves the collection of information relevant to the decision and the reliance on analysis of this information in making decisions (Dean & Sharfman, 1993). However, information processing often leaves managers facing too much information to be able to comprehend it all (Olsen, West, & Tse, 2008). After learning what information they can get and where to get it, managers face the more difficult challenge of what use to make of it (Graham, Dodd, Cottle, & Tatham, 1962). When decisions have to be made speedily and with cognitive economy in the face of an overwhelming mass of information or tight deadlines, managers might have no choice but to rely on intelligent intuitive judgments (Sadler-Smith & Shefy, 2004).

Second, human judgment relies on experience (Epstein, 1994). Intuitive management choices need to be self-evidently valid rather than require justification via logic and evidence. When solid information is not available, knowledge derived from experience can be often more compelling and more likely to influence behavior (Epstein, 1994). The experience levels of management can critically influence information search activities and, thus, decision making (Hambrick & Mason, 1984). The identification of a problem, the processing of relevant information, and the implementation of an appropriate pricing strategy are dependent on the skills, expertise, and knowledge of the manager responsible for this aspect of the function (Yeoman & Watson, 1997). Thus, intuition plays a critical role in expert decision-making because decision makers benefit when their implicit and intuitive knowledge adds advantages to making a decision, beyond what explicit and rational judgment can account for (Plessner & Czenna, 2008; Salas, Rosen, & DiazGranados, 2010).

Third, extensive experience applied to a specific field can produce automatic responses and a large and well-organized knowledge base, affording intuitive pattern recognition capacities (Dane & Pratt, 2007; Klein, 2003). Experienced managers use a collection of complex patterns in the field to perceive larger and more meaningful patterns in the environment more rapidly than those who are without such experience (Gobet & Simon, 1996; Neisser, 1976; Simon & Chase, 1973).

In sum, human beings are able to evaluate information that is difficult to measure and quantify and to capitalize on new information and changing conditions in a dynamic decision-making environment (Blattberg & Hoch, 1990; Meehl, 1954).

Focus on Process as the Unit of Analysis

The focus on an outcome or choice orientation as the unit of analysis is grounded in a positivist approach. The approach includes the use of systematic procedures and an assessment of all information involving costs and benefits; finally a decision is made, based

on this conscious deliberation. Price can be observed and is assumed to be the result of this analytical and systematic process based on clear decision-making rules, according to the rational perspective. For example, implicit in the revenue management theory is evidence of the rational approach as it computes the parameters of the programmatically delivered information about matching forecast to actual demand values.

The rational perspective assumes that the level of price is sensitive to only the current level of information. Price reflects each of the most relevant factors and is dependent only on the current state or level of the economy and is not dependent on its history. Croes and Semrad (2012) demonstrated that hotel prices have a strong affinity with their history, thereby suggesting the inconsistency of the rational perspective. Their study further claims that hotel prices work with a reference point, and determining prices from that reference point is strongly influenced by a bias that favors the status quo. The high prices that hotel managers set for their hotel rooms might reflect a reluctance to incur losses relative to the reference point (e.g., a tendency to rack prices). Therefore, the informational space required in understanding price setting includes not only the current price levels, but also the history and the construction of the reference price point.

One final argument against the outcome-oriented approach embedded in rational choice perspective is the faith in the almost unlimited ability to get the costs and benefits equation right. The notion that managers can conceive costs and benefits to the ultimate consequence and their decision is based on the net positive result of benefits is highly suspect. Discerning causal relationships for which nonevents are lacking biases the predictive validity of outcomes. Inferences based only on success cases cannot reliably provide quality leadership and business practices (Shugan, 2007). Research indicates that the practices of business leaders, on average, barely beat luck. Decisions are based on factors that usually stem from a coincidence of random events; this is why

decisions are little better than random guesses (Kahneman, 2011).

There is a growing body of management and decision literature arguing that the rational approach can be limited to some situations in which business environments are stable and expected. For example, environmental uncertainty seems to impact effectiveness of the rational approach (Khatri & Ng, 2000). Environmental uncertainty might generate multiple plausible solutions while confounding the success rules required to define a plausible solution. When situations imply less-structured problems, a rational approach seems less effective (Dane & Pratt, 2007). In such conditions, human judgment takes a more relevant role in decision making.

The lodging industry seems prone to the previous two conditions that would make a rational approach problematic: uncertainty and instability. Many pricing problems encountered in the lodging industry can be unstructured. For example, Craig (2009) illustrated how hotel pricing is influenced by social elements. When hotels see their competitors lowering rates, they perhaps feel pressured and drop rates in response, putting aside everything learned in pricing training.

Therefore, this study claims that a process-oriented focus calibrates the tasks and activities required to reach an end stage (e.g., a manager contemplating such tasks and activities would achieve better performance in operation). The repetitive application drives more consistency in management practice because the opportunity to repeatedly garner quick feedback from activities leads to the desired result. Focusing on process might identify the regularity in the hotel environment, and therefore, might elicit higher managerial performance. Consistency in managerial decision-making is important for enhancing predictive validity and accuracy of prices.

The purpose of this study is to explore the process of discount decision making in the lodging industry. Specifically, this study examines the role, if any, of human judgment in discount decision making related to the lodging industry.

METHODOLOGY

Initial Study

To understand the process of (a) identifying a problem, (b) learning relevant information attributes and their sources, and (c) selecting discounting decision making among alternatives, the study conducted interviews with hotel managers directly involved in pricing. The phenomena were explored through information attributes and time components. Information attributes consisted of what information participants gathered, where from, and how it was used in decision making; whereas, time components were identified as days in advance before a guest's arrival day. The premise was that managerial decision-making with regard to pricing is a part of the organizational rules and routines; at the same time, individual managers seek to make sense of their actions and the actions of others (Scapens, 2006).

The research questions to be addressed are as follows: (a) Who is involved in making pricing decisions? (b) What signals should managers heed in order to consider a change in price? (c) What are the key information attributes needed to make discounting decisions? (d) What is the role of human judgment in processing information and making discounting decisions?

Sampling and Data Collection. To locate hotel managers effectively, snowball sampling was used. The snowball technique is often conducted when studies involve experts; initial experts are selected and then additional experts are referred by the initial experts (Zikmund, 2003). Sampling started with a few managers through personal contact and enlarged through recommendations of earlier participants.

Interview questions were prepared to investigate the process of (a) identifying disequilibrium between actual demand and expectation, (b) selecting and interpreting relevant information, (c) identifying the source of information, and (d) making discount decisions based on information collected within the social and institutional context.

Each interview took place at the manager's hotel and lasted 45 minutes. The interview was

led by one trained researcher, and an assistant was present during each interview to help guarantee reliability and consistency across the interview. During the interviews, a detailed description of the hotel manager's price-setting process was obtained. The interviews were audiotaped and/or transcribed.

Data Analysis. Debriefings were conducted and field notes taken immediately following each interview. Using script theory, each discount decision encountered was examined by specific scenes in specific acts (Abelson, 1976; Solomon, Surprenant, Czepiel, & Gutman, 1985). Observation of the phenomena was documented in words and numbers to help develop consensus among the researcher and research assistant, as well as participants, with regard to how each participant makes decisions about price changes and their general applicability (Hays & Wood, 2011).

Follow-Up Study

In order to confirm the findings from the interviews, the study was expanded to include a survey of lodging industry managers and was designed to see what kinds of information managers rank highly when considering price adjustments in their operation. A sample of 117 participants was specifically asked to rank the most important of four conditions, identified in the interviews, which lead them to make price markdowns: lead time, current booking, competitors' room rates, and potential for cancellation. The key dimensions were derived from the interviews with experts thereby meeting the requirement of face validity. Using the snowball technique, surveys were collected from hotel managers who were directly involved in pricing decisions. Crosstab analysis was applied to examine the survey data.

RESULTS

Initial Study

Sample Profile. Seven hotel managers responsible for defining and implementing pricing strategies were interviewed, which met

the requirement of the sample size for consensual qualitative research (Hays & Wood, 2011). Table 2 summarizes the demographic profile of the participants. Six managers were male (86%) and five managers had a bachelor's degree (71%). All seven managers were positioned at the executive management level (e.g., owner, revenue manager, rooms' director, sales manager, general manager, and assistant general manager). Three managers were 25 to 34 years old, two were 35 to 44, and two were 55 to 64. The industry tenure of managers varied from 8 months to 38 years.

Participants' institutions varied in size: The number of rooms ranged from 63 to 774 rooms, and the number of employees ranged from 13 to 600. In terms of ownership structure, three hotels belonged to a management company, two hotels were affiliated with a brand (one hotel was affiliated with a chain, but independently owned), and one hotel was independently owned with its own brand. All managers identified their institutions as either midscale or luxury hotels.

Discount Decision Making Model. Researchers proposed a Discount Decision Making Model based on interview results. This framework reveals a process ranging from strategic decision-making to operational decision-making. The model reflects the interdependencies among the stages leading to a choice of discounting. The way human judgment would play through on the horizontal form as time nears the arrival date is described through five stages: forecasting, monitoring, identifying the problem, assessing the information, and making an adjustment. During each stage, the hotel's performance would display distinctive characteristics, and managers would make appropriate operational decisions after assessing different types of information.

In most hotels, multiple actors were involved in the pricing process. Managers in numerous departments appeared to participate in making discounting decisions. Departments such as sales and marketing, revenue management, rooms division, and front desk/guest services were included in the discussion. Given the multiple

actors involved, weekly meetings seemed to be the preferred discussion mode for ensuring that the maximum benefit was obtained.

Proposition 1: Multiple actors are involved in making pricing decisions, representing General Manager/Assistant General Manager, Sales/Marketing, Revenue Management, and Rooms Division and each actor pursues his/her own interests in making pricing decisions.

As depicted in Figure 1, the identified actors, activities, and resources are interrelated in a general system framework.

Stage 1: Forecasting. The objective of forecasting was straightforward among the managers: revenue maximization. Categorized as the strategic decision-making stage (Jones, 1999), long-term decisions were made at the forecasting stage. In the long run, most managers shared similar goals to ensure that the maximum benefit was obtained from market segmentation and rate strategies. The importance of accuracy of forecasting was recognized as managers attempted to get enough rooms on the books before the primary booking window in order to avoid short-term discounting, rate discounting, and opaque usage. In addition, two managers pointed out issues related to costs. Managers were aware that the bottom-line rates should cover break-even points to ensure that they at least meet or exceed their overhead costs per room.

In the forecasting stage, it was observed how managers set their initial rates. According to the interviews, forecasting took place six months to a year in advance for the upcoming year, indicating booking-window ranges from a year prior until the arrival date. Initial pricing was set with a variety of considerations—mainly, market trends and past performance. Although managers had access to different types of information, most managers considered their past performance indicators, such as occupancy rate, average daily room rate (ADR), and pick-up speed of previous years, to be the most useful. It was critical to evaluate the same time period for the current year and previous year. Historical performance

TABLE 2. Sample Profile of Interviewees

Characteristics	Manager A	Manager B	Manager C	Manager D	Manager E	Manager F	Manager G
Firm ownership	Independently owned/ affiliated with a chain	Independently owned	Management company	Management company	Management company	Brand franchisee	Others
Service type	Business/leisure	Resort	Business	Business/leisure	business/leisure	leisure	business/leisure
Firm segmentation	mid price	mid-price/luxury	mid-scale	luxury	luxury	mid-price	luxury/mid-scale
Size of hotel	63	774	288	445	445	70	
Number of employees	13	600	111	350	350	15	
People involved in the Discounting Pieces	GM/Owner	Director of guest services; Director of Sales and Marketing; Revenue Manager; Managing Director	Revenue manager; Sales director; Rooms director; General manager; AGM	Revenue manager; Sales director; Rooms director	GM; Director of revenue management; Director, of sales	GM; AGM; Sales manager	Revenue Manager; General Manager; Director of Sales; Front Desk Manager
Gender	Male	Male	Male	Female	Male	Male	Male
Education	Associate degree	Bachelor's degree	Master's degree	Bachelor's	Bachelor's	Bachelor's degree	Bachelor's degree
Age	25-34	55-64	35-44	55-64	35-44	25-34	25-34
Title	GM/Owner	Managing director	AGM	GM	Director of revenue management	GM	Revenue manager
Industry tenure	8 months	38 yrs	14 yrs	36 yrs	18 yrs	6 yrs	10 yrs
Company tenure	8 months	4 yrs	14 yrs	20 yrs	9 yrs	6 yrs	2 yrs

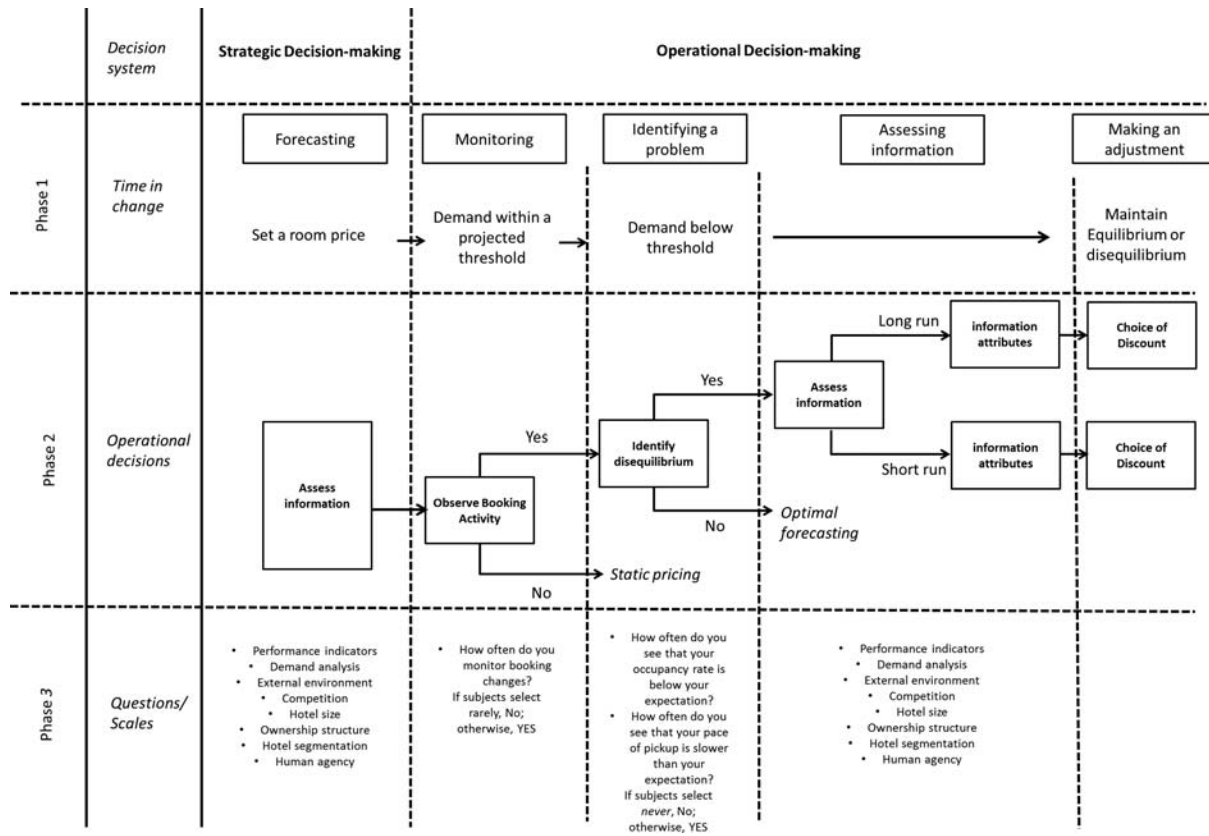


FIGURE 1. Discount decision making.

helped managers ensure that their price strategies met their hotels' standards and created a baseline for opening-up strategies and length-of-stay patterns to drive business. Past performance was captured through internal reports tracking the pace and positioning relative to the previous year. Internal sources included the front desk, corporate office, franchise office, sales forecasting report, and audit package.

In conjunction with internal analyses, many managers subscribed to external reports from Smith Travel Research (STR), TravelClick,

Marketvision, and Rubicon to evaluate their competitors' past performances and their market share in the competitive set. Considered as great resources, these reports provided managers with information about what was happening in different global distribution systems. From the reports, managers could see uptrend or downtrend in the market. For example, TravelClick's Demand360 is a competitive market intelligence resource available to the lodging industry that provides future visibility into the market and share performance across all distribution channels and segments. External reports helped managers look forward to determine what would happen in the business environment and how their hotels' performances would actualize at the end of the day.

In addition, managers secured information from third-party intermediaries and social media to further optimize the mix of businesses across a set of days and scan the environment

TABLE 3. Ranking of Information Elements That Influence Discount Decisions

	Rank 1	Rank 2	Rank 3	Rank 4
Lead time	44%	23%	18%	15%
Occupancy rate	8%	32%	35%	25%
Competitor Rate	26%	24%	31%	19%
Potential cancelation	22%	21%	16%	41%

TABLE 4. Ranking of Information Elements by Departments

		General/Assistant General Managers	Revenue Managers	Sales/Marketing Managers	Rooms Division Managers	Pearson Chi-Square
Lead Time	Rank 1	50%	24%	58%	52%	.104
	Rank 2	21%	32%	8%	28%	
	Rank 3	11%	29%	19%	8%	
	Rank 4	18%	16%	15%	12%	
Occupancy Rate	Rank 1	4%	18%	4%	8%	.067*
	Rank 2	36%	57%	25%	20%	
	Rank 3	50%	39%	32%	28%	
	Rank 4	11%	21%	32%	44%	
Competitor Rate	Rank 1	29%	54%	11%	20%	.022**
	Rank 2	25%	18%	39%	20%	
	Rank 3	32%	29%	21%	52%	
	Rank 4	14%	36%	21%	8%	
Potential cancelation	Rank 1	18%	32%	25%	20%	.386
	Rank 2	18%	18%	21%	32%	
	Rank 3	7%	29%	21%	12%	
	Rank 4	57%	57%	25%	36%	

Note. * $p < .10$; ** $p < .05$.

that could influence their performance. As part of the demand analysis, tools such as the Convention and Visitors Bureau calendar were combined with knowledge of demand events, and holiday shifts were also considered important to look for before opening price strategies.

Proposition 2: Managers set initial rates six months to a year ahead and forecasting is based mainly on market trends and past performance in an attempt to maximize revenue.

Stage 2: Monitoring Booking Activities. In terms of operational procedures, all managers agreed that they monitor pick-up patterns, lead times, and business trends on a regular basis. Booking changes were looked at roughly once each quarter in terms of a booking window and changes to the mix of distribution channels (e.g., online, hotel direct, and global distribution system). Managers were more inclined to give closer looks at booking changes 60 days before an arrival date on the booking window. When managers monitored booking activities, they typically looked at the pace and position of the booking. As the arrival date neared, the frequency of monitoring booking activities

increased to two to three times per week. During busy periods, managers would look at booking changes every two to three hours a day.

Manager B described his experience during the Easter holiday:

We have Easter coming this month. Our strategy is that we are not going to discount our rates, and we will be the last ones to be filled up [in the market]. Knowing we are going to have demand for Easter, we don't worry about [a low occupancy rate now]. Currently, we still have 110 rooms to be sold for that night, but I am not worried about it. It will come. We will be slowly filling up. That means we will charge higher rates for those rooms that I could have filled up two months ago, but we want higher rates so we have to be patient. By next week, I will give a really close look at booking activity every two to three hours a day to make sure [my strategies are working].

Proposition 3: Managers regularly monitor booking activities and tend to give more frequent looks at booking changes as an arrival date nears.

Stage 3: Identifying the Problem. Managers focused on getting enough rooms on the books before an arrival date to avoid short-term discounting, but discounting

was still a reality for the managers. Managers checked the pace and position of booking compared to the previous year. Programs, such as EasyPMS, show managers that one week's pickup should reach a certain level of room inventory. If pickup speed is not happening as expected, disequilibrium between actual booking and forecasting occurs.

Disequilibrium arises from changes to government policy and the opening of new inventory or the renovation of existing inventory. For example, the government sequestration and budget cuts affected per diem-based areas, where hotels provide the bulk of negotiated business tied to government contracts and per diem rates. One of the managers shared his recent challenge: his hotel was facing new inventory in the immediate market. His competitor was putting new inventory on the market and was aggressively undercutting rates for negotiated clients as a strategy of quick market penetration.

Managers constantly face discrepancies between actual reservations and forecasting, and management's appropriate operational actions to control the discrepancy between actual booking and forecasting seem essential.

Proposition 4: Managers often face discrepancies between actual reservations and forecasting, and these discrepancies arise from changes to government policy and the opening of new inventory or the renovation of existing inventory.

Stage 4: Assessing Information. When managers encountered disequilibrium, they sought various information and activities facilitated from different sources. In assessing information, the previous year's performance served as a reference point. Pricing depended on their revenue position compared to the previous year and the feasibility of the sellout or group cancellation. For example, a hotel sold fewer rooms than expected. The manager would go back to the previous year's performance and check whether the hotel was able to sell all available rooms on that

particular day of the previous year at the last minute.

At this stage, because the hotel's performance was influenced by its competitors, managers showed great concern about learning how their competitors were doing in terms of performance and rate strategies. Most managers agreed that they would quickly adjust their rate strategies if primary competitors made rate adjustments. Managers kept an eye on occupancy rates and ADRs of their competitors; as Manager F reflected: "*How is the market driving the price?*" After managers learn about rates of competitors, they tend to adjust their rates immediately.

To obtain information on competitors in a timely manner, managers assessed competitors' websites, third-party intermediaries (e.g., Expedia), and social media to find out competitors' performances, business trends, and customers' buying habits. Moreover, managers stressed the important rule of word-of-mouth among hoteliers. Through personal networking, professional and regional associations and meetings, most managers know each other and some are close friends. In facing a discrepancy, managers feel comfortable calling around to other hotels to learn about their performances.

Proposition 5: Faced with disequilibrium, managers seek various information details before making pricing decisions; information elements consist of previous year's performance, competitor's actions, and feasibility of sell-out or group cancellation on a finite-horizon booking window.

Stage 5: Making an Adjustment. Managers considered a price adjustment (a) if the pace and position of booking made a significant change, either positive or negative, relative to forecasting and (b) if primary competitors made rate adjustments and show significant gains in the competitive market. In situations when managers are forced to deal with an uncertain and time-pressured environment, their response to low occupancy rates is simply to adapt and change.

There were three ways management could respond to the problem (negative disequilibrium) in operation. First, if the pace of booking is moving really slowly, managers could make operational adjustments on rate strategies by controlling room rates. For example, managers would want to speed it up a little bit by lowering the price. In offering discounted rates, managers could either match their rates with their competitors' or use their gut feeling to offer "low enough" rates to drive more business to their hotels. Discounted rates attract immediate short-term demand in the market and solve the issue of slow-paced booking.

By offering discounted rates, managers can observe positive changes on the pace of booking. Whether managers are satisfied with degrees of booking changes depends on managerial preferences. For example, some managers prefer to offer deep discounts hoping to see quick positive changes on booking, whereas others take dollars off from rack rates deliberately.

Second, managers could loosen the restriction of minimum lengths of stay (LOS). Managers could keep the same rate but now accept any reservations regardless of LOS. In many operations, hotel managers apply LOS restrictions so that they could receive selective reservations, preferably a longer stay than a shorter stay. When the pace of booking is not up to their expectations, managers could remove LOS restrictions and welcome any reservations.

Third, managers could decide to release rooms to opaque usage (e.g., third-party distribution channels). When dealing with a low occupancy rate, managers could allocate more inventories to third-party online distribution channels. For example, Manager B shared his recent experience with a last-minute cancellation from a group. He had 100 empty rooms left unexpectedly, so he released them to a third-party distribution channel. Within a few hours, his 100 rooms were booked.

Proposition 6: Faced with negative disequilibrium, management makes a decision to either offer discounted rates,

loosen the restriction of minimum lengths of stay if any, release rooms to opaque usage, or a combination of these three methods—but the most commonly agreed quick fix is to offer discounts.

Follow-Up Study

A follow-up study was conducted to confirm the findings from the interviews. The follow-up study addressed Stage 4 of the framework revealed in Figure 1. Stage 4 was of particular interest to the study because the main objective of the study was to identify the factors that are critical to lodging managers in the discount-making process. Consequently, a survey of lodging industry managers was designed to see what kinds of information managers rank highly when considering price adjustments in their operation.

Hypotheses Development. Several departments in a hotel establishment are involved in pricing decisions, and managers make discount decisions using their own judgment. Although there are several plausible factors that might influence this judgment, such as weather, group cancellations, no-shows, and flight delays/cancellations, structured interviews with hotel managers reveal that managers pursue their own interests aligned with their department's benefits. For example, managers from the marketing department are careful in offering discounted rates because discounts might dilute the image of brand. Similarly, general managers seem to be more aggressive in discounting because they are more interested in cash flow in the operation. Thus, it is hypothesized that managers from different departments rank information elements differently.

Descriptive Results. A total of 117 surveys were collected. 54 percent of participants were male. An average age of participants was 36 years old and a majority of them had a bachelor's degree (62%). The sample consisted of Revenue Managers (32%), General or Assistant General Managers (24%), Sales/Marketing Managers (22%), and Rooms Managers (21%).

Results showed that 44% of participants ranked “lead time” as being the most important piece of information in discounting. Managers work on a finite horizon until an arrival date nears. The extent of how much time managers have before they take any actions to fix disequilibrium determines whether managers choose to discount at the current time. In addition, hotel managers ranked “occupancy rate compared to past performance” as important; 67% of them ranked it second or third place in terms of importance. With regard to “competitors’ room rate,” the importance of information is dispersed; 26% rank it as the first place, 24% as the second place, and 31% as the third rank. Finally, potential cancellation received relatively little attention from managers in making discount decisions because 41% of participants ranked “potential for group cancellation” the least important information among four information attributes.

Hypotheses Testing. Managers ranked information elements differently with regard to occupancy rate compared to the past year ($\chi^2 = .067, p < .10$) and competitors’ room rate ($\chi^2 = .022, p < .05$). Seventy-five percent of Revenue Managers ranked “occupancy rate compared to previous year” as the first and important, whereas 61% of General/Assistant General Managers ranked it as the third and fourth important. In terms of competitors’ room rates, 54% of Revenue Managers ranked it as the most important information element but 52% of Rooms Managers ranked it as the third place. Managers from different departments place different importance on information elements that influence making decisions. As a result, the hypothesis is patricianly supported.

DISCUSSION AND CONCLUSIONS

The major goal of the current study was to narrate events, stages, and cycles of decisions in choices made by hotel managers in order to determine the role of human judgment based on contextual factors in the decision making process. A choice, such as to discount or not to discount, is the product of human agency and social forces over time as human agency and its perception of

reality within a specific context infuse meaning into business practices. It is interesting to observe that the role of algorithms (i.e., revenue management) during the pricing process is only to register actions and to derive “learned” responses to these actions. But the interpretation of these actions is strictly a human (manager) activity pervaded with risks of human error. These human errors might lead to instances when hotels are left with empty rooms or are overly discounting. Thus, only managers have the ability to make the choice. The application of the constructionist approach indicated which aspects of the context matter in the construction of a specific choice by retrieving subjective accounts of those involved in the process of generating and sustaining patterns, procedures, and routines.

This study narrates five stages of discounting process as time nears the arrival date: forecasting, monitoring, identifying the problem, assessing the information, and making an adjustment. During each stage, human judgment is used that leads to obtaining certain information, making decisions, and, in turn, resulting in better or worse performance. A hotel’s performance reflects the distinctive characteristics of hotel managers who make appropriate operational decisions after assessing different types of information.

Their own interests reflected that managers appear to make discount decisions using their own primary information elements. Managers place the most importance on “lead time” in making discount decisions. When managers face performance inferior to what was expected, they make a decision whether to offer discounted rates, loosen the restriction of minimum lengths of stay, if any, or release rooms to opaque usage. The most commonly used method is to offer discounted room rates. Before managers make any corrective actions to fix disequilibrium, the extent of how much time managers have before an arrival date determines whether managers choose to discount at the current time. In addition, managers from different departments rank some information elements differently. Although a majority of revenue managers see the current performance indicator compared to the past year important, general/assistant general managers do not seem to agree.

The findings of the study also identified the habitual management practices and enhanced the understanding of how management's knowledge is constructed and how this knowledge is applied to justify actions and choices. Human activity confronting market instability in its quest for getting the price right becomes routinized over time, making sense of the complexity of market prices in the lodging industry. The process of pricing correctly reveals complexity imbued with status quo and overconfidence bias. These biases are displayed in the use of reference price and the 80–20 rule, the latter suggesting that the manager expects to be right 80% of the time. Working with a reference price not only reveals a strong bias toward the status quo, but also might be an indication of loss aversion. Loss aversion suggests that the assumption of the rational choice, that choice depends only on that state and is not influenced by the manager's history, might be misplaced. Prospect theory could provide a more insightful explanation of this practice than rational choice theory.

This practice does not only integrate a configuration of an established set of routines for carrying out the pricing task, but could also reflect human improvisation and strategies to cope with the unexpected. Managers seem to search for stability in a volatile environment and, thus, constantly attempt to transform the unpredictable elements in the market into routinized protocols for action. Coping strategies to deal with the uncertain environment reveal several rules such as

- Less-than-35 rule: If more than 35 customers refused the rate, it would be a red flag, at which point adjusting the rates would be considered.
- The 80–20 rule: this rule implies only a 20% chance that the hotel room price would be wrong and, therefore, would be considered a surprise. This is an indication of the overconfidence of the manager's ability to have the price right.
- Trial and error: Trial-errors by raising and dropping room prices to see how demand accordingly responds to the price.

- Follow suit: "If my competition all of a sudden drops their rates dramatically, I really don't have to think too hard [but follow suit]. Most nonresort hotels have to squabble over a \$5–\$10 difference in rate."
- Habitual decision: regardless of what causes a lack in reservations, managers follow a certain practice (e.g., discounts, minimize LOS, or release to third-party channels) that involves recognition of patterns over time, and they stick to the practice when dealing with lack of reservations.

This intuitive decision-making model based on pattern recognition reveals a process that is generated by a single option; the option is based on experience garnered over time. When a situation occurs for which a pricing decision must be made, the manager has a familiar option in mind. The market situation is forced by the manager to fit this option (belief system), and if the option is deemed appropriate, a corresponding plan is put into action; in the case when the option does not work out, another plausible option is considered and so forth until the manager finds an acceptable solution for the pricing challenge. This process is in line with the theory constructed by Klein (1999), called the *recognition-primed decision* (RPD) model. The RPD model considers intuition as a recognition of patterns based on past experience. In the hotel industry, conventions such as the 80%–20% rule, following suit, and trial and error are manifestations of using a coping strategy to hamstring complexity in the lodging industry.

The intuitive decision-making model revealed in this study seems to rely on the frequency of practice. For example, senior managers seem more skillful in determining the right price than the junior managers do. Therefore, opportunity to practice this intuitive process seems crucial to driving a closer match between supply and demand for hotel rooms. However, the role of the quality and speed of the feedback of the single option first considered in the decision-making process is less clear. Some feedback could be too ambiguous to provoke learning and acquired expertise and, therefore, might impact the

application of intuition on price decision making. In other words, if feedback is not quick and clear, then it begs the question of whether the lessons learned from experience are correct. More specifically, do the rules implemented to cope with the uncertain environment faced by hotel managers guarantee consistency in price decision making, or is the quality of choices made based more on luck?

Future research should investigate the role of the regularity of patterns in the lodging industry and a manager's learning history as drivers of price efficiency in the lodging industry. Managers appear to form habitual patterns of assessing information and make the same choice within an institutional context. Management's intuition might be biased as a pricing tool, however, because decision makers could be prone to errors and bias (Kahneman, 2003). For example, high-quality decisions might be the result of a trade-off between accurate decisions and speedy decisions. Experienced managers may synthesize forecasting quickly to make a judgment call, but their decisions might not be accurate. Therefore, detecting the relationship between accuracy and speed of decisions is recommended as a future study.

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