

**The Effect of a Customer Reward Program on Inducing Desirable  
Customer Behaviors: The Moderating Role of Purchase Purpose, Reward  
Type and Timing of Reward Redemption**

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# **The Effect of a Customer Reward Program on Inducing Desirable Customer Behaviors: The Moderating Role of Purchase Purpose, Reward Type and Timing of Reward Redemption**

## **ABSTRACT**

Efforts to address challenges in balancing supply and demand for capacity-constrained service firms have been centered on managing demand, service process or service employees. Despite the active role customers play in the service delivery process, no attempt has yet been made to manage customer roles towards that end. However, concerns have been expressed over the potential negative customer satisfaction effect of steering customer behaviors for the firm's benefit. Therefore, it is important to develop ways to induce firm-friendly customer behaviors without negatively affecting customer satisfaction. In this study, we intend to find such an approach and empirically test its effectiveness.

We identified providing a customer reward program as such an approach and examined its effectiveness in a restaurant setting. First of all, we tested the impact of customer understanding of the firm's entitlement to profit on their voluntary efforts to behave in a firm friendly manner. We then examined the impact of customer justice evaluation of the reward program on their willingness to participate in program which is presented as an option. Further, we investigated the moderating role of reward characteristics and purchase purposes on the reward program's effectiveness.

Findings of this study contribute to the extension of research in the service capacity management area, and offer service managers a means to better match supply and demand.

*Key words:* service capacity management, customer reward, customer citizenship behavior, customer co-production behavior

## **1. Introduction**

Service firms tend to have relatively fixed capacity but highly time-varying demand. Thus profitability depends largely on their ability to match supply and demand (Crandall and Markland, 1996). The airline industry serves as a good example. An airline's capacity is fixed by the number of planes and the number of seats in the planes, but its demand varies significantly by time of day, day of week or week of year. An airline's profitability is determined by how well it selects the most profitable mix of demand during high-demand periods and how well it stimulates demand during low-demand periods. Other examples include hotels, restaurants, and golf courses, to name a few. Due to limited control over managing capacity, these firms' efforts have concentrated on managing demand, such as moving demand from busy periods to slow periods and stimulating demand for slow periods.

Some service firms, however, have more flexibility in capacity than others. Restaurants serve as a good example. A restaurant's capacity is defined as the number of customers that can be accommodated during a given meal period and is determined not only by the number of seats in the restaurant but also how long seats are occupied by customers. For a 100-seat restaurant, for instance, when the average customer dining duration is one hour, the restaurant's hourly capacity is 100 customers. When the average dining duration decreases to 30 minutes, however, the hourly capacity increases to 200 customers. Hence, more restaurants are turning their attention to managing dining duration during capacity-constrained periods (Kimes, 1999). Similar interests have emerged in other service industries such as golf-courses and theme parks, where longer consumption duration decreases service capacity but does not necessarily generate more revenue.

Efforts to reduce consumption duration have so far been concentrated in areas under management control, such as service process management and resource management (Kimes and Robson 2004; Sill 1991). No attempt has yet been made to manage customers, who play important roles in the service delivery process. The current study is intended to serve as the first attempt to identify and test a management approach of motivating customers to voluntarily reduce consumption duration while benefiting both service firms and customers.

Previous studies show that customers are more likely to perform their expected role in the service process when they are rewarded for such performance (Lee, et al., 2004; Lovelock and Wright, 2002). Company feedback to customers in a reward format makes customers feel cared by the company and thus motivates them to behave in a manner beneficial to the company (Dowling and Uncles, 1997). Therefore, we propose a reward as a means to induce customers to voluntarily reduce consumption time and empirically examine its effectiveness.

The remainder of this paper is organized as follows. We first present the conceptual background of the current study, which is followed by the proposal of hypotheses. Research methodology and results will then be explained. The paper will be wrapped with discussions of the theoretical and practical implications of the findings.

## **2. Conceptual Background and Hypotheses Development**

### ***2.1. Service Capacity Management***

It was since the late 1970's that a stream of academic research and managerial efforts to help service firms maximize revenue by better balancing supply and demand has been pursued (e.g., Cross, 1997). The term "revenue management" has been coined to refer to this stream of efforts and is defined as selling the right inventory to the right customer at the right price at the right time so as to maximize revenue (Smith et al., 1992). Revenue management approaches are applicable to industries with distinct business characteristics such as relatively fixed capacity, time-perishable inventory, time-variable demand, and high fixed cost (Kimes, 1989). Further, to reap full benefits from revenue management approaches, firms should be able to segment customers, sell through advance reservations, prevent arbitrage of intermediaries, and accurately forecast demand (Vinod, 2004).

Revenue management strategies are classified largely into busy and slow period strategies. Busy period strategies concentrate on selecting the most profitable mix of demand, while slow period strategies center on stimulating demand for capacity that would otherwise go unsold. Specific revenue management approaches include differential pricing, inventory optimization, and overbooking (Vinod, 2004).

The focus of these approaches has lied on managing demand. Capacity management efforts have been limited to improving service processes, better training service employees (Sill, 1991), and adopting communication technologies and advanced process analysis tools (Kimes et al., 1998 and 1999) for the goal of minimizing service time and eliminating unnecessary delays. The impact of physical environment on customer consumption behaviors was also examined. For example, an empirical study using a Mexican restaurant setting found that customers seated in a banquette-type seating took longer to dine than those seated in other types of seating (Kimes and Robson, 2004).

In the meantime, concerns over these service duration reduction approaches have been expressed. The negative effect of reduced dining duration on customer satisfaction has been empirically demonstrated (Noone et al., 2007), alerting management to consider the long-run customer impact of these approaches. Therefore it is important to develop a method to reduce service duration while minimizing negative customer effects. The current study is intended to identify and test an approach that can motivate customers to voluntarily reduce service duration with the undesirable customer effect minimized.

## ***2.2. Customer Impact on Service Capacity***

For service firms, customer roles influence organizational productivity and performance (Hsieh et al., 2004). Service customers are sometimes described as productive resources and contributors to quality, satisfaction and value (Bitner et al., 1997). Considering the active roles customers play in the service delivery process, particularly in determining the length of service duration, inducing customer behaviors that could lead to reduced service duration can help service firms increase capacity. As long as the inducing efforts involve customer's voluntary cooperation, the negative customer satisfaction effect might be negligible (Namasivayam and Hinkin, 2003).

Service customers are at times considered as partial employees (Bower et al., 1990; Keh and Teo, 2001). This makes the theoretical framework applicable to employees also relevant to service customers. Just as behaviors expected from employees can be categorized into in-role behaviors (or task performance) and extra-role behaviors (or organizational citizen behaviors) (MacKenzie et al., 1991; Motowidlo and Van Scotter, 1994; Williams and

Anderson, 1991), behaviors expected from customers could also be classified similarly (Groth, 2005). In-role behaviors are required behaviors while extra-role behaviors are not required but appreciated when exhibited.

Customer citizenship behaviors are defined as individual customers' voluntary and discretionary behaviors that help the firm better perform (Bettencourt, 1997) and include acts of cooperation, helpfulness, and kindness (Lengnick-Hall et al., 2000). Customers with such citizenship engage in positive word-of-mouth, buy additional services, make recommendations to others, and show higher price tolerance (Bettencourt, 1997; Anderson, Fornell, and Mazvancheryl 2004). The particular customer citizenship behavior of interest for the current study is customer cooperation during the service process.

The importance of customer cooperation during the service encounter has been demonstrated as a key contributor to the customer's own and other customers' satisfaction and quality perceptions (Kelley et al., 1990 and 1992; Martin and Pranter, 1989). Of various customer roles, customer cooperation studies emphasize the partial employee role of customers (Kelley et al., 1992). Cooperative customer behaviors are exhibited when customers attempt to understand the service delivery process, be polite and respectful, observe rules and policies, and accept directions from the service provider (Bateson, 1985).

Cooperative customer behaviors are driven by the customer's internal motivation (Mills and Morris, 1986). According to the dual entitlement principles (Kahneman et al., 1986 a, b), customer perceptions of and reactions to the firm initiatives differ considerably depending on their understanding of the reasons behind the initiatives (Bazerman, 1985). For example, unjustified price increase is perceived as unfair while price increase due to increase in cost is perceived as fair (Urbany et al., 2004). Accordingly, customer understanding of the business impact of reduced service duration is likely to affect the customer's cooperative behaviors. Kahneman et al., (1986 a, b) argue that firms are entitled profit while customers are entitled value. The more customers understand that firms are entitled profit and that service duration has significant impact on the firm's profitability, the more they are likely to adopt cooperative behaviors. Therefore, we propose the following:

H1. The more customers understand the firm's entitlement to profit and the impact of service duration on the firm's profitability, the more customers are likely to show cooperative behaviors.

### ***2.3. Customer Rewards***

Although customer citizenship behaviors refer to customer behaviors that are voluntarily displayed without being directed or explicitly rewarded (Groth 2001), it has been shown that rewards can stimulate customer adoption of citizenship behaviors (Puffer, 1987). Offering rewards enhances customer justice perception and as a result stimulates customer adoption of the rewarded behaviors (Moorman, 1991). Service customers are more likely to perform their roles when they are rewarded for such behaviors (Yi et al., 2004). It is because customers feel cared when they are rewarded for their cooperative behaviors (Dowling and Uncles, 1997; Lovelock and Wright, 2002).

Other explanations can be drawn from studies on employee rewards. Rewards influence employee performance (Lee et al., 2006). When provided with clear and specific reward programs such as promotions and bonuses, service employees are more likely to demonstrate service-oriented behaviors (Hartline and Ferrell, 1996). Since employees are selfish beings pursuing self satisfaction, their behavior for the firm's interest has to be motivated through proper benefits that enhance their satisfaction (Banard, 1973). In general, individuals try to return the benefits they receive from others (Hormans, 1958). Thus, we put forth the following:

H2. Customers are more likely to display expected behaviors when they are offered a reward program than when they are not.

### ***2.4. Customer Choices***

When a reward program is presented as an option, the degree to which customers will exhibit the expected behavior can depend on their choice of the option. According to the social exchange theory (Barnard, 1973; Blau, 1964) and the exchange relation theory

(Lawler and Yoon, 1996), customers who choose to take advantage of the reward program are more likely to exhibit the rewarded behaviors. Hence, we propose the following:

H3. When a reward program is presented as a choice, customers who choose to take advantage of the program are more likely to show the expected behavior.

### ***2.5. Justice Evaluation of the Reward Program***

Customer evaluation of the justice of a reward program affects the effectiveness of the program (Chatman, 1991; Greenberg, 1987). Justice perception of a reward program is defined as the customer satisfaction with what they received relative to what they expected to receive in return for the efforts and sacrifices they made in an exchange relationship (Homans, 1961). When a reward program is perceived as unfair, customers lose the motivation to give what the reward program is expecting (Meglino and Ravlin, 1998) and further lose interest in establishing an exchange relationship with the reward provider (Ganesan, 1994). Conversely, when perceived as fair, a reward program can stimulate customer's desire to establish an exchange relationship with the reward provider and can induce positive customer attitudes towards the relationship (Moorman, 1991). Such stimulated desire and enhanced attitudes can contribute to the success of a reward program (Moorman, 1991). These arguments lead us to the following prediction:

H4. Customer justice evaluations of a reward program affect the customer willingness to adopt the reward program.

### ***2.6. Reward Attributes and Customer Characteristics***

The effectiveness of a reward program can also depend on the attributes of the program. The study by Keh and Lee (2006) examined the impact of two characteristics of a reward program (timing of reward redemption - immediate vs. delayed, and reward type - direct vs. indirect) on customer responses. Results showed that rewards that received more favorable responses were rewards directly related to the products and services sold such as price discounts (compared to discount coupons for other products or services) and rewards that

can be redeemed immediately (compared to later in time). Kivetz and Simonson (2002) found similar results. Dowling and Uncles (1997) offered the easiness of redemption as the reason for the favorable outcome for the immediate redemption. Rothschild and Gaidis (1981) suggested, however, that in order to maintain the intended customer motivation over a long period of time, a delayed redemption could be more effective.

The effectiveness of a reward program can also depend on the characteristics of customers to whom the program is presented. Noting the often missing providers' understanding of customer needs and expectations in the design and implementation of a reward program, some scholars emphasized the importance of evaluating the effectiveness of a reward program from customer perspectives (O'Brien and Jones, 1995; Sharp and Sharp, 1997).

Customer needs and preferences tend to vary by their purchase purpose, which can be categorized largely into two types: utilitarian and hedonic (Babin et al., 1994). Customers with a utilitarian purpose are usually concerned with efficiency and timeliness of the purchase while customers with a hedonic purpose are concerned with the potential entertainment and enjoyment aspects of the purchase (Hirschman and Holbrook, 1982). Taken together, we propose the following two hypotheses:

H5. The effectiveness of a reward program depends on the attributes of the program.

H6. The effectiveness of a reward program depends on the customer's purchase purpose.

Our proposed research framework can be summarized as Figure 1.

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Insert Figure 1 about here  
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### **3. Research Methods**

#### ***3.1. Research Context***

A survey with a scenario-based experimental design was used to test the hypotheses. A restaurant context was chosen for the scenario for three reasons. First, the restaurant

industry has actively engaged in balancing supply and demand by applying revenue management (Kimes et al., 1999). Second, during high demand periods, service capacity of a restaurant is considerably dependent upon customer dining behaviors. Third, the needs and preferences for service tend to vary widely by customer segments (Khan, 1991).

### ***3.2. Experimental Design and Manipulation***

Scenarios were created using 2(dining purpose: utilitarian vs. hedonic) x 2(timing of reward redemption: immediate vs. delayed) x 2(reward type: direct vs. indirect) experimental conditions. Scenario methods have been well demonstrated as appropriate for studies of our purpose (Bitner, 1990). The experimental design for this study is summarized in Table 1.

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Insert Table 1 about here

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Since testing hypothesis 1 does not require information on the reward program in the scenario, each scenario was split into two parts. Questions pertaining to hypothesis 1 were asked after the first part of the scenario was presented, and all the remaining questions were asked after the second part of the scenario was presented as well (See Exhibit 1 for a sample scenario).

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Insert Exhibit 1 about here

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In the first part of the scenario, participants were asked to imagine visiting a family restaurant during a peak lunch hour during which it is impossible to be seated without waiting. In order to create a consistent image of a family restaurant among participants, the restaurant was described as leading the family dine-out trend in the industry, rapidly growing, and offering a full range of western style menus with the price of the main course ranging between \$15 and \$30. In order to help participants understand the restaurant's interest in shortening dining duration during the busy hours, it was mentioned in the scenario that the restaurant management appreciates customers finishing their meals quickly or not lingering in the table too long after finishing their meals.

To manipulate the purchase purpose, participants were asked to imagine going to the restaurant for a quick and simple meal for lunch with random fellow workers who also happen to go for lunch (utilitarian purpose) or to meet with a few close friends over lunch (hedonic purpose).

In the second part of the scenario, participants were told that the restaurant offered a reward program in order to motivate customers to reduce dining duration. Stated in the scenario was “Our restaurant will offer you a reward if you finish your meal within 30 minutes after all of your orders are delivered.” The reward type was manipulated as either a discount of the total bill by 20% or a gift certificate for various other products and services equivalent to 20% of the total bill. The discount percentage was determined appropriate based on interviews with a few restaurant managers who have tried a similar promotion before. The timing of reward redemption was manipulated as an immediate offering of the discount or the gift certificate at the time of payment, or as an issuance of a coupon which entitles the holder with the discount or the gift certificate during the next visit to the restaurant.

We conducted a pre-test of our survey instrument among 40 (5 per scenario) graduate students enrolled in a business school at a major university in Seoul, Korea, and found no major issues with the instrument.

### **3.3. Respondents**

We collected approximately 20 responses for each scenario (a total of 164 valid responses), which is deemed large enough for our hypothesis testing methods (Cohen, 1988). We used a convenience sample of Korean travelers waiting to board an airplane at an international airport in Seoul, Korea. We chose airline travelers for their high likelihood of having dined out during a long distance trip. To ensure that participants are restaurant customers, responses with an average monthly dining frequency of zero were removed from analysis. Responses with a high level of inconsistency (i.e., 1 versus 7) between the two items for the same scale were also removed.

Participation in the survey was voluntary and no compensation was offered. Participants were mostly in their 20's (80.9%), 30's (13.5%) and 40's (5.6%). There were slightly more

female participants (55%) than male (45%). They were mostly well educated (78.4% college graduates and 11.8% graduate school graduates). This participant profile is confirmed as similar to the profile of Korean family restaurant customers (Kim, 2011; Kim and Kim, 2010).

### ***3.4. Measures***

#### *3.4.1. Customer understanding*

The level of customer understanding of the restaurant's entitlement to profit and customer understanding of the impact of dining duration on the restaurant's profitability was measured by a 5-item scale developed based on the work by Kahneman, Knetsch and Thaler (1986 a, b) and Urbany et al., (2004) (Table 2). Respondents were asked to express the degree to which they agreed to each statement on a 7-point Likert scale where 1 meant 'strongly disagree' and 7 meant 'strongly agree'.

#### *3.4.2. Customer willingness to adopt the reward program*

We measured customer willingness to adopt the reward program by asking "Will you adopt the proposed reward program?" Respondents were asked to mark their level of willingness on a 6-point Likert scale. We used an even-numbered scale so that respondents can be clearly divided into two groups: adopters and non-adopters.

#### *3.4.3. Customer efforts to reduce dining duration*

While customer citizenship behaviors are defined as customers' voluntary and discretionary behaviors without being rewarded, customer co-production behaviors are defined as behaviors expected from customers for the successful production and delivery of services (Groth, 2005). The customer citizenship behaviors promoted by a reward program become expected in return for the reward. Therefore the customer behaviors expected in return for a reward are more co-production behaviors than citizenship behaviors.

Particularly in our study context, the customer behavior promoted by the reward program is critical to the profitable delivery of the service. Hence, we considered the behaviors expected by the reward program as co-production behaviors and measured by the scale proposed by Groth (2005). We modified the three most applicable items in the scale to fit our study context (Table 2). In the meantime, customer behaviors to help restaurants reduce dining duration before a reward program is offered can be considered as citizenship behaviors and therefore were measured with the above-mentioned co-production behavior scales but with expressions such as required, expected or responsibilities removed.

#### *3.4.4. Justice evaluation of the reward program*

Customer justice perception of a reward program is defined as the degree to which the reward program satisfying the customer expectation for compensation in return for the customer efforts and sacrifices (Homans, 1961). Accordingly, we adapted the distributive justice scale proposed in the study by Tax et al. (1998) into a 5-item, 7-point Likert scale that fits our study context (Table 2).

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Insert Table 2 about here  
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## **4. Results**

### *4.1. Scale's Reliability*

The reliabilities of the multi-item scales were assessed using Cronbach's alpha, and were all found acceptable at the value of 0.8 or higher (Nunnally, 1978).

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Insert Table 3 about here  
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### *4.2. Hypothesis Tests*

In order to test H1, we conducted a regression analysis with the customer understanding as an independent variable and customer voluntary efforts to reduce dining duration as a dependent variable. In order to control for the potential effects of gender, age, customer price sensitivity, and purchase purpose, these variables were included in the model as independent variables. As shown in Table 4, the effect of customer understanding was significant at  $t=3.636$ ,  $p<.001$ , offering supports for H1. None of the control variables showed any significant effect.

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Insert Table 4 about here

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The effect of a reward program on customer voluntary efforts to reduce dining duration (H2) was tested using a paired t-test. The level of customer voluntary efforts after being offered a reward program ( $M=4.035$ ) was significantly higher than before ( $M=3.006$ ) ( $t=8.137$ ,  $p<0.001$ ) and therefore H2 was supported.

In order to test H3, we first divided the respondents into two groups by their intention to take advantage of the reward program. Those who selected a response rating of 3 or lower in the 6-point Likert scale question were grouped as non-adopters (67 respondents) and the other respondents as adopters (97 respondents). We then conducted a t-test between the two groups on changes in the level of voluntary efforts to reduce dining duration between before and after being offered the reward program. The change was significantly greater in the adopter group ( $M=1.625$ ) compared to that for the non-adopter group ( $M=0.138$ ) ( $t=6.450$ ,  $p<0.001$ ), and therefore H3 was supported.

A regression analysis was conducted to test H4. Customer justice evaluation of the reward program offered, the primary independent variable of our interest, was regressed on the customer willingness to adopt the reward program. In order to control for the effects of customer characteristics such as gender, age, price sensitivity and understanding of the firm's entitlement to profit were included in the model as independent variables. In order to control for the effects of situation attributes and reward program attributes, the purpose of dining and the type and the timing of the reward redemption were also included in the model. The effect of the customer justice evaluation of the reward program was significant ( $t=7.805$ ,  $p<0.001$ ), providing supports for H4.

Hypothesis 5 and 6 in this study proposed the effects of the reward program attributes and the customer purpose of dining on the effectiveness of a reward. Therefore, tests for these hypotheses were conducted only on responses from the reward program adopters. We conducted an analysis of variance (ANOVA) with the purpose, the reward type and the reward redemption timing as independent variables and the difference in the level of customer efforts to reduce dining duration before and after the reward program was offered as a dependent variable. As seen in Table 6, no main effect was significant but two interaction effects were. The interaction effect between the dining purpose and the reward type and the interaction effect between dining purpose and the reward redemption timing were both significant ( $F=4.307$ ,  $p<0.05$  and  $F=4.145$ ,  $p<0.045$  respectively). The mean differences by the purpose, reward type and reward redemption timing are shown in Table 7. The interaction effects are visualized in Figures 2 and 3.

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Insert Tables 6 & 7 about here  
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Insert Figures 2 & 3 about here  
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## **5. Discussion and Managerial Implications**

The primary purpose of the current study was to explore an approach to help capacity-constrained service firms to effectively increase capacity by motivating customers to behave in a manner beneficial to the firm. The specific approach explored was a customer reward in return for customer efforts to help the service firm increase capacity. Using analyses of data collected through a customer survey employing scenarios where a hypothetical reward program was offered, the effect of this approach was assessed in two areas: in terms of overall increase in customer efforts regardless of the customer's adoption of the reward program (H2) and in terms of a higher level of increase in efforts among customers who adopted the program compared to those who did not (H3). Results confirmed both effects, indicating the usefulness of a reward program as a means to induce customer behaviors helpful to the service firm.

Results also showed that customers with better understanding of the firm's entitlement to profit and the effect of their behavior on the firm's profitability were more likely to engage in firm-beneficial behaviors (H1). This suggests the importance of communicating to and educating customers on the firm's entitlement to profit and the impact of their behaviors on the firm's profitability. However, firms have to be careful not to trigger customer perceptions of unfairness that the firms' entitlement to profit is pursued at the sacrifice of customers' entitlement to value.

Further, findings of this study caution managers to ensure the perceived justice of the reward program. Otherwise, customers are not likely to adopt the reward program. Test results for H3 showed that customer justice perceptions of the reward program have a significant impact on the customer willingness to adopt the program. In other words, what is offered in the form of a reward in return for the sacrifice or efforts born by customers has to be just as valuable.

In addition to empirically demonstrating the effectiveness of a reward program in promoting the firm-beneficial customer behaviors, we also examined when a reward program might be more effective. Specifically, one situation variable of the purchase purpose and two reward attribute variables of the type of a reward and the timing of reward redemption were tested. Results showed that only two interaction effects were significant. One was the interaction between the purchase purpose and the reward type, and the other was the interaction between the purchase purpose and the timing of reward redemption. Post-hoc analysis results revealed that the reward type mattered only when the purchase purpose was hedonic ( $p<0.05$ ) and indirect rewards were more effective, while the timing of redemption mattered marginally only when the purpose was utilitarian ( $p<0.10$ ) and delayed redemption was more effective. These findings offer service managers important specifics on how differently they should design a reward program for maximum effects.

## **6. Limitations and Future Research Directions**

The findings of the current study need to be interpreted with a caution due to following limitations. First, because this study was limited to a single study in a single service industry and in a single culture, replications and extensions to other types of services and cultures are

needed before findings can be generalized. Particularly since this study involves customer compliance behaviors which tend to vary widely across cultures, future studies in different cultural contexts are warranted. Further, participants in the current study were rather young generations. Since customer behaviors tend to vary by age, future studies should include older generations.

Second, this study relied on scenarios to provide the stimulus material. Although commonly used for studies of our study's nature, scenarios lack the richness of an actual service encounter. Third, differences in responses could have been caused by the differences in the familiarity of the respondent with the type of reward program tested in this study. According to the study by Wirtz and Kimes (2007), customer familiarity with a particular business practice causes significant differences in customer responses. Therefore, future studies should control for the effect of customer familiarity.

Fourth, there could have been some confounding effects between utilitarian and hedonic purpose scenarios because the utilitarian purpose scenario was also described as dining out with others, although as pure companions rather than as someone to socialize with. Fifth, no information on who in the party is paying for the meal was offered in the scenario and therefore different assumptions in this regard could have led to differences in responses. The study by Wirtz and Kimes (2007) showed that customers tend to respond differently depending on whether they are paying for the purchase or not. A future study could be more specific in this regard.

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## Exhibit 1. A sample scenario

### **The first part of the scenario:**

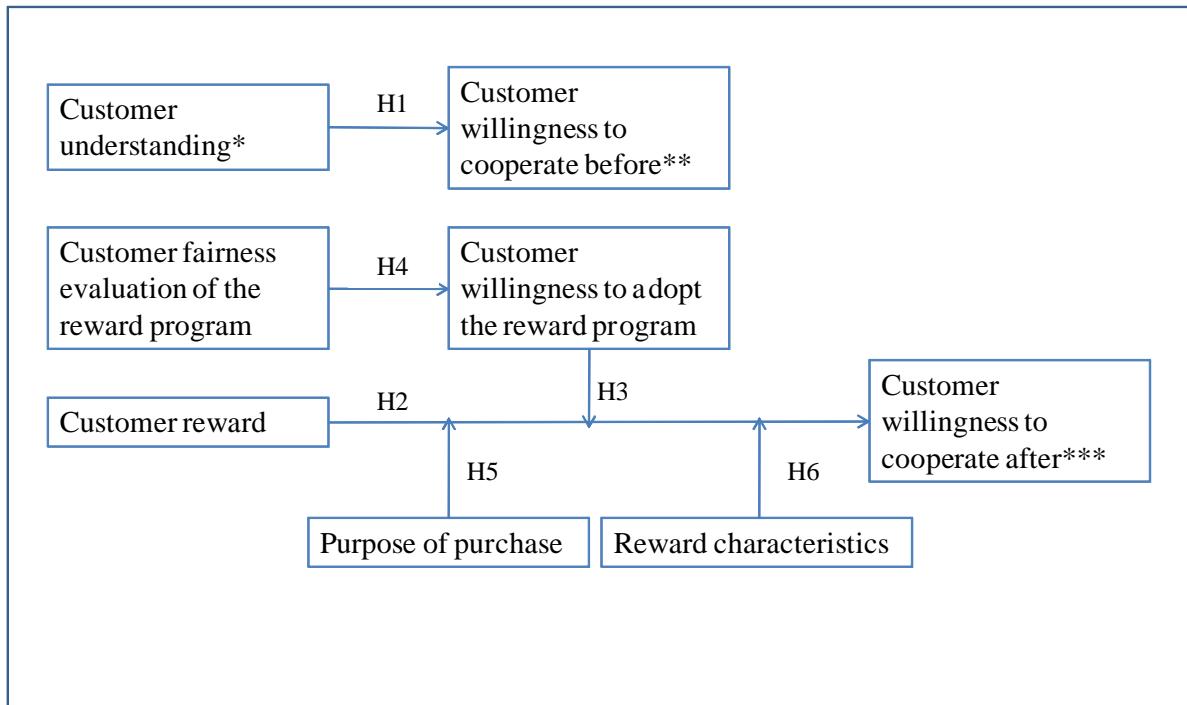
While wondering what to have for lunch, I decided to go to a family restaurant nearby for a quick and simple lunch with a few fellow workers who were also wondering what to have for lunch. The family restaurant we chose was well known for its leading role in forming the trend in the family restaurant business and was fast growing. The atmosphere of the restaurant was very lively with cheerful music. Employees looked young and full of energy. The restaurant's menu consisted of appetizers such as salad, onion rings, buffalo wings, main menus such as steak, pasta, rib, desserts such as brownie and various types of cake, and a variety of drinks. Menu price ranged between \$7.00 - \$8.00 for appetizers, \$15.00 - \$30.00 for main dishes, \$4.00-\$7.00 for desserts and \$3.00-\$7.00 for drink. During lunch time, this restaurant is always crowded and it is almost impossible to get seated without waiting. It is not very uncommon to observe some customers leave for another restaurant due to long waiting time. For this reason, during peak hours, the manager of this restaurant wants customers to quickly finish their meal and leave without lingering too long at the table after finishing the meal.

### **The second part of the scenario:**

This family restaurant offers a special reward program in order to motivate customers to reduce their dining duration. The program reads as follows:

“If you finish your meal within 30 minutes after all of your ordered food is delivered, we will offer you a 20% discount on your total bill. If you would like to participate in this event, please let your server know at the time of ordering your food.”

Figure 1. Research framework



\*Customer understanding of the firm's entitlement to profit and of service time's impact on the firm's profitability

\*\* Before being offered a reward program

\*\*\* After being offered a reward program

Table 1. Experimental design

	Utilitarian purpose		Hedonic purpose	
	Direct	Indirect	Direct	Indirect
Immediate				
Delayed				

Table 2. Measurement items

Scale	Items
Customer understanding *	I think the revenue impact of reduced dining duration for a restaurant is considerable.
	I think the profit impact of reduced dining duration for a restaurant is substantial.
	I think it is acceptable that restaurants try to reduce dining duration through various efforts such as offering customer rewards.
	I consider a restaurant practice such as offering customer rewards to encourage customers to reduce dining duration as acceptable.
	I think that, despite some inconveniences, customers should accept restaurant practices that help the restaurant maintain profitability.
Customer efforts (voluntary)**	I will perform all the tasks that can help this restaurant reduce customer dining duration.
	I will try to help this restaurant with those things that I can do to reduce my dining duration.
	I will adequately complete behaviors that help this restaurant reduce customer dining duration.
Customer efforts (in return for rewards)**	I will perform all the tasks that can help this restaurant reduce customer dining duration, as required by the reward.
	I will try to help this restaurant with those things that I can do to reduce my dining duration, as required by the reward.
	I will adequately complete behaviors that help this restaurant reduce customer dining duration, as expected by the reward.
Justice evaluation of the reward	What this restaurant offers in return for customer efforts to reduce dining duration is acceptable.
	What this restaurant offers in return for customer efforts to reduce dining duration is realistic.
	The amount of reward is acceptable.
	The form of reward is acceptable.
	The timing of reward redemption is acceptable.

\* Customer understanding: customer understanding of the firm's entitlement and service time impact on the firm's profitability

\*\* Customer voluntary efforts before: customer voluntary efforts to reduce service time before being offered a reward

\*\*\* Customer efforts after: Customer efforts to reduce service time after being offered a reward

Table 3. Scale reliability

Scale	No. of Items	Cronbach's $\alpha$
Customer understanding of the firm's entitlement and service time impact on the firm's profitability	5	.865
Customer voluntary efforts to reduce service time before being offered a reward	3	.835
Customer efforts to reduce service time after being offered a reward	3	.909
Justice evaluation of the reward	5	.879

Table 4. Regression analysis results to test H1

Independent Variable	b	t-statistic	Sig.
Gender	.037	.472	.638
Age	.115	1.460	.146
Price Sensitivity	.073	.909	.365
Purpose of purchase	-.052	-.669	.504
<b>Customer Understanding</b>	.283	3.636	<b>.000</b>

Dependent variable: customer voluntary efforts to reduce dining duration

Table 5. Regression analysis results to test H4

Independent Variable	b	t-statistic	Sig.
Gender	-.091	-1.456	.148
Age	-.162	-2.598	.010
Price sensitivity	.102	1.573	.118
Customer understanding	.084	1.227	.222
Purpose of purchase	-.078	-1.273	.205
Reward type	.121	1.994	.048
Reward timing	-.058	-.951	.343
<b>Justice evaluation of reward</b>	.540	7.805	<b>.000</b>

Dependent variable: customer willingness to adopt the reward program.

Table 6. Results of one-way ANOVA to test H5 and H6

Independent Variable	Mean-square	F-statistic	Sig
Purpose of purchase (purpose)	.046	.023	.879
Reward type	4.600	2.302	.133
Reward timing	1.674	.838	.363
Purpose * Reward type	8.608	4.307	.041
Purpose * Reward timing	8.284	4.145	.045
Reward type * Reward timing	1.168	.585	.447
Purpose * Reward type * Reward timing	.148	.074	.786

Table 7. Mean difference in the level of customer efforts to reduce service time between with and without the reward offered and adopted

	Dining purpose		Socialization purpose	
	Direct	Indirect	Direct	Indirect
Immediate	.533(1.390)*	1.433(1.529)	1.666(1.806)	1.083(2.037)
Delayed	.566(1.119)	1.416(1.559)	.904(1.480)	.650(1.644)

\*Figures in parentheses are standard deviations.

Figure 2. The interaction effect of purchase purpose and reward type on the mean difference with and without the reward offered

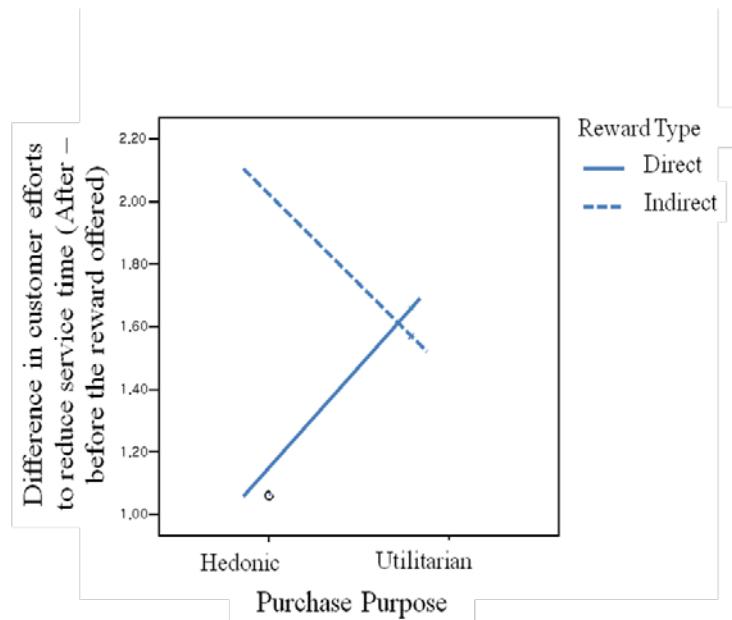


Figure 3. The interaction effect of purchase purpose and reward timing on the mean difference with and without the reward offered

