Jun 8th, 12:00 AM - Jun 10th, 12:00 AM

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The Impact of Magnitude Salience on Prix Fixe Menu Price Judgment

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May 3, 2010

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The Impact of Magnitude Salience on Prix Fixe Menu Price Judgment

ABSTRACT

The flat price structure of prix fixe menus (i.e., fixed food prices and fixed service gratuities) affords restaurant operators the opportunity to present the same menu price in different ways. This report examined customers’ responses to financially equivalent prix fixe menu prices with a built-in gratuity (i.e., all-inclusive prices), a separately listed percentage gratuity and a separately listed dollar gratuity in terms of deal perception. Through an online experiment, we found that prix fixe menu prices with a percentage gratuity below (above) the conventional 15% were perceived more (less) favorably than their all-inclusive counterparts. However, there was no significant difference between prix fixe menu prices with a percentage gratuity and those with a dollar gratuity at all surcharge levels. The implications of these findings for presenting prix fixe menu prices are discussed.
Prix fixe, a word of French origin, refers to “a complete meal offered at a fixed price” (*Merriam-Webster's collegiate dictionary*, 2003). A prix fixe typically consists of multiple courses, each with one or several selections, including appetizers, salads, soups, entrees, desserts, as well as beverages and drinks. Some restaurants offer wine pairings at an additional cost.

Although prix fixes are not as common as a la carte meals where customers have a wide range of choices and can order items on the menu without any restriction, they seem to have gained increasing popularity over recent years. For example, many high-end dining establishments now feature chef’s tasting menus where customers can savor a large assortment of small portion size dishes at a fixed price. Other restaurants often use prix fixes to cater functions or special crowds (e.g., theatre/movie/game goers). Prix fixes also help to control cost or inventory since restaurants can incorporate cheap, in-season produce as well as slow-selling or overstocked items into their prix fixe menus. On special occasions like Valentine’s Day, some restaurants even discard regular a la carte menus and instead try to upsell extravagant, multi-course prix fixe lunches and dinners in hope of raking in the dough.

As a social etiquette in the US, customers at table-service restaurants typically leave 15% of the food and beverage subtotal as voluntary gratuities or tips for satisfactory service.\(^1\) However, for prix fixes, some restaurants are prompted to impose compulsory service gratuities at higher levels. There are several considerations for this pricing practice. First, prix fixes are frequently used for functions or large dining parties, and waiting tables with big crowds commands extra labor work. To ensure that waiters and

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other staff are appropriately compensated, it is common for restaurants to automatically charge 18% service gratuities for parties of six or more. Second, even for small dining parities, preparing and serving prix fixes in general consumes considerably more time and efforts than typical a la cart meals as many prix fixes have more than three courses with wine parings. What’s more, due to the important role prix fixes play in operations, cost/inventory control and revenue generation, some restaurants strategically promote prix fixes as special deals and offer them at reduced prices relative to similar a la carte orders. To maintain a decent profit, they may opt for offsetting food discounts by posting mandatory, higher than average service gratuities.

For those restaurants that collect obligatory service gratuities on their prix fixes, some choose to build the surcharge into the menu price and present an all-inclusive prix fixe price to customers. However, several studies on price partitioning suggest that companies may be better off if they separate the surcharge from the base price. In addition, because a prix fixe menu price with a mandatory service gratuity has a flat price structure (i.e., a fixed base price as well as a fixed surcharge), restaurants may present the service gratuity either in percentage or in dollar terms should they choose to list it separately on the menu. Do customers respond differently to various price presentations on prix fixe menus? Is there an optimal price format for prix fixe menus, and if so, under what conditions? In answering those questions, we first review relevant literature to provide theoretical explanations of the impact of price partitioning on consumers’ deal perception. We then present an experiment to examine our specific hypotheses. Finally, we discuss our results and provide managerial implications for presenting prix fixe menu prices based on our study findings.
Theoretical Framework

Research on behavioral pricing has substantiated the fact that presenting the price of an offer in separate parts (i.e., a base price plus mandatory surcharges) versus a consolidated whole influences consumers’ recalled total cost, value perceptions, preference, demand, purchase intentions, price satisfaction as well as brand and retailer attitudes (Bertini & Wathieu, 2008; Estelami, 2003; Hwai Lee & Yuen Han, 2002; Morwitz, Greenleaf, & Johnson, 1998; Thaler, 1999; Xia & Monroe, 2004). However, there is little consensus when it comes to why customers respond to partitioned prices differently from the all-inclusive equivalents.

According to mental accounting principle, people prefer to integrate rather than segregate prices because the psychological pain of paying multiple prices is bigger than paying an equivalent single price (Thaler, 1999). Extant research has shown that presenting bundled products with one consolidated price would lead to more positive evaluations than those with separate price tags for each component (Johnson, Herrmann, & Bauer, 1999). The popularity of all-inclusive resorts like Club Med, which offer one price that covers all the meals, accommodations and recreation for the vacation rather than charge them separately in a partitioned price, lends vast support to this claim. On the other hand, some researchers suggested that the presence of multiple tags in a partitioned price forced consumers to mentally work out the total cost in order to assess an offer (Estelami, 2003; Morwitz, et al., 1998). Since precise mental calculation requires substantial time and cognitive efforts, most consumers instead tend to focus on the base price and make inadequate adjustment for surcharges or ignore them completely. As a result, on average, partitioned prices often lead to a better deal perception than equivalent
all-inclusive prices. For example, Morwitz et al. (1998) found that charging a typical amount of shipping and handling fee separately from the catalogue price of a telephone lowered recalled total price and hence increased demand.

Several researchers tried to resolve the pro- and anti-price partitioning debate by proposing a more flexible framework that could potentially reconcile the contradictory evidence. For instance, Kim and Kachersky (2006) posited that perceptions of partitioned prices are contingent on the relative salience of individual price component within a multi-dimensional price. If one price component is more salient than others, then the overall perception of the partitioned price is likely to be determined by consumers’ assessment of that salient price component. A number of findings from consumer information processing literature lend support to this assertion. For instance, it has been shown that in a multiple stimuli situation, salient stimuli are difficult to ignore and command more attention (Greenwald & Leavitt, 1984; Nisbett & Ross, 1980). In addition, people tend to place more weight to salient information (Taylor & Fiske, 1978) and the increased focus on salient information in judgment and decision making is often at the expense of other related, but less salient information (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). Therefore, consumers exposed to multiple dimensions of a partitioned price may construct their value perceptions of the offer on the basis of the most salient individual price while discounting or disregarding other price information. When the base price of an offer is more salient than the surcharges, perhaps due to its relatively large amount, consumers tend to focus on the base price and insufficiently process or ignore surcharges. This sometimes may lead to a lower recalled total cost and gives partitioned prices an advantage over equivalent consolidated prices as previous research has
demonstrated. However, when the surcharge is more salient than the base price, consumers’ deal evaluation may be shaped more by their assessment of the surcharge rather than that of the base price or the total price. In this case, consumers’ perceptions on the surcharge play a critical role in overall price judgment and hence can lead to either favorable or unfavorable consequences.

Price salience is a complex construct and can be manipulated in various ways (Kim & Kachersky, 2006). Of particular interest here is magnitude salience. There are two dimensions in magnitude salience for partitioned prices. The first dimension is the relative magnitude of a price to a consumer’s reference price or price range. The second dimension, which only applies to multi-dimensional prices, is the relative magnitude of one price component to the others within a partitioned price. As several studies have already examined the relationship between the relative magnitude of discounts or surcharges to the base price and perceptions of price, our present study focused on the first dimension of magnitude salience (Hardesty & Bearden, 2003; Heath, Chatterjee, & France, 1995; Xia & Monroe, 2004). Lambert (1978) claimed that the larger the magnitude of a price relative to a consumer’s reference price, the more attention that price will attract. In addition, Bertini and Wathieu (2008) suggested that when consumers have a narrow reference range for a price, it becomes more salient to consumers because it lends more confidence in their price judgment.

The role that reference price plays in price perception is closely related to transaction utility. Transaction utility or the attractiveness of a deal depends on the extent to which the observed price compares favorably with those standards (Thaler, 1985, 1999). Both anecdotal evidence and research indicated that transaction utility (or
disutility) of a single-price offer can greatly influence people’s purchase decision. For example, people sometimes buy items on sale solely because of the greater transaction utility associated with sales prices, even though they don’t need them. Alternatively, when an observed price is considered to be above its reference range, consumers more often than not abandon or postpone the transaction. It could be argued that this effect also extend to individual price components of a partitioned price. In fact, one limitation for the numerical processing bias explanation of price partitioning is that the surcharge examined in those studies “were chosen to be well within the typical range for these surcharges” (Morwitz, et al., 1998). Yet, as we discussed earlier, companies may be motivated to impose higher than standard surcharges in order to cover additional costs or make the base price attractive.

To examine whether magnitude of the surcharge relative to its reference range could moderate consumers’ perception and evaluation on partitioned prices versus their all-inclusive counterparts, we conducted an online experiment in the context of prix fixe menus. Two characteristics of service gratuities at restaurants are worth-noting. First, unlike some types of surcharges, restaurant gratuities are established by social norms and fairly standard across the country. In general, a gratuity of 15% of the bill before tax for satisfactory service is a good rule of thumb. Consequently, consumers’ reference range for restaurant gratuities is pretty constricted and homogenous. Second, the very fact that restaurant gratuities are usually presented in percentage format also facilitates price comparison and judgment because they are in relative units and not influenced by dish prices and check sizes. On the other hand, it is more difficult for consumers to compare the prices of menu items since factors such as portion size, special ingredients, reputation
of the chef, and restaurant ambiance could all contribute to a wide reference range of dish 
prices. Hence we argue that in general restaurant gratuities have more magnitude salience 
than dish prices. As a result, for prix fixe menus with all-inclusive prices, given that the 
surcharge level is masked by the price format and obscured by the relatively large 
reference range of dish prices, deviations from the standard 15% should have little impact 
on consumers’ deal perception. However, a shift from a built-in gratuity to a separately 
listed percentage gratuity would leave the surcharge level different from 15% salient to 
customers, and their deal evaluations would be shaped more by the derived transaction 
utility or disutility of that surcharge. Specifically, we proposed that:

    H1: Prix fixe menu prices with a percentage gratuity below the conventional 15% 
    will be evaluated more favorably than equivalent all-inclusive prix fixe menu 
    prices. Prix fixe menu prices with a percentage gratuity above the conventional 
    15% will be evaluated less favorably than equivalent all-inclusive prix fixe menu 
    prices.

    If evaluating a percentage gratuity is straightforward for customers because of its 
small reference range and invariance to the base price, then changing a percentage 
gratuity to its equivalent dollar amount is likely to reduce the magnitude salience of 
service gratuities. Yet, the less common dollar gratuities may act as novel stimuli and 
induce consumers to direct their attention and cognitive efforts to convert dollar gratuities 
to more familiar and informative percentage level. Since directly figuring out the 
equivalent percentage level of a dollar gratuity involves division, which is the most 
demanding of arithmetic operation, we propose that consumers are more likely to work 
backwards and try to estimate the approximate dollar amount of the 15% of the base price
first. Then they would use the derived 15% dollar gratuity as the anchor and compare it with the observed dollar gratuity. If the presented dollar gratuity is higher, they would adjust its equivalent percentage level upward from 15%. The opposite is true if the presented dollar surcharge is lower. In either way, the adjustments tend to be inadequate (Tversky & Kahneman, 1974), resulting in a percentage level closer to the standard 15% than it actually is. This converting process makes consumers more accommodating to the deviations of gratuities from the standard 15% when they are specified in dollar term and hence possibly lead to a better deal evaluation than comparable percentage gratuities.

Hence we hypothesize that:

\[ H2: \text{Prix fixe menu prices with percentage gratuity below (above) the conventional 15\% will be evaluated more (less) favorably than those with equivalent dollar gratuity.} \]

We tested our research hypotheses with an online experiment described below.

**Method**

**Subjects**

We conducted an online experiment to test our hypotheses. Six hundred and six consumer panelists from a national marketing research company participated in our study to earn incentive points upon completion of the online experiment. One hundred and six of them did not go through the entire experiment process and were excluded from our analyses\(^2\). Of the participants, 42\% were men and 84\% were Caucasian. Their ages ranged from 16 to 82, with the average being 40.39. Two percent of the participants had

\(^2\) Of the 500 completed surveys, we first manually corrected problematic data that can be ascribed to formatting errors. We then trimmed extreme outliers that are three standard deviations away from the mean for each variable.
some education, 21% were only high school graduates, 41% had some college, 24% were college graduates, and 11% had done post-graduate work. Eighteen percent of the participants reported a household income less than $25,000 a year, 40% reported between $25,001 and $50,000, 31% reported between $50,001 and $100,000, and 11% reported more than $100,000 a year. Their average dining out frequency at full-service restaurants was four times per month, with a low response of zero time per month and a high response of 99 times per month. Thus, our sample represented a diverse set of restaurant patrons.

**Design and Procedures**

The experiment is a 3 (surcharge level: 12% vs. 18% vs. 23%) x 3 (price format: percentage gratuity vs. dollar gratuity vs. all-inclusive price) between-subject design. We chose 12% and 18% to represent the gratuity level modestly below and above 15% with the same deviation distance (i.e., 3%). Since 15% is the normative level for restaurant gratuities, we expect that consumers would regard 18% gratuity as a bad deal and 12% gratuity as a good deal in terms of transaction utility. In addition, we also included gratuity at 23% level to examine participants’ reaction to a more aggressively priced service gratuity.

Participants first read a scenario where they were asked to assume that they are dining with a friend before seeing a Broadway show at a table-service restaurant with a good online review on customer service. Next, participants saw a contrived three-course prix fixe dinner menu with price information on the computer screen. We manipulated price formats by telling participants that the restaurant adopted a compulsory surcharge policy rather than customary tips in order to streamline service operation and cut down
serving time since theatre goers often have time constraints on how long they could spend at the restaurant before the show starts. In the all-inclusive price condition, participants were presented with one single menu price inclusive of gratuities. Participants in the percentage condition read a menu price with a fixed percentage level of automatic gratuity while those in the dollar condition was shown a menu price with a fixed automatic gratuity in dollar terms.

After making one selection from each course and placing a hypothetical order, participants responded to several questions based on their knowledge about the menu on the next screen. First, participants were asked to indicate their agreement on the question “The pre-theatre dinner provides good value for money” on a Likert-scale ranging from 1 (very much disagree) to 7 (very much agree). Then they accessed the perceived value of the pre-theatre dinner on a seven-point scale anchored by “bad deal / good deal.” Answers to these two questions were used to measure deal perception. To control for any confounding effect of expected service quality on value judgment, we also asked participants to rate their expected level of service quality on a nine-point scale anchored by “very poor / very high.” After recalling and writing down the total cost for the pre-theatre dinner, participants in different conditions responded to different questions for additional analyses. In the end of the experiment, data about participants’ tipping habits and attitudes as well as their demographic information were collected.

Results

Expected service quality

3 Participants were also asked to rate the pre-theatre dinner on a 7-point scale from 1 (very cheap) and 7 (very expensive). However, we dropped this question as a measure for deal perception since it is related more to expensiveness.
Across nine conditions, participants’ mean expected service quality ratings on a nine-point scale were between 7.15 and 7.69. A 3 (surcharge level) x 3 (price format) ANOVA with participants’ ratings on expected service quality showed that neither the main effects ((F (2, 491) = .079, p = .924 for surcharge level; F (2, 491) = .315, p = .73 for price format) nor the interactions (F (4, 491) = .8856, p = .473) was significant. Therefore, despite variations on the levels of service gratuities among conditions, all our participants expected that they would receive similar level of service for the prix fixe dinner. Nevertheless, in the following analyses, we used the expected service quality rating as a covariate to further tease out its impact on deal evaluations.

**Deal evaluations: full model**

A value index was constructed by averaging responses to the two value perception questions for each participant (coefficient α = 0.86). The mean values of indices across nine conditions were summarized in Table 1. These indices were then analyzed using a full factorial design of the general liner model with price format and surcharge level as between-subject factors and the expected level of service quality as a covariate. The ANCOVA analysis produced a marginally significant two-way interaction between price format and level of gratuity (F (4, 490) = 2.151, p = .073). Our predictions were evaluated in a series of post hoc comparisons and interaction contrasts using error term from the full ANCOVA model (Keppel & Wickens, 2004).

We first ran the model with 18% and 23% gratuity conditions alone to determine if there is significant difference between these two levels. An ANCOVA showed that neither the main effects (F (2, 490) = 1.525, p = .217 for price format; F (1, 490) = 1.616, p = .204 for level of gratuity) nor the interaction between price format and level of
gratuity (F (2, 490) = .273, p = .761) were significant. We hence collapsed the data for 18% and 23% gratuities to represent the level of gratuity above the standard 15% level. The level of gratuity below the standard 15% level remained as 12%.

Deal evaluations: percentage gratuities vs. all-inclusive prices (pooled model)

To test hypothesis 1, we considered percentage gratuity and all-inclusive price conditions alone and analyzed the value index as a function of price format (percentage gratuity vs. all-inclusive price) and level of gratuity (below vs. above 15%) with the expected level of service quality as a covariate (see figure 1). The ANCOVA analysis yielded a significant two-way interaction between price format and level of gratuity (F (1, 490) = 7.941, p = .005).

As expected, menu prices with percentage automatic gratuity led to a better deal perception (M = 4.57) than equivalent all-inclusive prices (M = 3.92; t (490) = 2.246, p = .025) when the gratuity level is below the standard 15% level. However, the relationship was reversed when the gratuity level is above the standard 15% level (M = 3.99 vs. M = 4.29; t (490) = 3.02, p = .083). Therefore, hypothesis 1 was supported.
An implied premise for hypothesis 1 is that, for all-inclusive prices without explicit information about the included service gratuities, consumers may assume the hidden gratuity similar to the 15% standard level. We therefore asked participants in the all-inclusive price condition to indicate what percentage gratuity they expected in the all-inclusive menu prices. For the 167 valid responses, the average “hidden” gratuity was 13.28% with a standard deviation of 6.44%. Both the median and the mode (49 out of 167) were 15%. The interquartile range (IQR) was 8% (18%-10%). These descriptive statistics combined suggested that, without explicit information about gratuity level, most participants in the all-inclusive price condition indeed tended to assume a value close to the standard 15%.

To rule out the possibility that the observed pattern of deal perception was led by evaluation of total expense rather than partitioned surcharges, an ANOVA was also performed on participants’ recalled total price on the pooled model with percentage gratuity and all-inclusive price conditions alone (see figure 2). The results revealed a significant main effect of pricing format only ((F (1, 484) = 48.89, p < .001). On average, participants in all-inclusive price condition recalled a higher total price than those in percentage gratuity condition when the gratuity levels both below (M = 36.81 vs. M = 32.72; t (484) = 3.72, p < .001) and above the standard 15% (M = 38.07 vs. M = 33.13; t (484) = 7.29, p < .001). Since there was no significant interaction between price format and gratuity level on recalled total price ((F (1, 484) = .433, p = .51), it is unlikely that recalled total price was the driver for participants’ deal perceptions.

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Insert Figure 2 About Here
Deal evaluations: percentage vs. dollar gratuities (pooled model)

Contrary to our expectation, an ANCOVA on deal index for the pooled model with the expected level of service quality as a covariate under percentage and dollar gratuity conditions alone did not yield significant interaction between price format and gratuity level ((F (1, 490) = 2.086, p = .149). Only a significant main effect of gratuity level ((F (1, 490) = 4.587, p = .032) was observed (see figure 3). Although hypothesis 2 was rejected, simple effect comparison on each price format did provide some evidence that dollar gratuity may hinder participants’ deal evaluation by blurring the otherwise apparent evaluation basis of percentage gratuity. For percentage gratuity, participants rated menu prices below the standard 15% gratuity (M = 4.57) as a better deal than those above the standard 15% (M = 3.99; t (490) = 2.402, p = .017). In contrast, there was no significant difference below and above the standard 15% gratuity on deal evaluation in dollar gratuity condition (M = 4.24 vs. M = 4.13; t (490) = .52, p = .604). We will discuss this further in the discussion.

Discussion and Implication

The main purpose of this research was to examine the influence of price partitioning on deal perception and the moderating effect of surcharge level relative to its
reference range in a prix fixe menu context. Consistent with previous research, results from an online experiment demonstrated that participants responded to prix fixe menu prices with a separately listed percentage service gratuity differently from the equivalent all-inclusive menu prices where service gratuity was built into the price. More important, our findings suggested that surcharge levels moderated the relationship between price format and deal perception. When service gratuity was above the standard 15%, participants perceived prix fixe menus with automatic percentage gratuity as lesser deals than those with equivalent all-inclusive prices. In contrast, when service gratuity was blow the standard 15%, participants regarded prix fixe menus with automatic percentage gratuity as better deals than their all-inclusive counterparts.

We hypothesized that the moderating effect of gratuity level was due to the fact that service gratuities in percentage term have greater magnitude salience than dish prices. Thus, percentage gratuities different from the standard 15% commanded more attention and received more weights in participants’ deal evaluation than other less salient price information. To provide support for our claim and rule out alternative explanations, we further showed that price partitioning led to lower recalled total costs than equivalent all-inclusive prices at both gratuity levels. However, lower recalled total expenses didn’t necessarily translate into better deal perception. In particular, when service gratuities were above 15%, participants’ deal perception on partitioned menu prices was shaped more by the hefty surcharges than the low recalled total expense.

We also explored the potential faming effect of surcharge format on deal perception. Following the rationale of magnitude salience, we believed that consumers have to convert a dollar gratuity to the corresponding percentage level if they want to
evaluate it properly. Because of the difficulties associated with mental calculation, consumers are likely to resort to a converting process where they anchor on the equivalent dollar amount of the standard 15% and adjust the observed dollar gratuity upward or downward. This procedure, however, tend to result in a value close to the anchor level. Therefore, we proposed that participants exposed to dollar gratuities will have a better deal perception when the equivalent percentage gratuities are higher than 15%, and vice versa. Although data from our experiment followed the predicted pattern, they didn’t produce a statistically significant interaction between gratuity format and gratuity level on deal perceptions. Several possible post hoc explanations are as follows: First, since gratuities presented in dollar amount have reduced magnitude salience or evaluability, some participants, if not many, may simply choose to ignore them or take them for granted. If this is the case, then the converting process did not happen at all and their deal perceptions were driven by other relatively more prominent price information such as the food price or total expense. Second, participants who opted for converting the dollar gratuity may not necessarily anchor on the standard 15% gratuity level as we expected. Rather, they may use 10% or 20% of the base price because those values are easier to work out mentally than 15%. Although participant may follow the same anchoring-and-adjustment process as we hypothesized, different anchoring values will give rise to offsetting effects because the final values are always biased toward the anchors\(^4\). This may render our result less apparent. Finally, some researchers argued that presenting price with a “$” sign may increase the semantic salience of the price and bring about negative reactions(Kim & Kachersky, 2006; Yang, Kimes, & Sessarego, 2009). It

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\(^4\) For example, for a dollar gratuity between 10% and 15%, anchoring on 10% and adjusting upward will result in a value close to 10% while anchoring on 15% and adjusting downward will result in a value close to 15%.
follows that a dollar gratuity, with its affixed dollar sign, may dampen deal perception relative to equivalent percentage gratuity in this regard. This possibility may also contribute to our non-significant result.

The results of the present research have several managerial implications for pricing prix fixe menus. The most important takeaway from our study is that restaurant operators should avoid imposing service gratuities different from the standard 15% separately on prix fixe menus. Since leaving 15% of the food and beverage subtotal as tips is a well-entrenched social norm, customers are likely to be sensitive and have strong responses to compulsory service gratuities at other levels.

Second, our research suggested that when the service gratuity is above the standard 15% and consequently may bring about negative transaction utility, presenting prix fixe menus with all-inclusive prices would be more appropriate than separating service gratuities from the menu prices. As we discussed earlier, some restaurants are compelled to charge higher than normal service gratuities for prix fixes because these meals entail more service than typical a la carte ones. Others may simply hope to sweeten their prix fixe deals and attract customers by discounting food items but raising the accompanying service gratuities to maintain profits. Regardless of the motivations behind, they would be better off in terms of deal perception to cover up the true level of service gratuities and present all-inclusive prices to their customers. In fact, this point has been taken by a growing number of restaurants including Per Se, which made the headlines in 2005 by initiating automatic service gratuities of 20% on its menus in lieu of customary
tipping but now instead prices its two nine-course tasting menus at 275 dollars each with service included.\(^5\)

On the other hand, although our findings indicated that restaurants may benefit in terms of consumers’ deal perceptions by listing a service gratuity below 15% for their prix fixe menus, several caveats are in order. First, we only tested a gratuity level modestly below the standard 15% (i.e., 12%). Therefore our results may not hold up for more extreme values. Second, in our experiment, we explicitly told the participants that the service quality of the restaurant is satisfactory and used their expected service quality as a covariate in our analyses. Consequently we controlled our participants’ service quality perception. In reality, however, gratuities below the standard 15% may bring about negative expectation or perception of the service quality due to the price-quality association and spoil the overall deal perception eventually.

As for whether presenting the service gratuity as a percentage level or in a dollar amount, our results suggested that there was no significant difference between the two formats. There is little doubt that dollar gratuity tend to hinder participants’ judgment on the gratuity level. However, consumers may take different approaches to deal with this ambiguity other than anchor on the standard 15% and compare its converted dollar amount with the actual dollar gratuity as we supposed. Further research is needed to address this complexity.

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Table 1: Deal index as a function of price format and level of gratuity (full model)

<table>
<thead>
<tr>
<th>Percentage gratuity</th>
<th>Dollar Gratuity</th>
<th>All-inclusive price</th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>4.57 (n=44)</td>
<td>4.24 (n=61)</td>
</tr>
<tr>
<td>18%</td>
<td>4.05 (n=52)</td>
<td>4.18 (n=56)</td>
</tr>
<tr>
<td>23%</td>
<td>3.92 (n=59)</td>
<td>4.10 (n=56)</td>
</tr>
</tbody>
</table>

Notes: Mean value of the deal indices with corresponding number of observations for each condition (in parentheses) were indicated in each cell.
Figure 1: Deal Evaluations: percentage gratuities vs. all-inclusive prices (pooled model)
Figure 2: Recalled Total Cost: percentage gratuities vs. all-inclusive prices (pooled model)
Figure 3: Deal Evaluations: percentage vs. dollar gratuities (pooled model)

![Figure 3: Deal Index Comparison: % vs. $](image-url)
References


