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IMPACT OF BRAND ADVERTISING ON FOOD CONSUMED AWAY FROM HOME

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ABSTRACT

As consumption of food away from home increases, competition for consumers' dollar is intensifying among the major restaurant brands. This study examines the impact of brand advertising on consumers' choice of food away from home. Study results are in concert with our common sense regarding consumer FAFH behavior.

Key Words: foodservice, advertising impact, consumer behavior, food away from home

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INTRODUCTION

Advertising has two main purposes - to promote and to educate, the later being less emphasized in any typical advertising campaign. These two roles of advertising are not equally important from the point of the advertisers, who would rather like to influence consumer behavior than to educate them. We focus here on the first goal of advertising, i.e., its promotional objectives. In that regard, advertising's goal is to increase the consumption of a product or service by existing and potential consumers (Blisard, N., 1999). The impact of advertising and promotion has been well-documented in the marketing field in general, particularly for branded products (e.g., Aliawadi and Neslin, 1998; Mela, Gupta, and Lehman, 1997; Batra, et al., 1995). Similar studies in the field of agricultural marketing are not common, mainly due to the lack of scanner data that these previous studies used. Those studies that deal with food products are focused mainly on generic advertising on such products as milk (e.g., Kinnucan, et. al., 1997; Kaiser and Reberte, 1995). While there was plenty of research on the impact of promotion and/or advertising at the store/brand level (mainly because scanner data is available), an exhaustive search in the literature for research that addressed the impact of advertising (or promotion) by the foodservice sector on consumers' food-away-from-home behavior was not found. This study aims to contribute to the literature by addressing that gap.

Advertising impacts consumers' choice of product or service and it sometimes has serious consequences. For instance, studies on the impact of television commercial on food preferences of young children showed that with multiple exposures to food commercials led them to prefer the advertised product (Lipscomb and Evers, 2001). Similar negative impact of tobacco advertising on adolescents was reported by Lovato, et al. (2004), and that of alcohol advertising was reported by Grube and Wallack (1994). It is a common finding of these and similar studies of the same kind that advertising and promotion of products and services considered health hazard for young body and mind has a negative impact on young people's behavior.

While both branded advertising and generic advertising are used in the food marketing system, food industry in general and the foodservice sector in particular focuses more on branded advertising. Food consumption patterns in the United States have been undergoing fundamental changes over time, e.g., Americans are now consuming more food away from home (FAFH) than ever before and that level reached almost 48 percent of our total food expenditure in recent years. The main catalysts behind the increase in the share of food dollars spent on FAFH are the changes in socio-economic and demographics factors (Stewart, et al., 2004). According to the *Advertising Age* (June 28, 2004), the food and beverage industries spent \$6.4 billion dollars on advertising (does not include promotion) in 2003, of which almost 53% was spent on TV advertising. There were several foodservice companies among the 100 leading advertisers in 2003, such as Yum! Brands (ranked 46th, \$761.1 million total spending), Burger King Corp. (62nd, \$524.5 million), Doctor's Associates (83rd, \$407.9 million), and Wendy's International (88th, \$385.8 million).

With the expected and present growth within the FAFH market, the restaurant industry is frantically working on different ways to capture as much of this market as possible. Although there are a variety of different market strategies at the disposal of this sector (e.g., location, menu, pricing, and advertising), advertising is a very important and commonly used strategy (particularly used by chain restaurants) to attract, retain, and acquire customers. This is because advertising has many functions and its use by foodservice businesses to influence consumer behavior (e.g., advertising designed to increase the demand for a product) is one of the most fundamental functions.

Importance of diet and exercise on one's health cannot be overemphasized. More recently the public policy toward promotion of better health through better diet has been gaining momentum despite objections from various sections of the food industry. The recent revision of the food pyramid is an example of how public policy has been shifted toward better diet and better health. In another development many restaurants, particularly fast food chains, have either eliminated or trimmed down their "super sized" menus following industry leader McDonald's decision to do so in 2004. Many fast food restaurants also added healthy side dishes (e.g., salads) to their menu to attract health minded consumers. Despite these and many other public and private attempts to help the American consumer to make a healthy

dietary choice when she or he eats out, fast food restaurants are still very popular among consumers!

The aim of this study will be to examine the impact of brand advertising on consumers' choice of a food and restaurants when they eat out frequently. Using a consumer survey as the primary data source, this study aims to assess the relationship between chain restaurants' use of advertising as a strategy to increase the demand for their products (i.e., menu items) and consumers' likelihood of eating out at such places. We focus on brand advertising because it is the most common form of advertising in the foodservice sector (www.Adage.com), and mostly heavily used by fast food chains, such as McDonald's, Burger King, etc.

Past studies focusing on consumers' food-away-from-home behavior did not focused on the role and impact of advertising on consumers' behavior (e.g., Byrne, P., O. Capps, Jr., and A. Saha, 1996; Stewart, et al., 2004). This study is contributing to the literature by addressing that gap as well as looking at assessing the impact of foodservice (brand) advertising from a consumer perspective rather than the usual store sale (or scanner data) perspective. Given the importance of diet and health in the public policy arena, the results of this study may have important public policy implications. This is because this study may show that consumers prefer fast food more compared to other choices, and that such preference may be due to influence of brand advertising by restaurants.

RESEARCH METHOD

Data

Data for this study were collected through a mail survey of consumers (copy of the consumer survey is available upon request.). The survey was pre-tested and administered at Rutgers University in Spring 2002, and data collection was completed by June 2002. The sample was drawn from a listing of households supplied by InfoUSA, a private mailing list firm. Surveys were mailed to a random sample of 2,400 households in New Jersey, the target population. Data collection activities included initial and follow up mailings of questionnaires with further follow up for non-response. The total number of responses received was 989, about 41%. Of

these surveys, 724 contained complete information on most variables of interest in this study and were used in the analysis.

The consumer survey captured socio-demographic and economic characteristics of nearly one thousand New Jersey consumers as well as their perception and belief regarding impact of advertising on their choice of restaurants. The respondents were asked whether or not they believe their consumption behavior was influenced by restaurant advertising. Since individual belief (about the influence of advertising) was based on individual self-selection, it is likely that those individuals who believed they were not influenced by advertising have systematically different characteristics from those who believed otherwise. Thus, the respondents were divided into two groups: one whose members believed their selection of a restaurant was not influenced by advertising, and the other whose members believed their behavior was influenced by advertising. Such sub-division of consumer groups produced the (pseudo) experimental and (pseudo) control groups, i.e., two heterogeneous groups. There were 251 respondents in the experimental group and 473 respondents in the control group. Using consumer behavior theory as a framework, we use discrete choice models to fulfill the study objective (see Peter and Olson, 2004 for an excellent treatment of the subject on consumer behavior).

Modeling Consumer Behavior: An Empirical Approach

National restaurant chains, such as e.g., Burger King, Wendy's, McDonalds, Outback Steakhouse, Taco Bell, etc., are at the forefront of advertising spending compared to independents for obvious reasons; independents may lack adequate funds to advertise widely, or even the necessity to advertise widely may not be there as word of mouth may work better for such independents. Thus, we assume that if consumer chooses to patronize chain restaurants ($CHAIN=1$) over non-chains or independents ($CHAIN=0$), then perhaps that consumer gets influenced by brand advertising by chains ($ADVT=1$, 0 otherwise). Our aim is to estimate that probability of consumers being influenced by advertising by chain restaurants.

We divide consumers into two groups in terms of their frequency of eating out in any given week ($FREQUENT$). We assign a value equal to 1 (one), i.e., $FREQUENT=1$, to those

who eat out at least 2-3 times a week and assign FREQUENT=0 to those who do not eat out in such a frequency. We hypothesize that consumers who eat out very frequently (one would agree that eating out at least 2-3 times a week is very frequent!) are being influenced by restaurant advertising; conversely, these consumers would choose chains over independents.

Choosing a restaurant type (i.e., chain vs. non-chain) also depends on what consumers prefer in terms of type of food they like to eat when they eat out. We, thus, introduce a variable named MENU_i (i=1, 2, ...5; see Appendix 2 for this and other variable definition) which, we hypothesize, would determine whether a consumer prefers chains or independents, e.g., if a consumer prefers Chinese food, it is unlikely that he would also prefer chain restaurants because Chinese restaurants are rarely chains. Eating out may also be influenced by such intrinsic reasons as the ambience (AMBIENC) and quality-taste of food (TASTQUAL). Additionally, we hypothesize that a consumer is more likely to choose to eat out (regardless of chain or independent) if he perceives that the restaurant provide a better price (PRICE), better service (SERVICE), and is located conveniently (CONVEN). It is also likely that individuals usually eat out if he/she does not know how to cook or does not have time necessary to cook a meal at home (NOCOOK).

Many times choosing a restaurant when eating out is a family affair and perhaps families with children have more to say on the subject than others. Thus, we include two explanatory variables to represent the family size (HHSIZE) and number of children in respondent's family (HAVEKID). Previous research on the demand for food away from home suggests the need to control for consumer income and demographics (e.g., Byrne, Capps, and Saha; Stewart et al.). Thus, the survey included questions designed to measure the income of the respondent's household (INCOME), the age of the respondent (REALAGE), the gender of the respondent (GENDER), whether the respondent is educated (EDUCAT), whether the respondent works for wages (JOB), and whether respondent's spouse works because that puts added pressure on time-constrained consumers to cook at home (SPOUSE).

The empirical version of the consumer choice model based on the above discussion is presented in Equation 1 below, i.e., the above discussion can be presented in a functional

form. The function explaining consumers' choice of type of restaurants (either chain or independent) can be presented as follows:

$$\text{Eq. 1: } CHAIN (1,0) = f(\text{types of menu/food chosen when eating out, frequency of eating out, influence of advertising as perceived by the respondent, socio-demographic characteristics, and consumers' stated reasons for preferring certain eating places}).$$

Estimation of the consumer choice model (Eq. 1) is carried out using a discrete choice empirical model (binary logistic model). Given that brand advertising is primarily associated with national chains, we assume that those who prefer chain restaurants are probably more influenced by brand advertising than those who do not patronize chains. Thus, this logistic model assumes that an individual's probability of being influenced by national chains advertising depends on a vector of independent variables (X_{ij}) associated with respondent i ($i=1, 2, 3, \dots, n$) and a vector of unknown parameters β :

$$\text{Eq. 2: } P_i = F(Z_i) = F(\beta X_{ij}) = 1/[1 + \exp(-Z_i)],$$

where, $F(Z_i)$ = the value of logistic cumulative density function associated with each possible value of the underlying index Z_i , and P_i = the probability that an individual behave certain way due to those independent variables X_{ij} , $j=1, 2, 3, \dots, k$. In the above equation, βX_{ij} is a linear combination of the independent variables so that,

$$\text{Eq. 3: } Z_i = \beta_0 + \beta_1 X_{1j} + \beta_2 X_{2j} + \dots + \beta_k X_{nk} + \varepsilon_i,$$

where, Z_i = unobserved index level or the log odds of the i th observation; X_{nk} = n th respondent's k th attribute, and β = parameters to be estimated; and ε = random error or disturbance term. Thus, Equation 1 takes the following form which is estimated using the statistical program SAS (version 8.2; PROC LOGISTIC). Descriptive statistics and variable definitions are presented in Appendix tables 1 and 2, respectively.

$$\text{Eq. 4: } Prob(CHAIN = 1) = f(MENU_i; i=1, 2, \dots, 5, FREQUENT), ADVT, INCOME, GENDER, REALAGE, EDUCATION, JOB, HHSIZE, HAVEKID, SPOUSE, TASTEQUAL, NOCOOK, PRICE, CONVEN SERVICE AMBIENC, \varepsilon).$$

RESULTS AND DISCUSSIONS

Selected survey results are presented in Table 1 showing consumer preference for eating out in chain restaurants, frequency of eating out, and whether or not respondents were influenced by brand advertising by restaurants. Here are some of the interesting facts from Table 1: the age group 35 through 44.9 not only preferred chain restaurants but also were influenced by restaurant advertising, and also frequently ate out compared to other age groups. Those respondents who had job (either full-time or part-time) perhaps are starving for time because they ate out more, chose chain restaurants over independents, and also were influenced by advertising compared to those who were not employed for wages or salaries. Families that had either a single individual or a couple of individuals ate out more, chose chain restaurants over independents, and also were influenced by advertising compared to others in that category, such as those with a larger family size.

The logistic function presented in Equation 4 is estimated using the maximum likelihood method available in SAS. Regression results are presented in Table 2 along with three model goodness-of-fit statistic. All three tests show excellent model fit, e.g., the Hosmer and Lemeshow Goodness-of-fit test hypothesized (H_0) that there is no difference between the observed and predicted values of the response variable (CHAIN), and we do not reject the Null hypothesis. In addition to estimated parameters and their respective test of significance (Wald Chi-square), odds ratio, marginal effects, and probability of event response being equal to 1 (i.e., respondent choosing chain over independent) are presented (see Table 2 footnote for explanation and computation of these statistics.).

Among the statistically significant variables, the following had positive impact on consumers' choice of chain restaurants: MENU when the food was hamburger, sandwiches, and fries, ADVT, HHSIZE, NOCOOK, PRICE, and CONVEN. The last column in Table 2 shows that the probability that consumers who prefer chain restaurants would also prefer burger/sandwich and fries type food is 0.761. This is very insightful given that there are various types of food available besides burger/sandwich and fries in a chain restaurant, and consumers still seem to prefer food generally served at fast food places! In terms of marginal

effect, one percent increase in the HHSIZE would increase consumers' visit to chain restaurant by almost 29% - the implication being increased family size leads to added demand for chain restaurants food. Similar explanations are possible for the rest of significant variables that positively impacted consumers' choice of restaurant type.

Several variables negatively impacted consumers' choice of chain restaurants, i.e., an increase in the value (or units) of these variables would lead a decline in consumers' choice of chain restaurants and would imply consumers increased preference for independents. Those variables that had a negative impact on CHAIN include INCOME, REALAGE, JOB, TASTQUAL, and AMBIENC. The probability that consumers would choose independents over chains when their income goes up is 0.48. Similarly, a ten percent increase in the respondent's age, say from 50 years to 55 years, would result in almost 32% drop in patronization of chain restaurants by that individual. Similar explanations are possible for the other variables that had significant negative impact on the dependent variable CHAIN (event response = 1).

CONCLUSIONS

It appears that the results presented here are grounded on common sense, i.e., results do make sense in terms of the real world FAFH activities of consumers. For instance, those families with children in the household also preferred chain restaurants and said that they were influenced by restaurant advertising; we all know the power of toys in the kid's meal! Or, when individuals' income goes up, or they get older, or they have a job, or when they give priority to taste and quality food and ambience, they do not prefer chain restaurants. In terms of the main goal of the study, i.e. to assess the influence of advertising by chains on consumer behavior, we found that such advertising does have impact on consumer's choice of type of outlet and menu choices.

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Table 1: Eating out, Choosing Chain restaurants, and Influence of Advertising by Demographic Variables

Demographic variables	Frequency of Eating out (FREQUENT)	Type of Restaurants chosen (CHAIN)	Influence of Advertising on choosing where to eat out (ADVT)
	<i>Percent responding “YES” to eating out at least 2-3 times a week</i>	<i>Percent responding to “YES” to preferring national chains</i>	<i>Percent responding “YES” to the fact that advertising influences type of food eaten</i>
AGE (N=724)			
Under 25	0.28% (or 0.0028 of N)	0.83	0.55
25 – 34.9	4.70	4.97	4.42
35 – 44.9	10.08	11.05	11.33
45 – 54.9	8.43	8.70	8.56
55 – 64.9	5.25	3.87	5.94
65 and over	3.31	2.35	3.87
INCOME (N=671)			
Under \$25k	0.30	0.75	0.89
\$25 – \$34.9k	0.89	1.64	2.38
\$35 -- \$49.9k	2.24	3.28	3.73
\$50 – \$74.9k	7.15	6.86	6.54
\$75 -- \$99.9k	5.96	7.45	6.71
\$100 – \$124.9k	6.26	5.37	5.66
Over \$125k	9.54	6.41	8.79
GENDER (N=714)			
Male	18.77	15.55	17.65
Female	13.03	16.39	17.09
EDUCATION (N=717)			
High school or less	0.42	0.42	0.28
High school graduate	11.58	8.79	10.74
Some college (no degree)	3.63	6.14	6.14
College graduate	2.09	2.65	3.07
Some post graduation	5.86	7.67	6.56
Grad. School	8.51	6.14	7.81
JOB (N=724)			
Employed	25.69	23.07	29.93

Not employed for wages or salaries	6.35	8.70	7.73
FAMILY SIZE (categorized version of the variable HHSIZE) (N=724)			
2 or under	17.82	10.77	16.16
3 – 5	6.08	7.87	6.77
Over 5	8.15	13.12	11.74
KIDS at HOME (categorized version of the variable HAVEKID) (N=724)			
Have children	14.92	20.17	18.78
No children	17.13	11.60	15.88
SPOUSE (N=724)			
Employed	26.38	27.35	29.56
Not employed for wages or salaries	5.66	4.42	5.11

Source: Survey raw data.

Table 2: Determinants of Consumers' Decision to Eat out at Chain Restaurants (N=655)

DEPENDENT VARIABLE : CHAIN (probability modeled is event response =1, i.e., Chain=1)							
VARIABLES	DF	Estimate ¹ (stand. error)	Wald Chi- Square	Pr > ChiSq	Odds ratio ²	Marginal effect ³	Probability ⁴
Intercept	1	0.0819 (0.9298)	0.0077	0.9299	1.08529	8.529	0.52045
Menu_1 (Italian)	1	0.0423 (0.2618)	0.0261	0.8717	1.04320	4.320	0.51057
Menu_2 (Chinese)	1	-0.1337 (0.2163)	0.3821	0.5365	0.87482	-12.518	0.46662
Menu_3 (Deli type)	1	0.0408 (0.2082)	0.0383	0.8447	1.04162	4.162	0.51019
Menu_4 (Hamburger, sandwich, and fries)	1	1.1558 *** (0.2136)	29.2771	<.0001	3.17643	217.643	0.76056
Menu_5 (Steakhouse type)	1	0.2601 (.2020)	1.6586	0.1978	1.29707	29.707	0.56466
Frequent	1	-0.1888 (0.2176)	0.7525	0.3857	0.82798	-17.202	0.45295
Advt	1	0.3891 * (0.2051)	3.5997	0.0578	1.47569	47.569	0.59607
Income	1	-0.0972 * (0.0588)	2.7355	0.0981	0.90733	-9.267	0.47571
Gender	1	0.0835 (0.2158)	0.1498	0.6988	1.08710	8.710	0.52087
Realage	1	-0.0324 *** (0.0102)	10.0412	0.0015	0.96809	-3.191	0.49189
Educat	1	0.0587 (0.0621)	0.8940	0.3444	1.06045	6.045	0.51467
Job	1	-0.4910 * (0.2651)	3.4317	0.0640	0.61201	-38.799	0.37966
HHsize	1	0.2536 * (0.1534)	2.7337	0.0982	1.28866	28.866	0.56306
Havekid	1	-0.0919 (0.1748)	0.2766	0.5990	0.91216	-8.784	0.47703
Spouse	1	0.1248 (0.3069)	0.1655	0.6841	1.13297	13.297	0.53117
Tastqual	1	-1.0063 *** (0.2154)	21.8169	<.0001	0.36558	-63.442	0.26771
Nocook	1	0.1999 (0.2113)	0.8946	0.3442	1.22125	22.125	0.54980
Price	1	0.4784 ** (0.2298)	4.3335	0.0374	1.61355	61.355	0.61738
Conven	1	0.4000 ** (0.2300)	3.0243	0.0820	1.49185	49.185	0.59869
Service	1	-0.00456 (0.2765)	0.0003	0.9868	0.99545	-0.455	0.49886
Ambienc	1	-0.7858 *** (0.2682)	8.5842	0.0034	0.45573	-54.427	0.31306
<i>Hosmer and Lemeshow Goodness- of-Fit Test</i>	8	--	2.2391	0.9728	--	--	--
<i>Likelihood Ratio</i>	21	--	179.1709	<.0001	--	--	--
<i>Pseudo R-square</i>				0.3348			

NOTE: (i) 1=Maximum Likelihood Estimates, (ii) 2= Odds ratio, which is more useful for categorical variables, is computed as follows: Odds ratio= $\exp(\text{estimate})$, e.g., the odds ratio for “Menu_1” is 1.08529, or $\exp(0.0819)=1.08529$, (iii) 3= marginal effect, which is more useful for continuous variables, is computed as follows: Marginal effect = $(\exp(\text{estimate}) - 1)*100$, e.g., the marginal effect for “Realage” is 6.045, or $(\exp(0.0587)-1)*100=6.045$. Marginal effects are computed at the sample means, (iv) Probability (of event response), which is useful for both categorical and continuous variables, is computed as follows: $\text{Prob}(X=1) = \frac{\exp(\text{estimate of } X)}{1 + \exp(\text{estimate of } X)}$, where X is event, e.g., the probability Menu_4 is 0.76056, or $\frac{\exp(1.5558)}{1 + \exp(1.5558)} = 3.1764/4.1764 = 0.76056$, (v) *** = significant at 99%; ** = significant at 95%; * = significant at 90% level.

Appendix 1. Descriptive Statistics of Variables (N=724)¹

Variable	N	Mean	Mode ²	Std Dev	Minimum	Maximum
Menu_1 (Italian)	724	0.7748619	1	0.4179620	0	1.000
Menu_2 (Chinese)	724	0.6063536	1	0.4888957	0	1.000
Menu_3 (Deli type)	724	0.5511050	1	0.4977253	0	1.000
Menu_4 (Hamburger, sandwich, and fries)	724	0.4917127	0	0.5002769	0	1.000
Menu_5 (Steakhouse type)	724	0.4502762	0	0.4978654	0	1.000
Chain	724	0.3176796	0	0.4658960	0	1.000
Frequent	724	0.3204420	0	0.4669691	0	1.000
Advt	724	0.3466851	0	0.4762434	0	1.000
Income	671	5.1296572	5	1.8591122	1.00	9.000
Spouse	724	0.8301105	1	0.3757953	0	1.000
Gender	714	0.5112045	1	0.5002249	0	1.000
Realage	724	49.8977901	55	12.8902397	20.00	93.000
Educate	717	3.7907950	2	1.6232508	1.00	6.000
Job	724	0.7541436	1	0.4308915	0	1.000
HHSIZE	724	2.8839779	2	1.3139607	1.00	8.000
Havekid	724	0.9751381	0	1.1216174	0	5.000
Tastqual	724	0.6118785	1	0.4876594	0	1.000
Nocook	724	0.3066298	0	0.4614131	0	1.000
Price	724	0.2417127	0	0.4284171	0	1.000
Conven	724	0.6312155	1	0.4828089	0	1.000
Service	724	0.2444751	0	0.4300727	0	1.000
Ambienc	724	0.2748619	0	0.4467533	0	1.000

Note: (i) 1=except for INCOME, GENDER, and EDUCATION; (ii) 2=mode is the appropriate descriptive statistics for categorical variables (all variables except REALAGE, HHSIZE, and HAVEKIDS).

Appendix 2: Explanation of Variables

Menu_1 (Italian)	1, if consumer “regularly/usually” chooses Italian food when he/she eats out; 0, otherwise.
Menu_2 (Chinese)	1, if consumer “regularly/usually” chooses Chinese food when he/she eats out; 0, otherwise.
Menu_3 (Deli type)	1, if consumer “regularly/usually” chooses Deli type food when he/she eats out; 0, otherwise.
Menu_4 (Hamburger, sandwich, and fries)	1, if consumer “regularly/usually” chooses hamburger, sandwich, and fries type food when he/she eats out; 0, otherwise.
Menu_5 (Steakhouse type)	1, if consumer “regularly/usually” chooses steakhouse type food when he/she eats out; 0, otherwise.
Chain	1, if consumer “prefers” national chains (e.g., Burger King, Pizza Hut, etc.) over locally owned eating places; 0, otherwise.
Frequent	1, if consumer “usually” eat out <i>at least</i> every 2-3 days a week; 0, otherwise.
Advt	1, if advertising influences the “type of food” respondent eats out; 0, otherwise.
Income	combined family income of all members of the household; 1= under \$25k/yr; 2=\$25k-34.9k/yr; 3=\$35k-49.9k/yr; 4=\$50k-74.9k/yr; 5=\$75k-99.9k/yr; 6=\$100k-124.9k/yr; 7 ≥ \$125k/yr.
Spouse	1, if spouse works, 0, otherwise.
Gender	1, if male; 0, if female.
Realage	age in years.
Educat	education level of the respondent; 1 ≤ High school or less; 2= High school graduate; 3= some college (no degree); 4 = College graduate; 5 = some post graduation; 6= Grad. School
Job	1, if respondent works either full-time or part-time; 0, otherwise.
HHsize	household size; total number of adult plus children in the household.
Havekid	number of children under 18 in the household.
Tastqual	1, if “better quality-taste” of food is the most important reason in general for eating at a particular place; 0, otherwise.
Nocook1	1, if “no time to cook/don’t know (how to cook)” is the most important reason in general for eating at a particular place; 0, otherwise.
Price	1, if “better price” is the most important reason in general for eating at a particular place; 0, otherwise.
Conven	1, if “convenience/location” is the most important reason in general for eating at a particular place; 0, otherwise.
Service	1, if “better service” is the most important reason in general for eating at a particular place; 0, otherwise.
Ambienc	1, if “atmosphere (inside the eating place)” is the most important reason in general for eating at a particular place; 0, otherwise.