

8-2014

The Contribution of Norm Familiarity to Race Differences in Tipping Behavior: A Replication and Extension

Michael Lynn

Cornell University, wml3@cornell.edu

Follow this and additional works at: <http://scholarship.sha.cornell.edu/articles>

 Part of the [Food and Beverage Management Commons](#)

Recommended Citation

Lynn, M. (2014). The contribution of norm familiarity to race differences in tipping behavior: A replication and extension. *Journal of Hospitality & Tourism Research*, 38, 414-425. doi:10.1177/1096348012451463. Retrieved [insert date], from Cornell University, School of Hospitality Administration site:<http://scholarship.sha.cornell.edu/articles/588/>

This Article or Chapter is brought to you for free and open access by the School of Hotel Administration Collection at The Scholarly Commons. It has been accepted for inclusion in Articles and Chapters by an authorized administrator of The Scholarly Commons. For more information, please contact hlmdigital@cornell.edu.

The Contribution of Norm Familiarity to Race Differences in Tipping Behavior: A Replication and Extension

Abstract

A large web-based survey found that (a) awareness of the 15% to 20% tipping norm partially mediates Black–White and Hispanic–White differences in restaurant tip size and (b) norm awareness predicts restaurant tip size for Blacks, Hispanics, and Whites alike. These findings replicate and extend previous research results reported by Lynn and suggest that race differences in tipping can be reduced by reducing race differences in awareness of the 15% to 20% restaurant tipping norm.

Keywords

restaurant tipping, survey research, consumer behavior

Disciplines

Food and Beverage Management | Hospitality Administration and Management

Comments

Required Publisher Statement

© SAGE. Reprinted with permission. All rights reserved.

The Contribution of Norm Familiarity to Race Differences in Tipping Behavior:
A Replication and Extension

Michael Lynn
Cornell University

Journal of Hospitality & Tourism Research (forthcoming)

Michael Lynn (WML3@Cornell.edu) is the Burton M. Sack Professor of Food and Beverage Management at the School of Hotel Administration, Cornell University, Ithaca, NY 1483-6902.

ABSTRACT

A large web-based survey found that (i) awareness of the 15 to 20 percent tipping norm partially mediates Black-White and Hispanic-White differences in restaurant tip size, and (ii) norm awareness predicts restaurant tip size for Blacks, Hispanics and Whites alike. These findings replicate and extend previous research results reported by Lynn (2011) and suggests that race differences in tipping can be reduced by reducing race differences in awareness of the 15 to 20 percent restaurant tipping norm.

The Contribution of Norm Familiarity to Race Differences in Tipping:

A Replication and Extension

Blacks and Hispanics tip less on average than do Whites in U.S. restaurants (Lynn & Thomas-Haysbert, 2003; Lynn, in press). This race difference in tipping poses a problem for managers in the restaurant industry as well as for Blacks and Hispanics themselves, because servers are aware of the differences (McCall & Lynn, 2009) and, as a result, dislike waiting on ethnic minority customers and deliver inferior service to those ethnic minority customers they do serve (Brewster, 2011; Rusche & Brewster, 2008). Furthermore, these managerial problems with hiring and motivating servers to wait on ethnic minority customers make restaurant executives less likely to locate full service restaurants in ethnic minority neighborhoods (Amer, 2002; Wallace, 2001). To adequately address these problems, the race differences in tipping that give rise to the problems must be reduced, which requires an understanding of the causes and origins of those race differences (Lynn, 2004).

Lynn (2004) has argued that race differences in restaurant tipping are largely due to race differences in awareness of the 15 to 20 percent restaurant tipping norm and that educational campaigns designed to reduce the latter will also reduce the former. Consistent with this position, he recently reported in the *Cornell Hospitality Quarterly* on a study finding that norm familiarity partially mediated Black-White differences in tipping (Lynn, 2011). He also found that norm awareness increased the tips of Blacks and Whites similarly (i.e., norm awareness did not moderate Black-White differences in

tipping) and concluded that eliminating the race difference in norm awareness is likely to reduce Black-White differences in restaurant tipping by about thirty-three percent.

This paper reports on a replication and extension of Lynn's (2011) *Cornell Hospitality Quarterly* article. The replication involves re-examining the role of norm familiarity as a potential mediator and moderator of Black-White differences in tipping. This replication involves one methodological improvement over Lynn's study. He had respondents categorize their typical tip as "nothing," "\$1-2," "\$3 or more," "less than 10% of the bill," "10 to 15 percent of the bill," "15 to 20 percent of the bill," and "more than 20 percent of the bill." This method provides only crude, insensitive measures of tip size and requires that cash tippers and percentage tippers be analyzed separately. Furthermore, since there are race differences in cash vs percentage tipping (Lynn, 2011), the differential selection by race into the samples of cash tippers and percentage tippers confounds any race effects observed in separate analyses of those samples. These problems with measurement insensitivity and confounding are avoided in the current study by asking respondents how much they would tip in dollars and cents on a given bill size. Cash tippers and percentage tippers were each able to decide on a tip amount using their preferred method and the result is a continuous measure on a common metric. Moreover, this measure more closely resembles actual tipping decisions in the real world.

The extension of Lynn's (2011) article involves examining the role of norm familiarity as a potential mediator and moderator of Hispanic-White differences in tipping. Although one early study found that Hispanics tipped similarly to Whites (Lynn & Thomas-Haysbert, 2003), two more recent studies have found that Hispanics tip less than Whites (Lynn, in press; Lynn, Jabbour & Kim, 2012). In addition, Lynn (2006)

found that Hispanics were less likely than Whites to know that it is customary to tip 15 to 20 percent of the bill in U.S. restaurants. Despite these findings, however, no one has empirically examined the extent to which norm familiarity mediates and/or moderates Hispanic-White differences in tipping. These issues are addressed for the first time in the study reported below.

An internet based survey was used to obtain data on tipping, awareness that it is customary to tip 15 to 20 percent of the bill in U.S. restaurants, and respondent race as well as on numerous other control variables. The data from this survey was used in an article by Lynn, Jabbour and Kim (2012), who reported that both Blacks and Hispanics reported tipping smaller average amounts than Whites in the survey. However, Lynn, Jabbour and Kim did not examine or report any analyses involving awareness of the 15 to 20 percent restaurant tipping norm, so the current focus on that norm awareness as a mediator and moderator of race differences in tipping goes beyond their article to make a unique contribution to our understanding of those race differences.

METHOD

Members of the Survey Sampling International consumer panel who were at least 18 years old and resided in the United States were invited to participate in a survey concerning tipping. An attempt was made to get 200 Whites, 200 Hispanics, and 200 Blacks in the sample, so after an initial direct invitation to participate (sent to 10, 567 panel members and resulting in 161 completed surveys) the company used its new Dynamix methodology to get the targeted demographics sought. This new methodology involves inviting respondents to participate in an unspecified study (out of several possibilities), giving those who respond qualification questions, and then randomly

assigning respondents to one of the studies for which they qualified. This methodology does not permit calculation of the response rate for a given study using traditional equations, because those panelists contacted may qualify for more than one study but are assigned to complete only one. However, the company's calculations put the response rate for this portion of the sample at 2.99 percent. Nine hundred forty-four people started the survey, but many rushed through the survey in under three minutes (median completion time was 7.25 minutes), provided highly unlikely/questionable answers (e.g., greater tips for poorer service than for better service, tips of 100 percent or more, and ages greater than 100 years), failed to answer key questions, reported being less than 18 years old, and/or reported an ethnicity other than White, Black or Hispanic. Dropping these problematic, questionable, and/or irrelevant respondents from the sample left 339 white, 180 black and 184 hispanic participants for a total of 703 observations. See Table 1 for descriptive statistics on the final sample.

Survey participants were asked to indicate how much in dollars and cents they would tip on one of two randomly assigned bill sizes (\$21.32 or \$46.23) if the service was "unusually good," "average" and "unusually bad." These values were converted to tip percentages. All three of these dependent measures were analyzed (see Table 3 thru 5), but only the tips under average service are discussed in the main text, because (i) average service is by definition more typical or common than is unusually good or bad service, (ii) more respondents provided this tip amount than provided the other tip amounts, and (iii) the small differences observed across measures could be due to chance.¹

¹ Lynn, Jabbour & Kim (2012) reported that the race by service interactions in their analyses were not statistically significant and that finding was replicated in the current sample. A repeated measures analysis

Respondents were also asked “How much are people in the United States generally expected to tip restaurant waiters and waitresses for adequate to good service?” The response options to this questions were: (i) nothing (tips are not expected), (ii) spare change (1 to 99 cents), (iii) \$1 to \$2, (iv) \$3 or more, (v) less than 10% of the bill, (vi) 10 to 15% of the bill, (vii) 15 to 20% of the bill, (viii) more than 20% of the bill, and (ix) don’t know. Those respondents aware that people are expected to tip at least 15 percent of the bill (i.e., those giving responses vii and viii) were coded as knowing the restaurant tipping norm while everyone else was coded as not knowing the norm.²

Finally, among other things, participants were asked to provide information about:

- (i) their sex (Male = 1, Female = 2),
- (ii) their birth year (recoded as age),
- (iii) their race (coded into two dummy variables: Black (yes=1, no =0) and Hispanic (yes=1, no =0), so that each of these ethnicities were contrasted with Whites in the analyses),
- (iv) their education (on an 8 point ordinal scale from 1= “less than high school” to 8 = “professional degree (JD,MD)”), and

using the general linear model produced non-significant service X Black ($F(2, 1284) = 2.10$, n.s.) and service X Hispanic ($F(2, 1284) = 0.45$, n.s.) interactions in a model controlling for bill size, age, sex, education and income.

² The fact that the response options were overlapping (e.g., 10 - 15% and 15 - 20%) and not exclusive (e.g., \$3 or more and any percentage response) precludes its use as a continuous measure of beliefs about the normative tip size. However, that is not what it was intended to measure. Rather, it was intended to measure whether or not the respondent knew that the normative tip was at least 15 percent of the bill. Our coding of the responses reflects this intended usage and is not adversely affected by the overlapping and non-exclusive nature of the options. The other options were used as “incorrect” decoys to reduce demand characteristics and guessing of the correct response and their effectiveness in this was enhanced by making them overlapping and non-exclusive. For example, the 10 - 15% and 15 - 20% options help differentiate people who know that you are supposed to tip 15 percent of the bill but not that 15 percent is the low end of expected tip sizes (i.e, people with incomplete norm knowledge) from people who know that 15 percent is the smallest expected tip size (i.e., people with more complete norm knowledge).

(v) their income (on a 9 point ordinal scale from 1= “below \$20,000” to 9=”\$90,000 or more”).

RESULTS AND DISCUSSION

The data contained both continuous and binomial dependent measures -- i.e., percent tip and norm awareness respectively. Binomial variables like norm awareness violate the assumption of homogeneity of variance underlying standard OLS regression and tests of heteroskedasticity in the models predicting percent tip were also significant ($p < .05$), so heteroskedasticity robust standard errors were used in the regression analyses reported below.³ Bill size, age, sex, education and income were used only as control variables in this study, so their relationships to awareness of tipping norms and to tipping will not be discussed or elaborated upon. However, interested readers can find the effects of these variables in the complete regression results reported in Tables 2 thru 5.

Race Differences in Tipping

A regression of percent tip on Black and Hispanic produced significant negative effects for Black ($B = -1.91$, $t(700) = -3.33$, one-tailed $p < .001$) and Hispanic ($B = -1.56$, $t(700) = -2.81$, one-tailed $p < .003$). These effects remained significant after controlling for bill, age sex, education, and income – for Black ($B = -1.76$, $t(695) = -2.98$, one-tailed $p < .002$) and Hispanic ($B = -1.93$, $t(695) = -3.41$, one-tailed $p < .001$). Consistent with the results reported by Lynn, Jabbour and Kim (2012), both Blacks and Hispanics tipped less than Whites. The current regression coefficients were larger than those reported by Lynn, Jabbour and Kim, but some differences are to be expected because the models

³ See Wooldridge (2000) for a defense of use of least squares regression with robust standard errors to analyze binomial dependent variables.

being tested differed and this combined with missing values for many variables lead to differences in samples as well.

Norm Awareness as a Mediator

The mediation of an independent variable's effect on a dependent variable can be established by demonstrating that the proposed mediator is related to both the independent variable and the dependent variable after controlling for the independent variable (Baron & Kenny, 1986). Thus, norm awareness can be said to mediate race effects on tipping if the races differ in norm awareness and if norm awareness predicts tipping after controlling for race. An assessment of these effects using regression analyses can be found in Tables 2 thru 5. These analyses indicated that both Blacks ($B = -.22$, $t(700) = -4.91$, one-tailed $p < .001$) and Hispanics ($B = -.15$, $t(700) = -3.28$, one-tailed $p < .001$) were less aware of the 15 to 20 percent restaurant tipping norm than were Whites. These effects remained significant after controlling for bill, age sex, education, and income – for Black ($B = -.18$, $t(695) = -4.03$, one-tailed $p < .001$) and Hispanic ($B = -.08$, $t(695) = -1.65$, one-tailed $p < .05$). Furthermore, norm awareness significantly predicted percent tip ($B = 2.65$, $t(694) = 5.56$, one-tailed $p < .001$) after controlling for race. These results indicate that norm awareness does mediate Black-White and (to a lesser extent) Hispanic-White differences in restaurant tip size. However, the Black-White ($B = -1.29$, $t(694) = -2.25$, one-tailed $p < .02$) and Hispanic-White ($B = -1.73$, $t(694) = -3.18$, one-tailed $p < .001$) differences in tip size remained statistically reliable after controlling for norm awareness, so norm awareness is at best a partial mediator of these race differences in tipping.

The regression coefficients -- for race effects on norm awareness and for norm awareness effects on tipping after controlling for race -- were also used to calculate values for the Sobel test, which is another way to assess the statistical reliability of mediation effects (Sobel 1982). The Sobel test statistic was -3.24 (one-tailed $p < .001$) for the Black-White difference in tip size and was -1.58 (one-tailed $p < .06$) for the Hispanic-White difference in tip size. The Sobel test that norm awareness mediates Hispanic-White differences in restaurant tip size did not meet conventional levels of statistical significance, but that test has weak statistical power (Zhao, Lynch & Chen, 2010).

To provide a more powerful statistical test of mediation effects, the data were also analyzed with Hayes' (2012) PROCESS macro for SPSS, which uses bootstrapping to calculate the standard errors of the indirect race effects on tipping. This program does not accept binomial mediators, so norm awareness was recoded as follows in these analyses: 1 = low norm awareness (responses i thru iv and ix reflecting absence of awareness that any percentage is expected), 2 = medium norm awareness (responses v and vi reflecting awareness that a percentage tip is expected but not of the expected magnitude), and 3 = high norm awareness (responses vii and viii reflecting awareness that at 15 percent or more is expected). These analyses found significant effects of Black ($B = -.28$, $t(696) = -4.48$, one-tailed $p < .001$) and Hispanic ($B = -.16$, $t(696) = -2.31$, one-tailed $p < .01$) on norm awareness along with a significant norm awareness effect on percent tip after controlling for Black, Hispanic and the other control variables ($B = 2.19$, $t(695) = 6.83$, one-tailed $p < .001$). More importantly, the indirect effect of Black on percent tip thru norm awareness was -.62 with a 95 percent confidence interval of -1.05 to -.32 and the indirect effect of Hispanic was -.36 with a 95 percent confidence interval of -.74 to -.08.

Since the confidence intervals for both indirect effects excluded zero, they are statistically significant; meaning that norm awareness reliably mediates both Black-White and Hispanic-White differences in tipping. That mediation is only partial, however, as the effects of both Black ($B = -1.82$, $t(696) = -3.10$, one-tailed $p < .002$) and Hispanic ($B = -1.89$, $t(696) = -3.30$, one-tailed $p < .001$) remained significant after controlling for norm awareness and the other control variables.

Norm Awareness as Moderator

The reduction in the regression coefficients from models testing race effects both before and after controlling for norm awareness provides a reasonable estimate of the magnitude of the reduction in race differences in tipping achievable by eliminating race differences in norm awareness. However, this argument assumes that norm awareness affects tipping for Blacks and Hispanics as much as it does for Whites. To test this assumption, the interaction of race with norm awareness was assessed in regression analyses that controlled for respondents age, sex, education and income as well as for the main effects of both race and norm awareness. The results of these analyses are presented in Table 2. Neither the Black x Norm Awareness interaction ($B = -1.67$, $t(692) = -1.55$, two-tailed $p < .13$) nor the Hispanic x Norm Awareness interaction ($B = 1.07$, $t(692) = 0.99$, two-tailed $p > .32$) was statistically significant.⁴ These findings replicate and extend those reported by Lynn (2011) and, together with the previously reported mediation analyses, suggest that an educational campaign designed to increase Blacks' and Hispanics' awareness of the 15 to 20 percent restaurant tipping norm would reduce the Black-White and Hispanic-White differences in restaurant tip size.

⁴ A comparable analysis using the three level measure of norm awareness also produced non-significant effects for the Black x Norm Awareness interaction ($B = -.82$, $t(692) = -1.18$, n.s.) and the Hispanic x Norm Awareness interaction ($B = .44$, $t(692) = 0.54$, n.s.) effects on percent tip under average service.

CONCLUSIONS

A large web-based survey found that (i) awareness of the 15 to 20 percent tipping norm partially mediates Black-White and Hispanic-White differences in restaurant tip size, and (ii) norm awareness predicts restaurant tip size for Blacks, Hispanics and Whites alike. These findings replicate and extend previous research results reported by Lynn (2011) and suggests that race differences in tipping can be reduced by reducing race differences in awareness of the 15 to 20 percent restaurant tipping norm. This reduction of race differences in tip norm awareness can be achieved by restaurant managers by including tipping guidelines and information about server compensation on menus, table tents and checks. Two executives at a major restaurant chain (who wish to remain anonymous) have told me that they found this approach helpful in reducing Black-White differences in tipping at one of their locations. However, it also makes sense for major industry organizations, like the National Restaurant Association (NRA) or the Multicultural Foodservice and Hospitality Alliance (MFHA), to organize and fund a multi-media campaign promoting the 15 to 20 percent restaurant norm. Such a campaign could target all consumers and, thereby, avoid the political pitfalls associated with discussing race differences in tipping.

Although the results of this study indicate that norm awareness does mediate race differences in tipping, that mediation was only partial. The data from this study suggest that completely eliminating race differences in awareness of the 15 to 20 percent restaurant tipping norm will likely reduce Black-White differences in restaurant tip percentages by only about 30 percent and will likely reduce Hispanic-White differences in restaurant tip percentages by only about 10 percent. Thus, an educational campaign

promoting tipping norms is only a partial solution to the industry problems stemming from race differences in tipping. To fully solve the problem of race differences in tipping, we need more research to better understand and address all the causes of those race differences.

While most of the obvious potential explanations for race differences in tipping (e.g., socio-economic differences, service discrimination, and norm awareness) have been tested, there are still numerous issues for future research to explore. For example, it is possible that servers' treat White, Black and Hispanic customers differently, but in such subtle ways (e.g., degree of smiling and other non-verbal behaviors) that they are not captured in the service ratings used to control for service quality. Thus, more research is needed to measure and control for more specific and subtle dimensions of service. Another possibility is that Whites, Blacks and Hispanics differ in their perceptions of how much others tip even after controlling for awareness of the injunctive 15 to 20 percent restaurant tipping norm and that this perception of others' norm compliance mediates the race differences in tipping. This possibility would be at odds with the fact that norm awareness does not moderate race differences in tipping, but it too deserves investigation. Finally, most existing research on the topic treats the different racial groups as homogeneous even though there are meaningful differences between the members of each racial group in terms of socio-economic status, national origin of family, current geographic location, etc... Testing to see if any of these factors moderate race differences in tipping may provide insight into the processes and causes underlying those differences. Hopefully, this paper will encourage more researchers to study these and other issues surrounding race differences in tipping.

REFERENCES

- Amer, S. (2002). Minority report. *Restaurant Business*, November 15, 27-38.
- Brewster, Z.W. (2011). Racialized customer service in restaurants: A quantitative assessment of the statistical discrimination explanatory framework. *Sociological Inquiry*, 1-26.
- Hayes, A.F. (2012). *PROCESS*. <http://www.afhayes.com/public/process.pdf> (accessed March 2012).
- Lynn, M. (2004). Ethnic differences in tipping: A matter of familiarity with tipping norms. *Cornell Hotel and Restaurant Administration Quarterly*, 45, 12 - 22.
- Lynn, M. (2006). Geodemographic differences in knowledge about the restaurant tipping norm. *Journal of Applied Social Psychology*, 36, 740-750.
- Lynn, M. (2011). Race differences in tipping: Testing the role of norm familiarity. *Cornell Hospitality Quarterly*, 52 (1), 73-80.
- Lynn, M. (forthcoming). A comparison of Asians', Hispanics', and Whites' restaurant tipping. *Journal of Applied Social Psychology*.
- Lynn, M., Jabbour, P. & Kim, W. (2012). Who uses tips as reward for service and when? *Journal of Economic Psychology*, 33, 90-103.
- Lynn, M. & Thomas-Haysbert, C. (2003). Ethnic differences in tipping: Evidence, explanations, and implications. *Journal of Applied Social Psychology*, 33, 1747-1772.
- McCall, M. & Lynn, A. (2009). Restaurant servers' perceptions of customer tipping intentions. *International Journal of Hospitality Management*, 28, 594-596.
- Rusche, S.E. & Brewster, Z. (2008). "Because they tip for shit!": The social psychology of everyday racism in restaurants. *Sociology Compass*, 2, 2008-2029.

- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models, *Sociological Methodology*, 3, 290-312.
- Wallace, L. (2001). The restaurant wars: dare to go where no broker has gone before. DiversityInc.com (accessed August , 2001).
- Wooldridge, J.M. (2000). *Introductory Econometrics: A Modern Approach*. Cincinnati, OH: South-Western.
- Zhao, X., Lynch, J.G. & Chen, Q. (2010). Reconsidering baron and Kenny: Myths and truths about Mediation Analysis, *Journal of Consumer Research*, 37, 197-206.

Table 1. Descriptive statistics for the final study sample.

	N	Minimum	Maximum	Mean	Standard Deviation
Percent Tip (Ave. Service)	703	.00	49.75	14.76	6.10
Percent Tip (Bad Service)	652	.00	25.96	6.37	5.64
Percent Tip (Good Service)	654	.00	95.22	21.76	9.89
Norm Awareness	703	.00	1.00	.44	.50
Bill Size	703	21.32	46.23	33.86	12.46
Age	703	18.00	90.00	44.03	16.05
Sex (male=1, female =2)	703	1	2	1.49	.50
Education	703	1	8	3.43	1.39
Incomer	703	1.00	9.00	3.55	2.41
Black (yes=1, no=-0)	703	.00	1.00	.26	.44
Hispanic (yes=1, no=-0)	703	.00	1.00	.26	.44
White (yes=1, no=-0)	703	.00	1.00	.48	.50

Table 2. Regression coefficients (and heteroskedasticity robust standard errors) from regressions of norm awareness on race and other variables.

	Model 1	Model 2
Constant	.53*** (.03)	-.03 (.11)
Bill Size		-.00 (.00)
Age		.005*** (.001)
Sex		.04 (.04)
Education		.05*** (.01)
Income		.03*** (.01)
Norm Awareness		
Black	-.22*** (.04)	-.18*** (.04)
Hispanic	-.15** (.05)	-.08 (.05)
Black x Norm Awareness		
Hispanic x Norm Awareness		
N = 703	R ² = .02	R ² = .12

* p < .05, ** p < .01, *** p < .001

Table 3. Regression coefficients (and heteroskedasticity robust standard errors) from regressions of percent tip (for average service) on race and other variables.

	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	13.56*** (.32)	15.66*** (.31)	20.88*** (1.65)	20.96*** (1.63)	20.88*** (1.61)
Bill Size			-.10*** (.02)	-.10*** (.02)	-.10*** (.02)
Age			-.02 (.01)	-.04* (.02)	-.03* (.02)
Sex			-.91* (.46)	-1.02* (.45)	-1.03* (.45)
Education			.02 (.16)	-.11 (.16)	-.12 (.16)
Income			.18* (.09)	.10 (.09)	.10 (.09)
Norm Awareness	2.73*** (.45)			2.65*** (.48)	2.75*** (.66)
Black		-1.91** (.57)	-1.76** (.59)	-1.29* (.57)	-.74 (.79)
Hispanic		-1.56** (.56)	-1.93** (.57)	-1.73** (.54)	-2.12** (.69)
Black x Norm Awareness					-1.67 (1.08)
Hispanic x Norm Awareness					1.07 (1.08)
N = 703	R ² = .05	R ² = .02	R ² = .07	R ² = .12	R ² = .12

* p < .05, ** p < .01, *** p < .001

Table 4. Regression coefficients (and heteroskedasticity robust standard errors) from regressions of percent tip (for unusually bad service) on race and other variables.

	Model 8	Model 9	Model10	Model 11	Model 12
Constant	4.91*** (.26)	7.53*** (.33)	9.45*** (1.42)	9.45*** (1.37)	9.32*** (1.37)
Bill Size			-.01 (.02)	-.01 (.02)	-.01 (.02)
Age			-.04** (.01)	-.06*** (.01)	-.06*** (.01)
Sex			-.17 (.44)	-.28 (.42)	-.31 (.43)
Education			-.02 (.17)	-.14 (.17)	-.14 (.17)
Income			.18 (.09)	.08 (.09)	.08 (.09)
Norm Awareness	3.18*** (.43)			3.17*** (.47)	3.52*** (.65)
Black		-2.89** (.53)	-2.97*** (.54)	-2.46*** (.53)	-2.08** (.63)
Hispanic		-1.65** (.52)	-2.09*** (.56)	-1.85** (.54)	-1.58* (.66)
Black x Norm Awareness					-.87 (1.12)
Hispanic x Norm Awareness					-.56 (1.05)
N = 652	R ² = .08	R ² = .05	R ² = .06	R ² = .13	R ² = .13

* p < .05, ** p < .01, *** p < .001

Table 5. Regression coefficients (and heteroskedasticity robust standard errors) from regressions of percent tip (for unusually good service) on race and other variables.

	Model 13	Model 14	Model 15	Model 16	Model 17
Constant	21.10*** (.59)	22.34*** (.53)	37.97*** (3.08)	37.96*** (3.10)	38.21*** (3.15)
Bill Size			-.22*** (.03)	-.22*** (.03)	-.21*** (.03)
Age			-.13*** (.03)	-.14*** (.03)	-.14*** (.03)
Sex			-1.40 (.74)	-1.48* (.74)	-1.40 (.73)
Education			.23 (.26)	-.31 (.27)	-.33 (.27)
Income			.18 (.14)	.12 (.13)	.13 (.13)
Norm Awareness	1.46 (.76)			2.06** (.77)	1.08 (1.05)
Black		-1.24 (.97)	-1.53 (.94)	-1.20 (.94)	-1.27 (1.41)
Hispanic		-1.01 (.95)	-2.78** (.97)	-2.64** (.97)	-4.41*** (1.24)
Black x Norm Awareness					-.37 (1.73)
Hispanic x Norm Awareness					4.11* (1.85)
N = 654	.01	R ² = .003	R ² = .11	R ² = .12	R ² = .13

* p < .05, ** p < .01, *** p < .001