

AGE AND GENERATIONAL COHORT EFFECTS IN STORE ASSESSMENTS AND CHOICE: A CASE STUDY

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Recently, researchers have included characteristics such as consumer preference and attitude in their discrete choice considerations and equations to better understand and predict brand purchase. While past studies have shown characteristic effects in category purchase, this study suggests that a generational cohort of consumers may play a part in a specific store brand choice decision.

In some cases, as in this study, their effect may not be seen to be in parallel with age effects, and may be, more properly, a representation of emotion, as part of attitude. As such, cohort effects should also be considered at least for the discrete store services choice framework.

INTRODUCTION

Frameworks for consumer choice have been presented in several different theories (Mowen 1988; Bettman, Johnson and Payne 1991; Plous 1993; Bettman, Luce and Payne 1998; Degeratu, Rangaswamy and Wu, 2001). With a goal of choice prediction, these theories attempt to represent an individual's information integration process regarding the choice alternatives "when making the choice of a single preferred option" (Meyer and Kahn 1991, p. 86).

Recently, some scholars have suggested that certain latent variables which have not been included, such as consumer product perceptions and attitudes, should be considered (Zaltman 1997; Wolfe 1998; Ashok, Dillon and Yuan 2002; Ben-Akiva et al. 2002). The researchers argue that the latent variables, also termed external and internal influences or characteristics, quantified for inclusion by psychometric data, may affect product choice and in turn purchase prediction. Based on their studies, the researchers posit that a full information framework or model is better than those currently used for choice explanation and

prediction. Combining product attributes with characteristics in the choice mix "leads to a more behaviorally realistic representation of the choice process, and consequently, better explanatory power" (Ben-Akiva et al. 2002, p. 431). As a result, some scholars have begun to reevaluate their understanding and methods of prediction of consumer purchase choice (Chen, Wong and Lee 2001; Louviere 2001; Ashok, Dillon and Yuan 2002; Ben-Akiva et al. 2002. See also Verma, Iqbal and Plaschka 2004).

To date, only consumer perceptions and attitudes have been suggested for inclusion with product attributes (Ashok et al. 2002; Ben-Akiva et al. 2002). This paper supports the consideration of attitude in purchase choice as proposed by others (Ashok et al. 2002; Ben-Akiva et al. 2002). It suggests also that choice theories should go beyond inclusion of the characteristics of perceptions and attitude. In some cases, such as with store brands that are a mix of merchandise and services, the theories should include consumers' generational membership or cohort to more completely define and predict purchase choice of a specific store brand, specifically where attitude assessments have addressed the central merits of the brand rather than through the peripheral route (Petty and Cacioppo 1981).

In addition, the generational cohort effect may suggest an emotional connection to store brand

choice, separate from the age effect. The connection appears to be a representation for the consumptive emotions associated with each brand in attitude as suggested by Richins (1997) and Bagozzi and Dholakia (1999). Where attitudinal responses suggest age and generational cohort differences, it may be important to consider such differences in store choice.

Expansion of the Purchase Choice Framework

The need to expand the product purchase choice framework with the age variable has already been suggested by others (Rentz et al. 1983; Rust and Yueng 1995). Unfortunately, there has been little additional work presented in the literature in support of such a move, especially when considering store choice in regard to the bundle of services provided. As such, the purpose of this paper is to attempt to support and extend the research of others (Rentz et al. 1983; Rust and Yueng 1995) and to support the age inclusion. The research for this paper also suggests the need to include the generational cohort variable. This is not as an extension of age but as a characteristic in its own right, and also as a possible extension and representation of emotion in attitude. In so doing, it is believed that marketer prediction of ongoing supermarket brand choice will be improved. As a basis for the support, a cross-sectional consumer study was conducted assessing consumers' ongoing choice of grocery stores in a local region. Purchase choice is measured over intent, since consumers may change their intent once presented with the actual purchase decision at the point of sale (Fazio et al. 1989; von Freymann 2002).

In this context, various forms of grocery store services were studied with results not supporting the inclusion of age in the choice equation in this instance. This is not to assume that age should not be considered in other situations. However, new information is added to the literature with suggested inclusion of generational cohort data in the choice

framework. This new data was derived using an application of a modified version of SERVQUAL for retail stores which measures service quality in a retail store setting (Dabholkar, Thorpe and Rentz 1996). Respondents' store brands chosen for ongoing shopping were also noted and used in the analysis.

LITERATURE REVIEW

Age and Generational Cohort Effects Defined

Practitioners have long argued that consumers' age and generational membership may affect purchase choice (Neuborne 1999; Gardyn and Fetto 2000; Gunderson 2001; Paul 2001; Tsui 2001; Patton 2002). However, little appears to exist in the literature on these characteristics' links to brand choice. For clarification, attributes are tangible or intangible features of an object like a product (as a good and/or service). Product attributes are identified and used separately or in combination by consumers in the choice consideration process (Bettman et al. 1991. See also, Fishbein and Ajzen 1975; Fishbein 1980; Hirschman 1980; Ajzen 1988).

Choice characteristics, on the other hand, are not product-specific attributes and would typically encompass such internal variables as perceptions, attitudes and personality traits and such external variables as demographics which include consumers' ages (Hoch, Kim, Montgomery and Rossi 1995; Brinkley and Conner 1998. See also Howard and Sheth 1967). Generational membership, or more specifically a generational cohort (Strauss and Howe 1991), would also be considered a characteristic in this context as it is not an attribute of a product. Where characteristics appear to be part of goal-setting and goal-striving behavior, they may also act as constants or necessary additions to consumptive choice prediction (Bagozzi and Dholakia 1999). As such, characteristics might affect task difficulty assessments and final brand judgments (Louviere and Meyer 1981;

Louviere and Gaeth 1987; Bettman et al. 1991; Meyer and Kahn 1991).

Understanding steps in the choice process such as behavioral intent are also important. However, the focus for understanding and predicting purchase choice should not be on intent, as it may or may not convert into actual purchase of an object (Ajzen 1988, 1991; Fazio, Powell and Williams 1989; Bagozzi and Warshaw 1990. See also, Fishbein and Ajzen 1975). It has been suggested that the more appropriate focus is purchase choice (Fazio et al. 1989). Without actual purchase, all other considerations of products may need to be reassessed as unrealized intentions due to heuristics or some other intervention. For example, this may be seen in consumer intentions to purchase a particular branded grocery item based on past performance, only to be swayed at the point of purchase by price promotions, shelf placement, packaging, or other promotional inducements.

In a study of price-directed grocery shoppers, store location was the first step in brand choice. However, a product's internal price focus became only one of multiple references available to consumers once they were at the point of purchase to make their final brand choice (von Freymann 2002). In addition, in this context of purchase choice, some posit that attitude is a critical component to the actual purchase, while others see it as a step removed in intent (Fazio et al. 1989. See also Howard and Sheth 1967; Ajzen and Fishbein 1980; Fishbein 1988). Some suggest that attitude internally accessed or formed during intent may be brought forward into the choice process, exerting an effect on purchase (Fishbein 1967; Fishbein and Ajzen 1975). For example, consumers bring their attitude of an object to the decision process, such as their attitude of the store where they will grocery shop (Petty, Unnava and Strathman 1991). In cases of an actual purchase choice, such as at what store will they purchase their groceries each week, consumers will choose either directly based on their attitudes of the prime attributes or central

merits of the object (in this case, a store with a mix of merchandise and services). They may also choose indirectly based on some peripheral route without using the central merits (Petty and Cacioppo 1981; Petty et al. 1991).

Aside from attitude's cognitive and conative associations with a product, the affective association of likeability of the product may be the first and most basic choice consideration. "'Attitude' can be conceptualized as an *evaluative judgment*, and *affect* could be reserved for a *valenced feeling state*" [where] "attitude is operationalized via bipolar scales, such as like-dislike" (Cohen and Areni 1991, p. 190). While likeability may carry an affective emotional tag resulting from a brand's attributes, it may also be the result of feelings based on positioning or other conditioning characteristics (Shimp 1991). In either case, likeability would be considered a part of the emotions or feelings of the affect system in attitude and also a part of the decision process (Zajonc 1980; Zajonc and Markus 1985; Pieters and Van Raaij 1988; Damasio 1994; Petty, Wegener and Fabriger 1997). Other studies suggest a connection between emotions and product attributes and advertising (Batra and Ray 1986; Batra and Holbrook 1990).

Purchase choice

Consumers' age and cohort effects may have an influence on category purchases; and in some cases, the influence may be in opposite directions, suggesting a separation of age and cohort analysis (Rentz, Reynolds and Stout 1983). These characteristic effects have been noted in category purchases of coffee, soft drinks, and insurance products (Rentz et al. 1983; Rentz and Reynolds 1991; Rindfleisch 1994; Chen et al. 2001). In addition, generational cohort-group effects were noted in savings plan participation and other financial product selection, along with purchases in certain food categories, such as ethnic and fast foods (Meredith and Schewe 1994). However, it has not been determined if age and cohort effects directly influence discrete choice of a

brand. To date, such findings appear to be primarily practitioner-based and anecdotal (Meredith, Schewe and Karlovich 2002).

By definition, age effects are represented in those individual behaviors arising from and/or influenced by aging and the particular phase of life in which a person finds oneself (Glenn 1983). A cohort is a group of individuals who experience the same event within a certain interval of time; typically individuals are combined when they are in the same birth year (Ryder 1965). The generational cohort, however, is different from the typical cohort in that the generational cohort members are connected by some limited span of consecutive birth years, typically 17-23 years in length and defined by the members' central social roles. The most critical of these social roles are in a phase, as seen in all societies as the "discrete coming-of-age moment (or 'rite of passage')"

 (Strauss and Howe 1991, p. 61).

By extension to product choice, could these effects influence the selection of a brand, especially one that represents a bundle of services, such as a retail store? For example, in ongoing grocery store choice, it has long been assumed that its choice assessments are typically based on three prime components: location, price, and services. After consumers make their noncompensatory decision on distance location, researchers and practitioners have suggested that the modern food market is a branded product where purchase choice depends on a value equation of a store's pricing format coupled with its individual bundle of services. (Arnould, Oum and Tigert 1983; Louviere and Gaeth 1987; Bell, Ho and Tang 1998; Sirohi, McLaughlin and Witrink 1998). In a grocery chain, the bundle of services are part of the store as product, and they may constitute the chain's distinctive competence as with Publix's and Harris Teeter's original move to combine their food preparation with a more open retail floor plan where the roof is lifted to the second story level with added bright lighting and colors.

Support for Age and Cohort Effects

Human age as in other living things is a "temporal location" (Ryder 1965, p. 847), a general and changing measure linking the continuous points of one's life from birth to death. Age is also a measurement point and range definition for a cohort. In a cohort, there is a structure similar to a social class but more conceptually close to an ethnic group, where "membership is determined at birth, and often has considerable capacity to explain variance, but need not imply that the category is an organized group" (Ryder 1965, p.847). Each cohort will be unique, with its makeup and personality formed in part by its point of origin and place in history.

Temporal differentiation has been suggested to show the need to expand the cohort concept beyond a birth fixation to include members exposed to any significant and lasting event within the cohort's life history. Once so defined, the expanded cohort presents itself as a major element in the study of human socialization outside the familial unit, which has little influence on the cohort as a whole (Glen 1983; Rindfleisch 1994; See also Ryder 1965).

Generational Cohorts

Based on a review of United States history over the past 300 hundred years by Strauss and Howe (1991), they posit that a generational cohort is formed as a special cohort segment, whose age length covers a phase of life. The most critical phase may be the coming-of-age, which is the passage from the dependence of youth to the emerging active independence of young adulthood. For each generational cohort, this passage is different, due to its common age point and place in history and the apparent attending negative events that combine to form its different and lasting peer personality. The peer personality of passage is an emotion-based attitude formed from common beliefs and behaviors concerning sex roles, family life, work and play, money, politics, institutions,

religion, lifestyles, and their society's future. As a result, the effects of the generational cohort are separated from age effects by the group's peculiar personality and its personality, along with its common age length that sets its boundaries (Strauss and Howe 1991; Meredith and Schewe 1994; See also Ryder 1965; Glen 1983; Rindfleisch 1994).

Various demographers and other social scientists have attempted to fix all-inclusive identifiers to each generation. Such a step can be important to brand marketers, especially in communications and product matching for ongoing loyalty. However, some identifiers have already been proven incorrect, such as Gen Xers as being slackers and Gen Yers as their extension. What appears to be more likely is that Gen Xers are mostly doubters. They are distrustful of everyone except their own generation, due to the downsizing and latch-key stressors during their coming-of-age. Gen Yers are multi-taskers who have learned to question their environment and the marketers who try to sell them something, in part due to their overexposure to television and its pitches. They have questioned whether their parents' brands are for them. This is in opposition to Baby Boomers who, for reasons of convenience, brand experience, and quality association have adopted a more trusting attitude toward certain branded goods and services (Freeman 1994; Ritchie 1995; Zill and Robinson 1995; Daboval 1998; Cheng 1999; Burkart 2000; Gallanis 2000; Kestenbaum 2001; La Ferla 2002).

Grocery Retailing

In the retail grocery store environment, each facility typically presents itself in one of four basic pricing formats; namely, HILO (Higher average store-wide prices than other formats but low weekly advertised prices), EDLP (Every Day Low Price), discount, and warehouse. There are also emerging versions of HILO, such as healthfood stores like Whole Foods and Earth Fare and specialty stores like Fresh Market. While many consumers claim to

be price conscious, some are unwilling to choose their store strictly based on price (Densmore and Kaufman 1988; Hoch, Dreze and Purk 1994). Studies have indicated that there can be significant price differences between formats. Such total basket differences can be as much as 30 percent between HILO and the discount and warehouse formats. Regardless, some HILO-format shoppers will not change their store shopped because of the services mix offered. However, if some of these consumers perceive that pricing have increased at their store by 5 percent or more, ongoing store brand loyalty may be altered (Hoch et al. 1994; von Freymann 2002).

Each store usually draws customers from within a two-to-five-mile radius, but some can travel from more than 10 miles away (Woodside and Trappey 2001; See also Huff 1964). Entering this environment, consumers typically represent themselves as one of seven different shopper types; namely, price, convenience, quality, value, service, store, or combination shopper (Saporito 1995; von Freymann 2002). Once location and price are confirmed, numbers and forms of services and their levels of quality complete the deciding factors in the store choice equation (Sirohi et al. 1998). In ongoing store choice, these three major components (location, price, and services) combine to effect consumer decision-making for each succeeding visit. As a result, consumers then see each emergent store location as a tradeoff between its grocery pricing and its grocery services bundle and the quality of the services in the bundle. The bundle of services can reach as many as 50 or more items, but the list can be actually factored down to just a few items (Louviere and Gaeth 1987; Finn and Louviere 1990; Sirohi et al. 1998). Unfortunately, such factoring eliminates subsets of the services that consumers may want and practitioners may feel they need for their marketing focus. Factors such as freshness and cleanliness do not appear in unaided recall, but these factors score higher than other services when presented (von Freymann 2002).

SERVQUAL

The bundle of grocery store services which includes store services and the merchandise offered has many different subsets. While some measurement instruments may cover the existence of the services or lack thereof, attitude assessment of the quality of the services is covered by SERVQUAL (Parasuraman, Zeithaml and Berry 1988). Given this consideration, a modified version of SERVQUAL (Dabholkar et al. 1996), which was developed for retail stores, was applied for grocery stores. This version appears to be more appropriate for the assessment, as it incorporates an expanded 28-question instrument covering previously excluded areas. It is hereafter called a modified version of SERVQUAL (Dabholkar et al. 1996) and it has been developed and tested to more appropriately measure retail store services quality. In addition, it brings added reliability and validity, especially for the store choice construct (Dabholkar et al. 1996; Bell et al. 1998).

Emotion in Attitude

Attitude is comprised of three parts: the cognitive, the affective, and the behavioral. As a component of the buyer behavior process, attitude brings together a consumer's internal evaluation of a brand, effecting purchase intent and purchase choice (Howard and Sheth 1967). It is "a learned predisposition to respond . . . [for] the way we think, feel, and act toward some aspect of our environment such as a retail store, television program, or product" (Hawkins, Best and Coney 2001, p. 394).

Emotion is part of the affective system in attitude; and as such, an integral part of the buyer behavior process. Emotion may come from a conscious response to an event or thought and be physiologically connected and physically expressed, with specific responses to the emotion (Bagozzi, Gopinath and Nyer 1999). More specifically, consumptive

emotions can be separated into positive or negative experiences, such as the general joy of a shopping trip or the specific sadness or frustration of not finding certain wanted attributes in a favored brand. Each on its own and together can affect the brand choice (Luce, Bettman and Payne 2001). Fifteen separate general or specific consumptive emotional outcomes are listed by Richins (1997) with the positives as joy, hope, relief, pride, liking, and surprise; and the negatives as fear, sadness, distress, frustration, dislike, anger, shame, guilt, and regret.

Recent research shows that emotions become part of the nervous system, resident in the amygdala, which acts as the brain's central processors, tagging all cognitive functions surrounding each stimulus and the body's response. In consumption, emotional tags are affixed to tangible and intangible brand attributes and are manifest in a buyer's attitude at the time of purchase to affect the buy or no buy decision (Damasio 1994; LeDoux 1995; Bagozzi et al. 1999). Such emotional tagging may transfer from major negative life events and associate with each individual in a generational cohort and his or her purchase attitude toward goods and services.

Considering this literature review, questions remain as to the nature and conduct of the generational cohort group, especially in terms of its impact on product quality assessments and specific brand choice, as opposed to age and period effects. As a result, a consumer survey is suggested in an attempt to gain more insight on the possible influence and impact of the generational cohort group in store brand choice.

METHODOLOGY

Harris Teeter, Inc., working with a local university, commissioned the study to determine what, if any, impact could be seen in ongoing store selection based on age and/or cohort effects. While it might be difficult to completely control for location in the study

area, metropolitan area data indicated that there were 230 supermarkets and 10 wholesale clubs in the proposed area of Charlotte, North Carolina metropolitan area (MA), which includes much of Mecklenburg County (Market Scope 2004). Major grocery chains in the area included BILO, Harris Teeter, Food Lion, Winn-Dixie; some more upscale markets such as Fresh Market; and Wal-Mart Supercenters. In a previous study, consumers indicated that they would be willing to travel in some cases up to 10-12 miles from home or work to grocery shop (von Freymann 2002). Using these figures and checking a map of Mecklenburg County, it appeared that most shoppers had access within the acceptable mileage to all the grocery markets in the area. Given this access, a consumer telephone survey was deemed the most appropriate method for a purely random sample of grocery shoppers in the studied area.

With out-of-pocket expenses funded by Harris Teeter, students at the local university were recruited to substantially reduce data collection costs, and they collected the data under the supervision of the lead investigator. In addition to class completion requirements as an actual problem, the students received token special inducements and pre-paid telephone cards. While telephone-screening banks were not available, the students received in-class training similar to professional interviewers. To help allay possible questions about reliability and validity, a modified version of SERVQUAL (Dabholkar et al. 1996) was used in the study.

Study Specifics

Given its reliability and validity, the modified version of SERVQUAL (Dabholkar et al. 1996) questions were used as the primary tool to operationalize the study. In addition to the 28 services quality questions, the five major retail services quality dimensions of physical aspects, reliability, personal interaction, problem solving, and policy were also assessed. Questions dealing with generational cohort emotions were developed based on the

literature review and added in a similar format. Consumers supplied their age and indicated via unaided recall the store at which they regularly shopped for most of their groceries. All scaled responses were noted on a 0-11 scale, as suggested by Finn and Kayande (1997).

For this study, a computer-generated random telephone list was not available for use. In its place, a paper random generator was produced based on all the exchanges available in the Charlotte, NC MA. The generator covered all listed, unlisted, and cell phone subscribers. Unfortunately, it also included all businesses, fax machines, out-of-service numbers, and other non-consumer linked equipment. As a result, in the pre-test phase, the interviewers experienced an extremely high rate of refusals, disconnects, and inappropriate numbers called (one completed survey for forty attempts). Due to time constraints, the process was replaced by simple random selection from the area white pages. Even with this process, the completion rate was one survey for twenty attempts. The overall response rate from the alternate process was 4.97 percent or 290 usable surveys for 5,840 calls.

Respondents had to agree to give their age before participating. Interviewers noted the respondent's age and then placed each within a generational cohort and a decade cohort defined at the end of the survey. Demographers traditionally use a phase of life of 20-22 years to define a generation (Meredith and Schewe 1994). However, Strauss and Howe (1991) enhanced the definition within the context of historical and social change over the past 300 years. Their seminal work also uses the phase of life but makes adjustments based on periodic social upheaval from their historic review. Due to its depth and reference by others in the literature (Rindfleisch 1994; Meredith et al. 2002), the work of Strauss and Howe (1991) was used to further refine the generational cohorts. As such, the generational ages ranged from 17-23 years versus the traditional 20-22 and are named as indicated. The primary shopper cohorts were defined as 21 years or

younger (Generation Y, born in 1981 or beyond); 22-40, (Generation X, born between 1962-1980); 41-59, (Baby Boomer Generation 1943-1961); 60-77, (Silent Generation 1925-1942); and 78-101, (GI Generation 1901-1924) (Strauss and Howe 1991) .

To secure participants, altruism was used as a form of incentive (participation will help the interviewer complete his or her college project). This was in place of a monetary incentive, as it has been found that some form of incentive is needed where potential product pricing influences may affect recall. Minimal or small response tasks and question alternatives such as “no opinion” or “don’t know” were also used in the design to improve accuracy as suggested (Estelami and Lehmann 2001).

HYPOTHESES

There are differing opinions as to what constitutes the generational cohort, especially in the group inclusion dates (Gardyn and Fetto 2000; Paul 2001; Tsui 2001). In this study, generational cohorts were formed based on the efforts of Strauss and Howe (1991). The respondent’s specific age was recorded as a condition for participating. Based on the age given, interviewers assigned each respondent to a generational cohort and decade group as suggested by Strauss and Howe (1991). A number of null hypotheses are presented, given that the primary objectives of study were to assess the relationship of age effects and generational cohort effects in consumer quality assessments of retail services and store brand choice. Ultimately, the significance of the age effects and the significance of the generational cohort effects in purchase choice are suggested over purchase intent.

H₀₁: There is no significant difference between grocery shoppers’ attitude assessments of the stores’ services quality in relation to the stores chosen.

H₀₂: There is no significant association between grocery shoppers’ age and their grocery store services quality assessments.

H₀₃: There is no significant association between the grocery shoppers’ age and the grocery store chosen.

H₀₄: There is no significant difference between grocery shoppers’ generational cohorts in 17-23 year segments in relation to their grocery store services quality assessments.

H₀₅: There is no significant association between the grocery shoppers’ generational cohorts in 17-23 year segments and the grocery store chosen.

H₀₆: There is no significant difference between the peer personalities of grocery shoppers’ generational cohorts in 17-23 year segments in relation to their grocery store service quality assessments.

H₀₇: There is no significant difference between generational cohorts in decade segments in relation to their grocery store services quality assessments.

RESULTS

The significance of attitude and store choice was measured to determine the importance of the relationships. This was accomplished by using the consumers’ grocery store services quality attitude assessments as developed in a modified version of SERVQUAL (Dabholkar et al. 1996) survey. The survey also collected unaided store selection responses. Age and generational cohort groupings were also noted. To calculate a total attitude measure, the assessments of each of 290 respondents were summed via Excel formula, yielding a total value for each respondent for grocery store services quality. In addition, a value was summed for each of the five major dimensions: physical aspects, reliability, personal interaction, problem solving, and store policy. The 28 perception items used to provide these values were included in the analysis. All respondents’ emotion response, age, cohort and decade group, and store regularly shopped, home values, and zipcode location were also available. Calculations were performed by SPSS, V.13.

Consumer attitudes regarding product attributes are important to measure as they can affect purchase intent and choice (Cohen and Areni 1991; Meyer and Kahn 1991; Bagozzi and Dholakia 1999. See also Achenbaum 1970; Wilkie and Pessemier 1973; Fishbein and Ajzen 1975). However, attitudes grouped by characteristics such as age and the generational cohort can be equally important for their potential effect on purchase choice (Rentz et al. 1983; Rentz and Reynolds 1991; Rindfleisch 1994; Rust and Yeung 1995). As such, purchase intent and choice were measured through the significance of the age and generational cohort relationships to total services quality and the store brand chosen (specifically, Harris Teeter, Wal-Mart Super Center, BILO, Winn Dixie, and Food Lion). The effects of the generational cohorts' peer personalities on the services assessments and store brand selection were also measured.

Attitude Assessments and Store Chosen

ANOVA (analysis of variance) of the summed modified version of SERVQUAL (Dabholkar et al. 1996) and of each of the five major dimensions of service quality was assessed in connection with the stores chosen. Significance ($p \leq 0.05$) was indicated in the summed representation and in three of the five dimensions (Table 1). As a result, H_{01} is rejected.

Age Effects

Regression analysis indicated that a significant relationship does appear to exist between shoppers' ages and perceived grocery store services quality attitude assessments. However, R^2 indicates variability within groups, suggesting a possible weakness to the relationship. Therefore, H_{02} is accepted (Table 2). This acceptance appears to be consistent with H_{03} .

Discriminant analysis was used to determine the significance between grocery store brand chosen and the shoppers' ages. Results indicated that a significant relationship did not exist; and therefore, H_{03} is accepted (Table 3).

Some groups had far fewer participants than others (which are representative of the Charlotte MA and primary shoppers). As a result, discriminant analysis was conducted again with fewer cohort groupings as suggested by George and Mallory (2001). In this case, the Gen X and Baby Boomer groups were used and the four major store alternatives of Harris Teeter, BILO, Food Lion, and Wal-Mart Supercenters. Results of this analysis of age in relation to brand choice also indicated that a significant relationship did not exist where $p \leq 0.05$ (Table 4).

Generational Cohort-Effects

One-way ANOVA analysis indicated that there is a significant difference between grocery store shoppers' generational cohorts in relation to the grocery store services quality assessments. As such, H_{04} is rejected where significance is indicated at $p \leq 0.05$ (Table 5).

Significance was also seen in MANOVA and MANCOVA analysis assessing the univariate SERVQUAL in conjunction with the cohorts (MANOVA) and cohorts and the covariate of home values (MANCOVA) (Table 6a and 6b).

Of the 28 individual perception items, six items show significance at $p \leq 0.05$ with generational cohorts. The items were modern looking equipment and fixtures, visually appealing facilities, visually appealing materials, individual customer attention, customer courtesy, and high quality merchandise available. As an additional step, multivariate MANCOVA analysis was conducted with the store's physical facilities and store material assessments, with the cohort groups as the independent variable and home value as the covariate. In this step, significance is also suggested where $p \leq 0.05$.

As with the age analysis, since there were insufficient data to assess association for all stores chosen and cohort-groups, the largest segments were selected; namely, Gen X and Baby Boomers and the major store brands

TABLE 1
One-way ANOVA
(Total Modified version of SERVQUAL and the five major service quality
dimensions as dependent variables with store chosen as independent variable)

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
TOTAL SERVQUAL	Between Groups	30161.535	9	3351.282	3.532	.000
	Within Groups	266635.647	281	948.881		
	Total	296797.182	290			
STORE'S PHYSICAL ASPECTS	Between Groups	2822.506	9	313.612	4.604	.000
	Within Groups	19140.202	281	68.115		
	Total	21962.708	290			
RELIABILITY	Between Groups	699.556	9	77.728	1.659	.099
	Within Groups	13162.389	281	46.841		
	Total	13861.945	290			
EMPLOYEE INTERACTION	Between Groups	4334.958	9	481.662	3.046	.002
	Within Groups	44428.451	281	158.108		
	Total	48763.409	290			
EMPLOYEE PROBLEM SOLVING	Between Groups	356.969	9	39.663	1.844	.060
	Within Groups	6044.956	281	21.512		
	Total	6401.924	290			
STORE POLICY	Between Groups	1139.663	9	126.629	2.801	.004
	Within Groups	12704.818	281	45.213		
	Total	13844.481	290			

represented in the area, which were Harris Teeter, BI-LO, Food Lion, and Wal-Mart Supercenters (George and Mallory 2001). With this adjustment, Pearson chi-square analysis indicated that a significant association existed. As a result, H_{05} is rejected, where significance is indicated at $p \leq 0.05$ (Table 8).

Regression was used with Gen X and Baby Boomer emotional data and each respondent's

total measure of services quality assessments for all 28 factors. The emotional data were represented in continuous scale format in measurements of shopping enjoyment, retailer trust, and consumer doubt. Gen X shoppers suggested a significant relationship with all three measures, whereas Baby Boomers suggested a significant relationship with enjoyment and trust. As such, H_{06} is rejected, where significance is indicated at $p \leq 0.05$.

TABLE 2
Regression Analysis (Total SERVQUAL and AGE)

Model Summary							
Model	R	R Square	Adjusted R Square		Std. Error of the Estimate		
1	.163(a)	.027	.023		31.652		
a Predictors: (Constant), AGE							
Coefficients(a)							
		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
Model		B	Std. Error	Beta			
1	(Constant)	220.926	5.241			42.157	.000
	AGE	.352	.126	.163		2.807	.005
a Dependent Variable: TOTAL SERVQUAL							

TABLE 3
Discriminate Analysis (Store Chosen and Age)

Eigenvalues				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.039(a)	100.0	100.0	.195
a First 1 canonical discriminant functions were used in the analysis.				
Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.962	10.949	9	.279

TABLE 4
Discriminant Analysis (Four Stores Chosen and Age of Baby Boomers and Gen X)

Eigenvalues				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.036(a)	100.0	100.0	.186
a First 1 canonical discriminant functions were used in the analysis.				
Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.965	7.568	3	.056

TABLE 5
One-way ANOVA (SERVQUAL & COHORTS -- Generational Cohort Group)

		Sum of Squares	df	Mean Square	F	Sig.
Modified Version of SERVQUAL	Between Groups	12659.065	4	3164.766	3.179	.014
	Within Groups	283766.111	285	995.671		
	Total	296425.176	289			

TABLE 6a
MANOVA (SERVQUAL & COHORTS)

Tests of Between-Subjects Effects Dependent Variable: SERVQUAL					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12365.678(a)	4	3091.420	3.108	.016
Intercept	3990348.863	1	3990348.863	4012.354	.000
COHORT8A	12365.678	4	3091.420	3.108	.016
Error	284431.504	286	994.516		
Total	16332511.000	291			
Corrected Total	296797.182	290			
a R Squared = .042 (Adjusted R Squared = .028)					

TABLE 6b
MANCOVA (SERVQUAL & COHORTS with HOUSEHOLD INCOME as Covariate)

Tests of Between-Subjects Effects Dependent Variable: SERVQUAL					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9331.977(a)	5	1866.395	2.516	.031
Intercept	1326080.255	1	1326080.255	1787.708	.000
HOME VALUE	410.149	1	410.149	.553	.458
COHORTS	8629.734	4	2157.434	2.908	.023
Error	146130.023	197	741.777		
Total	11751025.000	203			
Corrected Total	155462.000	202			
a R Squared = .060 (Adjusted R Squared = .036)					

TABLE 7
MULTIVARIATE MANCOVA
(Store's Physical Aspects of Physical Facilities and Store Materials
as dependent variables & Generational Cohort Group as dependent
variable with Household Income as covariate)

Multivariate Tests(c)						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.670	198.669(a)	2.000	196.000	.000
	Wilks' Lambda	.330	198.669(a)	2.000	196.000	.000
	Hotelling's Trace	2.027	198.669(a)	2.000	196.000	.000
	Roy's Largest Root	2.027	198.669(a)	2.000	196.000	.000
HOME VALUE	Pillai's Trace	.013	1.245(a)	2.000	196.000	.290
	Wilks' Lambda	.987	1.245(a)	2.000	196.000	.290
	Hotelling's Trace	.013	1.245(a)	2.000	196.000	.290
	Roy's Largest Root	.013	1.245(a)	2.000	196.000	.290
COHORTS	Pillai's Trace	.119	3.127	8.000	394.000	.002
	Wilks' Lambda	.883	3.132(a)	8.000	392.000	.002
	Hotelling's Trace	.129	3.136	8.000	390.000	.002
	Roy's Largest Root	.094	4.624(b)	4.000	197.000	.001
a Exact statistic b The statistic is an upper bound on F that yields a lower bound on the significance level. c Design: Intercept+INCOME7A+COHORT8A						
Tests of Between-Subjects Effects						
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	VISUAL42	79.912(a)	5	15.982	3.321	.007
	MATRL43	76.304(b)	5	15.261	3.505	.005
Intercept	VISUAL42	1428.908	1	1428.908	296.898	.000
	MATRL43	1586.863	1	1586.863	364.420	.000
HOME VALUE	VISUAL42	3.775	1	3.775	.784	.377
	MATRL43	.603	1	.603	.138	.710
COHORTS	VISUAL42	74.334	4	18.583	3.861	.005
	MATRL43	76.277	4	19.069	4.379	.002
Error	VISUAL42	948.118	197	4.813		
	MATRL43	857.833	197	4.354		
Total	VISUAL42	13702.000	203			
	MATRL43	13482.000	203			
Corrected Total	VISUAL42	1028.030	202			
	MATRL43	934.138	202			
a R Squared = .078 (Adjusted R Squared = .054) b R Squared = .082 (Adjusted R Squared = .058)						

Discriminate analysis was conducted with the generational cohorts' emotion and peer personality in relation to the store chosen. Results indicated that there was a relationship between the store chosen and the generational cohort's enjoyment emotion. However, relationships did not exist between the store

chosen and the peer personalities of trust and doubt.

To test the validity of the generational groupings, one-way ANOVA assessed the respondents in decade cohort segments in relation to each respondent's total measure of

TABLE 8
Chi-Square Analysis (Baby Boomer & Gen X with Stores
Chosen of Harris Teeter, Wal-Mart, BILO, and Food Lion)

Generational Cohort-Groups Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.026(a)	3	.029
Likelihood Ratio	9.274	3	.026
Linear-by-Linear Association	2.653	1	.103
N of Valid Cases	218		
a 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.19.			

TABLE 9
Chi-square Analysis (Decade Cohort-Groups and Stores Chosen)

Decade Cohort-Groups Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.905(a)	12	.091
Likelihood Ratio	20.262	12	.062
Linear-by-Linear Association	.827	1	.363
N of Valid Cases	218		
a 7 cells (35.0%) have expected count less than 5. The minimum expected count is .21.			

services quality assessments and for each of the five major dimensions. A similar effort had been already conducted for the groups as 17-23 year segments. As noted above, results indicated that the generational cohorts in 17-23 year segments present a significant difference at $p \leq 0.05$ for the total assessment and for two dimensions. The groups as decades did not present such significance at any of these levels. As such, H_{07} is accepted. In addition, Pearson chi-square of the decade cohort-groups (within Baby Boomer and Gen X segments) and stores chosen (Harris Teeter, Wal-Mart, BILO, and Food Lion) presented no significance (Table 9). The lack of a significant relationship is as seen with the ages/stores chosen relationship (Table 3 and 4).

CONCLUSIONS

A significant difference was found between each generational cohort group's attitude

assessments and the store chosen. Where each respondent indicated the store he or she regularly shopped at and then gave the assessments based on that choice, one could infer that attitude may be important in ongoing purchase choice of a grocery store as a specific brand. In this case, the differences were between selections for Harris Teeter, Wal-Mart Supercenters, BILO, Food Lion, Winn Dixie, and other small local stores in the Charlotte, NC MA.

Generational cohort effects were found to have significant relationships with tangible and intangible grocery store services assessments and ongoing store brand choice. However, age did not present clear significance in either assessments or purchase choice connection, whereas the generational cohorts did infer such a connection. Interestingly, in the assessment stage, the age effect suggested some different assessment relations and a greater number of

these relations than with the generational cohorts if one looks solely at significance of the relationship and does not consider the variability within groups as seen in Table 2.

The results support cohort effects as suggested by others (Rentz et al. 1983; Rust and Yueng 1995) and the generational cohort-group effect as suggested by Strauss and Howe (1991). However, the results go beyond their findings with cohort-group significance suggested in specific store brand assessments and choice. By using a modified version of SERVQUAL (Dabholkar et al. 1996) as the prime basis of the measurement instrument, reliability and validity were improved over other grocery store choice sets as presented in the literature, which do not reveal such rigor.

The results infer significance with generational cohorts as necessary characteristics for consideration in the choice framework in relation to attitude assessment data. In addition, generational cohorts suggest significant association to grocery store brand choice where age did not. While some may believe this is simply an extension of the age effect, these results do not support that conclusion. In testing for the Gen X and Baby Boomer cohorts' emotional connections, significance was indicated with their enjoyment and peer personality in the assessments. Significance was also suggested between the enjoyment emotion and store brand chosen but not with the peer personality and store brand chosen. The lack of peer personality significance at this stage may indicate that the representations used in this research are incorrect; however, the emotional significance was suggested in the emotion of enjoyment with the groups' connection to store brand chosen. The generational cohort emotional significance present with the assessments and store brand chosen suggests a reaction beyond the age effect. The generational cohorts appear to be usable as shorthand or coded representations for the consumptive emotions associated with each store brand in attitude as suggested by Richins (1997) and Bagozzi and

Dholakia (1999) and as physically resident in the amygdala of the brain as suggested by Damasio (1994).

Implications for Future Research

Various academic researchers and practitioners have called for application of a more reliable choice framework to begin to better understand and predict consumer purchase behavior. Testing may be appropriate via a discrete choice model in the form of utility maximization, especially when the choice set is known. However, as accurate as the current model may be, until recently, it was limited to the bundle of product-related attributes in the choice set. Perhaps this partly explains why scholars may have questioned the full predictive qualities of the model (Arnould, Oum and Tigert 1983; Meyer and Kahn 1991; Zaltman 1996, 1997; Bettman et al. 1998; Wolfe 1998).

Recently, researchers have begun to include latent variables or characteristics in their model equations. Such a move was called for in the past by social scientists, but it was thought by the discrete choice proponents that such data were outside the choice set and invalid as well. With the statistical improvements in survey techniques, headway is being made to reconsider inclusion of such data, especially valid information from perceptual and attitudinal studies (Ashok et al. 2002; Ben-Akiva et al. 2002). To date, however, the latent variables have only included attitudes and satisfaction measures relative to the brand attributes in the purchase choice set. Based on the results of this study, researchers are encouraged to consider inclusion of the generational cohorts in addition to attribute-based attitudes in their discrete choice framework or model. With further equational testing, it should be confirmed whether such inclusions are necessary and that they will improve understanding and prediction in not just store brand choice but brand choice in other more tangible product categories as well.

Limitations

The results reflect consumer services preferences for ongoing grocery store brand choice from a local metropolitan area of the southern United States and should not be considered as representative of any other area. Testing within discrete choice equations was not conducted, as it was beyond the scope of this study.

While every precaution was taken with training the interviewers, their supervision on each call was not possible. Even though outside groups obtained similar results, the interviewers in this study were students, leaving some to possibly question the results.

Delimitations

Due to the difficulties in completing purely random calls in the area using the self-generating technique, the interviewers were encouraged to switch halfway through the study to random number selection from the white pages of the local telephone book. As such, the results are representative only of those local telephone subscribers at all income levels with listed home telephone numbers. Cell phone subscribers and unlisted numbers were not available.

This services study is limited in that it only shows the need for consideration of the age and generational cohort characteristics in the discrete choice framework. It does not show that the added characteristics must be included in every situation, as some choice processes may work independently of these characteristics. More complete inference of such inclusions must be left for future situational testing of an expanded discrete choice model.

Implications for Management

For brands that represent a bundle of services, such as in various retail environments, inclusion of the generational cohorts in the

predictive framework appears to be important. Retailers are encouraged to conduct yearly assessments of their services quality using a modified version of SERVQUAL (Dabholkar et al. 1996) for baseline comparisons to competition. In addition, the use of the generational cohort-group may be helpful to them in predicting consumers' future services purchase choice. New directions may also present themselves for such testing. All marketers may want to consider such a step to determine whether the results of this study may be applicable to their environments and their predictive models.

For sometime, marketers have been aware of and responded to the needs of consumers based on age and/or period effects. However, much of what they have done with what they termed generational marketing may be actually age focused, such as marketing to today's teens seen as appealing to Gen Y. Even so, some of the generational approaches may be valid, especially when dealing with segments of the generation rather than the whole 17-23 year potential (Gardyn and Fetto 2000; Gunderson 2001; Paul 2001; Tsui 2001; Patton 2002). Marketers may see a generational cohort as unapproachable or inappropriate. However, where significance has been suggested, the technique is to find the emerging concerns of the cohort's leading edge and then track its concerns, the variations over time, and the applications to brand purchase. One such area in grocery marketing would be in taking advantage of the shift of Gen Y consumers as children exposed to more natural food products to their current concern for healthful, less caloric, natural food products for weight maintenance or loss. Coupled with this trend may be Gen Y consumers' fear of and reaction to terrorist activities (by citizens and others, at home and abroad) and their sense of lost security. This could translate into a growing need at the grocery store as a place one can trust, through more help with meal planning, food use guidance, and verbal and visual guarantees of food safety.

This preference shift may have far reaching effects on the Gen Y generation and their children and grandchildren as well. Marketers who not only respond to current age and period effects but also to the broader issues of the 17-23 year-wide generation may be more successful than their competitors in both the short and long term.

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