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CATALOG SPECIALTY FOOD BUYERS' COMPUTER USAGE AND PURCHASING ACTIVITY: A CASE STUDY

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Abstract

Specialty food aficionados, who use the Internet to gather information or place orders, resemble those who rely on mail order catalogs, except for being younger. Both groups are well-educated, wealthy, and frequent specialty food buyers. Among those studied, nearly all of the Internet users have considered shopping by catalog, half had used the Internet in the previous six months, and about 10 percent had actually purchased specialty food or beverages online. While preferring traditional retail shopping, this group views catalog and online shopping as substitutes. When choosing to shop via either of these options, product quality and uniqueness are most important; shipping costs and price are least important.

These conclusions are based on a survey that builds on previous research which examined Internet users who visit food-related sites on the World Wide Web. It found a strong correlation between catalog and online purchasing activity. This paper reports the findings of a follow-up survey targeted at random samples of individuals on four specialty food companies' mailing lists. The survey identifies the demographics and purchasing activity of specialty food catalog shoppers and compares them to the population of Internet users who visit food-related Web sites. It examines catalog shoppers' use of the Internet and online shopping, and compares the relative importance of a variety of factors in the decisions to buy online and by catalog.

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Background

The Internet has increasingly established itself as a major medium of communication, information, and commerce. One recent report estimated that 57 million Americans used the World Wide Web (www) between April and June of 1998. This is an increase of 20 million people over the second quarter in the previous year. (Ziff-Davis, 1998)

Researchers at Georgia Tech have been studying how people use the Internet. Their most recent survey indicates that 93 percent of American Internet users use the web for personal shopping (including gathering information, customer support, as well as purchases). (Kehoe et al, 1998) Ernst & Young estimates that 32 percent of Internet users have bought something online, and the total value of commerce on the www is expanding rapidly (Ernst & Young, 1998). For example, one forecast of 1998 holiday online buying predicts $1.1 to $2.3 billion dollars in sales (eMarketeer, 1998). Although food and beverage sales on the Internet are only predicted to comprise an estimated 3.5 percent of Internet sales in 1998, they are expected to reach $336 million by 2000 (Bulkeley, 1996).

Previous research indicated that Internet users who purchase specialty food and beverages online are also frequent catalog shoppers (White, 1997). This project was designed to continue that research by examining the computer usage and purchasing activity of specialty food catalog shoppers. Findings suggest that more than one-half of catalog shoppers are online, and a large proportion of them use the Web to search for information about specialty foods. Relatively few (10%) have bought food or beverages online, but more than one-third appear to have adopted the medium, buying something online in the previous six months.

It also examines a variety of factors influencing consumers' decisions to buy specialty foods online and by catalog. Research by Gehrt, Yale, and Lawson suggests that consumers find catalog shopping to be convenient for a variety of reasons including issues of time, space, effort, and perhaps recreation (Gehrt et al, 1996) This project was designed to compare the relative importance of convenience, local availability, price, and other factors for consumers considering online and/or catalog specialty food purchases. The experimental hypothesis, that the reasons for shopping by catalog and online are nearly identical, was not contradicted.

Methodology

The research used a case study analysis of four specialty food firms. We selected these companies based on the goal of having companies which direct market a variety of products, which market primarily both nationally and regionally, and which have catalog mailing lists ranging from small (i.e., 40,000 addresses) to large (i.e., more than 1,000,000 addresses). After considering these factors, we selected and received cooperation from Omaha Steaks (Nebraska-based, prime meat products and ready-to-eat entrees), Dean & DeLuca (New York-based, wide range of specialty food products), Ducktrap River Fish Farm (Maine-based, smoked seafood products), and Oakville Grocery (California-based, jams and jellies, oils, vinegars, and other products).

Each company was asked to provide a random selection of 800 addresses from its catalog mailing list. One firm had programming difficulties providing a random selection of names and provided a list of slightly over 800 names beginning with "B." The mailing list database from each company was examined, and a random sample of 800 addresses was selected, if more than 800 had been provided. Duplicate addresses were eliminated. Each address was assigned an ID number for the survey.

Beginning in November, 1997, postcards were sent to each household announcing that they would be receiving a survey within the next week. It briefly explained the purpose of the survey and encouraged their participation. It also directed recipients to a web site on the University of Maine's server where they could complete the survey online if they preferred. Approximately three days later a survey booklet was mailed to each household. The booklet contained a letter on University of Maine letterhead explaining the survey in greater detail and ensuring the confidentiality of all individual information, the full survey, and a self-addressed, postage-paid mailer.

After approximately three weeks, a second survey booklet was sent to each respondent for whom a completed survey had not been received and who appeared to have a valid current address. Based upon mailings returned by the Post Office, 4.1 percent of the total sample provided by the four companies were undeliverable. As of January 12, 1998 a total of 980 valid survey responses had been received. This represents a response rate of 30.7 percent from the deliverable addresses. The response rate from each of the four companies ranged from 23.8 percent to 36.7 percent. Nine percent of all responses were received via the web site; ninety-one percent were received through the mail.

Survey responses from both the online form and the postal form were coded and entered on a spreadsheet for analysis using Microsoft Excel. Participating companies received reports on the results of responses from their portion of the sample. To maintain company confidentiality, this report summarizes results of the aggregated 980 valid surveys.

Demographics

The demographics of respondents to this catalog-based survey were similar to those of previous online surveys (see Table 1 through Table 5). The population is well-educated, wealthy, and makes frequent purchases of specialty food and drink products.

Within the respondent population, however, the four companies' mailing lists differed significantly from one another on every demographic characteristic. Therefore, for each variable, statistics are provided describing the range of the four companies and their median. No statistics are provided on the respondent group in total because of the varying response rates of the companies.

Females comprised a majority of all four companies' samples (58.2 % - 72.4 %). This is similar to online results, but their majority was significantly higher in this catalog-based survey (Table 1).

Table 1: Gender

	Catalog Survey		1997 Online Survey
	Median	Range	Mean
		% of Respondents	
Female	64.8	58.2 - 72.4	53.0
Male	35.2	27.6 - 47.2	45.2

Respondents' age demonstrated the largest deviation from previous online surveys. Like the online population, approximately one-half of the catalog survey respondents were aged 35-54, with a median of 49 percent (Table 2). However, the vast majority of the remainder of catalog respondents was age 55 or over (median 41 %). The opposite was true for the online group. Approximately 42 percent of this group fell between the ages of 18-34; 11 percent were 55 or older.

Table 2: Age

	Catalog Survey		1997 Online Survey
	Median	Range	Mean
		% of Respondents	
<17	0.0	0.0 - 0.6	0.6
18 - 20	0.0	0.0 - 0.0	3.6
21 - 24	0.7	0.0 - 1.2	9.0
25 - 34	7.4	2.2 - 20.5	29.3
35 - 44	22.5	12.1 - 25.5	22.8
45 - 54	26.5	15.3 - 33.7	21.6
55 - 64	18.5	14.6 - 20.2	9.0
65 +	22.2	12.0 - 49.6	1.8

Similar to online respondents, the catalog population was well educated. On average, more than 90 percent had at attended some college, and approximately one-third had an advanced degree. Again, education varied significantly by company (Table 3).

Table 3: Education

	Catalog Survey		1997 Online Survey
	Median	Range	Mean
		% of Respondents	
Did not graduate H.S.	0.5	0.4 - 1.5	2.4
Graduated H.S.	5.0	4.8 - 16.9	3.6
Some College or 2-year Program	24.5	16.6 - 32.9	25.7
Graduated College	34.4	27.3 - 42.0	39.5
Advanced Degree	31.4	22.5 - 43.5	26.9

Closely related to age, employment levels differed across the four companies. In general, however, approximately two-thirds of the respondents worked outside of the home (Table 4). This was significantly lower than the online population.

Table 4: Employment

	Catalog Survey		1997 Online Survey
	Median	Range	Mean
	% of Respondents		
Full Time (30+ hours)	55.4	39.3 – 64.9	73.1
Part Time (less than 30 hours)	12.0	9.6 - 14.6	13.8
Not employed for pay	32.7	20.5 – 51.0	12.6

Income levels were high across all four companies, and were generally higher than those of the online respondents (Table 5). The majority of each company's respondents indicated an annual income of $55,000 or higher, and the median income across the four companies fell between $65,000 - $74,999.

Table 5: Income

	Catalog Survey		1997 Online Survey
	Median	Range	Mean
	% of Respondents		
< 15,000	1.1	0.0 - 2.6	7.8
15,000 - 24,999	2.2	1.5 - 9.3	7.0
25,000 - 34,999	6.3	2.5 - 11.9	12.2
35,000 - 44,999	7.5	5.3 - 11.9	11.3
45,000 - 54,999	10.5	8.8 - 11.8	11.3
55,000 - 64,999	8.2	5.9 - 9.8	15.7
65,000 - 74,999	7.1	4.9 - 8.3	7.0
75,000 - 99,999	18.1	14.0 - 22.0	12.2
100,000 +	37.3	21.8 - 51.0	15.7
Rather Not Say	24.9	23.2 - 30.5	28.9

Computer Usage and Internet Activity

Approximately 72 percent of respondents to the catalog survey indicated having a personal computer in their home and more than 50 percent had used e-mail and/or visited at least one site on the World Wide Web in the previous six months (Table 6).

Table 6: Respondents' Computer and Internet Usage

	Median	Range
	% of Respondents	
PC in Home	71.8	50.0 - 77.5
Used Internet	57.2	40.2 - 63.7
Used E-mail	52.8	36.2 - 60.5
Visited www Site	52.3	33.5 - 60.3
Internet Activity (of those respondents who visited www sites)		
To Go Shopping	28.5	27.4 - 41.7
To Access Newsgroups	41.6	39.3 - 43.0
To Search for Recipes	36.9	22.6 - 43.9
To Access Commercial Information	57.2	51.2 - 64.0
Instead of Watching TV	32.7	27.3 - 33.3
Any Internet Purchase	36.8	35.1 - 45.1
Visits to Food/Drink www Sites	47.3	23.8 - 59.2

Of those who used the web, respondents were most likely to have accessed commercial information (57.2 %) and visited food and drink sites (47.3 %). Approximately 37 percent searched for recipes. Thirty-seven percent made at least one online purchase in the previous six months.

Web use was highly correlated with the respondent's age. While 77 percent of those under age 35 visited one or more sites on the Internet in the previous six months, 41 percent of those aged 55-64 did so, and only 20 percent of respondents 65 and over went online.

Purchasing Activity

A large majority of respondents (87.9 %) made at least one specialty food or drink purchase in the previous six months (Table 7). Three quarters of them bought at a local retail outlet, and, on average, they purchased from 15 of the 26 survey product categories.

Table 7: Respondents' Specialty Food and/or Drink Purchasing Activity

	Median	Range
	% of Respondents	
Retail		
Any Retail Purchase	76.2	67.7 - 82.6
Catalog		
Considered Shopping by Catalog	80.2	65.8 – 82.7
Any Catalog Purchase	62.6	45.8 - 71.3
Online		
Considered Shopping Online (all respondents)	12.3	8.0 – 19.9
(internet users)	(23.9)	(17.3 – 33.0)
Any Online Purchase (all respondents)	4.5	1.4 – 10.2
(internet users)	(9.6)	(3.1 – 17.5)
All Sources		
Any Purchase from any Source	87.9	84.2 - 90.9

Approximately 80 percent of respondents considered purchasing specialty food and/or drink products by catalog in the previous six months, and nearly 63 percent placed one or more orders. They bought from an average of 3 product categories.

One-eighth of all respondents, and nearly one-quarter of those who used the Internet, considered making an online purchase. Nearly five percent (9.6 % of Internet users) actually purchased specialty food and/or drink products online, buying, on average, from one product category. As with computer usage in general, age was inversely related with online purchasing activity. Respondents under the age of 35 who used the Internet were 8 times more likely to have purchased food or drink products online than Internet users aged 65 and over (16.4 % vs. 2.0 %). Approximately 9 percent of respondents aged 35-64 purchased specialty foods online.

Catalog purchasing activity, or at least a willingness to consider shopping by catalog, was also predictive of online specialty food and beverage shopping within the respondent population. Nearly every individual (99.1 %) who indicated that he/she had considered shipping for specialty food or drink products online also considered shopping by catalog. Those respondents who made at least one catalog purchase during the previous six months (and used the Internet) were more than twice as likely to have made an online purchase than respondents who did not make a catalog purchase (12.2 % and 5.6 %, respectively).

Factors Influencing the Choice to Purchase by Catalog and Online

Respondents were asked to evaluate ten issues with regard to their importance (very important [1] to very unimportant [5]) in the decision to purchase specialty food and drink products by catalog. They repeated the process with regard to the online purchasing decision.

Although responses varied slightly across companies and demographics, a general pattern emerged. The results indicated that issues of quality and selection were the most important to respondents; product price was least important (Table 8). The relative importance of price varied inversely with respondent income, but it was consistently the least important factor across all income categories.

The cost of shipping was also among the least important factors, but respondents rated it significantly more important than product cost. This is one possible explanation for their greater purchasing activity at local retail outlets.

Table 8: Respondents' Ratings of Important Factors in Catalog and Online Purchasing

	Catalog		Online	
	Median	Range	Median	Range
Quality/Selection				
Quality of Product(s)	1.12	1.10 – 1.16	1.15	1.06 – 1.23
Quality of Shipping	1.39	1.26 – 1.40	1.33	1.11 – 1.48
Looking for Product(s) not Available Locally*	1.44	1.32 – 1.68	1.39	1.31 – 1.48
Order Process				
Ease of Ordering	1.40	1.35 – 1.43	1.26	1.06 – 1.37
Convenience	1.51	1.44 – 1.55	1.40	1.11 – 1.46
Security of Ordering by Credit Card**	1.69	1.57 – 1.83	1.27	1.17 – 1.43
Prior Knowledge of and/or Experience with Company**	1.69	1.38 – 1.86	1.84	1.39 – 1.91
Availability of Gift Shipments	2.07	1.99 – 2.35	2.27	1.89 – 2.62
Price				
Cost of Shipping	2.09	1.79 – 2.26	1.97	1.78 – 2.31
Low Price	2.45	2.26 – 2.79	2.39	2.06 – 2.62

Note: ** Significant at 99 percent confidence level
* Significant at 95 percent confidence level

Security of credit cards, and local availability were significantly more important in the decision to purchase online among the total population of survey respondents. However, for those respondents who considered shopping online, there were no differences in their evaluation of any of the ten issues. That is, online shoppers considered security of credit cards to be equally important when shopping by catalog or online. Those respondents who only considered catalog shopping differed in their opinion, rating credit card security as somewhat less important. They also found prior knowledge of and/or experience with a company to be more important.

The issue of local availability, and consumers' preference for local retail shopping, is also evidenced by their purchases. Three of the four companies' sample populations had sizable concentrations of respondents within their "home" region. For two companies, the region was defined as a group of states (i.e., New England). One company's region was a single state. The fourth company had too small of a sample (5.5 %) in its local region to include in this analysis.

For each of the three companies, one of their primary product categories was identified, and purchasing patterns were analyzed by region. In general, local residents were equally or more likely to have purchased a product item within the category from a traditional retail outlet in the previous six months (Table 9). However, residents outside the home region were significantly more likely to have purchased the products by catalog. While this data is not definitive, it does suggest that consumers look to catalog shopping more often when products are not available locally. Too few of the respondents bought the products online to determine any relationships.

Table 9: Respondents' Purchasing Rates Inside and Outside of Companies' Local Regions

	Company 1		Company 2		Company 3	
Source of purchase of company's major product	Within Region (N=64)	Outside of Region (N=125)	Within Region (N=113)	Outside of Region (N=163)	Within Region (N=39)	Outside of Region (N=135)
Retail	69.8	62.4	47.8	49.7	74.3*	55.6
Catalog	1.6**	14.4	38.9*	53.4	7.7	18.5
Online	0.0	0.8	0.0	0.8	0.0	3.0

Note: ** Significant at 99 percent confidence level
* Significant at 95 percent confidence level

Summary

This project was conducted to examine consumer's purchasing behavior and attitudes toward catalog and online shopping for specialty food and drink products. Because the specialty food industry is so diverse, no single sample population could be identified which was representative of the universe of specialty food and drink catalog shoppers. Therefore, a case study approach was used, and the mailing lists of four various companies were sampled.

The survey was designed to address three primary hypotheses:

1. Consumers prefer to purchase specialty food products at local retail stores, but will buy items not available locally from catalogs and online;
2. Product quality and/or uniqueness are more important than price; and
3. Online shopping and catalog shopping are substitutes for each other.

While the demographic characteristics of the respondents to this survey differed across the four participating companies, they were generally well educated, wealthy, and make frequent purchases of specialty food and drink products. This is similar to the population of Internet users who visit specialty food and drink sites online. However, respondents to the catalog-based survey were older than their online counterparts, and females comprised a larger majority of the population.

Approximately 52 percent of respondents used the Internet in the previous six months, and nearly half (47 %) of those users visited food and drink sites on the World Wide Web. More than one-third made at least one online purchase. Internet usage was highly correlated with age. While 77 percent of respondents 35 years of age and under went online in the previous six months, only 20 percent of those aged 65 and over did so.

Most respondents (88 %) purchased specialty food and/or drink products in the previous six months. Local retail outlets were the most common, and frequent, sources of those purchases, with three-quarters of respondents indicating one or more purchases. Approximately 80 percent of respondents considered shopping by catalog, and more than 62 percent did make at least one purchase. Twelve percent of respondents, or 24 percent of Internet users, considered online shopping. Nearly 5 percent of them, or 9.6 percent of Internet users, made at least one specialty food or drink purchase online.

A willingness to shop by catalog appears to be directly related to a consumer's interest in online shopping. Nearly all respondents, 99.1 %, who considered shopping for specialty food or drink products online also considered shopping by catalog. Additionally, those Internet users who actually purchased by catalog in the previous six months were more than twice as likely to have also purchased specialty food and drink products online than those respondents who did not make a catalog purchase.

The most important factors in making the decision to purchase specialty food and drink products by catalog or online were very similar. In both cases, product quality was the most important issue. Product price was least important, regardless of the respondent's income. Shipping costs were also of minimal importance, but they were consistently more important than product price.

There was some indication that a product's local availability was significant in the decision to buy by catalog or online, but further research is needed to better understand this factor.

It appears that most consumers who use the Internet view catalog and online shopping as substitutes for one another. Whether shopping by catalog or online, the same issues are important in their purchasing decisions. Furthermore, the costs associated with the two purchasing methods are identical, and, therefore, not a factor in the decision-making process.

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