

The Economics of Tipping

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A tip is a payment from a customer to a service provider, but tips differ from other economic transactions in significant ways. The level of the tip is discretionary. It differs between customers and between occasions. The norm to tip exists in some countries and not in others. Where tipping exists, it occurs in some service occupations (like taxi drivers) but not in others (like bus drivers).

Restaurants and bars are the industries where tips are by far the most prominent. In the US food industry alone, Azar (2011) estimates that annual tips reach \$47 billion. The Treasury Inspector for Tax Administration (2018) estimated a total of \$44 billion of individual tip income in 2006 in the United States (including unreported tips, and not only in the food industry). These estimates make it clear that tip income in the food industry is the major source of US tip income, which is also the reason that much of the literature on tipping, including this article, tends to focus on restaurant tipping. The number of workers affected by tips is also very high. In the US, for example, there are over 2.6 million servers and 610,000 bartenders (as reported at <https://www.bls.gov/ooh>), occupations in which tips are a significant source of income. In many US states, tipped employees have a lower minimum wage—as low as \$2.13 per hour—resulting in wage income being very low and making tips a very high part of their income. Wessels (1997) reports that the income share that comes from tips is 58 percent for servers in full-course restaurants

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and 61 percent for those in counter restaurants—and these are underestimated numbers because tips are often underreported.

For many years, tipping has received some attention from psychologists, who wanted to understand the psychological motivations for tipping, but little attention from economists. In recent years, however, tipping has attracted more interest in economics (for a detailed literature review, see Azar 2007a). The first section of this paper offers a brief historical and contextual review of tipping. The next section discusses some of the main reasons for tipping. It explains why an explanation for tipping based on rational forward-looking consumers is not supported by the evidence. Instead, tipping is better explained as a result of psychological and social motivations of consumers who obey a social norm. For tipping to encourage better service, tips should increase in service quality, and so the next step is to examine the evidence about the relationship between service quality and tips. The discussion then turns to the question of how tips often represent rents to servers and how some restaurant owners try in various ways to disrupt the social norm of tipping and instead use service charges to appropriate those rents—sometimes with the intention of redistributing them to untipped workers. An accusation sometimes leveled against tipping is that it can facilitate racial discrimination and sexual harassment, and so the evidence for these claims is outlined. The conclusion offers an overall perspective on tipping, rooted in the preceding discussion, and suggests some directions for future research.

History and Context

There is no agreement on just how the practice of tipping started. Hemenway (1993) suggests that tipping dates as far back as the Roman era and is probably even older. Segrave (1998) claims that tipping may have begun in the late Middle Ages when a master or lord of the manor could give a little extra money to a servant or laborer, whether from appreciation of a good deed or from compassion. Brenner (2001) attributes the tipping origins to 16th century England, where brass urns with the inscription “To Insure Promptitude” were placed first in coffeehouses and later in local pubs. People tipped in advance in order to get good service by putting money in these urns. Indeed, Schein, Jablonski, and Wohlfahrt (1984) and Brenner (2001) suggest that “tip” comes from the first three letters of “To Insure Promptitude,” but others suggest different stories. Hemenway (1993), for example, argues that “tip” may come from stipend, a version of the Latin “stips.”

It seems that Europe exported the practice of tipping to the United States, when high-income Americans who traveled in Europe in the 19th century started tipping upon their return to the United States, to show that they had been abroad and were familiar with the European customs (Schein, Jablonski, and Wohlfahrt 1984). By 1895, the average tip in European restaurants was 5 percent of the bill, while in the United States a common tip was 10 percent. Segrave (1998) estimates that during the early 1910s, five million US workers—more than 10 percent of the

labor force—had tip-taking occupations. The large extent of tipping gave some tipped employees relatively high income, and employers both in Europe and the United States sometimes tried to take these economic rents from the workers either by taking the tips, or by charging employees for the right to work and earn tips (Scott 1916; Segrave 1998; Azar 2004a).

By the early 20th century, even though the tipping custom had only just arrived in the United States, there were already attempts to abolish it. Some saw tipping as creating a servants' class, part of a society where the tippers looked down upon the service providers. Gunton (1896) called tipping offensively un-American, because it was contrary to the spirit of American life of working for wages rather than fawning for favors. Some states passed laws against tipping, starting with Washington in 1909, but these laws were repealed after several years.

Over the years, the percentage tipped in the United States has gradually risen. The 10 percent tipping norm in restaurants in the late 19th century stayed for several decades (Hathaway 1928; Post 1937), but eventually increased to 15 percent (Post 1984). In her etiquette manual, Post (1997) writes, "It wasn't long ago that 15 percent of the bill, excluding tax, was considered a generous tip in elegant restaurants. Now the figure is moving toward 20 percent for excellent service. In ordinary family-style restaurants 15 percent is still the norm." Today, some travel guides refer to 15–25 percent as a tipping standard in restaurants (for example, <https://www.lonelyplanet.com/news/2016/12/07/how-much-to-tip/>). A similar pattern of increasing tip percentages is observed in taxi tipping, starting with 10 percent early in the 20th century (Hathaway 1928), rising in mid-century to 15 percent (Post 1984), and then by the end of the 20th century reaching 20 percent in large cities (Post 1997).

Today, tipping norms differ around the globe. Tourist guidebooks often provide advice about the tipping norms in the country (for example, Star 1988). In Europe, where tipping originated and was common already hundreds of years ago, today tipping is generally less common and in much smaller magnitudes than in the United States. In many European restaurants, tipping takes the form of rounding up the restaurant bill a little, not adding 15–20 percent to the bill. Along with restaurant servers and taxicab drivers, some of the professions where tipping is at least relatively common include food delivery people, bartenders, and hair salon workers.

Main Reasons for Tipping

It is extremely difficult to explain tipping behavior from the perspective of a purely self-interested consumer. After all, a tip is usually given after the service has been provided. One can make a theoretical argument that if the self-interested consumer is in a repeated relationship with a seller, for a good or service where qualities controlled by the seller matter, then the consumer could have an economic motivation to tip. However, this motivation for tipping is irrelevant for customers without intentions to return to the same service provider. In a big city, for example, you are unlikely to meet the same taxi driver in the future—and even if you did,

Table 1

Reasons Given for Tipping

Reason for tipping	United States	Israel
1. Avoid feeling guilty	60.2%	13.3%
2. Avoid embarrassment	44.1%	23.2%
3. Tipping being a social norm	84.7%	58.1%
4. Show gratitude	67.8%	68.9%
5. Waiters depend on tips	66.9%	32.4%
6. Get poor future service if I don't tip	13.6%	2.5%
7. The waiter may yell at me if I don't tip	4.2%	0.0%
Total number of reasons	3.42	1.98
Number of observations	118	241

Source: Based on Azar (2010).

the driver is unlikely to recognize you and adjust the quality of service to your tip a couple of years ago. People also tip in restaurants or hotels when they travel and do not plan to go back to the same places. This already suggests that for many tippers (those who are one-time customers), future service is not a reason for tipping. In what follows, I will explain why even for repeat customers, future-service considerations are not likely to be a significant reason for tipping. Instead, psychological and social motivations seem more plausible reasons for tipping. Then, I also discuss how the motivations of tippers, workers, and restaurants could combine to create a self-reinforcing social norm that sustains tipping behavior.

The Lack of Support for Future-Minded Tipping

One way to gain insight into why people tip is to ask them. Azar (2010) conducted a survey in the United States and Israel, asking people to mark the reasons (possibly more than one) why they tip, giving seven possible reasons. Table 1 reports some results. Future-service considerations or the risk of being yelled at do not seem to be an important reason in either the United States or Israel. In both countries, the most common responses are that tipping is a social norm and to show gratitude. However, US respondents (who gave more reasons on average compared to Israelis) also often endorsed the reasoning that waiters depend on tips and that they want to avoid feeling guilty and avoid embarrassment as reasons why they tip.

Additional evidence that future service does not motivate tipping is provided by Azar (2007b). Azar builds a theoretical model showing that if future service is a reason for tipping, the sensitivity of tips to service quality should be higher for repeat customers than for one-time customers. Azar then analyzes empirical data from restaurants and does not find evidence for such difference in tipping behavior, suggesting that future service is not a reason for tipping even by repeat customers.

An alternative approach to assess the importance of future interactions as a potential cause for tipping is to look at the occupations where tipping is common. Lynn (2016) uses a survey to study characteristics of tipped versus non-tipped service occupations and finds that higher likelihood of encountering the same service

provider on multiple service occasions and occupations with higher frequency of customer patronage are not more likely than other occupations to be tipped. As a concrete example, it seems unlikely that anyone thinks about the chance of meeting the same cab driver for a future trip when calculating a tip. This again suggests that future-service motivations are not an important reason for tipping. In a similar spirit, Lynn (2018) uses an online survey to study the motivations for tipping in various occupations. He finds a wide array of occupations where future-service motives are plausible, but tipping is rare. Some of these rarely tipped occupations where a consumer might plausibly expect to see the same person on a future visit were dental hygienists, veterinarians, car mechanics, appliance delivery and installation men, and restaurant workers who hand you the food when you pick up takeout orders. This again suggests that future-service motivations are not an important motivation for tipping.

Because future-service motivations do not seem to be a significant reason for tipping, we can conclude that the vast majority of tipping is not motivated by economic considerations of a selfish and emotionless consumer, but rather by psychological and social motivations, and in particular the first five reasons in Table 1. Indeed, tipping as the social norm was the most popular reason given for tipping in the US and the second most popular in Israel. Moreover, the reasons of avoiding feeling guilty and avoiding embarrassment, which are frequently endorsed, are also related to tipping being a social norm; people do not feel guilty or embarrassed not to tip workers where there is no social norm to tip them (like flight attendants).

A different approach to understand the motivations for tipping is provided by Azar (2004b), who combines a model of tipping with the historical evidence. In the model, a customer chooses the size of a tip (measured as a percentage of the bill) to maximize utility in a framework where the choice of a tip can provide higher utility from following a social norm or feeling good personally about the tip (say, from feeling generous), but a higher tip also costs more.¹ In this model, the social norm is endogenous and evolves over time: the norm in each period is the average tip in the previous period. The model allows customers not to have any positive feelings from tipping beyond the desire to obey the social norm, but the analysis shows that if tips remain unchanged or increase over time, this means that at least for some customers, such positive feelings from tipping exist. Combined with the historical evidence discussed earlier about tip percentages in the United States increasing

¹Specifically, the utility function in Azar (2004b) is

$$u(g; n_t, \theta) = d(g - n_t) + \theta p(g) - bg,$$

where g is the tip in percentage of the bill, n_t is the tipping norm at time t , and p is an increasing function that captures the psychological utility from tipping that results from feeling generous, impressing others, etc. The value of θ captures the degree of positive feelings that the customer gains from tipping, where $\theta \geq 0$ and the population of customers may be heterogeneous in the value of θ . The function d captures the disutility from social disapproval and the desire to conform to the social norm, and it is assumed to be maximized at $d(0)$, and b is the bill size. The customer chooses g to maximize utility (subject to $g \geq 0$), taking as given the values of n_t and θ .

over time, the model suggests that the US pattern during the last century is that people tipped on average a little above the social norm, because it gave them positive feelings of being generous, impressing others, showing their gratitude, and so on. Because the average tipper tipped above the norm, over time the tipping norm increased. Then people started tipping above this increased norm, the norm further increased, and so on. This process can explain why the percentage tipped in US restaurants roughly doubled over the last century. The model can be applied also to the evolution of social norms other than tipping, and it suggests that when a norm is costly to follow and people do not derive benefits from following it other than avoiding social disapproval, the norm erodes over time.

Tipping as a Welfare-Increasing Social Norm

Why are social norms, like tipping, created? One view in economics is that social norms are created because they increase welfare. In this spirit, Arrow (1971) argued:

I want, however, to conclude by calling attention to a less visible form of social action: norms of social behavior, including ethical and moral codes. I suggest as one possible interpretation that they are reactions of society to compensate for market failures...There is a whole set of customs and norms which might be similarly interpreted as agreements to improve the efficiency of the economic system (in the broad sense of satisfaction of individual values) by providing commodities to which the price system is inapplicable.

In this spirit, Azar (2005a) examines whether tipping is a norm that increases social welfare using a model of tipping in which a customer and a server interact. The server's utility is standard and includes the earnings from the tip and the cost of effort, both depending on the service quality, which the server chooses optimally. The customer's utility function is less standard, as it includes psychological utility and a social norm, along with the cost of the tip itself. However, there is no assumption that following the social norm exactly will lead to the highest utility, which allows for cases in which motivations like generosity and empathy for the server result in the psychological utility being maximized at a tip level that is above the social norm.² Azar finds, in line with the view expressed by Arrow (1971), that tipping can indeed improve

²Specifically, the customer's utility function in Azar (2005a) is

$$u(s, t, b) = -b(1 + t) + f(t - n(s)) + G(s, b),$$

where s is service quality, t is the tip percentage, b is the bill size, and $n(s)$ is the social norm function about how much should be tipped for each service quality. The first term of $-b(1 + t)$ captures the cost of dining and leaving the tip. The last term of $G(s, b)$ is the utility from the dining experience, which depends on service quality and on the quantity and quality of food purchased, which are captured by the bill size. The function f captures the psychological utility from feelings and depends on the difference between the amount tipped (t) and the norm about how much should be tipped for the service quality received.

service quality and social welfare, and that these improvements will be larger when the sensitivity of tips to service quality according to the social norm is higher.

Which Occupations Are Tipped?

One more approach to thinking whether the purpose of tipping is to improve social welfare is to look across occupations. Azar (2005b) uses a list of 37 occupations, some of which are tipped whereas others are not. Using several sources on tipping practices, Azar builds a measure of tipping prevalence in each occupation. Using questionnaires, the occupations were rated on several dimensions: the closeness established between the customer and the worker during the service; the worker's income not including tips; the income of the typical customer of this service occupation; the relative importance of the personal versus professional components of service; and the ability of the customer to evaluate the professional component of service. The latter two are used to create a measure of the customer's ability to monitor the worker. The results suggest that tipping prevalence is negatively correlated with the worker's income (before tips) and positively with the customer's income, so tipping seems to serve as a redistributive norm: it happens more in occupations where it transfers money from high-income individuals to low-income ones. Tipping prevalence is positively affected by the closeness established during the service between the worker and the customer. In terms of economic efficiency, if tipping was created in the occupations where it has the highest ability to lower monitoring costs by shifting them from the employer to the customer, we should see a positive relationship between the customer's monitoring ability and tipping prevalence; however, this relationship is negative (though not statistically significant) in the data. However, if we extend the notion of social welfare to include psychological utility, then possibly tipping is created where it improves social welfare the most, because tipping seems to be more prevalent in occupations where consumers feel empathy and compassion for the workers and want to show gratitude for good service.

Lynn (2016) takes a similar approach, using a more extensive list of 122 service occupations and a different set of questions. He concludes that in the United States, customers are more likely to tip occupations with these characteristics: workers are less happy than customers during the service encounter; the workers' income, skill, and required judgment are low; the workers deliver customized service; and customers can more easily evaluate workers' performance than managers can. The last item implies that tipping is more common where it yields higher economic efficiency.

Customer Interests Regarding Tipping

A social norm in favor of tipping might be based on the interaction of psychological, social, and economic motivations between customers and sellers. For customers, tipping appeals to several different motivations, as discussed above, and consequently most customers prefer tipping to the main alternatives. For example, Azar (2010) asked in his survey if customers would prefer tipping or an automatically added service charge. Roughly one-fifth of the US and Israeli respondents

expressed no preference between the two. However, those who did express a preference were overwhelmingly in favor of tipping in both countries (tipping was over four times more popular on average), despite the modest level of service charge proposed as the alternative (15 percent of the bill in the United States and 12 percent of the bill in Israel).

Why do customers prefer tipping? The Azar (2010) survey did not ask directly, but the responses to other questions provide some hints. Over two-thirds of the respondents, in both the US and Israel, endorsed this reason for tipping: "By tipping I can show the waiter my gratitude for his service." In addition, respondents reported a high sensitivity of their tips to service quality, suggesting that they want to be able to control what they pay for the service, according to the actual service they receive. When asked for the reasons they tip more for better service, the majority of respondents reported that it is fairer that tips will depend on service, and that they want to show their gratitude in proportion to how grateful they actually are. These responses can explain why tipping is preferred to service charges that do not depend on service quality.

Restaurant Interests Regarding Tipping

Servers often earn much more with tipping than they would in a regime in which tipping is replaced by service charges or higher prices that go to the restaurant, which would only pay them wages. What about the interests of the restaurant owner? I will discuss at a later point why restaurants may not want to support tipping. But do restaurants also have reasons to prefer tipping to service charges or higher prices? The answer is "yes."

First, because most customers prefer tipping and restaurants operate in a competitive environment, it makes sense (at least for most restaurants) to choose the policy that most customers prefer.

Second, higher prices in lieu of tipping may result in customers perceiving the restaurant as more expensive and less attractive, even if the tips plus the lower prices are equal to the increased prices. This can be the result of psychological biases in the perception of prices, which puts more emphasis on the menu prices than on the additional costs (such as tips).

Third, the mechanism of tipping, in which a customer receives service and observes its quality and then has discretion regarding how much to tip, can potentially serve as customer monitoring that improves service and social welfare (Azar 2005a). Imagine that it is too costly for the owner to supervise all the dimensions of service quality for certain workers, like their degree of friendliness (and then also pay more to workers who provide better service). It is possible that tipping provides an incentive to improve service, in a way that saves money for the restaurant and makes both the worker and the customer better-off.

Fourth, if a restaurant replaces tipping with higher prices and then pays its servers what the average server used to earn with tips, it benefits those who earned lower tips at the expense of those who earned higher tips. The latter servers may quit and go to work at a competing restaurant that uses tipping, where they will earn

more. Presumably the servers who had previously received higher tips are the ones the customers like more (and therefore they tip them more). Thus, the restaurant's move to higher prices results in self-selection of the poorer servers to continue working and the better servers to leave.

Finally, we should remember that we are usually talking not about a new restaurant, but about an existing restaurant, and tipping is the status quo. Replacing tipping with higher prices at an existing establishment is a change. Changes create various costs, they may have unforeseen consequences, and firms often do not like changes without clear benefits. Changing a restaurant with tipping to a restaurant with higher prices requires printing new menus. It risks upsetting repeat customers. Weekend shifts that are popular among the servers with tipping due to higher tip income will become unattractive due to more work for the same pay under fixed wages, possibly making it hard to get servers for these busy shifts.

Taking these motivations together, a restaurant has an incentive to facilitate tipping by making it easy and salient for tips to be paid. One way we see this happening is that US restaurants and taxicabs commonly offer the bill with a space for a tip to be inserted for those who pay with credit cards, and sometimes they even calculate and show the customer how much a tip of 15, 20, or 25 percent would be. The observation that all the relevant parties—the customers, the servers, and the restaurants—have reasons to retain tipping can explain why it is still such a widespread phenomenon and a social norm that at least in some industries and some countries survives and even flourishes and becomes more significant.

The Relationship between Tipping and Service Quality

Does tipping actually provide incentives to the workers in a manner that improves service quality? The answer depends on the sensitivity of tips to service quality, and several studies have tried to assess this sensitivity empirically. A common methodology used for this purpose is to give customers as they exit the restaurant a questionnaire about their dining experience, which includes questions about service quality and usually some additional control variables. The bill and tip amounts can be collected either from the customers or from the restaurant. Regressions in which the tip is the dependent variable and the service quality (as rated by the customer) is one of the independent variables then suggest to what extent tips are associated with service quality.

How Is Service Quality Associated with Tipping?

The results about the relationship between service and tips from customer surveys are mixed. On one hand, studies that examine whether a certain behavior of servers affects tips often find a significant effect. For example, Lynn, Le, and Sherwyn (1998) found that customers tipped significantly more when they were touched by the server than when they were not touched, and Lynn and Mynier (1993) found that squatting during the initial visit to the table increases tips.

On the other hand, when considering the relationship between service quality and tips directly, the sensitivity of tips to service quality seems to be low. In a meta-analysis, Lynn and McCall (2000) found a statistically significant and positive relationship between tips and service evaluations, but the effect of service on tips was small and accounted for less than 2 percent of the variability in tip percentage (although it approached 5 percent of the variability in studies that used customer ratings of service on multi-item scales, which may be more reliable).

Several similar studies since that review have also found that the sensitivity of tips to service quality is positive, but modest. Conlin, Lynn, and O'Donoghue (2003) collected survey data from 1,393 customers of 39 restaurants in Houston, Texas. They averaged the customers' answers to four measures of service quality (appearance, friendliness, speed of service, and attentiveness)³ and combined these to create a single measure on a 1–5 scale. They find that an increase of 1 point in this combined measure raises the tip by 1.46 percentage points, which is about 8 percent above the average tip of 17.56 percent. Azar (2007b) finds in a sample of 597 diners from six restaurants that repeating customers (N=169) reduce their tips by 0.09 percent of the bill for each additional point in self-reported service quality (on a 0–5 scale), whereas non-repeating customers (N=428) increase their tips by 0.90 percent of the bill for each point, representing about a 6.8 percent increase in tip income.

What Azar (2009) called the “tipping-service puzzle” arises here. The service ratings in the last two studies mentioned are generally very good, with an average score of about 4.5 out of 5. On the other hand, the low sensitivity of tips to service quality suggests that servers may be better off making less effort and giving lower service quality, because their tips will hardly be affected. How is low sensitivity of tips to service quality consistent with high service quality? One likely answer is that restaurants have many ways of trying to assure the expected high quality of service: training, monitoring, rules for server behavior, the threat of a customer complaining to the manager, and so on. A second possibility is that the server can provide some elements of better service like being friendly and smiling at low cost. Finally, servers may perceive the connection between tips and service quality to be stronger than it actually is. For example, Kwortnik, Lynn, and Ross (2009, in their Study 2) recruit 1,189 current servers from 48 US states to participate in a survey. Half of the servers indicated that service had a large or very large effect on tips, 37 percent indicated a medium effect, and only 13 percent indicated a small or very small effect.

Interestingly, when people are asked about their general tipping behavior rather than about how much they tipped on a certain occasion, their answers suggest a very high sensitivity of tips to service quality. Azar (2010) reports that on average, when service quality increases from 1 to 5 (on a 1–5 scale), people claim that they

³They also collected customers' ratings for the servers' “knowledge of menu.” However, this rating turned out to be negatively correlated with the tips, and the authors suggest that this may be a result of knowledgeable servers bothering the customer with unimportant information or being perceived as a “snob.” Therefore, this measure is not integrated with the other four measures.

increase their tips from 8.7 to 24.5 percent (in the US sample) or from 6.2 to 21.0 percent (in the Israeli sample).

How Does Tipping Affect Service Quality?

Several studies seek to assess how tipping affects service quality by comparing establishments with tipping to ones with compulsory service charges or service-inclusive prices. Kwortnik, Lynn, and Ross (2009, their Study 1) take advantage of the fact that about 40 percent of the restaurants in Miami Beach, Florida replaced voluntary tipping with automatic service charges, because many customers are international tourists unfamiliar with the US tipping norms. For 107 restaurants, the authors obtained the restaurant's Zagat service rating on a 0–30 scale and their tipping policy (voluntary tipping or a service charge, based on the policy towards tables of four or fewer customers). The authors regress the Zagat service rating on the tipping policy, controlling for food rating, décor rating, and restaurant expensiveness. The results show that service rating has a greater positive association with restaurants that practice voluntary tipping than with those having a service charge.

Lynn and Brewster (2018) analyze online ratings of restaurants that changed their policy from tipping to automatic service charges or service-inclusive pricing. They find that eliminating tipping reduced online customer ratings—more strongly when tipping is replaced with automatic service charges than when it is replaced with service-inclusive pricing, but at a level which is highly statistically significant in both cases. They also find that more expensive restaurants suffer from a smaller reduction in online customer ratings after eliminating tipping compared to cheaper restaurants. A natural interpretation of this result is that more expensive restaurants probably hire more experienced and professional servers, train them better, can afford (and need) to invest more in monitoring them, and pay them more, and therefore have more mechanisms that ensure high service quality also when the incentives provided by tipping disappear.

Lynn and Kwortnik (2015) also find a positive effect of voluntary tipping on service. They take advantage of the fact that Carnival Cruises changed its tipping policy from voluntary tipping to an automatic service charge in the early 2000s. Using reviews of 1,129 customers who rated the service on ten ships, the authors find that service ratings under tipping are significantly higher than under service charges.

We should remember that the studies that compare service quality with and without tipping may be comparing establishments that differ in other ways, too. For example, it is plausible that restaurants or cruise ships without tipping invested more in screening potential employees, training them, monitoring them, finding ways to motivate them financially, and otherwise to provide excellent service. Therefore, these studies may not be comparing tipping versus no-tipping with other factors held constant, but rather comparing tipping with a combination of no-tipping but a greater emphasis on other incentives for quality service. Given that these other incentives should improve service, the finding that nevertheless service is better with tipping reinforces the conclusion that tipping improves

service compared to no-tipping. In other words, the estimated improvement in service quality due to tipping in these studies may in fact underestimate the real improvement.

Tipping and a Struggle over Rents

Those in restaurants who receive tips are relatively low-skill workers who often earn more (in wages and tips) than other workers of similar skill levels—including those who work in the kitchen of the same restaurant. One example of this pattern became public when Danny Meyer, the head of the restaurant group Union Square Hospitality Group, announced in October 2015 that he would eliminate tipping in all the group’s restaurants (Steiner 2017). The initial plan was to have all 13 of the group’s restaurants fully tipless by the end of 2016 (Sutton 2015). Meyer claimed that compensation for kitchen workers had increased by about 25 percent since 1985, but increased more than 300 percent for tipped employees in the same period (Ruggless 2018). This resulted in difficulties in hiring chefs and cooks, who earn much less than servers (Ferdman 2015). A cook in New York makes between \$10-\$12 per hour and may face the burdens both of big-city rents and repaying culinary school debts. However, restaurants find it difficult to increase cooks’ wages because they have thin profit margins; the National Restaurant Association estimates that the median profit margin for mid-level establishments (having average checks of more than \$25) was 4.5 percent (Ferdman 2015).

Meyer mentioned (as quoted in Sutton 2015) that “we can’t have a situation where we are asking someone to pay \$40,000 to go to the Culinary Institute of America to then work for \$12.50 per hour, when they could work in fast food for \$15.” Servers at full-service New York restaurants can expect 20 percent tips in most cases, reaching a yearly income of \$40,000 (representing \$20 per hour) or more on average, with some of the city’s top servers earning above \$100,000 annually (Sutton 2015). The big gap in compensation, where cooks earned much less than servers because they were not tipped, led many cooks to switch to being servers, even though they had previously invested large amounts in culinary education.⁴ Similarly, Azar (2011) cites a California restaurant owner who switched from tips to service charges and wrote: “Before starting this service charge, our servers were making, on average, over TWICE the wage of the cooks, and while servers require only a few months of training, our cooks require 2–5 years!”

Restaurant owners have tried in several ways to claw back some of these rents. In the US, one approach in states that allow it is to pay only the “tipped minimum wage,” which is a lower legal hourly minimum wage that employers can pay workers

⁴Meyer, for example, mentioned on a *Freakonomics* podcast that “when I learned a statistic that for the first time in my entire career, that we had more culinary grads working in the dining room than in the kitchen, that was the moment when I said, ‘That has to stop,’ because they didn’t go to cooking school to be servers” (Dubner 2016).

who make money from tips. If tips and the tipped minimum wage together do not sum up to the regular minimum wage, the employer must fill the gap so that the worker gets in total at least the minimum wage. The federal tipped minimum wage is only \$2.13, although many states have higher tipped minimum wages.⁵

Another approach is for restaurants to switch from tipping to other ways to charge for service. Azar (2012) argued (before the recent trend of eliminating restaurant tipping) that increasing the minimum wage for tipped workers, and thus increasing the rents of servers, can lead restaurants to replace tipping with automatic service charges or with service-inclusive pricing. When a restaurant makes this change, it can pay the servers the regular minimum wage (or more, if their reservation wage is higher) and keep for itself the extra amounts (from the service charges or price increases due to service-inclusive pricing) above this wage (that is, the economic rents), which the servers kept under tipping.

The shifts to a higher tipped minimum wage in some places in recent years offers an opportunity to examine whether this indeed leads to changes in restaurant policy towards tipping. More generally, it allows us to examine to what extent a strong social norm such as tipping can be changed when one of the main players—the restaurant—finds that this social norm is unprofitable. The prediction of Azar (2012) indeed has been validated in recent years. In 2015, New York State decided to increase the tipped minimum hourly wage from \$5 to \$7.50 (Paarlberg and Reyes 2018), with further increases scheduled for the future. In New York City, for example, the tipped minimum hourly wage increased to \$10 for employers of 11 or more workers at the start of 2019 and to smaller employers at the start of 2020 (as reported at <https://labor.ny.gov/formsdocs/wp/Part146.pdf>). This is far above the federal tipped minimum hourly wage, which is \$2.13.

This was also the time when Danny Meyer announced that he would eliminate tipping for the 13 restaurants in the Union Square Hospitality Group (Steiner 2017), and other restaurants also announced plans to eliminating tipping and replacing it by service-including prices or automatic service charges. At about this time, Crowley and Rami (2016) mention a survey of 503 American restaurateurs who were asked about adopting a no-tipping policy: 18 percent said they have done so already, and 29 percent intended to follow suit. Only 27 percent said they are pro-tipping and will stay with tips. Another 10 percent said they were undecided, and 17 percent mentioned that they might switch to no-tipping if more of their colleagues do. The survey results reflect that initially, there was a lot of enthusiasm about Meyer's move to eliminate tipping in his restaurants. In a *Freakonomics* podcast (Dubner 2016), Meyer described how everyone was happier after the move to no-tipping in one restaurant. Due to the great publicity of the change, more customers came. This

⁵For a list of higher tipped minimum wages across states, see https://en.wikipedia.org/wiki/Tipped_wage. Among the four most populated states, which account for over one-third of the US population, only Texas uses the \$2.13 federal tipped minimum hourly wage. California has no tip credit, and so the minimum wage of tipped workers is equal to the regular minimum wage and is above \$10/hour; New York has a tipped minimum hourly wage of \$7.50 to \$10, depending on the location and employer; and Florida has a tipped minimum wage of \$5.23/hour.

allowed Meyer to increase wages to back-of-the-house (kitchen) workers and to avoid lowering the servers' wages. Servers no longer received tips, but their wages rose from \$5/hour to \$9/hour, plus a revenue-sharing program. Job applications for the kitchen went up 270 percent, but even the server applicant pool increased by 25 percent, 100 percent, and then 215 percent in the first three months. Meyer declared in late 2015 that the move of Union Square Hospitality Group (USHG) to hospitality included (increased prices and no tipping) will not hurt the average waiter, saying: "The waiters at our restaurants, when we eliminate tipping, will make as much or more, in 75 percent of cases, than they're making right now" (as quoted in Steiner 2017).

But after the initial excitement, it became gradually understood across the restaurant industry that there is no free lunch: that is, you cannot charge customers the same amount, increase the salaries of kitchen workers, and have the servers earn the same as before. The plan to switch all Union Square Hospitality Group (USHG) restaurants to no-tipping in one year was delayed. Many former and current servers reported that their income dropped substantially after the no-tipping policy was instituted, by about \$100 per week (Steiner 2017). Many servers quit.⁶ As noted earlier, busy shifts at a restaurant require more effort from a server, but with a fixed hourly wage and no tips, this extra work does not offer more income. Erin Moran, USHG's chief culture officer, suggests that customer visits at the restaurants dropped, reducing servers' compensation due to the revenue-share program. She said: "We learned very quickly that this is much more challenging than we had anticipated." Under-qualified and under-trained workers were sometimes hired to replace those who quit (Steiner 2017). Starting salaries for cooks did increase from about \$11/hour to \$13/hour, but because overtime is now managed more carefully, overall compensation for cooks is only slightly higher than it was under the tipping system. Servers can no longer increase their income by getting better shifts or higher tips, and to get a raise, they need to apply for it with a manager and pass written tests on their knowledge of service, food, and wine (Steiner 2017).

Problems with the no-tipping policy were not limited to the 13 Union Square Hospitality Group (USHG) restaurants. Some other restaurants that tried no-tipping, including the national chain Joe's Crab Shack, eventually switched back to tipping (Crowley and Rami 2016; Steiner 2017; Sun 2018). Thus, while switching to no-tipping gives the restaurant the possibility to extract economic rents from servers, it has to be done carefully in order not to reduce servers' income beyond the level they find acceptable, not to drive down service quality, and not to upset customers. Assuming that the service charges or price increases that replace tipping are at about the same

⁶When the no-tipping "hospitality included" program was introduced at Maialino restaurant in 2016, almost the entire front-of-house staff turned over, twice. At North End Grill, a significant group of workers from both the front-of-house and back-of-house quit. A former manager at Union Square Cafe mentioned that "the majority of our strongest people have left" (Steiner 2017). Meyer also admits that some servers were not thrilled with the no-tipping policy and many of them quit (Ruggless 2018).

magnitude as the forgone tips, the customers do not perceive themselves as better off without tipping. Many customers prefer the tipping policy where they have more control over how much they pay for service, where they can feel that they are demonstrating generosity, and according to the studies mentioned earlier, they also receive better service.

If servers' economic rents continue to rise due to increases in the tipped minimum wages, restaurants will probably continue the attempts to take away these rents by adopting no-tipping policies, even if it takes some time to figure out how to make the no-tipping policies successful. New York, for example, has considered abolishing the tip credit entirely (Albany Bureau 2018), which means that tipped workers will receive full minimum wages, which in New York will soon be \$15 per hour in many places. Earning tips of about 20 percent in addition to a higher minimum wage implies that servers will earn far more than others with similar occupational characteristics, which does not seem to be a stable equilibrium.

The analysis here suggests that those who are worried about the pay disparity within restaurants and who want to improve the situation of restaurant workers who are not tipped should not advocate to eliminate tipping. Instead, they should advocate that the restaurant be allowed to impose "tip pooling," in which the restaurant would allocate some of the tips from servers to the kitchen workers.

Tipping, Discrimination, and Sexual Harassment

The voluntary aspect of tipping raises the possibility that tips will be distributed in a discriminatory manner. It raises a further question about whether different groups disburse tips in the same way—and if they don't, might this result in the different groups receiving different levels of service. I present some evidence bearing on these questions, and then discuss whether tipping is linked to sexual harassment.

Discrimination Affecting Those Who Receive Tips

Several studies analyze how tipping differs by the ethnicity of the tipper and the tipped worker. Ayres, Vars, and Zakariya (2005) study tipping in New Haven taxis, using 1,066 surveys of tipping data from twelve drivers, consisting of six black drivers, four white drivers, and two "other minority" drivers (one self-reported as "Arab" and the other as "Asian (Indian)"). Table 2 presents some of their results: the rows show the race or ethnicity of the passengers, while the columns show the 12 taxicab drivers divided into white, black, and "other."

The bottom row of Table 2 shows that whites in this group receive higher tips. A similar pattern is observed when counting the rate at which drivers are not tipped at all: white drivers are stiffed by 15.7 percent of customers, black drivers by 28.3 percent, and the others by 36.4 percent. The final column shows that white passengers tipped more. Again, stiffing rates by passengers' race gives a similar picture, with 10.6 percent stiffing by white passengers, 39.2 percent by black

Table 2

Tips Received by New Haven Cab Drivers*(Number of observations in parentheses)*

Passenger race	Cab driver race			Average tip from passengers of this race
	White	Black	Other	
White	26.7% (224)	17.9% (222)	13.2% (34)	21.6%
Black	11.0% (112)	7.4% (176)	13.1% (28)	9.2%
Hispanic	17.5% (57)	7.1% (63)	11.3% (17)	12.0%
Asian	16.1% (42)	18.1% (36)	12.3% (17)	16.2%
Other	14.8% (6)	11.0% (5)	1.8% (3)	10.7%
Average tip for this group of drivers	20.3%	12.6%	12.4%	

Source: Derived from Ayres, Vars, and Zakariya (2005).

passengers, 34.3 percent by Hispanic passengers, 15.8 percent by Asian passengers, and 35.7 percent by other passengers. Several interesting patterns emerge in the intersections of the table. White passengers tipped white drivers 1.49 times more than black drivers. Perhaps surprisingly, black passengers also tipped white drivers 1.49 times more than black drivers; this may suggest that the higher tips to white drivers are not due to prejudice but due to a higher perceived service quality. Hispanic passengers seem to discriminate the most against black drivers, tipping white drivers 2.46 times more than black drivers. However, Asian passengers in this sample tip black drivers a little more than white drivers: 18.1 percent to black drivers versus 16.1 percent to white drivers.

Lynn et al. (2008) study ethnic differences in restaurant tipping, collecting data from 140 lunch customers of a southern US restaurant. Both white and black customers on average tipped white servers more than black servers. Interestingly, the form of this effect differed by perceived service quality. For non-perfect service quality (rating less than 5 on 1–5 scale), average tips for black servers (16.6 percent) were similar to tips for white servers (16.8 percent). However, for perfect service quality, white servers earned much higher tips averaging 23.4 percent, whereas black servers still received 16.6 percent.

While discrimination in tipping is an unwanted consequence, calls to abolish tipping because of it go too far. A tip in a place like a US restaurant resembles in some ways a gift in a wedding: both are voluntary in principle, but virtually compulsory in practice in the sense that almost everyone gives them, and yet the giver does retain discretion about how much to

spend.⁷ We will not abolish wedding gifts even if we find racial differences in the amounts received. Similarly, tipping should not be abolished due to racial differences. Instead, attempts to eliminate discrimination in tipping should use education and discussion. In addition, in some situations and in particular in restaurants, pooling the tips of the various workers and distributing them equally can solve the inequality in pay (although it also reduces the incentives of the servers to provide excellent service).

Differences in Tipping across Groups

The New Haven taxicab study suggests that the tipper's race is associated with the size of the tip, and this finding is consistent with other studies. Brewster and Nowak (2018) present the aggregate results of 11 previous studies that were published between 2003 and 2017 and used different methodologies: server records, exit surveys of diners, a telephone survey, and online surveys. In all 11 studies, white customers tipped on average more than black customers. In the aggregate data across all studies, the mean tip percent of black customers (N = 1,156) is 14 percent, while the mean tip of white customers (N = 4,003) is 18 percent.

Given the robust ethnic differences in tipping behavior, a natural question is whether servers discriminate against those who are expected to be poor tippers. Brewster and Rusche (2012) address this question using survey data derived from a community sample of servers (N = 200). The data indicate that servers do perceive tables with white customers to be better tippers than black tables. In addition, servers reported that white tables are easier to wait on than comparable black tables. Survey answers about self-reported server discrimination are reported in Table 3.

In these self-reported data, some servers do give poorer service to minorities, and it seems plausible that this behavior is motivated by prejudice more than by economic incentives related to tipping. Moreover, a server with pure economic motivations is not motivated by the average tip, but by the sensitivity of tips on the margin to service quality, and this sensitivity is not necessarily lower for minority groups. In fact, Ayers, Vars, and Zakariya (2005) find that the rates at which minority groups provide no tip at all to taxicab drivers are much higher. If this finding also applies to restaurant tipping, it suggests that the sensitivity of minority groups to service quality could be higher than that of other groups, giving incentives to make more effort when serving them.

Tipping and Sexual Harassment

One concern about tipping is that it may make customers feel entitled to practice sexual harassment and other behaviors that are unpleasant to the servers, especially female servers (Einhorn and Abrams 2018). However, most of the sexual

⁷In some places, such as Israel, the similarity is even higher because almost everyone gives a monetary gift. Daum (2016) reports that only 1 percent of her respondents believed that gift-receivers would enjoy getting a personal gift at their wedding, with the other options being cash or check.

Table 3
A Survey of Servers on Discrimination

Questions	Answers			
	Never	Sometimes	Often	Always
How often does the quality of service that you provide vary according to the customers' race?	61.5%	31.8%	4.6%	2.1%
How often do you give customers poor service because you think they will not tip well?	50.8%	42.1%	5.6%	1.5%
How often do you observe poor treatment of black customers by coworkers?	47.1%	38.7%	8.9%	5.2%
How often do you think your coworkers give customers poorer service than other customers based on the customers' race?	17.9%	54.4%	9.7%	1.5%

Source: Brewster and Rusche (2012).

Note: Rows may not sum to 100 percent because “don't know” category is left out. Sample size is N = 200.

harassment cases in restaurants are not by customers, and when such harassment does occur, it does not seem to have any close linkage to tipping.

For example, Johnson and Madera (2018) study sexual harassment by following 76 female US college students working in food and beverage service, mainly restaurants. These 76 students documented any sexual harassing behaviors they encountered over three months. The most frequent behaviors selected were when someone at work “told suggestive, sexual stories” (reported by 49 percent), “made offensive remarks” (46 percent), “made crude sexual remarks” (45 percent), “made sexist comments” (42 percent), and “attempted to discuss sex” (33 percent).” Of the 226 incidents recorded (an average of about one incident per month per worker), 112 of the incidents involved coworkers, 29 involved a manager, and 85 involved customers. However, there is no obvious reason why tipping is to blame, and it is not clear that limitations or abolition of tipping would diminish such behaviors.

A different national-level survey finds what seems to be much worse sexual harassment. McColl (2017) surveyed 300 hospitality workers, 90 percent of them women, and 89 percent had experienced sexual harassment at work. Of the respondents, 87 percent reported sexist remarks, 85 percent reported comments on their body, and 84 percent reported sexual innuendo. In addition, 73 percent said they had experienced unwanted sexual advances, 69 percent reported inappropriate touching, and 19 percent said they had been sexually assaulted. However, this survey was done in Australia, and as a travel guide notes, “generally, Australians and New Zealanders say tipping is not only unnecessary but also a practice to be avoided ...” (Rivera 2019). Clearly, sexual harassment can be a real and pervasive problem in the restaurant and hospitality industry, but it's not at all clear that tipping is the culprit.

Conclusion

Tipping is for obvious reasons a subject of controversy. A social norm that dictates a tip as a percentage of the bill doesn't seem to make intuitive sense: opening a \$100 bottle of wine does not require quadruple the effort of opening a \$25 bottle of wine, and bringing a \$40 steak is not four times as tiring as bringing a \$10 pasta. Critics have argued that tipping enforces archaic and undesirable social distinctions and that it facilitates discrimination in who holds what jobs in a restaurant, as well as encouraging sexual harassment (Ferdman 2016).⁸ A number of writers have expressed a negative attitude towards tipping or even called to abolish it (for example, Porter 2013; Keane 2014; S.K. 2015; Grimminck 2015; Dixon 2016).

The discussion and evidence in this paper suggests a more nuanced view. Perhaps some restaurants, under a certain kind of management and with a certain kind of reputation, could benefit by replacing tipping with a fixed service charge or with higher menu prices. Indeed, some restaurant owners strongly believe that replacing tipping with a fixed service charge, distributed among both servers and kitchen help, led to a better quality of food, improved team spirit, and ultimately resulted in a higher level of professionalism and better service—even if some previously high-tipped servers experienced a fall in income (for example, see Porter 2013).

However, at many other restaurants, the social norm of tipping has been reasonably robust. Many customers prefer the control of choosing a tip and have a positive feeling that they are showing generosity. Servers earn more as a result and find that busy shifts where they have to work harder are rewarded with higher income. Service quality seems modestly higher. It seems likely that restaurant owners, tempted by the tip rents being earned by servers, will continue to experiment with ways of recapturing some of those rents—either to redistribute to kitchen workers or to raise profits. Perhaps the self-reinforcing social norm of tipping will be toppled eventually in the United States, but with more than a century of history, it seems unlikely to go quickly.

The literature on the economics of tipping is relatively small. Some additional economic and business issues related to tipping and some future research directions are discussed in Azar (2003, 2007c, 2011). For example, one issue is the possibility that a tipped employee will behave in a manner that is harmful to an employer in order to increase tips (for example, by giving the customers free desserts or drinks).

⁸Ferdman (2016) interviews Saru Jayaraman, who is the co-founder and co-director of the Restaurant Opportunities Center United (ROC United) and director of the Food Labor Research Center at the University of California, Berkeley. Ferdman mentions that “Jayaraman has been working to end the modern tipping system for years.” Jayaraman describes evils of tipping (such as encouraging sexual harassment and servers preferring the interests of the customer to those of the restaurant), she relates tipping to slavery, and she mentions that tipping has racial implications because workers of color at fine-dining restaurants get jobs that are non-tipped instead of becoming servers and bartenders. Eventually, despite these evils, Jayaraman advocates for keeping tipping, but just moving the tip credit towards the minimum wage, saying “we’re fine with that—we’re not trying to get rid of tipping entirely. We just want the remaining forty three states to follow in California and the other six states’ footsteps, eliminating the two-tiered system and requiring employers to pay the full wage to all workers, with tips on top of that.”

The recent move of some restaurants from tipping to alternatives such as service charges or higher prices raises interesting questions and provides opportunities for theoretical, empirical, and experimental work. The possibility of tip pooling, either between tipped employees of the same occupation (like servers) or between tipped and non-tipped employees (like servers and kitchen workers) also affects incentives and has economic implications. Tipping norms are different around the globe, which should allow for some interesting comparisons and research possibilities. One can also imagine the possibility of future shifts in the social norm of tipping, perhaps with tips spreading to other occupations or tips becoming more sensitive to both service quality and to effort more generally.

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