Factors Influencing Early Adoption of New Food Products in Louisiana and Southeast Texas

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The study uses the chi-square contingency test for independence and an ordered probit model to examine the relationships between early adoption of new food products and primary grocery shoppers' geographic, demographic, and socioeconomic characteristics (GDS). The results suggest that GDS variables affect early adoption. Specifically, early adopters are likely to be women, about 42 years old, living in three-person households, college educated, Catholics, Caucasians, and have household income of at least $50,000.

"In the last ten years, products have proliferated at an unprecedented rate in every category of consumer goods and services, and the deluge shows few signs of letting up" (Quelch and Kenny, p. 143). Food processors played an important role in the deluge by introducing 155,000 new grocery products between 1985 and 1995; new food products accounted for 116,800 of that total (Gallo, 1996). Although 95 percent of new products are line (89 percent) and brand (6 percent) extensions rather than truly new (5 percent), firms incur substantial costs in producing them and failure rates are high. An estimated 67 to 80 percent of truly new products and 27 percent of product-line extensions fail (Allvine; Bragg; Gallo, 1992; Reddy, Holak, and Bhat). These aggressive expansion policies may also have weakened brand images or heightened problems between distributors and retailers (Quelch and Kenny).

Because of these market realities, firms need accurate information on potential consumers of new introductions. Researchers generally agree that early triers (innovators or early adopters) are vital to a new product's success (Allvine; Gatignon and Robertson; Morgan). Therefore, marketers should collect background information and behavioral characteristics on early triers of a product within an existing category and then develop their marketing strategies accordingly

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(Morgan). This information becomes more crucial given the increasingly segmented marketplace in the United States. Diffusion theory often guides studies on the dissemination of new technologies, products, services, and regulatory initiatives because it can enhance understanding of consumer behavior and help marketing managers and policy makers (Gatignon and Robertson). Under diffusion theory, the S-shaped diffusion curve classifies consumers as innovators (3-5 percent), early adopters (10-15 percent), early majority (34 percent), late majority (34 percent), and laggards (5-16 percent).

Innovators are risk takers, better educated, more affluent, socially active, and mobile; early adopters are younger and cautious; early majority buyers are slow and deliberate; late majority buyers tend to be older and very cautious; laggards are the last group to try a new product (Allvine).

Consumer behavior literature on factors influencing adoption or replacement of products is extensive, but findings on characteristics of innovators and other adopter categories are mixed. This led Gatignon and Robertson to assert that "innovators must be identified and characterized on a product category basis and that there is not a generalized innovator across product category or interest domains" (p. 861). Based on Gatignon and Robertson's assertion, this study focuses on the characteristics of early adopters of new food products in Louisiana and southeast Texas. The study draws from previous works in formulating its hypotheses on factors associated with early adoption of new food products. A summary of some of these findings is presented below.

Previous Research

Rural sociologists were among the first to study the adoption process. Brandner and Kearl in their study on the adoption of hybrid sorghum among Kansas's farmers found that adopters in areas not producing corn were younger than non-adopters. Almost 39 percent were less than 36 years of age as compared to about 6 percent of non-adopters. Education correlated positively with the adoption of hybrid sorghum. For example, 33 percent of adopters had some college education versus 6 percent of non-adopters. Additionally, non-adopters operated fewer acres than adopters. Norris and Batie found that the higher the income levels, larger the farm size, and lower the levels of debts, the greater were the expenditures on soil conservation practices by Virginia's farmers. Bhattacharyya, et al. indicated that the probability of Nevada's range cattle producers adopting the trichomoniasis vaccine was influenced by their educational levels, the size of herds, and their use of computers, veterinary services, and cooperative extension programs.

In their study on adopters and non-adopters of personal computers, Dickerson and Gentry hypothesized that adopters would be middle-aged, would own their residences, and would have higher incomes and educational levels than non-adopters. Their findings supported the stated hypothesis. Baker, in his study on computer adoption among New Mexico's nonfarm agri-businesses, found that adoption was influenced by the size and type of business (retail, broker, shipper or packer), but not by age or education. Batte, Jones, and Schnitkey's study indicated that the probability of computer adoption among Ohio's commercial farmers was positively related to size of operations, education, use of record keeping, and total farm information expenditure. In a similar study on computer adoption, Pulter and Zilberman's findings suggested that the probability of owning a computer was influenced by the size of farming operation, age, education, and the ownership of a farm-related business. Specifically, younger farmers or college graduates were more likely to own computers.

In studying demographic characteristics, attitudes and perceptions, and search behavior of car buyers, Bayus hypothesized that purchases of compact, standard, or full-sized automobiles were influenced by income, household size, age of household head, and number of cars the household owned. Further, early replacement buyers in comparison with late replacement buyers would have higher income levels, educational achievement, and occupational status, and also would be younger. His findings suggested that early replacers were more concerned about style and image than costs, and had higher income, lower levels of educational achievement, and occupational status than late replacers. Feldman and Armstrong found that buyers of Mazdas were younger than non-adopters.

In a similar vein, Wiseman's study assessed differences between buyers of "new season" and "new leftover" cars when both models were available to buyers. He analyzed the effects of product-related, personality, and socioeconomic and demographic variables on buyers' choices. Among his findings were that "new leftover" buyers of full-sized high-priced cars had more children, visited several dealers before buying, and intended to keep these cars four or more years. Conversely, "new season" buyers of full-sized high-priced cars had worked with their current employer for at least five years, and were the oldest, wealthiest, and most successful of the segments studied.

Bayus and Mehta hypothesized that variables such as number of adults in the household, presence of children, household income, whether wives worked, length at address, and regular use of credit cards influenced replacer segments and segment memberships for color televisions, coffee makers, refrigerators, vacuum cleaners, and washing machines. Consumers who replaced these commodities between four and five years were designated early replacers, while average replacers made new purchases between 12 and 15 years. The study found significant differences between household and replacement practices for several of the commodities. For example, more established households replaced colored-television sets between 12 and 15 years (average replacers). Households replacing coffee makers early had more adults, but these households were average refrigerator replacers. High-income consumers replaced colored televisions early, but were average replacers of coffee makers. Early

replacers of vacuum cleaners were more likely to have children more than six years of age. The greater the level of homemaking interests the more likely that consumers would replace their refrigerators early. Household characteristics were invariant to the replacement of washing machines. Other studies on consumer adoption of solar energy systems (LaBay and Kinnear), and self-service gasoline (McClurg and Andrews) suggested that adopters were younger than non-adopters of these products.

Gupta and Chintagunta reported that income and household size affected the probability of purchasing several brands of catsup. In particular, low-income households were more sensitive about prices and promotional strategies than high-income consumers, and that larger households bought larger brand sizes of catsup. Results from Misra, Huang, and Ott's study suggested that the probabilities of willingness to pay more for pesticide-free fresh produce were highest for older respondents and those with household incomes exceeding $35,000. In the case of new snack food, pancake mix, hamburger supplement, frozen concentrate, and overdraft checking, Morgan found a strong association between time of trial and the extent of usage.

Although the findings vary across commodities, for the most part, they suggest that adoption is influenced by age, education, and household income. In general, early adopters are younger, more educated, and affluent than late or non-adopters. After an extensive review of the diffusion literature, Gatignon and Robertson postulated that innovators had higher income and education, were younger, possessed greater social mobility, had favorable attitudes toward risk, greater social participation, and higher opinion leadership. Early adopters are critical to a new product's success. Market uncertainties can be reduced if firms know the characteristics of this consumer segment. This would allow them to shape their advertising and other promotional strategies. Given the high failure rates for new products, the proliferation of new food products, and the segmented marketplace, this study assesses the marketing outlook for new food products in one region of the United States. Additionally, Gatignon and Robertson's position on making generalizations about early adopters'

characteristics supports the need for a study of this nature.

The main objectives of the study are to (1) describe the characteristics of early adopters of new food products in Louisiana and southeast Texas; (2) examine whether geographic, demographic, and socioeconomic (GDS) variables influence the probability of early, late, or non-adoption of new food products by primary grocery shoppers in the study region; and (3) predict market segments most likely to be early adopters. Studies show that GDS variables play an important role in U.S. food consumption patterns (Kinsey; Lutz, Blaylock, and Smallwood; Senauer, Asp, and Kinsey). The GDS variables chosen for this study are geographic area, gender, age, household size, education, marital status, religion, ethnicity, and household income.

Based on previous findings, the study hypothesizes that early adopters have higher levels of education, household incomes, and occupational status, and are younger than late or non-adopters. Although the reviewed literature is inconclusive about gender, and household size, the study also postulates that early adopters of new food products are more likely to be women and unmarried consumers. No a priori assumptions are made about the remaining GDS variables. The study's findings will help food marketers to determine those consumers in the study region most likely to buy new food introductions in the future.

Data and Procedures

Data were obtained via a telephone survey of randomly selected households in Louisiana and southeast Texas. A private marketing firm conducted the survey during February 1993. The firm used the computer-assisted telephone interviewing system to collect the data. We targeted primary grocery shoppers in this survey, and collected information on their opinions about several issues related to meat and new food products. Specifically, the survey collected data on shoppers' meat preferences and eating habits; the likelihood of trying new foods and specialty meats; the importance of meat and nutritional attributes to purchase decisions; and GDS variables. To assess the likelihood of shoppers adopting new food products, the interviewers asked them to re-

spond to the following statement: (1) I like to try new food products; (2) I am hesitant, but sometimes I try new food products; (3) I hardly ever try new food products.

The initial sample had 1,002 respondents, but only 812 respondents answered all questions completely. Of these respondents, 38 percent indicated that they liked to try new food products. Forty-eight percent of shoppers hesitated before trying new food products. Sixteen percent said they hardly tried new food products. As an extension of diffusion theory, triers were characterized as early adopters, reluctant triers were termed late adopters, and non-triers were classified as non-adopters.

Univariate and Multivariate Analyses

The study used univariate analyses to describe the characteristics of early adopters. Chi-square contingency test for independence was used to determine whether significant differences existed between early adopters and GDS variables. Although this test can describe relationships between or among variables, it cannot measure the combined influence of a group of explanatory variables on a specific dependent variable. That analysis requires multivariate modeling techniques. One of these techniques is discussed below.

Primary grocery shoppers were classified as early, late, or non-adopters of new food products. Therefore, the dependent variable, *ADOPTNEW*, had three-discrete-response categories. Because *ADOPTNEW* is a discrete variable, ordinary least squares estimation technique is inappropriate. It yields biased regression parameters. The study used the ordered probit modeling technique (OPMT) to derive maximum likelihood parameter estimates. The ordered probit model (OPM) model is based on a latent regression function. For this study, the OPM with three-response categories is represented as follows:

1. $y^* = ß'X + \varepsilon, \varepsilon \sim N[0, 1],$
        $y = 0$ if $y^* \leq 0,$
        $y = 1$ if $0 < y^* \leq \mu_1,$
        $y = 2$ if $\mu_1 < y^* \leq \mu_2.$

The vector, y^* is unobserved because it is derived from a consumer's utility function. The y vector is observable and captures the three responses given by grocery shoppers. It lies between y^* and the cutoff utility vector, μ. X is a matrix of GDS variables, and ß is a vector of unknown parameters to be estimated; ε is a vector of random stochastic error terms assumed to be N~(0, 1). If ε is normally distributed across observations, Greene (1993) indicates that for estimation purposes the following probabilities enter the log-likelihood function:

2. $Prob(y = 0) = 1 - \Phi(- ß' X),$
        $Prob(y = 1) = \Phi(\mu_1 - ß' X) - \Phi(- ß' X),$
        $Prob(y = 2) = 1 - \Phi(\mu_1 - ß' X),$

where Φ is the cumulative standard normal distribution function, and $\mu_1 > 0$.

The responses for the dependent variable, *ADOPTNEW*, were coded to match equation 1 and reflected early, late, or non-adoption of new food products. Because of the hypothesis that early adopters are more educated and affluent, and have higher employment status, three categories are defined for education and household income, and two for employment status. The reference groups for education and household income are high school or less, and below $25,000, respectively. A professional/administrator is viewed as having a higher employment status than other employee groups. Age was left as a continuous variable because, on average, the respondents were fairly young (42-years-old). Household size is also a continuous variable, and the remaining GDS variables are binary. Table 1 shows the variable definitions and summary statistics for all variables in the multivariate model. The OPMT in *LIMDEP* 7.0 (Greene, 1995) generated the maximum likelihood estimates for the model.

Descriptive Statistics

From table 1, about 81 percent of the primary grocery shoppers lived in Louisiana. Seventy-five percent were women. While this percentage is large in comparison to census data, it reflects the direction of the survey. Its focus was primary grocery shoppers, and women play a

Table 1. Variable Definitions and Summary Statistics.

Variable Definitions	Variable Name	Mean	Std. Dev.
Explanatory Variables:			
AREA			
Louisiana=1; Texas=0	*AREA*	0.8067	0.3952
GENDER			
Female=1; Male=0	*GENDER*	0.7475	0.4347
AGE	*AGE*	42.0000	2.7978
HOUSEHOLD SIZE	*HSIZE*	2.9089	1.4432
EDUCATION			
Vo-Tech/Some College=1; 0 otherwise	*EDUC1*	0.2574	0.4375
College Graduate=1; 0 otherwise	*EDUC2*	0.2845	0.4514
MARITAL STATUS			
Married=1; 0 otherwise	*MARD*	0.6638	0.4727
RELIGION			
Catholics=1; 0 otherwise	*CATH*	0.3658	0.4819
EMPLOYMENT STATUS			
White collar=1; 0 otherwise	*WCOLL*	0.4926	0.5003
ETHNICITY			
Caucasians=1; 0 otherwise	*WHITE*	0.7968	0.4026
HOUSEHOLD INCOME			
$25,000-$49,999=1;			
0 otherwise	*INCOME1*	0.3374	0.4731
≥ $50,000 =1;			
0 otherwise	*INCOME2*	0.2377	0.4259
Dependent Variable:			
ADOPTERS OF NEW FOODS			
Early Adopters = 0			
Late Adopters = 1			
Non-Adopters = 2	*ADOPTNEW*	0.7512	0.6932

major role in that arena. On average, shoppers were 42-years-old and lived in 3-person households. Twenty-eight percent were college graduates; sixty-six percent were married; thirty-seven percent were Catholics, and 49 percent held white-collar jobs. Almost 80 percent of the respondents were Caucasians, and 58 percent had household income of at least $25,000.

Results and Discussion

Table 2 shows the cross-tabulations of early, late, and non-adopters of new food products by GDS variables. Eight of the ten GDS variables are statistically significant at the 5 percent level of probability or better. Adoption categories are invariant to geographic area and gender. Early adopters of new food products are younger and more educated, and have higher employment status and household income. Forty-one percent of shoppers aged 18-34 tried new food products as compared to 34 percent of those aged 55 years or older. Sixty-eight percent of college graduates are early adopters in comparison to 30 percent of shoppers with a high-school level of education or less. Professionals or administrators and shoppers with household incomes of at least $50,000 are more likely to be early adopters. The results also suggest that early adopters live in single or multi-person households, are unmarried, non-Baptists, and Caucasians. Late adopters are more likely to be between 18-44 years of age, from households with three or more persons, have at most a high school level of education, be married, hold a blue-collar type job, and have household incomes between $25,000-$49,999. The results support the

hypothesis that early adoption is independent of gender, but reject the null hypotheses related to age, education, marital and employment status, and household income.

Table 2. Univariate Analyses of New Food Adopters by GDS Variables.

Variable	Early Adopters	Late Adopters	Non-Adopters	Chi-Square[a]	P-value
	----------------Percent[b]-----------------				
Total	38	46	16		
AREA					
Louisiana	41	42	17		
Southeast Texas	37	48	16	2.187	0.335
GENDER					
Male	36	45	19		
Female	38	47	15	2.206	0.332
AGE					
18-34(years)	41	50	9		
35-44	38	50	12		
45-54	38	45	17		
≥ 55	34	41	25	31.953***	0.001
HOUSEHOLD SIZE					
1 or 2 Persons	38	43	20		
≥ 3 Persons	38	50	12	10.785***	0.005
EDUCATION					
≤ High School	30	48	21		
Vo-Tech/Some College	44	44	12		
College Graduate	68	16	16	90.616***	0.001
MARITAL STATUS					
Married	37	49	14		
Unmarried	40	41	19	8.059**	0.018
RELIGION					
Baptist	31	46	24		
Catholics	41	47	12		
Other	41	46	13	20.666***	0.001
EMPLOYMENT STATUS					
Professional/ Administrator	46	44	11		
Blue Collar	32	52	17		
Other	34	47	20	22.268***	0.001
ETHNICITY					
Caucasians	40	47	13		
Non-Caucasians	31	43	26	20.729***	0.001
INCOME					
< $25,000	33	47	21		
$25,000-$49,999	41	50	9		
≥ $50,000	50	40	12	25.950***	0.001

[a] Indicates statistical significance at the 0.05 (**) and 0.01 (***) levels of probability.

[b] Percentages may not sum to zero because of rounding.

Table 3. Regression Estimates for the Probability of New Food Adoption.

Variable	Estimated Coefficient[a]	Standard Error	Marginal Effects		
			Early Adopters Prob(y=0)	Late Adopters Prob(y=1)	Non-Adopters Prob(y=2)
CONSTANT	0.5785***	0.2155	0.2218	-0.0954	-0.1264
AREA	-0.1104	0.1067	-0.0423	0.0182	0.0241
GENDER	-0.1885**	0.0944	-0.0723	0.0311	0.0412
AGE	0.0432**	0.0175	0.0166	-0.0071	-0.0094
HSIZE	0.0558*	0.0335	0.0214	-0.0092	-0.0122
EDUC1	-0.2882***	0.1024	-0.1105	0.0475	0.0629
EDUC2	-0.2720**	0.1163	-0.1043	0.0449	0.0594
MARD	0.1050	0.1026	0.0402	-0.0173	-0.0229
CATH	-0.1482*	0.0869	-0.0568	0.0244	0.0324
WCOLL	-0.0221	0.1013	-0.0085	0.0036	0.0048
WHITE	-0.2360**	0.1014	-0.0905	0.0389	0.0516
INCOME1	-0.2146**	0.1084	-0.0823	0.0354	0.0469
INCOME2	-0.2579*	0.1298	-0.0989	0.0425	0.0563
μ_1	1.3799***	0.0619			

[a] Indicates statistical significance at the 0.10 (*), 0.05 (**), and 0.01 (***) levels.
Log Likelihood = -788.78
Log Likelihood, restricted = -816.82
Model Chi-Square (12) = 56.08***
Percentage Correctly Predicted = 50

Table 3 gives the OPM's results for the effects of selected GDS variables on the probability of grocery shoppers adopting new food products. The model's chi-square coefficient (56.08 with 12 degrees of freedom) is statistically significant at the 1-percent level. Thus, the null hypothesis that all slope coefficients are equal to zero is rejected. The positive and statistically significant coefficient for μ_1 confirms that the three-response categories are ordered. The model predicts 50 percent of the responses correctly.

Nine of the variables have statistically significant coefficients and imply that they influence the probability of new food adoption. The results further suggest that adoption is influenced by gender, age, household size, education, religion, ethnicity, and household income. Adoption is invariant to geographic area, marital status, and employment status. Greene (1993) cautions that the coefficients of the OPM are difficult to interpret. He further adds that without additional calculations it is unclear how OPM's coefficients should be interpreted. However, relative to the sign of the coefficients, the marginal effects for Prob(y = 0) and Prob(y = J) are unambiguous. Because the study is concerned primarily with the

actions of early adopters, the coefficients in the Prob(y = 0) column in table 3 are used to assess the likelihood of adoption for GDS variables with statistically significant coefficients. The marginal effects measure changes in a particular explanatory variable while holding other explanatory variables at their sample means.

The coefficient for *GENDER* suggests that women have a 7-percentage point greater likelihood of trying new food products than men. A 42-year-old grocery shopper is more likely to try new food products earlier than a 52-year-old shopper. College-educated shoppers have a 10-percentage point greater likelihood of early adoption than those with a high-school education or less. A unit change in religion from Catholics to non-Catholics lowers the probability of early adoption by 6-percentage points. Caucasians are 9-percentage points more likely to be early adopters than non-Caucasians. The probabilities fall by 8-, and 10-percentage points, respectively, as household incomes change from $25,000-$49,999 to below $25,000 or from at least $50,000 to less than $50,000.

In summary, early adopters of new food products are likely to have the following charac-

teristics. They are women, at most 42-years-old, from 3-person households, more educated, Catholics, Caucasians, or they have household income levels above $25,000. The findings for gender, age, education, and income are in line with the study's hypotheses. However, marital status and employment are insignificant predictors of early adoption of new food products in Louisiana and southeast Texas. The study's findings that higher income consumers are more likely to be early adopters of new food products are supported by other studies on new product adoption (Bayus; Bayus and Mehta; Dickerson and Gentry; Misra, Huang, and Ott; Norris and Batie; Wiseman). The results for age are similar to those reported by other researchers (Brander and Kearl; Feldman and Armstrong; LaBay and Kinnear; McClurg and Andrews; Pulter and Zilberman). Higher education is a good predictor of adoption in this study. This was also the case in previous studies (Brander and Kearl; Batte, Jones, and Schnitkey; Bhattacharyya et al.; Dickerson and Gentry; Pulter and Zilberman). Gatignon and Robertson's hypothesis on higher employment status is not substantiated by the findings. No comparisons are possible for gender, household size, and religion because the reviewed literature did not consider these variables.

Market Segments

As mentioned previously, 67 to 80 percent of truly new products and 27 percent of product-line extensions fail. Despite the bleak picture, some new products achieve tremendous market successes. Cooper asserted that in each of the success stories market needs existed, and the innovations targeted those needs. In the case of food products, many of the introductions were designed to meet U.S. consumers' changing GDS characteristics and concerns about health and nutrition, particularly the fat, sodium, and cholesterol content of foods. Prior to the implementation of Nutrition Facts labels in 1994, many of the new food introductions had health and nutritional claims. In 1995, 16,900 new food products were introduced and about 2,000 had claims of low or reduced fat content (Gallo, 1996). Further, many new food products introduced over the past 17 years have been withdrawn (Gallo, 1996). These statistics

reinforce the overriding need to identify likely adopters of new food products and to court them with appropriate advertising and promotional strategies.

On that premise, the study used table 3's results to predict the probabilities that six-consumer groups would adopt new food products early in the diffusion process. The segments are developed from GDS variables with statistically significant coefficients (table 3). Although the focus is on early adoption, predicted probabilities are calculated for the three-adopter categories. Early adopters are crucial to a new product's success in the early stages of the diffusion process, but in the long run firms must design product lines to cover the market needs of all consumer groups (Allvine).

Segment I profiles female grocery shoppers who are 42-years-old, from 3-person households, college educated, Caucasians, and whose household income level is at least $50,000. Segment II consists of male shoppers with the same characteristics as I. In segment III, shoppers have lower levels of education and household incomes, but possess all other characteristics as I. Segment IV's members are men with III's characteristics. Segments V and VI extend segments I and II with the inclusion of the statistically significant coefficient for *CATH*. The predicted probabilities for the six-consumer segments are presented in table 4.

Table 4. Predicted Probabilities for Six Market Segments.

Market Segments	Early Adopters PProb(y=0)[a]	Late Adopters PProb(y=1)[b]	Non-Adopters PProb(y=2)[c]
I	0.5239	0.4012	0.0749
II	0.4483	0.4862	0.0655
III	0.4129	0.5334	0.0537
IV	0.3372	0.6269	0.0359
V	0.5636	0.3615	0.0749
VI	0.4013	0.5471	0.0516

[a] $PProb(y = 0) = 1 - \Phi(-\hat{\beta}'X)$

[b] $PProb(y = 1) = \Phi(\hat{\mu}_1 - \hat{\beta}'X) - \Phi(-\hat{\beta}'X)$

[c] $PProb(y = 2) = 1 - \Phi(\hat{\mu}_1 - \hat{\beta}'X)$

Note: In calculating the predicted probabilities for the six-market segments, the binary variables for gender, education, and household incomes took values of 0 or 1. Other variables were held at their sample means.

From the table 4, shoppers with segments I and V's characteristics are more likely to adopt new food products early. Those in segments II, III, IV, and VI are more likely to be late adopters. The probabilities of early adoption are 0.5239 and 0.5636 for segments I and V, respectively. This implies that about 56 percent of shoppers in segment V try new foods early. Women more readily embrace new food products than men. Segment V has about a 36-percent late adoption rate. Lower education and household income levels slow adoption rates. Overall, a new food product has a good chance of being tried in the study region. Predictions are that less than 8 percent of grocery shoppers in the study region will not try new food products.

Concluding Remarks

Responding to changes in U.S. consumers' GDS characteristics, food processors introduced almost 117,000 new food products between 1985 and 1995. Although many were product-line and brand extensions rather than truly new products, they were very costly to produce and market. In 1995, food market firms spent about $10.2 billion on consumer advertising (Gallo, 1996). Despite these expenditures, a high percentage of new food products fail. Knowing the marketing segments most receptive to new food products is an efficient tool in combating failure rates. This strategy allows the food industry to shape its advertising and promotional efforts toward these consumers. Given the regional differences in U.S. food consumption patterns, this study analyzed the characteristics of early adopters of new food products among primary food shoppers in Louisiana and southeast Texas.

Results from an OPM used to make the determination suggest the likelihood of adopting new food products early is influenced by gender, age, household size, levels of education, religion, ethnicity, and household income. Early adopters are more likely to be women, about 42-years-old, living in 3-person households, college educated, Catholics, Caucasians, and have household income of at least $50,000. This segment has a 16-percentage point greater likelihood of trying new food products than male shoppers with the same characteristics. In general, male shoppers, without

college degrees, and with household income levels between $25,000 and $49,999 are more likely to be late adopters of new food products. With future introductions, food marketers in this region may enjoy greater market successes in the former group of consumers than in the latter group.

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