

## **The Effects of Tipping on Consumers' Satisfaction with Restaurants**

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### **Abstract**

A quasi-experiment with different tipping systems by the restaurant chain Joe's Crab Shack indicates that online ratings of the dining experience were reliably higher under tipping than under a no-tipping, service-inclusive pricing system. These findings provide an important counter-argument to those calling for the abolition of restaurant tipping. Consumers are happier with restaurant experiences under tipping, so there is a cost to eliminating or outlawing it.

## **The Effects of Tipping on Consumers' Satisfaction with Restaurants**

Tipping is nearly ubiquitous in U.S. restaurants, but it has come under attack in recent years with numerous journalists, social commentators, and restaurateurs calling for its abolition. Some of these people are calling on restaurateurs to voluntarily abandon the practice (Bershidsky, 2015; Grimminck, 2015), but many are calling for the practice to be banned or outlawed (see Dunn, 2013; O'Neil, 2015; Stuart, 2014). The latter path through regulatory changes may be the only feasible way to get rid of tipping, because price competition is a major impediment to restaurateurs' voluntary and unilateral abandonment of this compensation system (Lynn, 2017).

The advocates of abolishing tipping typically focus on the negative effects of tipping on workers. Among other things, they argue that tipping (i) results in unreliable and low incomes for tipped workers (Stuart, 2014), (ii) creates income inequality between waiters and kitchen staff (Bershidsky, 2015), (iii) enables and encourages customers to sexually harass female servers (Stuart, 2014), (iv) enables and encourages income tax evasion among servers (Grimminck, 2015), and (v) discriminates against less attractive waitresses and servers of color who receive lower tips than do more attractive waitresses and white servers (O'Neil, 2015). Some commentators have argued that these and other problems with tipping undermine the consumer's dining experience (e.g., Bershidsky, 2015), but much of the public debate over tipping has overlooked potential impacts on consumers. In this paper, I contribute to the policy debate about whether or not tipping should be outlawed by identifying the potential pros and

cons of tipping from a consumer perspective and assessing their net effects in a field study that compares restaurant customer satisfaction under tipping and no-tipping systems.<sup>1</sup>

There are reasons for believing that tipping undermines consumer satisfaction. For example, people have argued that tipping discourages teamwork among servers, which lowers service levels and customer satisfaction (Frumppkin, 1988). Others have argued that tipping motivates servers to discriminate in service delivery against groups perceived to be poor tippers (Brewster, 2013), which should lower satisfaction among those consumer groups. However, there are stronger and more numerous reasons for believing that tipping enhances consumer satisfaction. First, consumers report that they like tipping more than service charges or service inclusive menu pricing (Azar, 2010; Lynn, 2017), so this preferred service attribute may directly enhance consumer satisfaction. Second, consumers believe that tipping provides incentives that enhance service (Mills and Riehle, 1987; Lynn and Wang, 2013), so tipping may improve perceptions of service quality and overall customer satisfaction through assimilation and expectancy effects. Third, tipping is a pay-for-performance compensation system that selectively attracts and retains more competent workers in tipped occupations (Lynn, Kwortnik and Sturman, 2011) and that motivates servers to provide more personalized service (Kwortnik, Lynn and Ross, 2009), so tipping may enhance customer's subjective well-being by improving actual service levels. Fourth, tipping is a voluntary, pro-social behavior (Greenberg, 2014) that may

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<sup>1</sup> This study also speaks to public policy on the tipped minimum wage. Some policy analysts are advocating an elimination of the tip allocation (or credit) that permits restaurateurs to pay tipped workers a lower than typical minimum wage (Allegretto and Cooper, 2014). If adopted, this change in tipped minimum wage policy would encourage more restaurants to abandon tipping, because it would increase servers' pay beyond levels necessary to secure good workers and, thereby, encourage restaurateurs to capture the excess pay for themselves by replacing tipping with service charges or higher service-inclusive menu pricing (Azar, 2012; Lynn, 2017). Thus, the benefits and harms to consumers of tipping vs alternative ways to compensate service workers need to be considered as part of the potential benefits and harms of raising the tipped minimum wage.

enhance consumer satisfaction by leading consumers to: (i) infer greater satisfaction with the service encounter via self-perception processes (Fazio, 1987), (ii) positively bias their perceptions of service encounters to justify their tipping (Gawronski, 2012), or (iii) feel pride, self-satisfaction or some other form of “warm glow” affect (Giebelhausen, et. al, 2017). Finally, tipping is a form of price partitioning and discrimination that may enhance the satisfaction of price-sensitive consumers by reducing their perceived and actual costs of eating-out (Lynn, 2017; Lynn and Wang, 2013).

Although there are strong theoretical reasons to believe that tipping enhances consumers’ overall satisfaction with the service experience, published research assessing the existence, strength and robustness of this effect is limited. Azar (2004) observes that restaurant tip percentages have increased over time and argues that this trend suggests people derive psychic benefits from tipping that exceed its costs. In addition, Kwortnik, Lynn and Ross (2009) found that consumers’ ratings of service were higher at Miami Beach restaurants with tipping than at those with automatic service charges. Finally, Lynn and Kwortnik (2015) reported that Carnival Cruise’s customers rated their overall cruise experience more positively before the cruise line replaced tipping with automatic service charges than they did afterwards. These studies do suggest that tipping enhances customer satisfaction, but fall short of making a compelling case. Historical trends are at best indirect evidence of the net benefits to consumers of tipping and even that indirect evidence depends on the reasonable but uncertain assumption that the disutility of violating tipping norms is continuously differentiable (Azar, 2004). The observed effects of tipping on service ratings should lead to greater customer satisfaction, but provide little evidence about the strength of the latter effects because perceptions of service quality may be more sensitive to tipping systems than are feelings of overall satisfaction with the service experience.

The reported effect of tipping on overall satisfaction with Carnival's cruises was small and barely significant using a one-tailed test, so it could be a Type I error. Even if reliable, it is hard to interpret the effect because Carnival's move to no-tipping was accompanied by significant operational changes (i.e., a shift toward "Total Choice Dining") that may have temporarily degraded service levels on the affected ships while the new systems were being learned and refined. Furthermore, this study compared tipping with automatic service charges, as did Kwortnik, Lynn and Ross' (2009) study described above. Many consumers dislike service charges but are more neutral toward service-inclusive pricing (Lynn, 2017), so it is possible that tipping has different effects on customer satisfaction when compared to the latter alternative. Thus, more research is needed to test the effects of restaurant tipping on consumers' overall satisfaction with the dining experience. The study reported below takes advantage of a quasi-experiment with different tipping policies conducted by the restaurant chain Joe's Crab Shack to provide such a test.

#### Data Set

In 2015, Joe's Crab Shack tested a no-tipping policy at 18 of its 131 restaurants. Servers at the affected restaurants were paid higher wages that were funded through higher menu prices. Rollout of the no-tipping policy was staggered over time with 1 restaurant adopting the policy in July, 2 restaurants in September, 11 restaurants in October and 4 restaurants in November. In early May 2016, the company reversed course and returned to tipping at 14 of the 18 test restaurants. To test the effects of these policy changes on consumer satisfaction, a commercial firm, "ReviewTrackers," was asked to scrape the online reviews of the 18 affected restaurants as well those of 18 selected control restaurants that were posted between September 1, 2014 and August 30, 2016. The control restaurants were other Joe's Crab Shack units in the same state or

region as the treatment restaurants or were Bonefish Grill restaurants in the same cities as the treatment restaurants.<sup>2</sup> Overall, ReviewTrackers provided 1,252 Google and 1,402 Yelp reviews and ratings of the 36 restaurants along with the location of the restaurant being reviewed and the date the review was posted. Tipping policy was coded as “0 = no-tipping” if the review was of a treatment restaurant and was posted during the months of treatment; otherwise tipping policy was coded as “1 = tipping”.<sup>3</sup>

For supplemental analyses, two additional, dummy-coded, tipping-policy variables were created. Tipping Before was coded as a “1” if the review was of a treatment restaurant and was posted before the months of no-tipping treatment. Tipping After was coded as “1” if the review was of a treatment restaurant that returned to tipping in May 2016 and was posted during or after that month. When simultaneously entered into a regression model including restaurant dummies, the coefficients of these new tipping policy variables reflect the effects of moving away from tipping (after reversing the sign) and moving back to tipping respectively. In addition, the texts of the reviews were searched for the presence of references to tipping (i.e., the strings “tip” and “gratuity”), the service/server (i.e., the strings “service,” “server,” “waitress,” and “waiter”), the price (i.e., the strings “price,” “dollar,” and “\$”), and food/atmosphere (i.e., the strings “food,” “taste,” and “atmosphere”) and binomial variables were created for the presence or absence of each string. Indices reflecting the number of relevant strings appearing in the review were created for each reference topic by summing the relevant binomial variables and those indices

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<sup>2</sup> Joe’s Crab Shack and Bonefish Grill are comparably priced seafood restaurant chains, so the latter was perceived as a reasonable source of control restaurants.

<sup>3</sup> Depending on the treatment restaurant, the months of treatment were July, or September, or October or November 2015 through (including) April or August 2016. More precise assessments of the tipping policies in effect during the dining experience being reviewed were not possible. However, this imprecision in the assignment of reviewed dining experiences to tipping policies in effect at the time should reduce rather than increase differences between treatment conditions, so it makes our tests of tipping policy effects more conservative.

were used in the analyses reported below. Finally, the total number of words in each review was coded and used as a control variable in the analyses of text content.

## Results and Discussion

Descriptive statistics for, and correlations among, the key variables in this study are presented in Table 1. The effects of tipping policy on consumer satisfaction were assessed with regression analyses reported in Table 2. These analyses indicate that customer ratings of restaurants are higher (by .24 to .45 points out of 5) when the restaurants have a tipping policy than when they have a service-inclusive pricing policy with no tipping. This effect is robust to inclusion (or not) of source of review, date of review, and restaurant dummies as control variables (see Models 1 – 4, Table 2). Tipping policy appears to have had a slightly larger effect on Google reviews than on Yelp reviews (see Model 5, Table 2), but the difference is not reliable ( $B = .32$  vs  $.24$ ,  $F(1, 35) = .22$ , n.s.). The move away from tipping also appears to have had a slightly larger effect on customer satisfaction at the treatment restaurants than did the move back to tipping (see Model 6, Table 2), but again the difference is not reliable ( $B = .30$  vs  $.25$ ,  $F(1,35) = .08$ , n.s.).

The effects of tipping policy on references to tipping, service/servers, price and food/atmosphere in the review-texts were assessed with Poisson regression analyses reported in Table 3. These analyses indicate that customers mentioned tipping, service/servers, and price in their restaurant reviews less when the restaurant had a tipping policy than when it had a no-tipping policy (see Models 1-3, Table 3). Notably, no comparable tipping-policy effect was found for mentions of food/atmosphere, which should not have been affected by tipping policy (see Model 4, Table 3). Furthermore, these effects controlled for total word count, so they reflect changes in the content and not just volume of remarked upon aspects of the dining experience.



These results are consistent with the idea advanced in the introduction that no-tipping policies might reduce overall consumer satisfaction through its reduction of satisfaction with the restaurant's tipping policy, service, and prices.

The consequences and potential meaning of changes in review-text content were assessed in a regression of review ratings on review source, posting date, restaurant dummies, number of review references to tipping, service/servers, price, and food/atmosphere, total review word count, and tipping policy with standard errors clustered within restaurant (see Model 7, Table 2). Results indicated that greater review mentions of tipping, service/servers, and price were associated with lower review ratings – though only the latter two effects were reliable. Mentions of food or atmosphere were unrelated to review ratings. Furthermore, the effect of tipping policy was diminished and only marginally significant ( $p < .14$ ) in this analysis. Although far from proof of underlying process, these results are at least consistent with the idea that displeasure with the no-tipping policy and with service and prices under that policy mediated its effects on overall consumer satisfaction.

### Conclusions

The key finding of this study is that online consumer reviewers were happier with restaurant experiences when the restaurant had a tipping system than when it had a no-tipping, service-inclusive pricing system. In addition, these consumers were more likely to mention the tipping policy, service/servers, and prices when reviewing tipping as opposed to no-tipping restaurants and mentions of the latter two of these topics were associated with reliably lower overall restaurant ratings. These findings extend previous evidence that overall cruise ratings and restaurant service ratings are higher under tipping than under service charge systems (Kwortnik, et. al., 2009; Lynn and Kwortnik, 2016). They are also consistent with previous findings that

consumers' prefer tipping over its alternatives (Azar, 2010; Lynn, 2017), tipping reduces actual and perceived restaurant expensiveness (Lynn, 2017; Lynn and Wang, 2013), and tipping increases perceived service quality (Kwortnik, et. al., 2009).

The finding that tipping enhances online consumer reviewers' overall satisfaction with restaurant experiences provides an important counterpoint to the many people arguing that tipping harms workers and, therefore, should be abandoned or even outlawed (Dunn, 2013; Grimminck, 2015; Stuart, 2014). Even if many of the claims about tipping's harmfulness are valid, restaurateurs and policy makers contemplating the abandonment or outlawing of tipping should weigh those harms against the benefit of tipping's enhancement of customer satisfaction. Since consumers outnumber service workers by a wide margin, that benefit of tipping may outweigh its purported harms to workers. However, the current findings involve the effects of tipping vs no-tipping in a society where tipping is normative and other restaurants retain pro-tipping policies. If tipping were universally abandoned or were outlawed as some are advocating, the resulting customer dissatisfaction may be reduced by the loss of service and price comparisons with tipping restaurants as well as by the growth over time in familiarity with, and acceptance of, no-tipping systems. Future research should test these possibilities by comparing customer satisfaction under tipping and no-tipping systems in industries or countries where tipping is less normative. Researchers should also identify and test other benefits and costs of tipping vs its alternatives in order to better inform tipping policy.

Table 1. Descriptive statistics for, and correlations among, variables in the study (n = 2,654).

	Mean	S.D.	Tip Policy	Yelp	Date	Tip Ref.	Service Ref.	Price Ref.	Food Ref.	Words
Rating	3.29	1.53	.08*	-.20*	.16*	-.13*	-.22*	-.21*	-.003	-.29*
Tip Policy <sup>a</sup>	.83	.37	1	.09*	-.18*	-.28*	-.02	-.06*	-.001	-.003
Yelp <sup>b</sup>	.53	.50		1	-.46*	.07*	.34*	.20*	.001	.42*
Date <sup>c</sup>	474.45	196.65			1	.03	-.18*	-.08*	-.01	-.25*
Number of Tipping References	.07	.26				1	.22*	.23*	-.02	.28*
Number of Service/Server References	.66	.74					1	.16*	-.002	.48*
Number of Price References	.24	.52						1	-.01	.36*
Number of Food or Atmosphere References	.69	.67							1	-.002
Number of Words	75.17	94.00								1

<sup>a</sup> tipping=1, no-tipping=0; <sup>b</sup> yes =1, no=0; <sup>c</sup> Converted to days from first date in the data set;

\* p< .01

Table 2. Coefficients (and robust standard errors clustered within restaurant) from regression analyses predicting customer satisfaction ratings (number of observations = 2654; number of restaurants = 36).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	3.03*** (.10)	3.31*** (.10)	2.79*** (.18)	2.87*** (.13)	2.86*** (.13)	2.87*** (.14)	3.24*** (.14)
Yelp <sup>b</sup>		-.65*** (.09)	-.50*** (.11)	-.58*** (.08)	-.51** (.16)	-.58*** (.08)	-.24** (.08)
Date <sup>c</sup>			.001** (.0002)	.001*** (.0002)	.001** (.0002)	.001** (.0002)	.001** (.0002)
Restaurant Dummies				included	included	included	included
Number of Word Strings Referencing Tipping							-.06 (.11)
Number of Word Strings Referencing Service/Server							-.15** (.05)
Number of Word Strings Referencing Price							-.31*** (.07)
Number of Word Strings Referencing Food/ Atmosphere							.001 (.04)
Number of Words							-.003*** (.0004)
Tip Policy <sup>a</sup>	.31** (.11)	.39** (.10)	.45*** (.11)	.28* (.11)			.17 (.11)
Tip Policy X Yelp					.24* (.11)		
Tip Policy X Google					.32 <sup>t</sup> (.16)		
Tipping Before <sup>b</sup>						.30* (.14)	
Tipping After <sup>b</sup>						.25 <sup>t</sup> (.14)	
R <sup>2</sup>	.01	.05	.06	.15	.15	.15	.20

<sup>a</sup> tipping=1, no-tipping=0; <sup>b</sup> yes =1, no=0; <sup>c</sup> Converted to days from first date in the data set;

<sup>t</sup> p < .10, \* p < .05, \*\*p < .01, \*\*\*p < .001

Table 3. Coefficients (and robust standard errors clustered within restaurant) from Poisson regression analyses predicting number of word strings referencing different topics in the review text (number of observations = 2654; number of restaurants = 36).

	Model 1: Tipping References	Model 2: Service/Server References	Model 3: Price References	Model 4: Food/ Atmosphere References
Constant	-2.10*** (.29)	-.82*** (.08)	-1.72*** (.18)	-.562*** (.10)
Yelp <sup>b</sup>	.32 (.20)	.54*** (.06)	.65*** (.11)	-.04 (.04)
Date <sup>c</sup>	.001 (.001)	-.0002 (.0001)	.0000 (.0003)	.0000 (.0002)
Restaurant Dummies	included	included	included	included
Number of Words	.005*** (.0004)	.003*** (.0002)	.003*** (.0003)	.0001 (.0002)
Tip Policy <sup>a</sup>	-1.31*** (.26)	-.12* (.05)	-.27** (.08)	.07 (.06)
Pseudo R <sup>2</sup>	.22	.09	.10	.01

<sup>a</sup> tipping=1, no-tipping=0; <sup>b</sup> yes =1, no=0; <sup>c</sup> Converted to days from first date in the data set;

<sup>t</sup> p < .10, \* p < .05, \*\*p < .01, \*\*\*p < .001

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