

Understanding tipping behaviour – an economic perspective

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There are generally three explanations for tipping: social approval, equitable service exchange and other reasons. The combination and importance of these reasons differ between countries and cultures. In this study, three distinct questions were asked. What influences the *frequency* of the tipping decision? What influences the *magnitude* of the tip given? Who is likely to tip *more* than the norm? A survey among diners was conducted at one of South Africa's largest arts festivals. Using regression analyses, this paper aims to identify the factors that influence tipping behaviour in South Africa. While most previous research has focused on motivational and/or psychological reasons for tipping, this research contributes towards understanding tipping from an economic perspective. The results show that the frequency of tipping and its magnitude are a function of the ability to pay. However, socio-demographics play an important role, especially in the paying of the above-normal tip.

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JEL classification: C25; L83; J46

Although tipping practices differ from culture to culture or country to country, tipping is a global phenomenon (Lui, 2008). In this regard, Mkono (2011) argues that country-specific investigations of this nature are required and the literature review confirms that only a few studies have been conducted in

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developing countries despite its impact on employment and what employees gain from it. Tipping takes place in a wide variety of occupations, such as barbers, bartenders, beauticians, car guards, casino croupiers, concierges, delivery staff, doormen, exotic dancers, golf caddies, maître d's, musicians, parking valets, pool attendances, porters, shoeshine boys, taxi drivers, tour guides, waiters/waitresses and washroom attendees (Lynn and Wang, 2013). These occupations cut across various hospitality and tourism businesses and therefore deserve further investigation. Most research concerning tipping concerns the motivation for tipping (Azar, 2010) and according to Lynn and Grassman (1990) there are three reasons why people tip, namely for social approval, equitable service and other reasons. According to Barkan *et al* (2004, p 449) and Bujisic *et al* (2013, p 242) service quality is probably the most frequently researched reason for tipping.

A tip is defined as a 'voluntary gift of money given in appreciation for service received and retained by the person giving the tip' (Brown and Rolle, 1991, p 76). Waiting staff are most probably the most researched of all the types of occupations where tipping takes place. The restaurant sector forms an integral part of the tourism product and the payment for services that are rendered at the restaurant takes on various forms. While some countries use fixed service charges that are added to the bill, many other countries leave the decision to pay the waiter for his or her service (that is, by tipping) to the discretion of the customer. The latter could also include a shared tip policy, where all tips are shared equally among staff (Barkan *et al*, 2004).

In addition, it is important to note the economic value of this type of activity; for example, in the USA, out of 4.7 million food servers employed, more than 3 million employees earn some portion of their income from tips (Miller, 2010). It is estimated that tipping in the USA and Canada generates in excess of US\$40 billion per year, while in the USA alone it is estimated at US\$27 billion (Azar, 2009). According to Lynn (2006), 10% of the US population eat out at a restaurant on any given day, and in an average month it totals 58%. Comparable data from other countries concerning the economics of tipping are scant.

It is clear that tipping is an important economic phenomenon with implications for different areas in economics and management, and though it has received a lot of attention from psychologists, economists in general have not yet addressed many economic questions related to tipping (Azar, 2003). This is even truer for tourism economists, since very few articles (Schwartz, 1997; Barkan *et al*, 2004; Bladh and Holm, 2013) on this topic have been published in mainstream tourism journals. Is tipping more related to the psychology of the tipper, or is it a pure economic phenomenon (that is, those who can afford to give a tip do so)? The aim of this research is to determine the influence of socio-demographic and dining behaviour on the tipping behaviour of visitors at a major national arts festival in South Africa, while controlling for 'ability to pay'. In order to achieve the goal, the following three distinct questions were asked in this research. What influences the *frequency* of the tipping decision? What influences the *magnitude* of the tip given during the festival? Who is likely to tip *more* than the South African norm of 10%?

Literature review

Saunders and Lynn (2010) state that tipping is an illogical economic action, as consumers tip through choice rather than being ethically or legally bound as patrons to tip. In addition, tipping is contradictory to normal economic exchange theory, as tipping represents buyer-determined values for services and voluntary expenditures that escalate the cost of amenities that have already been received (Lynn *et al.*, 1993; Whaley *et al.*, 2014). Alternatively, consumer choice theory states that consumers aim to maximize their pleasure by consuming various combinations of goods and services, constrained by their income (Perloff, 2007, p 75), which implies that they are willing to pay for service received (in this case, as rendered by waiting staff) to the extent that their income permits.

Regardless of all these theories and views, people tip and millions earn their livelihood from this practice. The question then is not so much why people tip, but the focus shifts to the following question that this research will attempt to address: Which socio-demographic and dining behaviour variables influence tipping, or is it simply a question of those who can afford to tip, do so? In other words, is tipping a normal good with higher income customers who are associated with more regular tipping practices? This, in fact, is extremely useful in the discourse of tipping and even more so since this investigation is conducted in a developing country. The literature review revealed the following results concerning *socio-demographic* variables and how they influence the amount that people spend on tipping. The focus of most of the research that is reflected here was on how these variables influence the magnitude of the tip.

In terms of *gender*, it seems that men tip more than women (Crusco and Wentzel, 1984; Lynn, 2006). The gender impact also differs when it comes to the gender of the waiter or waitress, since Lynn and McCall (2000) found that men tip more when the waiter is female and vice versa. *Ethnicity* also plays a role; black visitors in the USA tend to give a flat rate, compared to white visitors (Lynn, 2004). Harris's (1995) study revealed that black Americans tip less than their white counterparts. In addition, research by Lynn *et al.* (2008) found that both white and black visitors tipped white waiters and waitresses more than black waiters and waitresses.

A study by Thomas-Haysbert (2002), however, showed that when one controls for education and income, the difference between white and blacks in terms of tipping is insignificant. This questions the relevance of previous research results that did not account for income in the tipping decision (that is, the economic view that spending is a function of income). *Income* showed a positive relationship with tipping and the same applies for *education* (Lynn and Thomas-Haysbert, 2003).

Language has a positive relationship with tipping. Van Vaerenberg and Holmqvist (2013) found that if visitors are served in their first language (mother tongue), they tend to tip more compared to visitors who are served in a second language.

The literature has also shown the relationship between the following *behavioural variables* and tipping: Lynn and McCall (2000) found that the *size of the bill* has a significant influence on the tipping amount and this variable,

according to Lynn (2006), is twice as powerful as all the other variables combined in determining the amount of tipping in restaurants. Green *et al* (2003) confirmed this and also found that the percentage of tips decreases with the bill size.

Another positive relationship was found between paying with a credit card, compared to paying cash (Garrity and Degelman, 1990; Lynn, 2006); therefore, *method of payment* also has an influence. The *size of the group* or dining party has a negative influence; as the group increases, the tip becomes smaller (Freeman *et al*, 1975; Lynn, 2006).

Another much debated factor or variable is *quality of service*, since the better the service levels are perceived to be, the bigger the tip (Schwartz, 1997; Lynn and McCall, 2000; Conlin *et al*, 2003; Chung and Heung, 2007). The problem with quality service, however, is that good or bad service is influenced by many aspects and it seems that the robustness of the effect, when researchers have contributed for many potential confounds suggests a causal relationship and it appears that the service–tipping relationship is weak (Lynn, 2000, 2004; Bodvarsson *et al*, 2003). Therefore, owing to the complexity of what it entails, service quality seems to be inconclusive.

Those who visit a restaurant regularly or *frequently* tip more than the infrequent visitors and also tend to base their tip more on the size of the bill than those who visit infrequently (Lynn and McCall, 2000).

Research by Sanchez (2002) and Conlin *et al* (2003) found a positive relationship between *alcohol consumption* and spending. The role of waiting staff and the way in which they conduct their business also have a significant impact on the tip they receive; for example, server adornment, such as wearing flowers in their hair, or writing ‘Thank you’ on the bill with their names on it all seem to influence bigger tips. A study by Seiter (2007) also found that flattery leads to bigger tips. Seiter and Weger (2013) confirmed that forms of address, reflecting immediacy, were positively related to higher tips. Therefore, the way visitors are addressed plays an important role (Rind and Bordia, 1995; Stillman and Hensley, 1980; Seiter and Gass, 2002). Friendliness alone does not lead to greater tips, since consumers or visitors expect the friendliness to be authentic, which then leads to a bigger tip (Bujisic *et al*, 2014); this confirms former research by Azar (2007). The same applies to the physical attractiveness of waiting staff, which also leads to greater tips (Hornik, 1992; Lynn and McCall, 2000).

Lynn and McCall (2000) found that *customer mood* shows a positive relationship to tipping; this implies that if the customer is in a good mood, he or she will tip more. It was also found by Greenberg (2014) that when *people are on holiday*, they tip more. In fact, the bad tippers tip more and the good tippers tip significantly more.

Aspects that were also found to play a role in tipping include the *weather* – for example, if it is a sunny day, people give larger tips (Crusco and Wentzel, 1984; Rind and Strohmetz, 2001). In addition, the *size of the town* or city has a positive relationship with bigger tips (McCrohan and Pearl, 1983; Garrity and Degelman, 1990; Rind and Strohmetz, 2001; Lynn and Thomas-Haysbert, 2003), as well as the *location* and whether the restaurant is elegant. This research thus aims to expand on this topic.

Methodology

The survey

This research, which (to the authors' knowledge) has not been done in South Africa previously, was carried out by means of a structured questionnaire and the survey was conducted in the city of Potchefstroom at one of the largest national arts festivals in South Africa, namely Aardklop, during September 2013. The reason for choosing this event is because a large number of visitors also dine out during their stay at the festival. In addition, the festival offers visitors many dining opportunities, which made it more affordable to conduct research among consumers or visitors in order to get a sense of their dining behaviour as well as their view on tipping. Previous research by Saayman and Saayman (2006), as well as van Wyk *et al* (2013), showed that visitors spend a significant amount on restaurants and dining out during arts festivals in South Africa.

This questionnaire was based on research that had been conducted by Lynn (2006) and Azar (2010), and consisted of three sections. Section A focused on socio-demographic information, such as gender, age, income, where they come from (place of origin) and occupation. Section B focused on the aspects that influence tipping, such as the waiting staff, restaurant and dining party. Section C assessed the reason why people tip or do not tip. The survey was conducted between 25 and 28 September 2013 and measured stated, not revealed, tipping behaviour. Ten restaurants that cover a variety of different cuisines were selected. Fieldworkers distributed 10 questionnaires per day randomly to diners at each of the selected restaurants. From the 400 that were distributed, 374 were suitable to be used in the analysis.

A descriptive analysis of the data revealed that 57.8% of the respondents were female; the respondents were predominantly Afrikaans-speaking (94%), which is to be expected, since it is an Afrikaans festival; 22% of the respondents were students, while 20% and 10% were professional persons (for example, medical doctors or engineers) and self-employed, respectively; the income distribution reflects the occupations; most of the respondents (40%) were from the North-West Province, the province that hosts the festival, followed closely by Gauteng (38%), the economic power house of South Africa and traditionally a main source of festival attendees. The profile is comparable to other studies that have been completed of festival attendees at the same festival (Kruger, 2010), which gives confidence in the representativeness of the sample.

The variables

As indicated above, the questionnaire consisted of three sections and questions from all three sections are included in this analysis. The following three distinct questions are asked in this research. What influences the frequency of the tipping decision? What influences the magnitude of the tip given during the festival? Who is likely to tip more than the South African norm of 10%?

To answer the first question, the dependent variable takes the form of an ordered ordinal variable with four frequencies, ranging from *never* (1) to *always* (4). The dependent variable for the second analysis is the amount in South

Table 1. Independent variables used in the analysis.

Variable name	Description
<i>FEMALE</i>	Dichotomous variable, where 1 = female and 0 = male
<i>AGE</i>	Age of respondent in years
<i>AFRIKAANS</i>	Dichotomous variable, where 1 = Afrikaans-speaking (the dominant language at the festival) and 0 = other languages (mainly English)
<i>OCCUPATION</i>	Categorical variable, where 1 = professional person (eg medical doctor) and 14 = unemployed
<i>GAUTENG</i>	Dichotomous variable, where 1 = respondent from Gauteng Province in South Africa (the most affluent province, from which the festival attracts large numbers of visitors) and 0 = all other provinces
<i>INCOME</i>	Categorical variable, where 1 = income less than R20,000 per year and 7 = income more than R552,000 per year
<i>PAY</i>	How many people the respondent is financially responsible for during the festival
<i>DINE</i>	Categorical variable that measures frequency of dining out, ranging from 1 = a few times a week to 6 = occasionally
<i>SPEND</i>	The sum of spending on food and beverages during the festival in South African rand
<i>REASONS FOR DINING</i>	Seventeen statements on a 5-point Likert scale, ranging from 1 = not at all important to 5 = extremely important
<i>TIPPING DECISION</i>	Twenty-six statements on a 5-point Likert scale, ranging from 1 = fully disagree to 5 = fully agree
<i>WHY TIP?</i>	Eleven statements in a 5-point Likert scale, ranging from 1 = disagree completely to 5 = agree completely
<i>WHY NOT TIP?</i>	Eleven statements on a 5-point Likert scale, ranging from 1 = disagree completely to 5 = agree completely

African rand that the respondent had tipped while dining out during the festival, asked as part of the spending components. To answer the third question, three scenarios were presented to respondents, as follows. (1) You go out for a cup of coffee which costs R15.00; how much do you tip? (2) You go out to lunch and your bill totals R144.00; how much do you tip? (3) You and your friends have dinner at a restaurant and the bill is R883.00; how much do you tip? For each of these questions, a dichotomous variable is coded which takes the value of 1 when the tip exceeds the customary 10% of the bill and the value of 0 when it is equal to or less than 10% of the bill.

Table 1 provides an explanation of all the explanatory variables that were used in the analyses.

Method

The data were captured in Microsoft® Excel® and the variables were coded in the same program. Two distinct analyses were used in the paper: principal component analysis and regression analysis. To reduce the statements of the last four independent variables listed in Table 1, each set of statements was subjected to principal component analysis by using the SPSS software.

The Kaiser–Meyer–Olkin (KMO) measure of sample adequacy and Bartlett’s test of sphericity were used to determine whether the data collection lent itself to being reduced, using principal component analysis (Field, 2009, pp 658–659). In all cases, the KMO is above 0.84 and Bartlett’s test is significant at a 1% level of significance, thus indicating that all four groups of statements can be subjected to principal component analysis.

The number of factors extracted for each set of statements was based on Kaiser’s criterion (factors with eigenvalues greater than unity). To improve interpretation of the various factors, oblique rotation was used in the analyses. Factor scores were calculated by using the Anderson–Rubin method, which led to uncorrelated and standard, normally distributed factor scores (Field, 2009, pp 640–644, 635).

The results of the analyses identified three factors with eigenvalues greater than unity that explain 60% of the variance in the reasons why people dine out.¹ Based on the items that loaded onto the factors, they are named ‘status’, ‘gastronomy’ and ‘socialization’. Four factors with eigenvalues greater than one were identified and they explain 55% of the variance in the tipping decision. Based on the item loadings, they are named ‘restaurant attributes’, ‘hospitality and services’, ‘payment and bill’ and ‘standardization’. Three factors explained more than 65% of the variance in the reasons why people tip and these factors were named ‘financial’, ‘service’ and ‘social acceptability’, based on the items that loaded onto each factor. Finally, two factors explained more than 65% of the variance in the reasons why people do not tip and these factors could be identified as ‘bad service’ and ‘inessential’.

The second set of analyses aimed to shed light on the three questions, posed in the previous section, by means of regression analyses. In all the analyses, income variables were included. To answer the first question, ‘What influences the frequency of the tipping decision?’, an ordered logistic regression was executed, since the data were ordinal and ranked from low to high. The ordered logistic regression was based on the following specification (Brooks, 2008; IHS Global Inc., 2013):

$$y_i^* = x_i\beta + \varepsilon_i, \quad (1)$$

where x_i is a set of explanatory variables, ε_i are i.i.d. random variables, and the observed y_i is determined from y_i^* by using the following rule:

$$y_i = \begin{cases} 0, & \text{if } y_i^* \leq \gamma_1 \\ 1, & \text{if } \gamma_1 < y_i^* \leq \gamma_2 \\ 2, & \text{if } \gamma_2 < y_i^* \leq \gamma_3 \\ \vdots & \\ M, & \text{if } \gamma_{M-1} < y_i^* \end{cases}$$

The corresponding probabilities of observing each value of y_i are therefore given by the following:

$$Pr(y_i = 0|x_i, \beta, \gamma) = F(\gamma_1 - x_i\beta),$$

$$Pr(y_i = 1|x_i, \beta, \gamma) = F(\gamma_2 - x_i\beta) - F(\gamma_1 - x_i\beta),$$

$$Pr(y_i = 2|x_i, \beta, \gamma) = F(\gamma_3 - x_i'\beta) - F(\gamma_2 - x_i'\beta),$$

⋮

$$Pr(y_i = M|x_i, \beta, \gamma) = F(\gamma_3 - x_i'\beta) - F(\gamma_M - x_i'\beta),$$

where F is the cumulative distribution function of ε_i . Both the threshold values of γ and the β -coefficients are estimated by using maximum likelihood. The authors used both EViews 8 and StataIC 12 to estimate the ordered logistic regressions, with the latter providing the odds ratios. Using the Pantula principle, only significant regressors were retained in the final estimates. To control for possible heteroscedasticity, the ordinal generalized linear model procedure was followed in STATA and a number of heteroscedastic ordered logistic regressions were estimated (see Williams, 2010). In none of the models could clear evidence of heteroscedasticity be found, since none of the terms in the variance equation were significant.² The reported results are therefore those of the normal ordered logistic regression, since it had the lowest Akaike and Schwarz information criteria.

To answer the second question, 'What influences the magnitude of the tip given during the festival?', stepwise forward and backward regressions were used in order to identify the significant influencers of the size of the tip. The variables identified by both were included in the final regression and the errors were adjusted to control for heteroscedasticity by using Bartlett kernel with Newey–West sample size-based bandwidth in EViews 8.

Finally, to answer the third question, 'Who is likely to tip more than the South African norm of 10%?', logistic regressions for each scenario were performed in SPSS (where the stepwise procedure was used to identify the influential regressors), EViews 8 and StataIC 12, with the last providing the odds ratios. The logit model takes the natural log of the odds ratio, that is,

$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right),$$

and uses this in a linear regression model (where P_i is the probability that the outcome takes the value of 1). The logit model therefore takes the following specification (Asteriou and Hall, 2011):

$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right) = \beta_2 + \beta_2 X_{2i} + \beta_3 X_{3i} + \dots + \beta_k X_{ki} + \varepsilon_i. \quad (2)$$

Interpretation of the estimated β -coefficients is problematic, since it shows the change in L_i for a unit change in X_j . Therefore, the odds ratio is often interpreted and the marginal effects can be calculated by taking partial derivatives (Asteriou and Hall, 2011).

Results

The regression results are discussed in three sections in order to address the three questions specified above.

Table 2. Results of the ordered regression.

Variable	Odds ratio	Coefficient	Std error	Probability
<i>FEMALE</i>	1.470	0.385	0.336	0.093
<i>AFRIKAANS</i>	0.288	-1.243	0.173	0.040
<i>PAY</i>	0.921	-0.081	0.082	0.365
<i>INCOME</i>	1.175	0.161	0.083	0.023
<i>DINE</i>	0.715	0.334	0.064	<0.001
<i>OCCUPATION</i>	0.942	-0.059	0.025	0.026
<i>FINANCIAL</i>	1.627	0.487	0.266	0.003
<i>GOOD SERVICE</i>	0.932	-0.069	0.132	0.625
<i>SOCIAL ACCEPTABLE</i>	1.106	0.101	0.171	0.514
<i>BAD SERVICE</i>	0.836	-0.178	0.109	0.175
<i>INESSENTIAL</i>	0.850	-0.161	0.127	0.281
/cut1	-5.602		0.867	<0.001
/cut2	-3.533		0.762	<0.001
/cut3	-1.669		0.744	0.026
Pseudo <i>R</i> -squared	0.106	Akaike information criterion		2.190
Schwarz criterion	2.362	Log likelihood		-316.82
LR statistic	75.04**	<i>F</i> -statistic		3.69**

Note: **Significant at the 1% level.

Results of the ordered regression

The ordered logistic regression results provide answers to the first question, 'What influences the frequency of the tipping decision?'. The results are shown in Table 2 and it is evident that the decision to tip when dining out is strongly influenced by income and the ability to pay, as is evident from the positive coefficients for income and the financial factor for deciding to tip, as well as the negative coefficient for occupation (with lower numbers representing more highly paid occupations). These variables are also significant at a 95% confidence level and therefore, it is evident that the frequency of tipping is largely determined by economic factors.

When interpreting the odds ratio, a value greater than 1 indicates that the odds of the event taking place increase, while a value of less than 1 indicates that the odds decrease. Therefore, the odds of tipping more regularly increase when the diner is female, English-speaking, with a higher income and a better-paid occupation, and when she dines out less frequently.

It is interesting to note that the reasons for tipping as well as the reasons for not tipping are both influential factors that determine the frequency with which tipping occurs in the South African circumstance. While bad service is likely to lead to less frequent tipping, good service is not necessarily associated with the more frequent tipping behaviour. In fact, the most influential reason why people decide to tip is rather a sense of contributing to the financial well-being of the waiting staff – that is, a social responsibility.

Compared to research by Lynn and Thomas-Haysbert (2003), this research confirms the dominant role that income plays in the tipping decision. Although previous research did not include occupation as a variable, increased frequency

Table 3. Results of the stepwise regression.

Variable	Coefficient	Std error	Probability
CONSTANT	14.069	38.687	0.716
SPEND	0.066	0.011	< 0.001
PAY	-8.121	9.072	0.371
AGE	1.103	0.696	0.114
FEMALE	18.692	16.619	0.261
AFRIKAANS	-23.421	26.030	0.368
STATUS	30.237	10.392	0.003
GASTRONOMY	-27.061	10.498	0.010
SOCIALISATION	8.725	8.894	0.327
RESTAURANT ATTRIBUTES	-1.885	11.725	0.872
HOSPITALITY AND SERVICE	17.525	6.329	0.006
PAYMENT AND BILL	1.958	7.695	0.799
STANDARDISATION	4.437	8.469	0.600
BAD SERVICE	3.073	7.884	0.696
INESSENTIAL	-25.374	9.848	0.010
R-squared	0.363	Akaike information	12.897
Adjusted R-squared	0.335	criterion	
Log likelihood	-2132.451	Schwarz criterion	13.069
F-statistic	12.99**	Wald F-statistic	6.601**
White heteroscedasticity test statistic	134.875	White χ^2 -prob	0.124

Note: **Significant at the 1% level.

of tipping is associated with both higher income levels and high income occupations. Our research contradicts findings by Crusco and Wentzel (1984), as well as Lynn (2006), who showed that men tend to tip more than women; this might indicate a cultural difference between the countries.

Results of the stepwise regression

To answer the second question, 'What influences the magnitude of the tip given during the festival?', the authors first employed both stepwise forward and stepwise backward to identify the influential covariates. The regression was then estimated with the South African rand value of the tip as dependent variable and the covariates as identified by the stepwise procedures. The results of the regression are indicated in Table 3 and White's heteroscedasticity test is also reported to show that error terms are homoscedastic.

These results indicate that the size of the tip is determined by the amount that is spent on food and beverages during the festival. While some socio-demographic variables are identified by the stepwise procedure, their influence is not significant. What is interesting is that, besides the size of the bill (SPEND), the reasons why people decide to dine at a restaurant and why they decide to tip (or why they do not tip) are the most influential. Those who dine because it is a status symbol tip larger amounts, while those who dine to enjoy the food are less likely to tip larger amounts.

The magnitude of the tip is also positively associated with the hospitality and service that the diner experiences, implying that although the service will

not necessarily convince someone to tip more frequently, it does influence the magnitude of the tip. Contrary to this is the finding that bad service is not necessarily associated with a lower tip value, although those who find tipping inessential do tip lower in this case.

Compared to other studies, this research corroborates findings by Lynn and McCall (2000), as well as Lynn (2006) and Green *et al* (2003), that the magnitude of the tip is a function of the size of the bill. However, in terms of the influence of quality service and being hospitable, the results contradict findings by Bodvarsson *et al* (2003), Lynn (2004) and Thomas-Haysbert (2002), who found a weak relationship between tipping and service levels. In this regard, it rather confirms the results that were found by Conlin *et al* (2003), Chung and Heung (2007) and Lynn and McCall (2000), who found a strong relationship between tipping and service quality. The status effect of dining out has not been included in previous research and is therefore unique to this study.

Language was also found to be important, especially in the context of this study, since the research was conducted at a predominantly Afrikaans festival. One explanation for this might be found in the research that was conducted by van Vaerenberg and Holmqvist (2013), who stated that diners that are served in their home language tend to tip more. Since English is the second language of many South Africans, it is not uncommon to be served in English – even at an Afrikaans festival.

Results of the logistic regressions

To find the answer to the third question, ‘Who is likely to tip more than the South African norm of 10%?’, the results of the three logistic regressions are presented in Tables 4 to 6. Again, the odds ratio is easy to interpret and indicates who is more likely to tip more than the customary 10%. To test for heteroscedasticity, the Davidson and MacKinnon test was programmed in EViews 8, and the corresponding Lagrange multiplier (LM)-statistic and *p*-value is also reported. The results of the test show that the null hypothesis of homoscedasticity cannot be rejected in all of the cases and therefore none of the models suffer from heteroscedasticity.

In Table 4, the results of the first scenario, namely the low bill scenario, indicate that younger people and females are more likely to tip more than the customary 10% for a cup of coffee. In addition, receiving good service also increases the size of the tip in such a situation. It is interesting to note that the economic reasons, namely income and occupation, do not play a significant role when the size of the bill is small.

In terms of the second scenario, namely lunch for R144.00, it is evident from Table 5 that economic reasons become more important. People with higher paying occupations are more likely to tip more than the customary 10%. In addition, younger people also tend to tip larger percentages, while the tip starts to decline as soon as the group starts to increase (PAY). Furthermore, the reasons why people tend to tip become important, with those who feel responsible to support the waiter financially inclined to pay a greater percentage. In addition, those feeling more pressurized by social status are inclined to tip less than the customary 10%.

Table 4. Results of the logistic regression for scenario 1 (coffee).

Variable	Odds ratio	Coefficient	Std error	Probability
<i>FEMALE</i>	1.955	0.670	0.312	0.033
<i>AGE</i>	0.964	-0.036	0.010	0.001
<i>RESTAURANT ATTRIBUTES</i>	0.902	-0.102	0.170	0.548
<i>HOSPITALITY AND SERVICE</i>	1.293	0.257	0.141	0.069
<i>PAYMENT AND BILL</i>	1.230	0.207	0.136	0.129
<i>STANDARDIZATION</i>	0.899	-0.106	0.147	0.471
<i>CONSTANT</i>	12.867	2.554	0.445	< 0.001
McFadden <i>R</i> -squared	0.070	Akaike information criterion		0.889
Schwarz criterion	0.967	Log likelihood		-144.598
LR statistic	21.813*	<i>F</i> -statistic		3.75*
Davidson and MacKinnon LM-statistic	1.435	Probability: LM-statistic		0.23

Note: *Significant at the 5% level.

Table 5. Results of the logistic regression for scenario 2 (lunch).

Variable	Odds ratio	Coefficient	Std error	Probability
<i>FEMALE</i>	1.470	0.385	0.336	0.093
<i>AGE</i>	0.971	-0.029	0.010	0.003
<i>OCCUPATION</i>	0.923	-0.080	0.029	0.005
<i>PAY</i>	0.833	-0.182	0.075	0.016
<i>FINANCIAL</i>	1.682	0.520	0.168	0.001
<i>GOOD SERVICE</i>	1.075	0.072	0.159	0.651
<i>SOCIAL ACCEPTABLE</i>	0.647	-0.434	0.155	0.005
<i>CONSTANT</i>	19.686	2.979	0.545	< 0.001
McFadden <i>R</i> -squared	0.083	Akaike information criterion		1.152
Schwarz criterion	1.235	Log likelihood		-176.206
LR statistic	31.94**	<i>F</i> -statistic		4.95**
Davidson and MacKinnon LM-statistic	1.916	Probability: LM-statistic		0.166

Note: **Significant at the 1% level.

When analysing the third scenario, namely dinner with friends for R883.00 (the high bill scenario), it is evident from Table 6 that economic reasons become less important and that personal beliefs and attributes become stronger again. This is clear from the factors that influence the decision to pay a tip, namely payment and bill, where people who indicated that they pay a greater percentage for a larger bill actually do so. Furthermore, those who feel it is their responsibility to support the waiting staff financially also tend to pay a greater percentage in the event of a large bill. Consistent with all the previous results, younger people, in contrast to older diners, are more likely to pay more than 10% and again, English-speaking diners tend to tip larger than Afrikaans-speakers, making them more generous tippers.

Table 6. Results of the logistic regression for scenario 3 (dinner).

Variable	Odds ratio	Coefficient	Std error	Probability
AGE	0.978	-0.021	0.008	0.013
AFRIKAANS	0.400	-0.916	0.478	0.055
GAUTENG	0.731	-0.312	0.238	0.190
RESTAURANT ATTRIBUTES	0.867	-0.142	0.134	0.288
HOSPITALITY AND SERVICE	0.996	-0.003	0.123	0.980
PAYMENT AND BILL	1.316	0.274	0.121	0.023
STANDARDIZATION	0.771	-0.258	0.122	0.035
FINANCIAL	1.558	0.443	0.128	< 0.001
CONSTANT	4.427	1.487	0.575	0.009
McFadden <i>R</i> -squared	0.069	Akaike information criterion		1.332
Schwarz criterion	1.433	Log likelihood		-219.510
LR statistic	32.90**	<i>F</i> -statistic		3.68**
Davidson and MacKinnon	0.333	Probability: LM-statistic		0.563
LM-statistic				

Note: **Significant at the 1% level.

An interesting observation is that the hospitality and service for an expensive meal tend to be less influential in the tip percentage. High tippers are also more likely to be against a standardization system or the inclusion of a fixed service fee in the bill, as is customary in many European countries.

Although this type of analysis (different scenarios), as indicated above, has not been done previously, it is interesting to note that the importance of income and other socio-demographic variables is not consistent. The only consistent variable is age, with younger people tending to tip more than the acceptable norm in all scenarios. No other research found this strong evidence for age as a determinant of tipping. Furthermore, it is evident that the factors that influence the tipping decision and/or the factors that determine why people tip are always identified as influential covariates. This might suggest that an exuberant tip has much more to do with personal beliefs and the service that has been received than income and the ability to pay.

Conclusion

The purpose of this research was to determine the influence of socio-demographic variables and dining behaviour on the tipping behaviour of visitors at a major national arts festival in South Africa. It distinguishes itself from other research by always including the ability to pay as a variable in the analysis of the tipping decision. The goal was achieved by providing answers to three key questions. What influences the frequency of tipping? What influences the magnitude of the tip? Who is likely to tip more than the South African norm of 10%? This innovative approach provides another dimension to the research that is currently available on the topic and highlights certain gaps in the current debates.

Concerning the magnitude of the tip, this research confirms other research findings, namely that the size of the bill is a key determinant, which is most

likely due to the practice that a certain percentage of the bill is customary tipping. The size of the bill can also serve as an indication of the ability to pay (income) and in this sense, tipping can be perceived as a normal good.

In terms of the frequency of tipping, it is again evident that the ability to pay (income and occupation) is associated with more frequent tipping behaviour. Although economic reasons are identified as key covariates, it is also interesting that females, as well as people who feel that it is their responsibility to support the waiter financially, tend to tip more frequently. This might indicate some form of empathy that South African females have towards waiting staff.

Another novel approach, namely the use of three scenarios to determine who are more likely to pay more than the customary 10% tip in South Africa, showed some interesting results. In this analysis, it is evident that the exuberant tip is not necessarily associated with income, but rather with the quality of service that is provided and feelings of financial responsibility towards the waiting staff. In addition, it is interesting to note that in the South African case, younger people are more likely to tip more than 10% in all three scenarios.

From the research, it is evident that tipping behaviour can be analysed from different perspectives. When the magnitude or the frequency of the tipping decision is analysed, the ability to pay is clearly a key concern and exclusion of income and/or other indicators of wealth creates missing variable bias, namely overstating the psychological and sociological reasons for tipping. However, these non-economic reasons seem to dominate when tipping above the norm is analysed. Future research could expand on the economic value of tipping, since very little is known about the contribution of tipping to the informal economy in the developing world.

Endnotes

1. The detail results of all the principal component analyses are listed in an appendix (Tables A1 to A4), but a detailed discussion thereof falls beyond the scope of this paper.
2. The results of these models estimated are available on request from the authors.

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Appendix

Table A1. Principal component analysis – reasons for dining out.

	Status	Gastronomy	Socialization
The status associated with dining at the finest restaurants	0.878		
I consider myself to be a foodie	0.828		
To experience the culinary skill of a particular chef (for example, Margot Janse at The Tasting Room)	0.799		
Dining out is a celebration of culture and heritage	0.777		
Business reasons (corporate lunch)	0.729		
To try the available specials	0.598		
It is part of my lifestyle	0.447		
Enjoying the food of a particular restaurant (such as The Test Kitchen)		0.798	
To break away from my routine		0.783	
For convenience (so that I do not have to make food)		0.691	
I enjoy great food		0.517	
I enjoy experiencing new food		0.503	
To try different restaurants		0.430	
Celebrating special occasions (such as birthdays)			0.852
Meeting family and friends			0.820
To socialize			0.571
To relax			0.395
Mean	2.767	3.450	3.635
Alpha	0.876	0.809	0.780

Note: Extraction method: Principal component analysis. Rotation method: Promax with Kaiser normalization.

Table A2. Principal component analysis – tipping behaviour.

	Restaurant attributes	Hospitality and service	Payment and bill	Standardization
The type of restaurant influences my tipping behaviour (franchised versus non-franchised)	0.846			
The location of the restaurant influences my tipping behaviour (for example, restaurants with a view)	0.842			
Good weather makes me tip more	0.832			
I tend to tip black waiters more than white waiters	0.772			
I tend to tip female waiters more than male waiters	0.745			
Soothing music playing at the restaurant makes me tip more	0.743			
My dining party/group composition	0.738			
The mood I am in greatly influences my tipping behaviour	0.677			
I tend to tip more after a few drinks	0.659			
When I am on holiday, I tend to tip more	0.643			
A more attractive waiter will receive a higher tip	0.588			
The greater the size of the dining party, the less I tip	0.458			
When paying with cash, I tip less	0.450			
The waiter's knowledge regarding the menu influences my tipping behaviour		0.788		
A more informative waiter receives a higher tip		0.751		
I will tip a lively waiter more		0.746		
The ability of the waiter will make me tip more (well trained and able)		0.685		
I tip more when high-quality service is delivered (the higher the quality of service, the higher the tip percentage)		0.636		
I tip friendlier waiters more		0.526		
The better the quality of the food, the more I tip		0.466		
I tip more when the ambience and atmosphere of the restaurant are appealing		0.448		
I tip more when the waiter introduces himself or herself, as it establishes a relationship		0.393		
The greater the size of the bill, the higher the percentage tip will be			0.726	
When paying with a credit or debit card, I tip a higher percentage			0.511	
Service fees should be standardized and included in the bill				0.753
I always tip at a flat rate (10%), regardless				0.737
Mean	2.597	3.588	3.207	3.171
Alpha	0.929	0.845	0.405	0.536

Note: Extraction method: Principal component analysis. Rotation method: Promax with Kaiser normalization.

Table A3. Principal component analysis – reasons for tipping.

	Financial	Service	Social acceptability
It contributes to the waiter's income	0.926		
I support the rule of tipping	0.813		
I feel positive when I tip	0.738		
It promotes job creation	0.561		
It builds an honest character in the waiter	0.507		
Waiters are more friendly with return visits		0.981	
It ensures that future service delivery is good		0.901	
Tipping is a social norm and is expected from me		0.629	
Some waiters' income are based on tips only, and I feel sorry for them		0.414	
It contributes to my social status			0.965
I receive social approval from my dining party			0.914
Mean	3.596	3.540	2.704
Alpha	0.807	0.777	0.865

Note: Extraction method: Principal component analysis. Rotation method: Promax with Kaiser normalization.

Table A4. Principal component analysis – reasons for not tipping.

	Bad service	Inessential
Bad personal service	0.861	
When waiters are rude	0.827	
No response when I order	0.813	
Waiters bring wrong order	0.731	
Because of bad service	0.726	
Waiters are ignorant concerning food/wine	0.703	
Appearance of waiter is not neat/clean	0.600	
Too many waiters served me, instead of one	0.447	
I do not think it is necessary		0.888
Waiters do get a salary		0.845
Waiters should be paid the minimum wage per hour, so that tipping becomes optional		0.619
Mean	3.560	2.514
Alpha	0.881	0.736

Note: Extraction method: Principal component analysis. Rotation method: Promax with Kaiser normalization.