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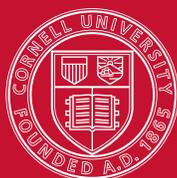


## Cornell Hospitality Report

The Effects on Perceived Restaurant Expensiveness of Tipping and Its Alternatives

*by Shuo Wang and Michael Lynn, Ph.D.*

Vol. 7, No 3, February 2007



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School of Hotel Administration

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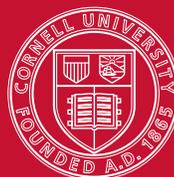
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# The Effects on Perceived Restaurant Expensiveness of Tipping and Its Alternatives

by Shuo Wang and Michael Lynn

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## ABOUT THE AUTHORS

Shuo Wang is a Ph.D. student at the Cornell University School of Hotel Administration (sw324@cornell.edu). In addition to his first-hand experience as a marketing and revenue-management practitioner, his primary research focus is on consumer behavior.

Michael Lynn, Ph.D., is an associate professor at the Cornell University School of Hotel Administration (wml3@cornell.edu). His primary research focuses are tipping behavior, status consumption, and consumers' response to product scarcity. He has published over 30 articles, in journals such as *Journal of Consumer Research*, *Journal of Applied Social Psychology*, *Journal of Personality and Social Psychology*, *American Psychologist*, and *Personality and Individual Differences*. The authors gratefully acknowledge the financial support of the Cornell Center for Hospitality Research for this research.



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## EXECUTIVE SUMMARY

**R**esearch on behavioral pricing has found that presenting the price of a product or service in separate parts rather than a consolidated whole can reduce consumers' perceptions of the total cost. That principle suggests that restaurants which charge separate fees for their food and service whether by voluntary tipping or an automatic service charge may be perceived as less expensive than those that include service charges in the form of an all-inclusive price. An internet-based simulation testing that idea found that participants rated restaurants with tipping or automatic gratuity policies as less expensive than restaurants that built the costs of service into menu prices. Furthermore, participants ordered more expensive meals when automatic gratuities were added to the bill than when the costs of service were built into menu prices. While the study was a simulation only (and no money was at stake), the industry's longstanding practice of setting menu prices with service charges extra is supported by these findings.

# The Effects on Perceived Restaurant Expensiveness of Tipping and Its Alternatives

by Shuo Wang and Michael Lynn

**A**lthough leaving tips at table-service restaurants is a well-entrenched social norm in the United States, various problems with this practice have prompted some restaurant operators to implement service charges or service-inclusive pricing in place of tipping. Whether a restaurant should use tipping or its alternatives to cover the expense of service has long been a controversial and complex issue.<sup>1</sup> Most recently, the media coverage of the decision by New York City restaurant Per Se to replace voluntary tipping with compulsory gratuities of 20 percent has spurred a new round of debate over tipping and alternative policies among industry practitioners.<sup>2</sup>

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<sup>1</sup>See, for example: “The Tipping–Service Charge Dilemma: No Easy Answers,” *Restaurant Business*, June 1, 1980, pp. 114-116; Charles Bernstein, “Tips or Charges? Hurst, McCarty Slug It Out on TV,” *Nation’s Restaurant News*, September 4, 1989, pp. 3-4; Paul Frumkin, “The Great Tipping Debate,” *Restaurant Business*, July 20, 1988, pp. 113-120; and B. Wine and T. Eure, “Viewpoint: Fixed Service Charges?,” *Restaurants USA*, February, 1987, pp. 24-25.

<sup>2</sup> P. Romeo, “The Tipping Point: Debate over Proper Payment Continues,” *Nation’s Restaurant News*, September 19, 2005, pp. 130-134.

## EXHIBIT 1

### Survey introduction and instructions



## Online Dining Experiment

You are invited to participate in a research project on customers' dining experience at full-service restaurants.

There are no known discomforts or risks associated with participation in this study. Your participation is voluntary and you are free to withdraw at any time. Your responses to the questions will be anonymous. Your participation will take about 10 minutes.



## Online Dining Experiment

### INSTRUCTIONS:

In this study, we try to simulate customers' dining experience through a web-based experiment. Four hypothetical restaurants will be presented sequentially on screen. For each restaurant, you will see the exterior and interior pictures of that restaurant and read a contrived menu. You are expected to select one appetizer, one entrée and one drink from the menu and review the corresponding check. You will be asked several questions based on your knowledge about that restaurant before proceeding to the next one. In the end of the experiment, there is also a general background survey.

Thank you for your participation in this study.

One of the many considerations in choosing an appropriate tipping or service-charge policy is the policy's effect on guests' perceptions of how expensive a restaurant is.<sup>3</sup> Research on behavioral pricing has suggested that partitioning prices, that is, presenting the price of a product or service in separate parts rather than a consolidated whole, can reduce consumers' perceptions of the total cost and, hence, increase demand. For example, Morwitz, Greenleaf, and Johnson found that auction bidders agreed to pay more in total cost when a 15-percent auction fee was charged separately than when it was bundled into the bid price.<sup>4</sup> This and other related findings suggest that restaurants which charge separate fees for their food and service via tipping or automatic service charges may be perceived as less expensive than those using all-inclusive pricing.<sup>5</sup> This is a potentially important effect, especially among price-sensitive clientele.

<sup>3</sup> M. Lynn, "Tipping and Its Alternatives: A Comparison of Tipping, Service Charges, and Service-inclusive Pricing," *CHR Reports*, Vol. 6, No. 5 (2006), Cornell Center for Hospitality Research.

<sup>4</sup> V.G. Morwitz, E.A. Greenleaf, and E.J. Johnson, "Divide and Prosper: Consumers' Reactions to Partitioned Prices," *Journal of Marketing Research*, Vol. 35 (1998), pp. 453-463.

<sup>5</sup> D. Chakravarti, R. Krish, P. Paul, and J. Srivastava, "Partitioned Presentation of Multicomponent Bundle Prices: Evaluation, Choice, and Underlying Processing Effects," *Journal of Consumer Psychology*, Vol. 12, No. 3 (2002), pp. 215-229; Y.H. Lee and C.Y. Han, "Partitioned Pricing in Advertising: Effects on Brand and Retailer Attitudes," *Marketing Letters*, Vol. 13, No. 1 (2002), pp. 27-40; and L. Xia and K.B. Monroe, "Price

The purposes of this report are to explain why and under what conditions tipping or service-charge policies may reduce perceptions of expensiveness (compared to a service-inclusive pricing policy), and to provide empirical evidence of those effects through a controlled experiment. In the next sections, we speculate about how consumers interpret menu prices under different tipping and service-charge policies. We then describe an experiment that tests our ideas and present the statistical analyses of our data. Finally, we discuss the implications of our findings for restaurant managers.

### How Consumers Perceive Partitioned Prices

When facing partitioned prices, consumers must integrate separate price information to determine the true cost of an offer. Consumers may process the price information in different ways and, hence, they may form different perceptions. Morwitz *et al.* proposed three major processing strategies, claiming that consumers would choose a particular strategy if the strategy's perceived benefit (in terms of expected accuracy in recognizing total price) outweighed the perceived cost (in terms of the time and cognitive effort required to process the price information).<sup>6</sup> Specifically, consumers are thought to adopt one of the three following processing strategies when interpreting partitioned prices.

Partitioning on the Internet," *Journal of Interactive Marketing*, Vol. 18, No. 4 (2004), pp. 63-73.

<sup>6</sup> Morwitz *et al.*, *op.cit.*

- (1) *Calculate the sum of the base price and the surcharge.*  
This strategy requires the highest cognitive effort but leads to the most accurate total price recognition. With this processing strategy, the presence or absence of price partitioning should have no effect on consumers' perceptions of expensiveness. In general, consumers use this strategy when the surcharges are presented as a simple dollar amount so that calculating the total prices involves only summation.
- (2) *Resort to simplifying heuristics rather than a precise calculation.*  
If the consumer does not think it worthwhile to calculate the total price precisely, he or she may use heuristic shortcuts to estimate the total by integrating the two separated pieces of price information. The most commonly used heuristics in dealing with multiple pieces of information are anchoring and adjustment.<sup>7</sup> When processing partitioned prices, customers may anchor on the base price (the primary information that is salient and important) and subjectively adjust that anchor upward to account for the surcharge (the secondary information with less availability and importance). Typically, such heuristics result in a combined price that is lower than the actual total price, given that research indicates that such adjustments are often too small.<sup>8</sup>
- (3) *Simply ignore the surcharge.*  
In some cases, consumers may ignore the surcharge completely, either by failing to notice the surcharge information or by noticing the surcharge but not incorporating it in the total price. The latter case may happen when the surcharge is relatively standard. In this case, incorporating information about additional charges does not lead to a better decision. This strategy

uses the least amount of cognitive effort and results in the lowest perceived accuracy of total prices among the three strategies.

## Employee Compensation Policies and Partitioned Pricing

Service-inclusive pricing presents consumers with a single price, while tipping and service charges present them with partitioned prices—one for the food and another for the service. When consumers evaluate the expensiveness of restaurants that have policies either of voluntary tipping or service charges, the guests must choose one of the three aforementioned strategies to process the partitioned prices. We believe that consumers are unlikely to choose the calculation strategy because calculating the dollar value of percentage tips or service charges and then adding that amount to the menu prices can be difficult, or, in many cases, guests are not inclined to fiddle with such calculations when they're trying to enjoy themselves. We also believe that it is unlikely that guests will ignore the tip or service charge, because at 15 to 20 percent of the bill, the typical tip or service charge is too large to ignore completely. These considerations mean that customers are most likely to make a near estimate of cost using the heuristic strategy.

Accordingly, we believe that consumers are likely to anchor their evaluations of restaurant expensiveness on menu prices and to subjectively adjust those evaluations either upward under tipping and service-charge policies or downward under a service-inclusive-pricing policy. In either case, the adjustment is likely to be insufficient, so that equivalent total costs will be perceived as lower under tipping and service charges than under service-inclusive pricing.

This possibility means that restaurants with voluntary tipping or 15-percent service charges may be perceived as less expensive than restaurants with comparable levels of employee compensation built into menu prices. It also means that restaurants with 18-percent service charges may be perceived as no more expensive than restaurants with 15-percent-higher service-inclusive menu prices, despite higher

<sup>7</sup> A. Tversky and D. Kahneman, "Judgment under Uncertainty: Heuristics and Biases," *Science*, Vol. 185 (September 1974), pp. 1124-1131.

<sup>8</sup> *Ibid.*

We believe that equivalent total menu costs will be perceived as lower under tipping and service charges than under service-inclusive pricing.

actual total costs at the restaurants with the 18-percent surcharge.

Consumers' demand usually increases when the perceived price for a product or service decreases. Thus, if tipping and service charges do lower perceptions of restaurant expensiveness, then they should also increase demand. One aspect of consumer demand is willingness to order the more expensive items from the menu, so any tipping or service-charge effects on perceived expensiveness may be reflected in restaurant patrons' check averages. This reasoning suggests that, after adjusting for differences in menu prices, restaurants that use tipping and automatic 15-percent gratuities should enjoy higher average check totals than would restaurants with comparable service costs built into menu prices. Furthermore, restaurants with automatic 18-percent gratuities may enjoy average adjusted check totals comparable to those of restaurants that have 15-percent-higher service-inclusive menu prices, despite greater total costs at the restaurants with the 18-percent service charge.

To this point, we have assumed that consumers base their evaluations of a restaurant's expensiveness on its menu prices (with insufficient adjustments for expected tips and service charges). That assumption is reasonable when menu prices and service charges (if any) are the only information available to consumers for their decisions. However, once a customer has paid the bill, he or she could evaluate the restaurant's expensiveness according to the actual payment rather than on some estimate based on menu prices. In that case, restaurants with tipping or service charges may be perceived as no less expensive than those with service-inclusive pricing, because the check has already arithmetically combined the separate food and service prices. This possibility means that a restaurant with voluntary tipping, one with a 15-percent service charge, and an establishment with service-inclusive menu prices may be perceived as equally expensive, once the customer has received bills specifying the total costs of eating at each of those restaurants.

## Method

We conducted an interactive web-based experiment to test our expectations about the effects of tipping, service charges, and service-inclusive pricing on perceived expensiveness and demand (as shown in Exhibit 1 and successive exhibits). Participants in this study were given information about four hypothetical restaurants, were asked to place a food and beverage order at each restaurant, and then requested to rate the expensiveness of each one. Each restaurant had a different tipping policy (i.e., voluntary tipping, a 15-percent automatic gratuity, an 18-percent automatic gratuity, or no tipping with a 15-percent surcharge built into the menu prices). Participants viewed and rated each restaurant one at a time. They viewed photographs of the exterior and interior of the restaurant and read a menu from the restaurant. In addition to listing the restaurant's food and beverage offerings, the menu contained information about its tipping policy.

Participants were next asked to order one appetizer, one entrée, and one drink from the menu. Based on this order, they received a bill. In half of the cases, the bill was presented and then the participant was asked to rate the expensiveness of the restaurant. The other half rated the expensiveness before they saw the check. After doing this for all four restaurants, participants were given a chance to reconsider their expensiveness ratings for the restaurants, and were asked to provide information about their demographic characteristics, tipping habits, and other traits.

## Participants

Although 369 members of a national consumer panel participated in our online experiment, we had to exclude the results of 51 participants who did not complete the experiment. Completing the process entered the participant in a sweepstakes promoted by a marketing research company. Of the participants, 57 percent were women and 87 percent were Caucasian. Their ages ranged from 18 to 80, with the average being 47. Two percent of the participants had some education, 20 percent were high school graduates, 41 percent

**EXHIBIT 2**

**Restaurant 1 simulation**

**Restaurant 1 Exterior View**

**Restaurant 1 Menu**

Item	Price
<b>Appetizers</b>	
Southwestern Eggroll	\$ 6.94
Grilled Chicken Caesar	\$ 7.19
Char-grilled Calamari	\$ 8.34
Grilled Cocktail	\$ 9.14
Tortilla Soup	\$ 4.85
<b>Entrées</b>	
Chicken Finger Platter	\$ 18.88
Grilled Salmon	\$ 12.22
Roasted Shrimp Alfredo	\$ 14.43
Sticky Glac Fillet & Chicken	\$ 15.55
NY Strip Steaks	\$ 20.34
<b>Beverages</b>	
Beck's	\$ 1.84
Ice Tea	\$ 1.84
Juice	\$ 2.13
Milkshake	\$ 2.42
Special Coffee	\$ 3.15

No Tipping – Employees not Allowed to Accept Tips

**Survey of Restaurant 1**

- Which of the following tipping norms applies to this restaurant?

- Tipping is Customary
- No Tipping – Employees not Allowed to Accept Tips
- A 15% Gratuity Will be Added to Bill at End of Meal
- A 18% Gratuity Will be Added to Bill at End of Meal

- I think the decor of this restaurant is:

Very downscale  1  2  3  4  5  6  7 Very upscale

- I think this restaurant is:

Very cheap  1  2  3  4  5  6  7 Very expensive

**Restaurant 1 Survey**

Submit

had some college, 25 percent were college graduates, and 12 percent had done post-graduate work. Twenty percent of the participants earned less than \$25,000 a year, 36 percent earned between \$25,001 and \$50,000, 37 percent earned between \$50,001 and \$100,000, and 7 percent earned more than \$100,000 a year. They reported dining out at full-service restaurants an average of five times per month, with a low response of no dining out and a high response of 80 times per month. Thus, in most regards our sample comprised a diverse set of restaurant patrons.

**Stimuli**

The four hypothetical restaurants in this study were mid-scale, full-service restaurants. Each of the three menu categories (i.e., appetizer, entrée, and beverage) had five individual items with various prices. The prices on the menus of Restaurant 1 and Restaurant 3 were roughly comparable and mid-price. The menu of Restaurant 2 was comparatively low-price, while Restaurant 4's menu was

comparatively high price. We always presented the four restaurants in the same order, starting with Restaurant 1. Likewise the two pictures and the menu items for each restaurant were always the same.

Things changed at the bottom of each menu, where we tried out the four different tipping policies. The four tipping policies were rotated among the four restaurants in such a way that each policy was associated with each restaurant's menu with equal frequency. We also made sure that the order in which the

**Restaurant 1**

Char-grilled Calamari	\$ 8.34
Roasted Shrimp Alfredo	\$ 14.43
Juice	\$ 2.13
<hr/>	
Subtotal	\$ 24.90
Tax	\$ 1.74
<b>Total</b>	<b>\$ 26.64</b>

Customer Copy

THANK YOU

Next

**Restaurant 1 Check**

policies appeared (that is, before or after one of the other policies) also attained equal frequency, a process known as a Latin-square counterbalancing. The reason for this was to control for any effect that the order of presentation of the tipping policies might have on our outcome measures.

Each participant was asked to answer three questions either before or after he or she viewed the check from each restaurant. The first question focused attention on the tipping policy by asking the participant to indicate which of the four tipping or service-charge policies was in effect at that restaurant. The second question was a filler question regarding the participant's liking of the restaurant's décor. Finally, the participant was asked to rate the expensiveness of the restaurant, on a 7-point Likert-type scale, ranging from very cheap (1) to very expensive (7). Again, some participants rated the restaurant before they saw the check and the others did so after they saw the check.

The check listed the items ordered and the price for each along with a subtotal, tax amount (which was 7 percent of the subtotal), the automatic gratuity (if any), and a grand total. For the restaurant with voluntary tipping, the check had a place for the participant to type in the tip amount, and the grand total was then automatically calculated.

After rating all four restaurants individually, participants were then asked to complete a final, end-of-experiment survey. This was the point when they could reconsider their expensiveness ratings for each restaurant, again using the seven-point scale. Then they were asked questions about their tipping habits, their attitudes toward different tipping and service-charge policies, their demographics, their familiarity with U.S. tipping customs, and the frequency with which they dine at full-service restaurants.

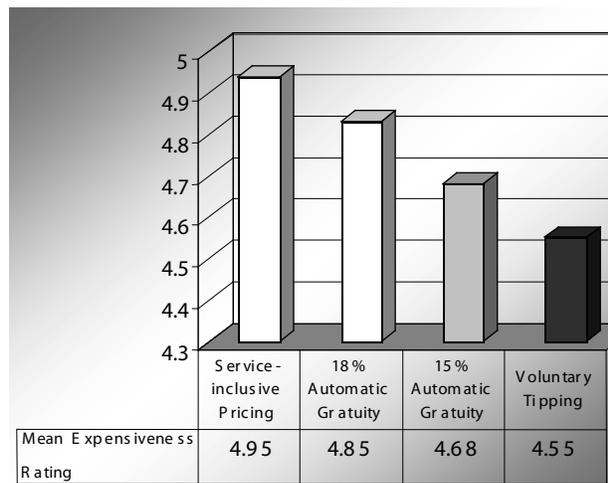
### Immediate Ratings of Restaurant Expensiveness

The first round of ratings of restaurant expensiveness under the four tipping policies is presented in Exhibit 3. The restaurants with the policy of no tipping (a mean of 4.95 out of 7) and the policy of an 18-percent service charge (4.85) were perceived as significantly more expensive ( $p < .05$ ) than were the restaurants with voluntary tipping (4.55) or a 15-percent service charge (4.68). Other than the significant difference of these restaurant pairs, we found no other significant differences, though the difference between the 15-percent service charge and the voluntary tipping policies was marginally significant ( $p < .07$ ). These findings support our expectations about the effects of partitioned pricing on perceived restaurant expensiveness.

The order in which the bill and the questions on expensiveness were presented had no significant effect on the ratings. This means that the effects of tipping policies on immediate expensiveness ratings did not differ according to when the bill was presented (see Exhibit 4). This suggests

### EXHIBIT 3

#### First-round ratings of restaurant expensiveness

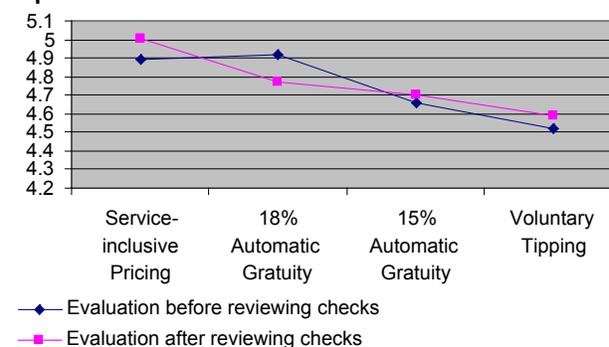


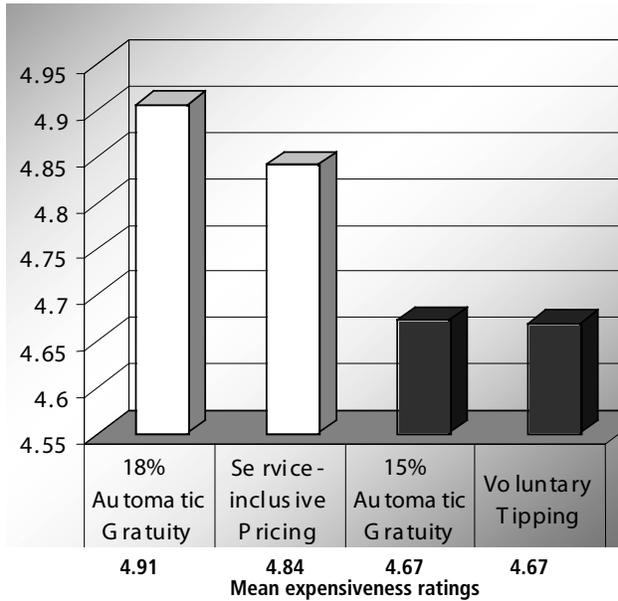
Notes: Those policies whose columns have a different shading significantly or marginally significantly differ from one-another in mean expensiveness rating.

The immediate ratings of restaurant expensiveness were analyzed using a full factorial design of the general linear model with tipping policy as a within-subjects variable and counterbalance order and rating and bill order as between subjects variables. This analysis produced significant effects only for tipping policy ( $F(3, 948) = 11.38, p < .001$ ) and the interaction of tipping policy with counterbalance order ( $F(9, 948) = 66.79, p < .001$ ). The effects of tipping policy were not significantly moderated by rating and bill order ( $F(3, 948) = 1.14, p > .33$ ) or the interaction of counterbalance order with rating and bill order ( $F(9, 948) = 1.27, p > .25$ ). The non-significant interaction with rating and bill order means that tipping policy effects on perceived restaurant expensiveness occur regardless of whether a person has received a bill integrating the food and service charges for a particular dining occasion. The significant interaction between tipping policy and counterbalance order simply reflects differences in the perceived expensiveness of the four different stimulus restaurants, so the only theoretically interesting effect to achieve significance was that of tipping policy.

### EXHIBIT 4

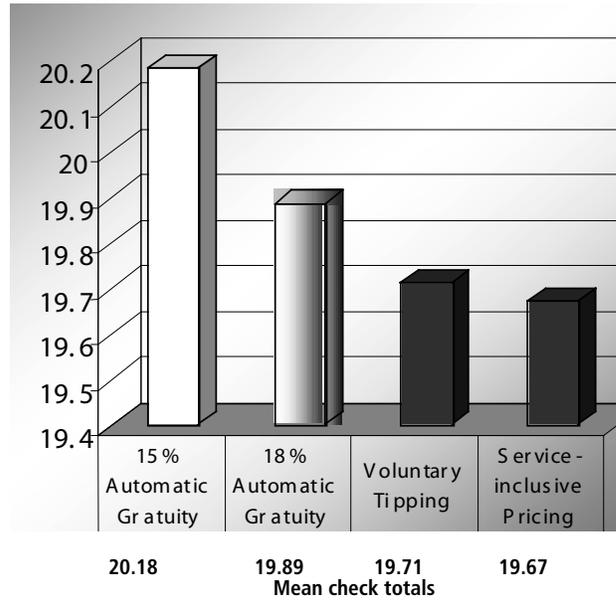
#### Expensiveness evaluation before and after checks



**EXHIBIT 5****Expensiveness ratings after check presentation**

Notes: Those policies whose columns have a different shading significantly differ from one-another in mean expensiveness rating.

The delayed ratings of restaurant expensiveness were analyzed using a full factorial design of the general linear model with tipping policy as a within subjects variable and counterbalance order as a between subjects variable. This analysis produced significant effects for tipping policy ( $F(3, 942) = 4.45, p < .005$ ) and the interaction of tipping policy with counterbalance order ( $F(9, 942) = 45.23, p < .001$ ). As before, the significant interaction simply reflects differences in the perceived expensiveness of the different stimulus restaurants, so only the tipping policy effect is theoretically interesting.

**EXHIBIT 6****Average check totals by tipping policy**

Notes: Those policies whose columns do not share a shading have significantly different average F&B subtotals.

The adjusted subtotals of the participants' bills were analyzed using a full factorial design of the general linear model with tipping policy as a within subjects variable and counterbalance order as a between subjects variable. The analysis produced a significant effect for the interaction of tipping policy with counterbalance order ( $F(9, 960) = 122.01, p < .001$ ), which reflected differences in the order size at the different stimulus restaurants. The main effect of tipping policy was only marginally significant ( $F(3, 960) = 1.93, p < .13$ ). However, paired comparisons of the different tip-policy conditions indicated that the average order size was significantly higher under the 15-percent service-charge policy than under the no-tipping and voluntary-tipping policies (means = \$20.18 vs. \$19.67 and \$20.18 vs. \$19.71). The subtotal under the 18-percent service-charge policy (mean = \$19.89) was not significantly different from that under any of the other policies.

that the effects of the various tipping policies on perceived restaurant expensiveness are fairly robust, and that consumers base evaluations of restaurant expensiveness on menu prices rather than on the bills they receive.

**Summary Ratings of Restaurant Expensiveness**

Participants' ratings of expensiveness did not change substantially in the second round of ratings. Once again, the restaurants with the no-tipping policy (mean 4.84) and 18-percent service charge (4.91) were perceived as significantly more expensive ( $p < .05$ ) than were those with voluntary tipping (4.67) or a 15-percent service charge (4.67). Again, we found no other significant differences (see Exhibit 5). These findings, like those above, support our expectations concerning the effects of partitioned pricing on perceptions of expensiveness. Furthermore, since the delayed ratings all occurred after subjects had received their bills, the findings provide additional evidence that partitioned pricing reduces

perceived restaurant expensiveness even when consumers are well aware of the total cost of their meal.

**Size of Food Order**

We found that the type of tipping policy seemed to affect the size of participants' orders. Although participants were to order one item in each of the three categories, they could select any item in each class, items that differed in price. Thus, the differences in demand for the higher price items are reflected in the subtotals of the participants' bills. (Note: We adjusted for the 15-percent higher menu prices in the no-tipping situation.) The order size for each tipping policy is presented in Exhibit 6. The average order size was significantly higher under the 15-percent-service-charge policy (\$20.18) than it was under the no-tipping policy (\$19.67) and voluntary-tipping policy (\$19.71). The average order under the 18-percent-service-charge policy (\$19.89) was not significantly different from that under the other policies.

EXHIBIT 7

Restaurant 2 Simulation

The screenshot displays a multi-panel interface for a restaurant simulation. The top-left panel shows the 'Restaurant 2 Interior View' with a red wall and wooden chairs. The top-right panel is a 'Survey of Restaurant 2' with questions about tipping norms and decor. The bottom-left panel is the 'Restaurant 2 Menu' listing items like 'Honey-mustard Chili' and 'Greek Salad'. The bottom-right panel shows the 'Restaurant 2 Exterior View' and a receipt for a meal including 'Greek Salad', 'Hamburger Steak', and 'Bottled Water'.

**Restaurant 2 Interior View**

**Survey of Restaurant 2**

- Which of the following tipping norms applies to this restaurant?

- Tipping is Customary
- No Tipping -- Employees not Allowed to Accept Tips
- A 15% Gratuity Will be Added to Bill at End of Meal
- A 18% Gratuity Will be Added to Bill at End of Meal

**Restaurant 2 Survey**

- I think the decor of this restaurant is:

Very downscale  1  2  3  4  5  6  7 Very upscale

- I think this restaurant is:

Very cheap  1  2  3  4  5  6  7 Very expensive

**Restaurant 2 Menu**

**Appetizers**

- Honey-mustard Chili  3.65
- Mezzarella Sticks  4.25
- Greek Salad  4.50
- Chicken Fingers & Buffalo Wings  5.75
- Soup of the Day  2.95

**Entrées**

- Greek-style Chicken Kabobs  6.95
- Hamburger Steak  7.95
- Sour Cream Pork Chops  9.25
- Shrimp Basket  10.50
- Salmon & Proscutto  11.25

**Beverages**

- Coffee  1.25
- Tea  1.25
- Bottled Water  1.30
- Soda  1.50
- Orange Juice  1.75

**Restaurant 2 Menu**

An 18% Gratuity Will be Added to Bill at End of Meal

**Restaurant 2 Exterior View**

**Restaurant 2**

Greek Salad	\$ 4.50
Hamburger Steak	\$ 7.95
Bottled Water	\$ 1.30
<hr/>	
Subtotal	\$ 13.75
Tax	\$ 0.96
18% Gratuity	\$ 2.48
<b>Total</b>	<b>\$ 17.19</b>

**Customer Copy**

THANK YOU

**Restaurant 2**

Check

These findings generally support our ideas concerning the effects of partitioned pricing on demand. Only the expectation that the average order size at restaurants with service-inclusive pricing would be smaller than those at restaurants with voluntary tipping was not supported.

Discussion

Previous research on behavioral pricing suggests that price partitioning reduces perceived expensiveness and increases demand.<sup>9</sup> We found that restaurant tipping and service

<sup>9</sup> Chakravarti *et al.*, *op.cit.*; Lee and Han, *op.cit.*; Morwitz *et al.*, *op.cit.*; and Xia and Monroe, *op.cit.*

charge policies act in that way. In our study, restaurants with voluntary tipping or 15-percent service charges were, in fact, perceived as less expensive than were restaurants with 15-percent-higher menu prices that included service.<sup>10</sup> Moreover, even though the restaurant with an 18-percent service charge had higher total costs, that restaurant was

<sup>10</sup> Sales taxes do create minor differences. The service-inclusive pricing is equivalent to a 23% surcharge on item prices (1.15x1.07=1.2305) assuming a 15% hidden service charge and a 7% sales tax. The 15% automatic gratuity represents a 22% surcharge on item prices (1.15 + 0.07 = 1.22) assuming a 7% sales tax. Similarly, a 25% surcharge on item prices could be derived for the 18% automatic gratuity (1.18 + 0.07 = 1.25).

Restaurant 3 simulation

**Restaurant 3 Exterior View**

**Restaurant 3 Interior View**

**Restaurant 3 Menu**

**Survey of Restaurant 3**

- Which of the following tipping norms applies to this restaurant?

- Tipping is Customary
- No Tipping -- Employees not Allowed to Accept Tips
- A 15% Gratuity Will be Added to Bill at End of Meal
- A 18% Gratuity Will be Added to Bill at End of Meal

**Restaurant 3 Survey**

- I think the decor of this restaurant is:

Very downscale  1  2  3  4  5  6  7 Very upscale

- I think this restaurant is:

Very cheap  1  2  3  4  5  6  7 Very expensive

**Restaurant 3**

Spinach & Artichoke Dip	\$ 6.30
Oven Roasted Scallops	\$ 13.75
Juice	\$ 2.00
<hr/>	
Subtotal	\$ 22.05
Tax	\$ 1.54
15% Gratuity	\$ 3.31
<b>Total</b>	<b>\$ 26.90</b>

Customer Copy

**THANK YOU**

Next

**Restaurant 3 Check**

perceived as being no more expensive than a restaurant with service-inclusive prices. These findings support the idea that partitioned pricing via voluntary tipping or service charges reduces perceptions of restaurant expensiveness. Moreover, these effects were evident in the summary ratings after all costs were tallied, demonstrating that the effect is robust, and reinforcing our earlier conclusion that customers base evaluations of restaurant expensiveness on menu prices.

We also found that average order sizes at restaurants with 15-percent service charges were larger than were those

at restaurants with service-inclusive menu prices. Although we failed to find a significant difference in the average order size between voluntary-tipping and service-inclusive-pricing policies, the means were in the expected direction. Furthermore, an 18-percent automatic service charge did not reduce the order size compared to service-inclusive menus. Again, these findings generally sup-

Restaurant 4 simulation

The simulation interface includes several key components:

- Restaurant 4 Exterior:** A photograph of the restaurant's building facade.
- Restaurant 4 Interior:** A photograph of the restaurant's interior, featuring a bar and dining tables.
- Restaurant 4 Menu:** A list of menu items categorized into Appetizers, Entrees, and Beverages, each with a price and a radio button for selection.
 

Category	Item	Price
Appetizers	Caesar Salad	6.50
	House-made Mozzarella & Tomatoes	7.75
	Buffalo Carpaccio	8.50
	Colossal Shrimp	9.75
	Old World Onion Soup	3.95
Entrees	Blackened Chicken Sandwich	11.50
	Classic Wiener Schitzel	13.95
	House Smoked Baby Back Ribs	15.50
	Glazed Wild Alaskan Salmon	16.75
	Grilled New York Strip	19.25
	Beverages	Item
Soda	1.70	
Coffee	1.85	
Fresh Juice	2.50	
Red Wine (glass)	5.00	
White Wine (glass)	5.00	
- Restaurant 4 Check:** A digital bill showing the following items and prices:
 

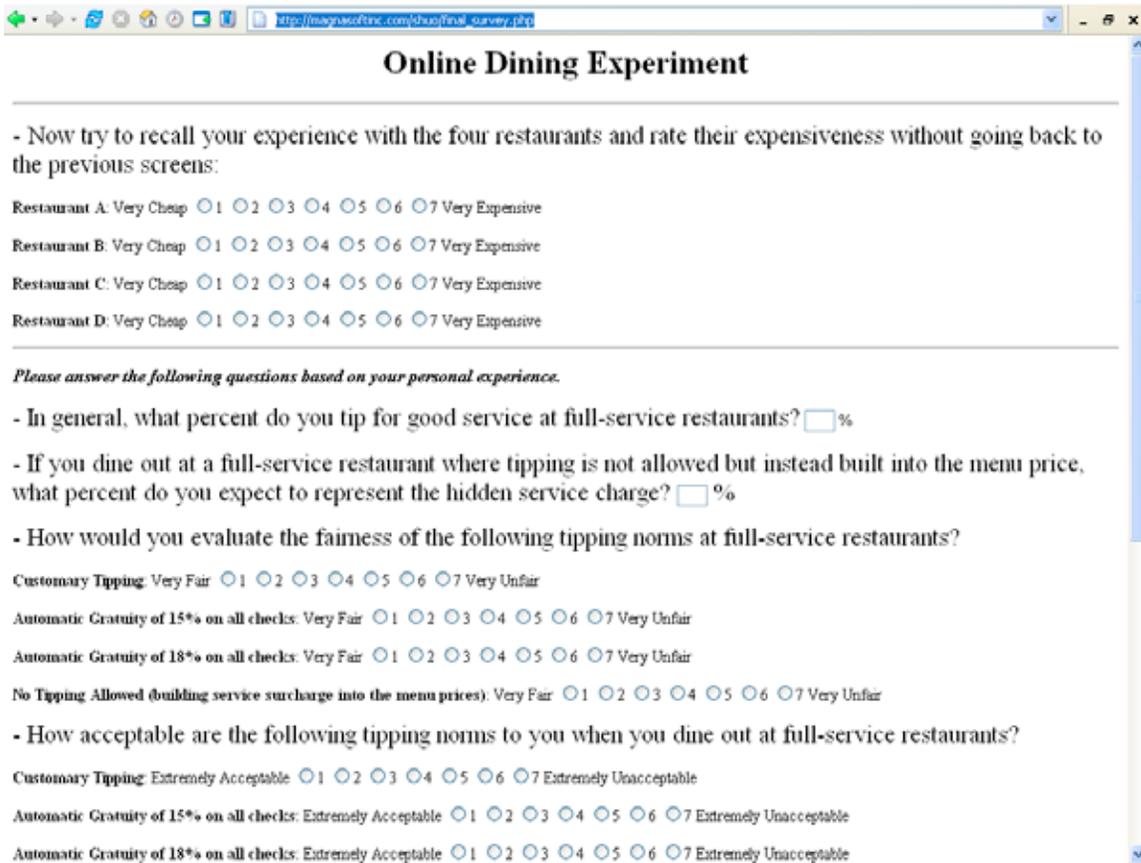
Item	Price
Buffalo Carpaccio	\$ 8.50
Glazed Wild Alaskan Salmon	\$ 16.75
Fresh Juice	\$ 2.50
<b>Subtotal</b>	<b>\$ 27.75</b>
Tax	\$ 1.94
<b>Amount Due</b>	<b>\$ 29.69</b>
Tip (assume good service)	\$
<b>Total</b>	<b>\$</b>
- Survey of Restaurant 4:** A survey form with the following questions:
  - Which of the following tipping norms applies to this restaurant?
    - Tipping is Customary
    - No Tipping -- Employees not Allowed to Accept Tips
    - A 15% Gratuity Will be Added to Bill at End of Meal
    - A 18% Gratuity Will be Added to Bill at End of Meal
  - I think the decor of this restaurant is:
    - Very downscale  1  2  3  4  5  6  7 Very upscale
  - I think this restaurant is:
    - Very cheap  1  2  3  4  5  6  7 Very expensive

port our ideas concerning the effects of partitioned pricing on demand.

Implications for Restaurant Tipping Policy

Our findings weigh against the use of service-inclusive pricing, particularly in restaurants with a price-sensitive clientele. Even so, we cannot categorically state that restaurants with service-inclusive pricing will always suffer from an unfavorable price perception. Upscale restaurants, for example, with their relatively price-insensitive clientele, should not see ef-

## End-of-experiment survey



**Online Dining Experiment**

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- Now try to recall your experience with the four restaurants and rate their expensiveness without going back to the previous screens:

Restaurant A: Very Cheap  1  2  3  4  5  6  7 Very Expensive

Restaurant B: Very Cheap  1  2  3  4  5  6  7 Very Expensive

Restaurant C: Very Cheap  1  2  3  4  5  6  7 Very Expensive

Restaurant D: Very Cheap  1  2  3  4  5  6  7 Very Expensive

---

*Please answer the following questions based on your personal experience.*

- In general, what percent do you tip for good service at full-service restaurants?  %

- If you dine out at a full-service restaurant where tipping is not allowed but instead built into the menu price, what percent do you expect to represent the hidden service charge?  %

- How would you evaluate the fairness of the following tipping norms at full-service restaurants?

Customary Tipping: Very Fair  1  2  3  4  5  6  7 Very Unfair

Automatic Gratuity of 15% on all checks: Very Fair  1  2  3  4  5  6  7 Very Unfair

Automatic Gratuity of 18% on all checks: Very Fair  1  2  3  4  5  6  7 Very Unfair

No Tipping Allowed (building service surcharge into the menu prices): Very Fair  1  2  3  4  5  6  7 Very Unfair

- How acceptable are the following tipping norms to you when you dine out at full-service restaurants?

Customary Tipping: Extremely Acceptable  1  2  3  4  5  6  7 Extremely Unacceptable

Automatic Gratuity of 15% on all checks: Extremely Acceptable  1  2  3  4  5  6  7 Extremely Unacceptable

Automatic Gratuity of 18% on all checks: Extremely Acceptable  1  2  3  4  5  6  7 Extremely Unacceptable

fects on their business from adopting service-inclusive pricing. (This is probably the situation for Per Se and restaurants like it.) Furthermore, the advantage that using an automatic gratuity confers on price cognition may disappear when service charges rise too high. In particular, if the amount of the automatic gratuity is higher than certain reference levels (e.g., the upper levels of voluntary tips left by consumers), consumers' perception of restaurant expensiveness may be shaped by what they might consider an outrageous automatic gratuity. If a restaurant operator is determined to levy a

large service charge to cover the expense of service, it might be better simply to implement service-inclusive pricing rather than shock guests with a huge automatic gratuity.

Although we endeavored to simulate consumers' dining experience through our computer-based experiment, our study wasn't a real-life dining situation. Our study perforce left out many other, related factors, such as service levels, brand, cuisine style, dining occasion, and even other customers. By isolating tipping from these other factors we may inadvertently have amplified its effect. Furthermore, our

Customary Tipping: Very Fair  1  2  3  4  5  6  7 Very Unfair  
 Automatic Gratuity of 15% on all checks: Very Fair  1  2  3  4  5  6  7 Very Unfair  
 Automatic Gratuity of 18% on all checks: Very Fair  1  2  3  4  5  6  7 Very Unfair  
 No Tipping Allowed (building service surcharge into the menu prices): Very Fair  1  2  3  4  5  6  7 Very Unfair

- How acceptable are the following tipping norms to you when you dine out at full-service restaurants?

Customary Tipping: Extremely Acceptable  1  2  3  4  5  6  7 Extremely Unacceptable  
 Automatic Gratuity of 15% on all checks: Extremely Acceptable  1  2  3  4  5  6  7 Extremely Unacceptable  
 Automatic Gratuity of 18% on all checks: Extremely Acceptable  1  2  3  4  5  6  7 Extremely Unacceptable  
 No Tipping Allowed (building service surcharge into the menu prices): Extremely Acceptable  1  2  3  4  5  6  7 Extremely Unacceptable

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*Please tell us about yourself.*

- How old are you?  years old
- Sex:  Male  Female
- Race:  Caucasian  Black  Hispanic  Asian  Mideastern  Mixed/other
- Are you a US citizen or permanent resident?  Yes  No
- Which of the following categories does your household income fall into?  
 \$0 - \$25,000  \$25,001 - \$50,000  \$50,001 - \$100,000  \$100,001 or more
- What is the highest level of formal education you have completed?  
 Some school  High school graduate  Some college  College graduate  Post-graduate
- Indicate your familiarity with US restaurant tipping customs:  
 Very unfamiliar  1  2  3  4  5  6  7 Very familiar
- On average, how many times per month do you dine out at full-service restaurants?  times per month

questions about tipping policies called participants' attention to the differences in the tipping policies at our hypothetical restaurants in a way that would not occur naturally. Therefore, participants in our study may have been more sensitive to differences in tipping policies than they would have been under normal circumstances. On the other hand, participants in this study did not actually have to pay the bills, and this may have made them less sensitive to differences in tipping policies and prices than they would be in real life.

Ideally, future research would test our hypotheses in real restaurants, but controlled experiments on tipping and service-charge policies is not feasible in the field. Realistically, restaurateurs must decide for themselves whether or not they think our findings generalize to their own circumstances. If they find our reasoning and empirical results compelling, then they can run their own case study by implementing changes in their tipping or service-charge policies to see what kind of reactions those changes bring. ■

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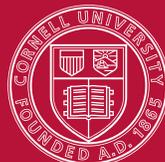


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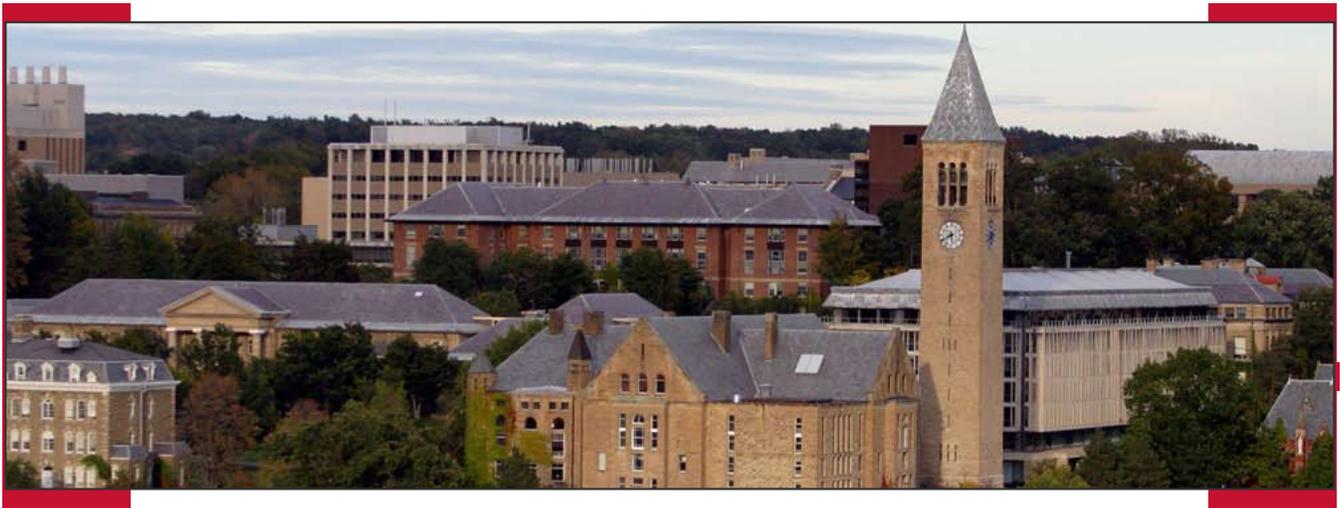
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