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Customer Preferences for Restaurant Brands, Cuisine, and Food Court Configurations in Shopping Centers

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Customer Preferences for Restaurant Brands, Cuisine, and Food Court Configurations in Shopping Centers

Abstract

An analysis of the mall restaurant preferences of a national sample of 1,737 U.S. residents sheds light on how to configure mall food service and demonstrates how local malls can determine what their particular market desires. The study tested demographic differences in relation to mall configurations and in relation to the types of food-service concepts that are in highest demand. Using customer choice analysis, this study asked respondents to choose among six mall food-service configurations, including one that had a large food court and one that had no food court at all. The most popular configuration combined a moderate-size food court with several casual and fast-casual restaurants. Least popular was the choice that had only table-service restaurants and no food court. The study also asked respondents to select their favorite mall restaurant concepts, with a particular eye to demographic differences in restaurant preferences. Since this is a national sample, it's not surprising that familiar national QSR and casual-dining chains topped the list. However, certain demographic groups rated the QSRs as their favorites, while others were more favorable to table-service concepts. Thus, as local and regional mall operators determine which restaurant concepts to offer in their malls, they should consider their customers' demographics and preferences. With that analysis, malls can set the mix of local and national operators, QSR and table-service concepts, and the configuration of those restaurants in the mall.

Keywords

market research, shopping malls, food courts, restaurant preferences, customer choice analysis

Disciplines

Business | Food and Beverage Management | Hospitality Administration and Management

Comments

Required Publisher Statement

The Center for HospitalityResearch

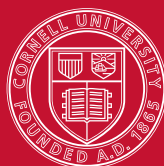Hospitality Leadership Through Learning

Customer Preferences for Restaurant Brands, Cuisine, and Food Court Configurations in Shopping Centers

Cornell Hospitality Report

by Wayne J. Taylor and Rohit Verma, Ph.D.

Cornell University
School of Hotel Administration

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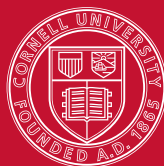
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EXECUTIVE SUMMARY

An analysis of the mall restaurant preferences of a national sample of 1,737 U.S. residents sheds light on how to configure mall food service and demonstrates how local malls can determine what their particular market desires. The study tested demographic differences in relation to mall configurations and in relation to the types of food-service concepts that are in highest demand. Using customer choice analysis, this study asked respondents to choose among six mall food-service configurations, including one that had a large food court and one that had no food court at all. The most popular configuration combined a moderate-size food court with several casual and fast-casual restaurants. Least popular was the choice that had only table-service restaurants and no food court. The study also asked respondents to select their favorite mall restaurant concepts, with a particular eye to demographic differences in restaurant preferences. Since this is a national sample, it's not surprising that familiar national QSR and casual-dining chains topped the list. However, certain demographic groups rated the QSRs as their favorites, while others were more favorable to table-service concepts. Thus, as local and regional mall operators determine which restaurant concepts to offer in their malls, they should consider their customers' demographics and preferences. With that analysis, malls can set the mix of local and national operators, QSR and table-service concepts, and the configuration of those restaurants in the mall.

Key words: Market research, shopping malls, food courts, restaurant preferences, customer choice analysis

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The fortunes of shopping malls have ebbed and flowed since the first enclosed mall was developed near Edina, Minnesota, in 1956, and with each economic shock or cultural trend malls have been forced to reinvent or redevelop their concept to continue to attract consumer traffic. Various trends have determined that malls should be enclosed, they should be open, they should be "lifestyle centers," or they should be "power strips." Some even offer amusement parks. In each revision, mall developers (or redevelopers) must consider their business mix, typically involving retail, entertainment, and food-service businesses. For example, during an earlier mall shakeout, in 2003, *Retail Traffic* magazine observed a trend toward "creativity" in signing mall tenants, including a Harley Davidson store, "discounters, home-furnishings retailers, bookstores, entertainment centers, and restaurant clusters."[1]

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[1] Curt Hazlett, "The Replacements," *Retail Traffic*, October 1, 2003 (http://retailtrafficmag.com/development/trends/retail_replacements/).

With each economic recession, it is tempting to declare the death of the mall, and it's true that each economic shock, including the current one, has caused many mall casualties. However, the recession of 2008-09 seems palpably different from earlier shocks, including those in 2003 and 2001. In a 2009 interview with *US News and World Report*, Steve Sterrett, chief financial officer of the Simon Group, which is one of the largest U.S. mall owners, observed the changes wrought in malls in recent years:

> Over the last 15 years, the mall has become more experiential. More casual dining, places like the Cheesecake Factory and P.F. Chang's. We've seen the reintroduction of stadium-style seating at theaters. You want to capture more of the shopper's time because if you capture their time, you capture their money.[2]

Although Sterrett anticipates even greater migration of services to malls, including insurance, spas, and fitness centers, he said that it remains to be seen whether malls are currently in another cyclical shakeout or whether changes are structural. One observer who argues that the change is structural is Kip Beckman, principal research associate for the Conference Board of Canada. In a 2009 commentary, Beckman argued that structural changes in the retail sector had already threatened malls' prosperity, and the recession only augmented that trend.[3]

One trend that mall operators face is what has been termed a "new austerity," which has reduced sales for many retailers and food-service purveyors. If that trend continues, mall operators will once again have to reconsider their mix and reconfigure their operations. Among the issues to be faced is what type of food-service operations will help attract people to malls and which will satisfy those who have come for other purposes, whether shopping or entertainment.

In this report, we explain a study of consumer preferences for mall-based food service. This report does two things. First, it provides a set of findings about mall restaurant preferences from a national sample. We recognize, however, that local preferences strongly modify national trends. Thus, this study has a more important goal of demonstrating market research procedures that might be applied to determine specific local preferences. In the course of the study, we offer management implications of our findings.

At the time of the study, the U.S. restaurant industry had seen a long-term upward trend toward eating out. Commercial restaurant service sales in 2007 were an estimated $488.3

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[2] Rick Newman, "How to Tell When a Mall Is in Trouble," *US News and World Report*, June 26, 2009 (www.usnews.com/money/blogs/flow-chart/2009/6/26/how-to-tell-when-a-mall-is-in-trouble.html).

[3] Kip Beckman, "The Venerable Shopping Mall Disappearing into the Sunset," *Hot Topics in Economics*, July 27, 2009 (Conference Board of Canada; www.conferenceboard.ca/economics/hot_eco_topics/default/09-07-27/The_Venerable_Shopping_Mall_Disappearing_into_the_Sunset.aspx).

billion, up 4.6 percent from 2006.[4] Consumption of food away from home accounted for 48.5 percent of total food expenditures in 2008, up from 45 percent in 1990 and 26 percent in 1960.[5] Although anecdotal reports say that consumers pulled back in 2009, we anticipate that the secular trend toward higher expenditures on food away from home will continue. Key to restoring this trend is a reduction in unemployment and underemployment. Until the 2008 recession began, the dining-out trend was supported by a decline in free time, particularly in households where both partners held full-time jobs, leaving less time to prepare meals at home.

Regardless of the economic times, consumers have numerous moderately priced food-service outlets from which to choose, including those offered by such nontraditional venues as grocery stores. The market for most mall-based restaurants has typically been people who have come to the mall for other purposes, usually shopping and, increasingly entertainment or other services.

Recession makes a crowded competitive environment even more challenging for both retailing and food service. To compete for customer traffic, shopping centers need to differentiate themselves beyond simply offering new retail outlets—especially given the contraction of the retail segment. Properly chosen food outlets may be one way to attract traffic to malls. Such growing interdependence of retail and restaurant industry (and hospitality in general) offers opportunities for both industries. A recent industry white paper from the Center for Hospitality Research has also highlighted the importance of food courts within the shopping center.[6]

Our report examines customer preferences for restaurant brands, cuisine, and food-court configurations in U.S. shopping centers and malls. Enclosed malls have typically included a food court offering a variety of quick-service food options to the customers. Beyond the QSRs in the food court, malls have offered fast-casual and casual restaurants near the food court, elsewhere within the mall, or at different locations on the premises. Even during this period of economic slowdown, a recent study shows that food-court operators in malls remain strong as customers tend to linger longer and spend more on food in lieu of retail purchases.[7] However, to our knowledge, research has not explored customer preferences related to dining options in shopping centers.

Specifically, our study explores customer preferences for the following issues: **(1)** configuration of food courts; **(2)** restaurant brands; and **(3)** cuisines. In addition to reporting aggregate results, we also identify market segments using cluster analysis based on brand preferences and cuisine preferences. The idea here is to see whether people who favor a particular set of brands or cuisines have noticeably different demographics from those who prefer other brands or cuisines. This report includes discussion of similarities and differences across various sub-groups.

Mall Developments over Time

To attract consumers over the years, malls have attempted to anticipate and respond to changing customer needs. As we indicated above, malls have shifted towards increasing their social and entertainment offerings, allowing them to compete with the more "functional" internet shopping.[8] One source of entertainment and differentiation is food outlets, which is one of the few areas of retailing that is resistant to online competition. Strangely, the number of research studies exploring customer preferences for food courts in shopping centers is relatively small.[9]

Kalcher and his colleagues are among those who have studied the impact of food court configuration on shopping center choice in United States and Europe.[10] Earlier, Sirpal and Peng looked at the impact of food courts on retail spending in Singapore malls.[11] Their study revealed that after the introduction of the food court there was an increased percentage of first-time visitors, increased frequency of visits, and increased length of time spent in the center. Eating at the food court was cited as one of the major purposes of visiting the center.[12] To be sure, food courts are not a new aspect of U.S. shopping malls, but this study indicates that at least some visitors are considering the food court as part of their mall visit.

A study on the retail industry in India showed that the retailing focus there is changing towards satisfying many

[4] National Restaurant Association.

[5] US Department of Agriculture Economic Research Service (www.ers.usda.gov/briefing/CPIFoodandExpenditures), updated November 25, 2009.

[6] Karl Kalcher, "North America's New Town Centers: Time to Take Some Angst Out and Put More Soul In," *Cornell Industry Perspectives,* No. 3, January 2009.

[7] P.K. Yuk, "Malls and Hunger Are a Recipe for Success," *Financial Times*, April 4, 2009, p. 14..

[8] Y.-K. Kim, "Consumer Value: An Application to Mall and Internet Shopping," *International Journal of Retail & Distribution Management*, Vol. 30, Nos. 11/12 (2002), p. 595.

[9] For exceptions, see: C.A. Martin, "Consumption Motivation and Perceptions of Malls: A Comparison of Mothers and Daughters," *Journal of Marketing Theory and Practice,* Vol. 17, No. 1 (2009), p. 49; and C.A. Martin and L. Turley, "Malls and Consumption Motivation: An Exploratory Examination of Older Generation Y Consumers," *International Journal of Retail & Distribution Management,* Vol. 32, No. 10 (2004), p. 464.

[10] Kalcher, *op.cit*.

[11] R. Sirpal and O. Peng, "Impact of Food Courts and Other Factors on Tenants' Businesses for a Major Shopping Centre in Singapore," *Property Management* , Vol. 13, No. 4 (1995), p. 13.

[12] *Ibid.*

different needs of consumers,[13] including facilities for family outings such as cinema theatres, food courts, and play places for children. While that study focused solely on the developing Indian retailing market, it may provide broader insight on changes in consumers' approach to shopping trips; consumers may be looking for a more holistic experience on their shopping trips and not focus solely on retail stores.
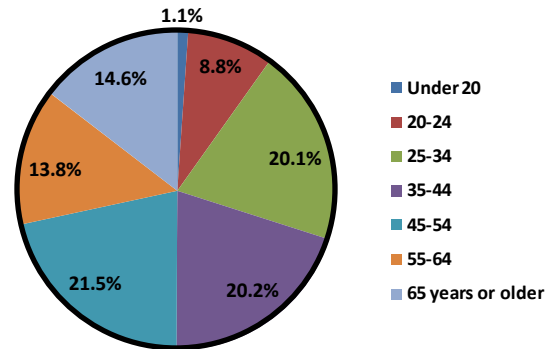
Our study is an initial investigation, and so it does not rest on a theoretical model other than the idea that certain food-service configurations will be more appropriate for shopping malls than other configurations might be. To gain a sense of common existing mall food-service arrangements, we began by interviewing corporate executives from a large corporation that operates approximately 200 shopping centers within the United States, as well as interviewing several shopping center and food court managers. In the course of these interviews, we visited shopping centers located in both urban and rural communities across the United States. This examination allowed us to identify the main brands, cuisines, and configurations of food courts either in use or considered by the shopping center managers and executives.

Next we conducted a nationwide online survey of a balanced sample of 2,000 shopping center visitors within the United States. A well respected sampling company provided us with the sample, which was designed to represent the U.S. population based on multiple demographic criteria. We only wanted responses from people who had recently purchased food at a shopping center, so an early question disqualified those who had not purchased any food during any of their shopping trips during the previous year. We received a total of 1,737 useable responses almost evenly divided between men and women. A snapshot of the sample's overall demographic characteristics is shown in Exhibit 1. All fifty states were represented in the sample, which included both urban and rural residents.
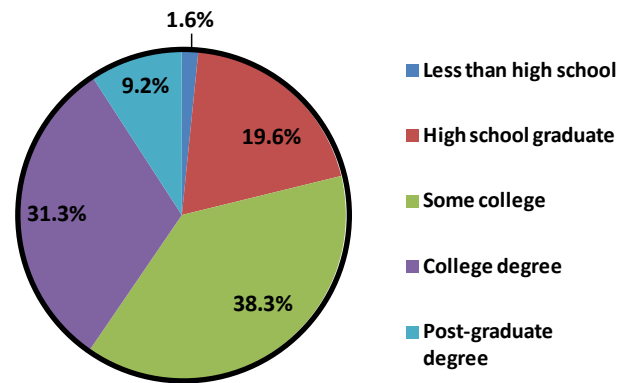
The survey asked the respondents about their shopping behavior and how often they visited specific types of mall restaurants (e.g., kiosk or café, QSR). We asked them to check off the cuisines that they would be most likely to purchase while at a shopping center and which of 109 restaurant brands they would patronize. The restaurant brand question employed the experimental design techniques from customer-choice analysis.[14] We also used a method known as best-worst choice analysis to examine what arrangement

Exhibit 1

Respondents' demographics (*N* = 1,737)

Age

- Under 20
- 20-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 years or older

Education

- Less than high school
- High school graduate
- Some college
- College degree
- Post-graduate degree

Income

- Under $50k
- $50k to $100k
- $100k to $150k
- More than $150k

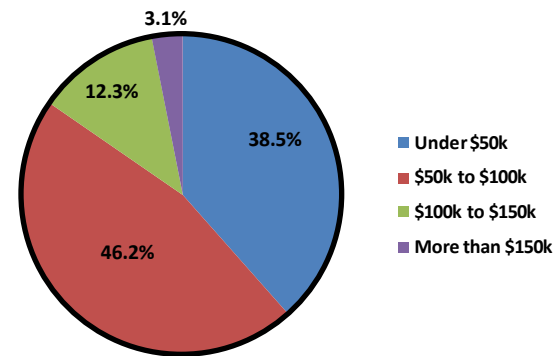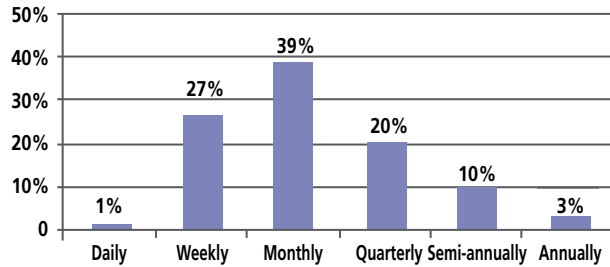[13] R. Srivastava, "Changing Retail Scene in India," *International Journal of Retail & Distribution*, Vol. 36, No. 9 (2008), pp. 714-721.

[14] For example, see: Rohit Verma, Ph.D., Liana Victorino, Kate Karni-ouchina, and Julie Feickert "Segmenting Hotel Customers Based on the Technology Readiness Index," *Cornell Hospitality Report*, Vol. 7, No. 13 (2009).
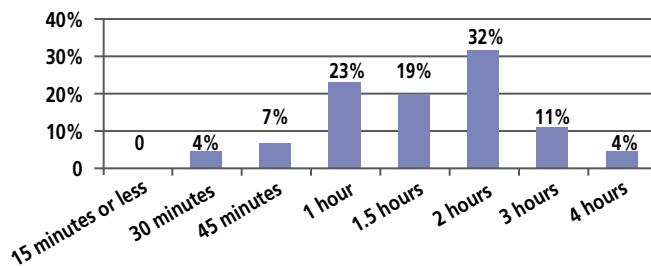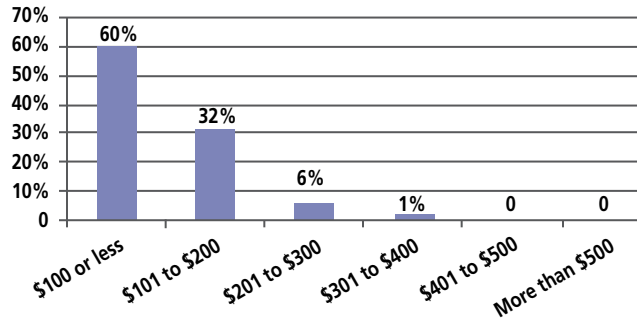
EXHIBIT 2

Respondents' shopping behavior

Shopping frequency

Average trip duration

Average expenditure per trip

Mall Dining Configuration Preferences

Based on our discussions with mall managers and operators, we tested our respondents' preferences among the following five food-service configurations: **(1)** Food court with 8 to 12 quick-service restaurants and a shared seating area, plus 1 or 2 casual dining restaurants at major entrances or in the shopping center's parking lot; **(2)** Grouping of 4 to 6 fast-casual and casual-dining restaurants in one area of the shopping center, each with their own seating area; **(3)** 4 to 6 fast-casual and casual-dining restaurants spread throughout the shopping center; **(4)** A small food court of 4 to 6 quick-service restaurants with a shared seating area, along with 3 to 5 fast-casual or full-service restaurants located in different areas of the shopping center; and **(5)** 4 to 6 casual-dining restaurants, some located inside and others on mall property, but not attached to the main mall.

Food court supreme. The most preferred configuration was the large food court, with 8-12 quick service restaurants, along with 1 or 2 casual-dining restaurants at a mall entrance or in the parking lot (Exhibit 3). The least preferred options had no QSR, and the one with casual-dining restaurants not attached to the mall was least favored overall. We thought that respondents' age or gender might drive these preferences, but we found no significant differences among demographic groups on the most preferred configuration, the large food court. Interestingly, we found that it was relatively older respondents (over 55) who preferred the casual dining configuration that was otherwise least liked overall.

Type of Food Outlet Preferences

Respondents' actual mall dining patterns conform to the food-court concept. The youngest respondents in our survey were also those who visited the mall most frequently, and they were most likely to eat at fast-food outlets. Sixteen percent of respondents said they ate at a mall QSR at least weekly. Fast-casual restaurants drew the second greatest frequency of visits (see Exhibit 4). Not surprisingly, given the age of the frequent mall visitors, a chi-square analysis found that the frequent QSR visitor group tends to have a lower percentage of married people (61.1% versus 67.4%) and of retirees, while it has a greater percentage of students and stay-at-home parents. In addition, this group of QSR diners tended to be much younger, less educated, and less wealthy than those in other demographic groups.

Long-duration shoppers. Just over one-third of our sample comprised long duration shoppers, those who typically spend more than two hours on a shopping trip. Because these shoppers are most likely to patronize food outlets, we compared this group to the rest of the sample. This group showed significant differences in gender, age, and employment status from shorter duration shoppers. The long duration shopper group included significantly more

they would most prefer for mall food service.[15] In terms of our respondents' shopping behavior, we note that the typical consumer in this sample visits a mall about once a month for a relatively modest shopping expedition, of $100 or less (see Exhibit 2). Moreover, half of the shopping trips last 90 minutes or less, including any stops at a restaurant or food court.

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[15] For a discussion of best-worst choice analysis, see, for example, Michael J. Dixon, Sheryl E. Kimes, and Rohit Verma, "Customer Preferences for Restaurant Technology Innovations," *Cornell Hospitality Report*, Vol. 9, No. 7 (April 2009).

EXHIBIT 3

Food-service configuration preferences

Configuration	Under 25	25-55	55+	Female	Male	Overall
Option 1	0.36	0.26	0.16	0.23	0.26	**0.24**
Option 2	0.12	-0.02	0.01	0.02	-0.01	**0.01**
Option 3	-0.19	-0.10	-0.06	-0.10	-0.09	**-0.09**
Option 4	0.11	0.07	0.03	0.09	0.04	**0.07**
Option 5	-0.40	-0.23	-0.14	-0.25	-0.19	**-0.22**
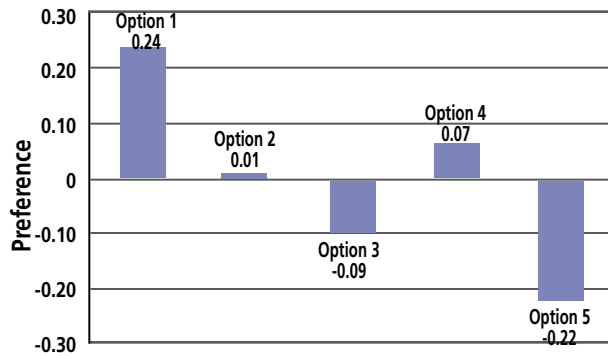
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Option 1	Food court with 8-12 quick service restaurants and a shared seating area PLUS 1-2 casual dining restaurants at major entrances or in the shopping center's parking lot
Option 2	Grouping of 4-6 fast casual and/or casual dining restaurants in one area of the shopping center, each with their own seating area
Option 3	4-6 fast-casual or casual dining restaurants spread throughout the shopping center
Option 4	A small food court of 4-6 quick service restaurants with a shared seating area, and 3-5 fast-casual or full service restaurants located in different areas of the shopping center
Option 5	4-6 casual dining restaurants, located both inside and on mall property, but not attached to the main mall

EXHIBIT 4

Patronage of mall restaurant types (percentage of respondents dining at least weekly)

Type	Under 25	25-55	55+	Female	Male	Overall
Kiosk	21.1%	10.0%	5.5%	11.0%	8.5 %	**9.8%**
QSR	40.4%	30.6%	16.8%	27.7%	27.5%	**27.6%**
Fast Casual	25.7%	16.4%	13.2%	16.8%	16.0%	**16.4%**
Casual	15.8%	12.2%	14.6%	13.1%	13.4%	**13.2%**
Upscale	5.3%	3.3%	4.1%	3.1%	4.3%	**3.7%**
Fine Dining	4.7%	1.8%	1.2%	1.2%	2.6%	**1.9%**

EXHIBIT 5

Cuisine preferences by age and gender

Cuisine	Under 25	25-55	55+	Female	Male	Overall
American	90.6%	85.8%	82.4%	86.3%	84.3%	**85.3%**
Chinese	68.4%	67.1%	56.8%	66.0%	62.5%	**64.3%**
Mexican	69.0%	63.0%	52.1%	62.2%	58.7%	**60.5%**
Italian	63.7%	56.7%	46.0%	56.3%	52.2%	**54.3%**
Seafood	33.9%	32.4%	35.3%	31.2%	35.7%	**33.4%**
Japanese	27.5%	22.0%	15.8%	18.9%	22.8%	**20.8%**
Greek	18.7%	20.2%	13.2%	17.5%	18.7%	**18.1%**
Thai	17.0%	16.7%	9.5%	13.7%	15.7%	**14.7%**
Indian	14.0%	9.6%	4.9%	8.4%	9.0%	**8.7%**
Vegetarian	11.1%	8.3%	6.7%	11.3%	4.7%	**8.1%**
French	13.5%	6.5%	5.1%	6.1%	7.6%	**6.8%**
Fusion/International	12.3%	6.9%	3.7%	6.4%	6.6%	**6.5%**
Middle Eastern	4.1%	7.5%	5.1%	5.9%	7.1%	**6.5%**
Vietnamese	7.0%	6.8%	4.5%	4.6%	7.8%	**6.2%**
Other	0.6%	1.3%	1.4%	0.8%	1.8%	**1.3%**

women (63.0% versus 45.2% overall) and people in the middle of the age distribution. Those in the 65 and older age group were underrepresented in long-duration shoppers. In terms of employment, there were significantly less full-time employees and retirees and more students and stay-at-home parents. This group used kiosks much more frequently than did shorter duration shoppers, but their patronage frequency for other types of restaurants was similar to that of the rest of the sample.

Cuisine Preferences

An overwhelming majority of the respondents (96.3%) chose American, Chinese, or Mexican cuisine as one that they would be likely to purchase, with American as the favorite. The cuisines that rated the lowest were Fusion, Middle Eastern, and Vietnamese (see Exhibit 5).

Brand Preferences

As shown in Exhibit 6, the largest percentage of respondents listed their highest preference for well distributed national brands. We note slightly different preferences between men and women. Olive Garden was selected as a favorite brand by 71.5 percent of women and 59.6 percent of men. Conversely, men gave a higher nod to Burger King (selected by 59.9 percent) than did women (52.5 percent). Older respondents showed a stronger preference for table-service brands

(e.g., Red Lobster and Outback Steakhouse), while the younger respondents prefer casual and QSR brands, such as Burger King, Taco Bell, and KFC.

Segmentation Analysis

We used cluster analysis to group respondents into categories with similar brand and cuisine preferences. We wanted to see whether the respondents who chose similar brands or similar cuisines had similar characteristics and whether those characteristics were substantially different from those who chose other brand or cuisine clusters. We hypothesized that there would be significant differences among those who choose diverse brands or cuisines.[16] Our analysis indicated that five clusters should be created. We ran a discriminant analysis test to determine the validity of using all of the demographic information and configuration preferences to

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[16] We utilized the same methodology for both the brand and cuisine cluster analysis. The clusters were created using a k-means algorithm. To determine the number of clusters to create, we graphed the ratio of within-in-class variance to total variance on a scree plot, calculated using XLStat. Using the plots for guidance, we set the number of groups to the point of the first elbow on the scree plot. Mathematically, we defined this point as the first cluster number where the rate of negative change decreased with one more cluster and increased with two more clusters. This is essentially a point in the graph where there is a flattening out of the line. Therefore, we focused on the point before the line flattened out (the elbow).

EXHIBIT 6

Brand preferences by age and gender

Brand	Under 25	25-55	55+	Female	Male	Total
Olive Garden	70.2%	64.4%	66.9%	71.5%	59.6%	**65.7%**
Wendys	64.3%	64.4%	60.6%	62.6%	64.1%	**63.3%**
Chilis	67.3%	61.2%	56.6%	61.7%	59.2%	**60.5%**
Outback	56.7%	55.9%	59.0%	59.0%	54.6%	**56.9%**
Burger King	63.2%	58.3%	48.9%	52.5%	59.9%	**56.1%**
Applebees	63.2%	54.1%	50.9%	55.2%	53.0%	**54.1%**
Dairy Queen	60.2%	57.3%	41.0%	55.6%	50.2%	**53.0%**
Taco Bell	64.3%	56.4%	41.4%	55.1%	50.6%	**52.9%**
KFC	62.0%	52.6%	50.1%	51.3%	54.4%	**52.8%**
Red Lobster	45.6%	50.1%	56.8%	53.6%	49.4%	**51.6%**

Note: Responses are based on a representative national sample of 1,737. Local preferences may vary.

EXHIBIT 7

Brand cluster demographics (comparison to overall sample)

Brand Cluster	1	2	3	4	5
Size (% Respondents)	31.8%	19.9%	23.7%	13.0%	11.6%
Gender (F/M)	44%/56%*	57%/43%*	51%/49%	58%/42%*	55%/45%
Marital Status (Married/Single)	62%/38%	66%/34%	63%/37%	66%/34%	64%/36%
Employment	5% less full time employees 7% more retirees*	5% more full time	Slightly less retirees, more students, and more stay at home parents*	9% less retirees*	Similar
Age	6% less 35-44 9% more 65+ Older population*	5% less 25-34 6% more 35-44	5% more 20-24 5% more 25-34 5% less 45-54 5% less 65+*	7% more 25-34 6% more 35-44 10% less 65+*	Similar
Education	Similar	7% less "High School Graduates" 8% less "Some College" 12% more "College Degree" 6% more "Post-Graduate Degee"*	5% more "Some College" 6% less "College Degree"	Similar	6% more "Some College" 5% less "College Degree"
Income	Similar	8% less "Under 25k" 6% less "35k-49.9k" 8% more "75k-99.9k"*	Slightly less wealthy	6% less "25-34.9k" Slightly more wealthy at the high end*	9% more "Under 25k" 7% less "75k-99.9k"*

The study found distinct preferences for restaurant brands, cuisines, and food-court configurations among different demographic groups.

segment the respondents into the five clusters, and this test indicated that we could do so. [17]

Each demographic variable was tested for significance in difference using chi-squared analysis. That is, the distribution of a particular demographic within a cluster was compared to the distribution of that attribute for all other clusters. For example, the gender distribution of Brand Cluster 1 was compared to the gender distribution of respondents not in Cluster 1, indicating that Cluster 1 had a substantially larger proportion of men and its representatives were significantly older than those in other clusters. The results of these tests are summarized in Exhibit 7.

Remembering that this is a national sample, this approach of creating brand clusters helps to determine what types of customer demographics will work best for a particular restaurant brand. By extension, we can argue that if a local mall manager has a sense of the demographics of her market area, she could identify potential gaps in the mall's restaurant brand offering.

Brand Cluster 1: As we said, this group comprises significantly more men who are older than people in other clusters. Additionally, employment status is skewed towards retirees. This group does not eat out as often as others. This is evidenced in the table by the fact that their top percentage changes in brand preferences are all negative (that is, low in relation to those of other clusters) and their frequency at all dining outlets is significantly lower than all other categories (except fine dining). Still, this group's favorite brands were all QSRs, including Wendy's, McDonald's, and Burger King.

Brand Cluster 2: This group contains significantly more women, is more educated, and has significantly higher incomes. This group is not significantly different in age distribution, but there is a shift towards middle aged respondents (age 35-44) compared to other clusters. This group tends to avoid the food court and prefers casual and upscale casual restaurants. In addition, this group uses kiosks more frequently than all other groups. While this group selected

fast casual as their favorite preference more than others did, they frequented them less often than did other clusters. Respondents in this cluster favored such restaurants as Olive Garden, Chili's, and Panera.

Brand Cluster 3: This group is slightly younger and has more students and stay-at-home parents than the other clusters. They are slightly less educated and have lower incomes. As might be expected, this group prefers quick-service restaurants more than other clusters and is less favorable to upscale and fine dining concepts. Added to the list of QSRs for this group is Dairy Queen.

Brand Cluster 4: Although this group is mostly similar to cluster 2, it has significantly less retirees and people over 65. There are no differences in terms of education levels and the income distribution is only slightly higher, but only at the high extreme. This group frequents all types of restaurants more often but prefers food courts more often than it goes for casual and upscale restaurants. The eclectic tastes of this group include both Wendy's and Olive Garden, as well as Dairy Queen and Chili's.

Brand Cluster 5: This group is similar to the other clusters in many respects. The only significant differences were that income is slightly lower and quick-service frequency is higher. People in this group are slightly less educated and have smaller incomes than the other clusters. This group also frequents fast casual more than other clusters, including A&W, Panda Express, and Garfield's.

Cuisine Cluster Analysis

The next thing we did was to group respondents in a separate set of clusters based on their preferences from a list of fifteen cuisines. This analysis resulted in seven clusters.[18] We again compared the demographic characteristics from one cluster with the demographics of all other clusters. For example, the gender distribution of Cuisine Cluster A was compared to the gender distribution of respondents not in Cluster A. The results of these tests are summarized in Exhibit 8.

The purpose of creating cuisine clusters was to get an idea of which cuisines should be represented together, according to the demographics of a market. As an example of how this analysis works, here is a summary of three cuisine clusters.

Cuisine Cluster B: Every respondent in this cluster selected seafood, Italian, and Chinese as their top preferences. This cluster is significantly less educated than the others, with a higher percentage of high school graduates. They tend to eat out more than average in all restaurant types. Their least preferred cuisines are Vietnamese and Middle Eastern.

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[17] The Wilks' Lambda from our discriminate analysis was significant at the .05 level, with $p < .0001$, indicating that the demographic and preference information could be effectively used to predict the brand cluster.

[18] The Wilks' Lambda from this analysis was significant at the .05 level, with $p < .0001$.

Exhibit 8

Cuisine cluster demographics (comparison to overall sample)

Cuisine Cluster:	A	B	C	D	E	F	G
Size	21.3%	15.3%	9.6%	13.2%	9.2%	12.7%	18.7%
Gender (F/M)	46%/54%*	53%/47%	54%/36%	50%/50%	47%/53%	52%/47%	57%/43%*
Marital Status (Married/ Single)	64%/36%	64%/36%	63%/37%	66%/34%	61%/39%	67%/33%	61%/39%
Employment	11% more retirees 5% less stay-at-home parents*	Similar	5% less retirees 5% more stay-at-home parents	6% less full-time employees 5% more retirees	16% more full-time employees 9% less retirees*	Similar	7% less retirees
Age	8% less 25-34 7% more 55-64 8% more 65+*	Similar	5% less 25-34 8% more 45-54	Similar	11% more 25-34 6% less 55-64 6% less 65+*	Similar	5% less 55-64 Slightly younger*
Education	Similar	8% more "High School Graduate" 10% less "College Degree"*	Similar	5% more "High School Graduate"	13% less "High School Graduate" 5% more "College Degree" 8% more "Post-graduate degree"*	8% more "College Degree"	6% less "High School Graduate"
Income	Similar	Similar	Similar	6% more "35k-49.9k"	5% less "Under 25k" 5% less "25-34.9k"*	5% less "35-49.9k"	Similar

Cuisine Cluster E: This group is slightly younger than other clusters, with a higher percentage in the 25-to-34 age range. They are also more educated than others. Unlike those in several other clusters, they are interested in ethnic food, with their top choices being Thai, Mexican, and Greek. Over 84 percent of the respondents in this group checked these three cuisines. They are also more favorable to Japanese food than other clusters and less interested in patronizing American cuisine establishments. We can say that this group seems to prefer diversity in their cuisines.

Cuisine Cluster G: This cluster has a significantly larger proportion of females. The age is slightly younger than average and there are 7 percent fewer retirees. They prefer Chinese, Italian, and American, with over 88 percent of the respondents in this cluster selecting all three of those cuisines. Although this group might seem to have much in common with cluster B, none of its respondents selected seafood as a favorite, although they were somewhat more

favorable to Mexican food than some others. Looking ahead to Exhibit 10, this cluster prefers a configuration with a food court and avoids the more expensive casual, upscale casual, and fine dining options.

Cross Tabulation of Cuisine and Brand Clusters

Using the clusters, we cross-tabulated membership of each cluster, as shown in Exhibit 9. The purpose of creating this table is to determine whether people who prefer a certain set of brands also lean toward a particular set of cuisines. Although our statistical tests indicated that this was occurring, in fact the numbers in the table in Exhibit 10 show no such relationship, except for the combination of Brand Cluster 1 and Cuisine Cluster A. In this cell, over 10 percent of the respondents are in both the Brand Cluster 1 and Cuisine Cluster A. Consistent with previous findings, participants in both of these groups tend to be older respondents who do not dine out as frequently.

EXHIBIT 9

Brand and cuisine cluster comparison

	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5	Total
Cuisine A	10.2%	3.5%	4.7%	1.0%	1.8%	21.3%
Cuisine B	2.6%	3.1%	4.3%	3.1%	2.2%	15.3%
Cuisine C	4.3%	1.8%	2.0%	.7%	.8%	9.6%
Cuisine D	4.0%	1.7%	4.4%	1.0%	2.0%	13.2%
Cuisine E	1.8%	2.4%	1.3%	3.1%	.6%	9.2%
Cuisine F	3.9%	3.3%	2.7%	1.4%	1.4%	12.7%
Cuisine G	4.8%	4.1%	4.3%	2.8%	2.7%	18.7%
Total	31.8%	19.9%	23.7%	13.0%	11.6%	100.0%

EXHIBIT 10

Cluster configuration preferences

		Configuration 1	Configuration 2	Configuration 3	Configuration 4	Configuration 5
Brand Cluster	1	—	—	—	8% less	—
	2*	17% less	—	5% more	—	5% more
	3*	8% more	—	—	—	—
	4*	5% more	—	7% less	9% more	—
	5	—	—	—	—	—
Cuisine Cluster	A	—	—	—	6% less	—
	B	6% less	—	—	—	—
	C	9% more	—	—	—	—
	D	8% more	—	—	—	—
	E	—	—	—	—	—
	F*	9% less	—	—	9% more	—
	G	5% more	—	—	—	—

Notes: Configuration 1: Food court with 8-12 quick service restaurants and a shared seating area PLUS 1-2 casual dining restaurants at major entrances or in the shopping center's parking lot. Configuration 2: Grouping of 4-6 fast casual and/or casual dining restaurants in one area of the shopping center, each with their own seating area. Configuration 3: 4-6 fast-casual or casual dining restaurants spread throughout the shopping center. Configuration 4: A small food court of 4-6 quick service restaurants with a shared seating area, and 3-5 fast-casual or full service restaurants located in different areas of the shopping center. Configuration 5: 4-6 casual dining restaurants, located both inside and on mall property, but not attached to the main mall.*Pearson Chi-squared = .000

Configuration Preferences

Returning to our main question of preferences for how a mall's food service should be presented, Exhibit 10 compares the most preferred configuration distributions for each brand and cuisine cluster. All differences greater than 5 percent between the cluster preference and overall preference are noted, and we have starred the significant differences, notably, Brand Clusters, 2, 3, and 4, and Cuisine Cluster F.

For example, let's return to Brand Cluster 2, the one containing a higher proportion of women with high incomes who prefer casual restaurants. Given their distinctive brand tastes, it should not be a surprise that they also have a significantly different distribution of preferences from those of the other groups. In keeping with their preference for table-service concepts, they were significantly less likely to select Configuration 1 (dominated by a food court) as

Exhibit 11

Cluster type preferences (in comparison to average respondents)

		Kiosk Frequency	QSR Frequency	Fast Casual Frequency	Casual Frequency	Upscale Casual Frequency	Fine Dining Frequency
Brand Cluster	1	-	-	-	-	-	+
	2	+	-		+	+	+
	3		+			-	-
	4	+	+	+	+		
	5		+				
Cuisine Cluster	A	-	-	-	-	-	
	B	+	+	+	+	+	+
	C						
	D		+				
	E	+		+	+	+	+
	F	-					
	G						

their most preferred option. This tendency is diametrically opposed to Brand Cluster 3, for instance, which is filled with relatively young people who prefer QSR concepts. They were significantly more likely to elect Configuration 1 as their top choice. With the largest percentage of married couples and college graduates, the demographics of Cuisine Cluster F seem to point toward their preference for a configuration (number 4) that allows more availability of table-service restaurants, while not entirely abandoning a food-court concept. This is the cluster that preferred Italian restaurants more than any other group.

Type Preferences

This issue of preference for restaurant type can be addressed more directly, as shown in Exhibit 11. This analysis compares the frequency of patronage by type of outlet according to brand clusters and cuisine clusters. The differences are indicated by either a plus sign or minus sign, depending on whether the frequency for a particular combination of cluster and type is significantly different from the average respondent. If the cell is empty, there is no significant difference in either direction. This occurs for Cuisine Cluster C in all cases. On the other hand, Brand Cluster 1, which leans toward men and retirees, frequents fine dining restaurants significantly more than those in the other clusters. We also see that Brand Cluster 2 leans away from QSRs and toward

table-service concepts (although they also grab food at kiosks). In the case of Cuisine Cluster C, which has essentially the same distribution of frequency preferences as the average respondent, as evidenced by the lack of "+" and "-" marks in that row.

Brand Preferences by Cluster

Exhibit 12 shows the top and bottom brand preferences for brand clusters and Exhibit 13 shows the same for cuisine clusters. Because this is a national sample, it stands to reason that well-known national brands are mentioned most often. Once again, we must note that the mall market is local (or regional), just like the restaurant market. Thus, both national brands and local or regional brands undoubtedly have a place in each mall's food-service mix. Partly to account for the influence of national brands on this listing we also looked at the largest percentage differences from the overall average for each brand cluster. Looking again at Brand Cluster 2, for instance, not only are there five casual-dining chains on the top of their list, but two additional chains (Ruby Tuesday and Cheesecakes) are substantially stronger among this group than for the sample as a whole. Likewise, we see the diverse tastes of Brand Cluster 4, which cited Johnny Rockets, Baja Fresh, and Fuddruckers (among others) far more often than the sample as a whole.

EXHIBIT 12

Brand preferences by brand cluster

Brand Cluster	1	2	3	4	5
Top 5 brands in this category	Wendy's: 49% Burger King: 46% Taco Bell: 38% McDonald,s: 36% KFC: 35%	Olive Garden: 80% Chili's: 74% Outback: 72% Macaroni Grill: 68% Panera Bread: 63%	Wendy's: 89% McDonald's: 86% Burger King: 84% Dairy Queen: 78% KFC: 77%	Wendy's: 91% Olive Garden: 89% Dairy Queen: 85% Outback: 84% Chili's: 83%	Wendy's: 84% A & W: 82% Olive Garden: 81% Panda Express: 81% Garfield's: 81%
Bottom 5 Brands	Ivars: 2% Cozzolis: 1% Flemings: 1% Currito: 1% Hovan: 1%	Arctic Circle: 5% Beard Papa: 3% Gold Star: 3% Hovan: 3% Edo Japan: 2%	2%: Braxton Seafood 2%: Brio 1%: Kona Grill 1%: Edo Japan 0%: Hovan	Beard Papa: 19% Genki Sushi: 19% Hovan: 15% Ivars: 14% Edo Japan: 12%	Cheesecake Factory: 2% LLHawaiian: 2% Benihana: 1% Currito: 0% Hovan: 0%
Top 5% Changes*	-2%: EdoJapan -4%: Hovan -4%: GenkiSushi -5%: GoldStar -5%: Ivars	+30%: Macaroni Grill +27%: Panera Bread +20%: Ruby Tuesday +19%: Outback +18%: Cheesecake	+52%: McDonald's +44%: Sonic +36%: Burger King +34%: Wendy's +33%: Dairy Queen	+55%: Johnny Rockets +50%: Baja Fresh +47%: Haagen Daaz +47%: Fuddruckers +47%: Ben & Jerry	+57%: Cosimos +53%: Garfield's +45%: A & W +40%: Dunkin Donuts +37%: Panda Express
Bottom 5% Changes*	-37%:TGIFriday -45%:Chili's -46%:Macaroni Grill -46%: Olive Garden -47%: Outback	-34%: McDonald's -37%: Dairy Queen -40%: KFC -46%: Wendy's -48%: Burger King	-11%: Sarku Japan -11%: Hooters -12%: Baja Fresh -20%: Cosimos -22%: Garfield's	+14%: Applebee's +14%: Hovan +12%: Genki Sushi +11%: Ivars +10%: Edo Japan	-29%: Ruby Tuesday -31%: Cheesecake Factory -34%: ChickFilAFillet -36%: Sonic -39%: McDonald's

*Note: Given that the large brands tend to dominate the "Top Brands" list we also looked at the largest percentage movers from the overall average. For example, say that Brand A was selected by only 5 percent of overall customers (and thus did not show up on the "Top Brands" list). If Brand A was selected by 15 percent of the specific cluster respondents, this difference (10 percentage points above the overall average) may be one of the largest movers among the brands and would be noted in this portion of the table.

EXHIBIT 13

Brand preferences by cuisine cluster

Cuisine Cluster:	A	B	C	D	E	F	G
Top/Bottom 3 cuisines in this category	1)American: 84% 2) Mexican: 34% 3)Seafood: 19% 13)Vietnamese: 1% 14)Chinese: 0% 15)Italian: 0%	1)Seafood: 100% 2)Italian: 100% 3)Chinese: 100% 13)Vietnamese: 3% 14)Other: 1% 15)Middle Eastern: 0%	1)Chinese: 100% 2)American: 75% 3)Seafood: 20% 13)Other: 1% 14)Italian: 0% 15)Mexican: 0%	1)Chinese: 100% 2)Mexican: 100% 3)American: 84% 13)Fusion/Mid East/Viet.: 2% 14)Italian: 0% 15)Other: 0%	1)Thai: 86% 2)Mexican: 86% 3)Chinese: 84% 13)Vegetarian: 35% 14)French: 32% 15)Other: 3%	1)Italian: 100% 2)American: 86% 3)Mexican: 55% 13)Other: 0% 14)Vietnamese: 0% 15)Chinese: 0%	1)Chinese: 100% 2)Italian: 100% 3)American: 88% 13)Fusion/Vietnamese: 2% 14)Other: 1% 15)Seafood: 0%
Largest Positive/ Negative Differences from other categories	+1%: Other -2%:American -5%:French -34%:Mexican -69%: Italian -82%: Chinese	+79%:Seafood +54%: Italian +40%: Chinese -5%: Thai -7%: Indian -8%: Middle Eastern	+39%:Chinese +0%:Thai +0%:Vietnamese -15%:Seafood -60%:Italian -67%:Mexican	+45%: Mexican +41%:Chinese +0%: Seafood -7%: Japanese -10%: Greek -63%:Italian	+79%: Thai +66%: Japanese +62%: Greek +22%:Chinese +1%: Other -8%: American	+52%: Italian +1%: American +1%: French -12%: Seafood -13%: Japanese -74%: Chinese	+56%: Italian +44%: Chinese +12%: Mexican -8%: Indian -10%: Thai -41%: Seafood

Managerial Implications and Conclusions

Although this study was necessarily conducted at the national level, these findings provide perspective as mall managers consider which types of food outlets to integrate into their shopping center—especially as they develop new mall configurations in the midst of recession. We have shown that consumers not only have specific likes and dislikes in terms of how food-service concepts are configured, but there are clusters of opinion about how to arrange mall food service according to types of restaurants, cuisines, and brands.

Our hope for this report is that by demonstrating how the demographics of a shopping center's customer base influence food-service preferences, managers can then decide how to allocate food outlet space and which concepts to offer. Using relatively simple market research, a mall operator could determine the demographics of mall users and then compare those customer demographics to the brand clusters discussed here (or create new ones).

Once again, we acknowledge that the mall market is regional at best, and so this report is meant to serve as a guide. Although our specific results are valid nationally, they must be considered carefully for local managerial implications. By examining the current mix of food outlets in a shopping center, a manager should be able to quickly identify any significant discrepancies between the mix of food outlet offerings and what the respondents to our survey preferred. This would form a starting point for further research on the local market's preferences.

Although our study did not expressly investigate customer satisfaction, we think that shopping center operators should consider the effects of food-outlet configurations on their customers' satisfaction. To that end, further research could examine the role that food outlets play in the shopping experience. As shopping centers reconfigure and reconceive themselves in the face of recession and the secular trend of internet retailing, they will once again need to find the combination of stores, restaurants, and other services that make for a compelling shopping experience—one that cannot be replicated elsewhere. Based on this study, we believe that the arrangement and selection of food outlets is an integral part of this process of mall reinvention. ■

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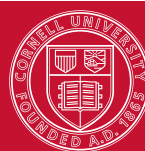
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