



The Effect of Write-In and Electronic Tipping Prompts on the Proportion of Customers Who Tip on To-Go Restaurant Orders

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Abstract

Tipping in restaurants for to-go orders has been a hotly contested topic for years now, with the majority of customers saying they do not want to tip for this limited-service experience. However, with tips making up part of the income of employees who manage to-go orders, it is important to explore if tipping methods influence the proportion of customers who tip, particularly when customers pay with a card as there already exists a large amount of literature on tipping differences between cash and card payments. This study reports that of the 45 anonymous customers who were prompted to tip by an electronic screen where there was a pre-selected 20% tip, 76% tipped on their to-go order. On the other hand, of the 58 anonymous customers prompted to tip by a paper receipt where the customer would have to write in a tip, 48% tipped on their to-go order. These results show that there is a statistically significant difference between the proportion of customers who tip depending on how they were prompted to tip while paying with a card ($p=0.0042$). These findings suggest that in the sample used for this study, customers were more likely to tip when tipping with an electronic screen than when they were asked to tip by writing in the tip on a paper receipt.

Keywords

Tip; restaurant; to-go; carryout; digital tip; write-in tip; tipping behavior; credit card tipping; receipt tipping.

Introduction

As the world moves more digital, a question arises about restaurant tipping in this new culture. With an estimated 67.7% of people feeling pressured to tip when a digital screen prompts them to, it's vital to observe the effects these prompts have on tipping. According to Karpinski (2022), a survey also found that of the 53.4% of customers who tip on to-go orders, 44.8% of these customers claimed they would not tip if the system had not prompted them to.

Despite these surveys, there is limited experimental data on if there is actual significance between write-in tips and digital tips when customers pay with a card. This leaves open the question of how much the tipping method actually influences the proportion of people who tip on to-go orders, especially in this limited-service context where service quality and privacy while tipping are constant for all participants.

The present study works to address this gap using an experiment where the tipping method was randomized by day and the proportion of customers who tipped using the designated method for the day was observed.

The overall purpose of this study is to investigate the following research question:

Is there a statistically significant difference in the proportion of people who tip when having to write in a tip versus tipping electronically where there is a pre-selected tip?

- p_1 = proportion of eligible to-go customers who tipped when prompted with the electronic method
- p_2 = proportion of eligible to-go customers who tipped when prompted by a paper receipt
- H_0 : there is no statistically significant difference between the proportion of customers who choose to tip between the tipping methods at a 0.05 level of significance ($p_1 - p_2 = 0$).
- H_a : there is a statistically significant difference between the proportion of customers who choose to tip between the tipping methods at the 0.05 level of significance ($p_1 - p_2 \neq 0$).

Methods

For this study, a quantitative, experimental design was chosen to study the two methods of tipping this research addresses by examining the proportions that tipped between the two methods. This process involves the collection and analyzing of data that can reject or fail to reject the hypothesis. By approaching this question quantitatively, more relevant data can be gathered that leads to the conclusion of this study.

Population and sample:

- The population was customers who order to-go orders with a host at Casa Tequila, a Mexican restaurant in Warrenton, Missouri. The sample was customers who ordered to-go orders on days and times chosen by the manager of the restaurant of this establishment based on the availability schedule of each week. The specific sample of customers who ordered to-go orders who were studied were customers who called in to-go orders or ordered to-go at the front of the restaurant with a host.

Data collection:

- For this study, each observation day chosen by the manager was randomly assigned a tipping method so that each day, the customers would either be prompted to tip on a digital screen where a 20% tip is pre-selected or they would be prompted to tip by writing a tip on a paper receipt. Which method is meant for which day was determined randomly using a randomized wheel and putting equal amounts of "electronic" and "paper" on the randomized wheel. Using the results of spinning this wheel, day one of the study was assigned with the first wheel result, day two of the study was assigned with the second wheel result, etc.
- Randomized assignment by observation day was used to reduce the possibility that the data was influenced by regular customers who come to the restaurant on certain days of the week. Also, it helped reduce the effect the time of day or day of the week potentially has on tipping.
- Data collection took place between July 2026 and August 2026. Data was collected via a notebook listing out the different possible tipping methods (paper, electronic, online order, or cash). After a customer would come into the restaurant and pay for their order, a tally mark would be recorded next to the appropriate tipping method. If a day was designated as a write-in (paper) tipping method day, in addition to the categories of tipping methods listed above, two additional categories were added to the notebook. One was "Paper:

Tipped” and the other was “Paper: No Tip” in order to collect the data required for this study. Additionally, before each customer decided to tip or not, a host would tell the customer something similar to “Sign below and you’ll be all good to go!” So, the person instructing the customer on how to pay would say nothing about the tip to avoid influencing the data.

- Data points were excluded from analysis if the customers did not pay with the designated method for the day. For example, if they were prompted electronically on a day that was designated for write-in tipping, they would be excluded. Additionally, cash payments and online orders were excluded because they did not pertain to this study.

Data Analysis:

Data analysis for hypothesis testing was done by utilizing a two-proportion Z-test for a difference between two proportions and by constructing a confidence interval for $p_1 - p_2$ at a 95% confidence level where p_1 is the proportion of customers who tipped on to-go orders when prompted to tip electronically and p_2 is the proportion of customers who tipped on to-go orders when prompted to write-in a tip. These statistical tests were used to see if there was a statistical difference between the two proportions. If a p-value was obtained that was less than 0.05, we would reject the null hypothesis. If the p-value was greater than or equal to 0.05, then we would fail to reject the null hypothesis.

Results

Table 1 shows the difference between tipping proportions between write-in tips and electronic tips over all days data was collected.

Tipping Method	Tipping Results			
	Tipped	Did not tip	Total	Proportion that tipped
Electronic	34	11	45	0.765
Write-in	28	30	58	0.483

It was observed that 76.5% of customers who were prompted to tip electronically tipped while 48.3% of customers who were prompted to tip with paper tipped, making it a 28.2 percentage point difference approximately between the two observed methods. A two-tailed two-sample z-test for the difference between two proportions was used to get a p-value of 0.0042. Since the p-value is less than 0.05, the null hypothesis is rejected. A two-proportion z-interval was consistent with this, finding that the 95% confidence interval was [0.09396, 0.4525]

Discussion

The purpose of this study was to see if there is a statistically significant difference in how often customers tip depending on if they have to write in a tip or if there is an electronic tipping

button. The sample to test the hypothesis that there is no significant difference consisted of 103 observations of customers who came into the restaurant to retrieve a to-go order packed by a restaurant host.

The results show that there is a significant difference between the tipping methods, with customers in this sample tipping more often with a digital screen than with a paper receipt. This experiment helps address the gap in the literature about the effects of writing in a tip while still using a credit card to pay, specifically in the typically unexplored limited-service context. It also supports the general trend in the literature that as the “pain of paying” increases, the amount of people who leave a tip decreases (Stadelmann & Trütsch, 2025, Woodruff-Santos, 2014). This is the pain-of-paying theory where there is a higher psychological cost of being generous, leading to decreased tipping. So, since the paper-tipping method observed in this paper would have had a higher psychological cost and been more work for the customers, the pain-of-paying could be a reason for the findings in this study.

This experiment’s results also are supported by Zarrabian (2019) which is about how different tip suggestions influence tipping electronically and with paper checks. This other study similarly concluded that tipping can be increased by having customers tip digitally instead of on a receipt.

There are also contradicting results between this paper and a study by Bechhoff (2019) where participants tipped less on a digital screen than on paper. A possible explanation for this difference is that the alternative study was done via a questionnaire, so not experimental data, and it also was focused on the pressures of having a server present with the digital tipping versus not present with a paper tip. Because of these two key distinctions, both papers can coexist given these differences in circumstances.

This matters because it gives insight into ways for restaurants to maximize tips, especially in the context of limited-service. A practical implication is that it shows restaurants that the method used to collect a tip could be associated with the proportion of customers who tip.

There are several limitations of this study that must be considered since they may affect the generalizability of results and the results themselves. The limitations include how the data was all collected at one restaurant and how at times the business of the restaurant could make it impossible to navigate customers to the designated tipping method for the night, causing 11 total customers to use a method that was not designated when paying with credit card. These 11 were excluded from analysis. There were also 24 customers over the course of the study who paid with cash for their orders. These customers were excluded from the rest of the results as well.

Additionally, since the time of sampling was chosen by a manager, there is a chance that convenience sampling could influence the results even though the randomized assignment of tipping methods each day and the variety of times and days the data was taken should combat this. The final limitation is that there was a pre-selected 20% tip for all electronic tips, so the difference found in this study could be partially attributed to this 20% pre-selected tip, however there were also clear options next to the pre-selected tip for higher or lower tips. Future research could explore this by exploring paper versus electronic tipping when the suggested tips are equivalent. These limitations potentially could have influenced results minimally and also could have affected how much these results can be generalized to other populations.

Overall, this study contributes to the literature by comparing an electronic tipping prompt and a paper tipping prompt between customers who paid by card in the context of a

limited-service restaurant. A lot of the existing research mentioned in this study focuses on hypotheticals or differences in payment, so, by observing actual transactions, this study adds additional evidence on how the method of tipping could relate to the proportion of customers who choose to tip.

Future research could extend this by exploring if the same trend is followed for sit-down service restaurants or if this trend is different in different areas of the United States.

Conclusion

This experimental study in a limited-service context explores the effects of tipping methods (electronic with a pre-selected tip or paper) on the proportion of customers who tip. It found that customers in this sample were associated with a higher likelihood of tipping in this context if they were prompted to tip with a digital screen rather than a paper receipt. This result contributes to the literature on tipping by showing how, for limited service circumstances, the method used for tipping might influence tipping behavior. Future research could usefully explore if the trend found in this study is continued in the context of a sit-down experience.

References

1. Bechkoff, J. (2019). Digital tipping intimidation at the counter. *Association of Marketing Theory and Practice Proceedings*, 1. <https://doi.org/10.20429/amtp.2019.55>
2. Karpinski, I. (2022, October 4). *Takeout tipping: Survey shows some feel pressured to tip when getting food to go*. FOX59 News. Retrieved September 21, 2026, from <https://fox59.com/news/national-world/takeout-tipping-survey-shows-some-feel-pressured-to-tip-when-getting-food-to-go/>
3. Stadelmann, M., & Trütsch, T. (2025). Payment choice and the pain of paying: Evidence on tipping behavior from payment diary data. <https://doi.org/10.2139/ssrn.5860342>
4. Woodruff-Santos, M. (2014, March 13). *The pain of paying: How technology tricks you into tipping more*. yahoo!finance. Retrieved September 21, 2026, from https://finance.yahoo.com/news/the-pain-of-paying--how-technology-tricks-you-into-tipping-more-203225829.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAMuP9zVYNdIPRiAZxVKZI7Q7Oc00ks1HSHSNqFU6IB9LUhU6jHab6xJm6vxDs6_f5
5. Zarrabian, D. (2019). *Tip nudging: A 3-Part Experimental Analysis of Influencing Tips Through Technological Default Menus*. <https://dash.harvard.edu/server/api/core/bitstreams/4c440e41-076c-4698-939b-9ddd45f470cc/content>